

robots and at the same time gain an understanding of basic programming constructs, including control structures and object-oriented programming. Student projects will include use of robots to simulate space exploration as well as other tasks suited to robots. Computer science majors may take this course to prepare for CS 150. (Attributes: GQ)

CS 140 Multimedia Programming (3) An introduction to computer programming in the context of multimedia. Introduces students to some of the principles of computer science. Students will learn how to write computer programs (in Python) for creating and manipulating three types of media: pictures, sounds, and movies. Computer science majors may take this course to prepare for CS 150.

CS 141 Discrete Math for Comp Sci I (3) Includes logic, sets, functions, matrices, algorithmic concepts, mathematical reasoning, recursion, counting techniques, probability theory. Not open to students with credit in Math 310. Pre: MATH 140 or MATH 140X or placement into MATH 241 or higher.

CS 150 Intro To Computer Science I (3) Intended for Computer Science majors and all others interested in the first course in programming. An overview of the fundamentals of computer science emphasizing problem solving, algorithm development, implementation, and debugging/testing using an object-oriented programming language. Pre: MATH 135T or higher, or placement into MATH 135 or higher. (Attributes: GQ)

CS 151 Intro to Computer Sci II (3) Reinforces and strengthens problem solving skills using more advanced features of programming languages and algorithms such as recursion, pointers, and memory management. Emphasizes the use of data structures such as arrays, lists, stacks, and queues. Pre: CS 150.

CS 171 Data Science Fundamentals in R (3) (lecture/lab) Introduction to the field of data science. Focus on communicating narratives regarding the underlying patterns in the data, i.e. storytelling with data. Topics include R programming fundamentals, data properties, visualization, importing, cleaning, and transforming data. No prior programming experience required. Pre: C or better in MATH 135T or higher, or placement into MATH 140 or higher. (Same as DATA 171) (Attributes: GQ)

CS 172 Python for Data Analysis (3) (lecture/lab) Fundamentals of Python programming for the analysis of real-world datasets. Topics include writing scripts and programs in Python and tools for cleaning, manipulating, and visualizing data. Introduction to intelligent analysis techniques. Properties of domain-specific datasets. No prior programming experience required. Pre: C or better in MATH 135T or higher, or placement into MATH 140 or higher. (Same as DATA 172) (Attributes: GQ)

CS 200 Web Technology I (3) Introductory web page authoring. Creation of client-side web pages using web authoring language and style sheets. Consideration of graphical design elements, validation, browser compatibility, and accessibility. Use of scripting language to add dynamic elements to web pages. (Attributes: GL)

CS 201 Web Technology II (3) Intermediate web page authoring. Creation of web pages that present data from XML sources and use XSLT transformations. Development of an e-commerce web site that uses a standard browser to accept user input, processes the user input with business logic, and connects to a back-end SQL database. Publication of web site to a web server. Pre: CS 200 or instructor's consent.

CS 205 PC Hardware (3) An introduction to the hardware components and assembly of personal computers and their connectivity to networks. Includes laboratory and hands-on assembly.

CS 235 Comp Forensic & Investigation (3) Students will learn how to examine digital devices in a forensically professional manner with the aim of identifying, preserving, recovering, analyzing and presenting facts and opinions about the digital information in the courtroom. Students will learn the basic artifacts of operating systems, file systems, recovery process of deleted data, Cybersecurity attacks, email tracking, mobile forensics, image file forensics, etc.

CS 241 Discrete Math for Comp Sci II (3) Includes functions, matrices, graph theory, trees and their applications, Boolean algebra, introduction to formal languages and automata theory. Pre: CS 141 and MATH 241.

CS 266 Comp Org & Assembly Lang (3) Organization of computers; assembly language; instruction sets: CPU; memory; input/output; interrupts; DMA. Pre: CS 150.

CS 272 Machine Learning for Data Sci (3) How to use data to automatically understand the world, make complex decisions, and even predict the future. Focuses on helping students do more with data by understanding and using a wide variety of machine learning tools. Taught in Python. Pre: CS/DATA 172 and MATH 241, which may be taken concurrently. (Same as DATA 272)

CS 282 Practical Comp for Sci & Engg (3) Create scientific and engineering computation spreadsheets emphasizing equations, references, mathematical functions, and charts. Use MS Excel to show trends, solve what if scenarios, filter information, and summarize information. Design and create MS Access tables, relationships, forms, queries, and reports to analyze scientific data. This class primarily focuses on advanced features and functions of MS Excel and MS Access and creates applications to solve scientific and engineering problems. Pre: MATH 140X (may be taken concurrently). (Attributes: GQ)

CS 300 Web Site Management (3) Advanced topics in web site administration. Issues covered include: site management (operating system, web server and database installation and administration); security (cryptography, authentication, digital certificates); and content (site design, ethical and business considerations). Pre: CS 200 or instructor's consent.

CS 315 Board Game Analysis & Design (3) This course focuses on the design and analysis of modern board games, card games, and other table-top games. Through game play, design, and writing assignments, students will develop critical thinking, problem solving, research and technical writing skills.

CS 321 Data Structures (3) Basic concepts of space/time efficiencies Algorithms and data structures for searching (binary search trees, AVL trees, hash tables) and sorting. Graph algorithms. Data compression using Huffman codes. Pre: CS 151 and 241, or instructor's consent.

CS 340 Graphical User Interfaces (3) Study of the graphical user interface as applied to computer software. Examination of history, human factors, design, technology and implementation of graphical user interfaces. Pre: CS 151.

CS 350 Systems Programming (3) Introduction to systems programming in the UNIX environment. Topics include the UNIX command shells and scripting, the C programming language, UNIX programming tools and system calls, processes and process

management, file and console I/O, and other selected topics. Designed for students interested in scientific, engineering or systems programming, systems administration or graduate education in computer science. Pre: CS 151 or CS/DATA 272.

CS 370 Data Management (3) Fundamentals of relational database usage and management from a data science perspective. Topics include properties of multi-table data, the entity-relationship data model, SQL for single and multiple table queries and updates, and communicating with databases using R. Pre: C or better in CS/DATA 171. (Same as DATA 370)

CS 373 Data Security & Privacy (3) This course studies the numerous privacy and security issues that arise when gathering, storing, analyzing, and distributing data. This course will teach students about the fundamental underpinnings of security & privacy as well as give practical, hands-on experience designed to help data scientists identify and resolve real-world issues. Topics include differential privacy, database security, server security, data ethics, machine learning safety, and data integrity. Primarily taught in Python. Pre: C or better in CS/DATA 172. (Same as DATA 373)

CS 385 Software Systems for Astronomy (3) (lecture/lab) The course provides basic instruction in the design and implementation of software for telescope control systems, instrument control systems (cameras and spectrographs); as well as the web-based tools used to plan observations. The course also covers the analysis and archiving of astronomical data. Students learn about existing software tools and packages, develop their own software tools, and analyze datasets from today's leading observatories. The course is open to both astronomy students with a strong interest in computer science, and to computer science students with a strong interest in astronomy. Pre: ASTR 110 or ASTR 180 and CS 150 or CS 172; or instructor's consent. (Same as ASTR 385)

CS 407 Intro To Numerical Analysis I (3) Solutions of equations in one variable, direct and iterative methods for systems of linear equations, the algebraic eigenvalue problem, interpolation and polynomial approximation, error analysis and convergence for specific methods. Offered spring semester. Pre: C in MATH 242 and MATH 211 and programming experience. (Same as MATH 407).

CS 408 Intro To Numerical Analysis II (3) A continuation of CS 407. Topics will include approximation theory, numerical integration and differentiation, solution of systems of nonlinear equations, numerical solutions to differential equations. Pre: C in CS 407. (Same as MATH 408).

CS 410 Elemts Computer Architec (3) (lecture/lab) Basic Machine Architecture, Cache Memory, Computer Arithmetic, RISC, Instructional-level Parallelism, Superscalar Processors, Microprogrammed Control, Parallel Processing. Performance Evaluation. Pre: CS 266 and 321.

CS 420 Database Internals (3) Concepts and methods for managing persistent data. Study of stream, sequential, relative and indexed organizations. Implementation techniques and performance. Introduction to SQL. XML as a data transport and storage mechanism. Pre: CS 321.

CS 421 Database Systems Design (3) Data models: hierarchical, network, relational, object oriented. Relational database management systems. Database design. Client/server systems. Web access to databases. Database administration and security. Transaction management. Database programming. Pre: CS 420.

CS 422 Database Analytics (3) Analysis of large datasets. Data warehousing and data mining. Data preprocessing. Measures of

similarity. Transformation and normalization techniques. Classification and clustering algorithms. Association analysis. Curse of dimensionality. Analysis techniques including regression, principal component analysis, linear discriminant analysis and feature selection. Pre: CS 321.

CS 430 Operating Systems (3) Covers the concepts, issues and design of modern operating systems. Topics include processes and state, concurrency, resource management algorithms for memory, processors and I/O devices, protection and security. Case studies of popular workstation, server and mainframe operating systems. Laboratory projects teach concurrent programming and OS implementation techniques. Pre: CS 266, CS 321.

CS 431 Networks & Data Commun (3) Thorough survey course covering major networking concepts such as Link-level Flow, Error Control, Congestive Control and QOS. Modern network protocols such as TCP/IP, ATM, Frame Relay, Ethernet, Fiber Channel and Wireless LANs will be compared and contrasted. Pre: CS 321.

CS 435 Ethical Hacking (3) "To beat a hacker, you need to think like a hacker". This course will provide hands-on training to students to become information security professionals while learning tools and techniques used by attackers. Students will get training to become ethical hackers to defend against cyber-attacks through the five phases of Ethical Hacking: Reconnaissance, Gaining Access, Enumeration, Maintaining Access, and Covering Tracks. Pre: CS 150

CS 440 Artificial Intelligence (3) Fundamental concepts of artificial intelligence including problem solving, heuristic search, reinforcement learning, and deep learning. Discussion of applications such as board game playing, video game design, and text processing. Pre: CS 321 or CS/DATA 272.

CS 450 Org Of Programming Lang (3) Advanced introduction to the concepts and issues in the design of computer programming languages. Topics include classification of languages, types, semantics, special forms parameter passing, closures, object-orientation, continuations, concurrency, exceptions, interpreters and garbage collection. Laboratory projects highlight design decisions and teach interpreter implementation techniques. Pre: CS 321.

CS 451 Compiler Theory (3) Study of LL, LR, LALR grammars and compiler techniques suitable for programming languages for use in constructing scanners, parsers, code generators, code optimizers for a compiler. Use of compiler construction tools such as lex and yacc to develop a compiler for a block structured programming language. Pre: CS 321.

CS 460 Software Engineering I (3) Emphasizes planning, analysis, and design phases of the Software Development Life Cycle with one model of the SDLC covered. Goal is to learn tools and techniques for sound requirement assessment and, working as a team, produce a verified design of a real software product. Pre: CS 321, One Writing Intensive Course. (Attributes: ALEX, GCC)

CS 461 Software Engineering II (3) Emphasizes implementation, installation and maintenance phases of the SDLC covered in CS 460. Goals are to learn specific techniques and tools for product development testing, measurement and documentation. Team will complete product. Pre: C or better in CS 460. (Attributes: ALEX, GCC)

CS 470 Theory Of Computing (3) Study of various models of computation and their relation to formal languages: finite automata, push-down automata, Turing machines, regular, context-free, and recursively enumerable languages. Unsolvability, NP completeness. Pre:

CS 321.

CS 475 Data Visualization (3) This team-taught course provides an interdisciplinary framework for learning cutting-edge techniques in data visualization. Students from various disciplines will collaborate on projects that refine and visualize complex data for interactive, educational presentations. Students are taught hands-on skills for creating effective data visualization products and tools that can be applied to a broad range of scientific disciplines, education, humanities, and the community. Pre: Junior or Senior standing. CS 150 or ART 112 are recommended prior to the course. (Same as ART 475) (Attributes: GCC)

CS 475L Data Visualization Lab (1) (lab) Hands-on training with the various software tools used throughout CS/ART 475. Course is repeatable twice for a total of 3 credits. Co-Req: CS/ART 475 or Instructor's Consent (Same as ART 475L)

CS 480 Digital Image Processing (3) This course provides introduces digital image processing fundamentals and the software principles used in their implementation. Topics include intensity transformations, spatial filtering, compression, geometric transforms, registration, wavelets, segmentation, and edge detection. This course reinforces theory through a hands-on programming approach. Prerequisite: CS 321

CS 483 Computer Vision (3) A survey of the field of computer vision. Covers both classic as well as deep learning approaches to analyzing images and video. Topics covered include keypoint features, object detection, multi-object tracking, and interacting with humans. Pre: MATH 211, and either CS/DATA 272 or CS 321. (Same as DATA 483)

CS 485 Social Network Analysis (3) Covers the six degrees of separation, models of the small world, page rank, network effects, P2P networks, network evolution, spectral graph theory, virus/news propagation, core-periphery, link prediction, power-laws, scale free networks, network communities, hubs and authorities, bipartite cores, information cascades, influence maximization Pre: CS 151

CS 495 CS Professional Seminar (1) (other) Computer science and software engineering are careers demanding technological and ethical application of computer hardware, software, and human resources. Course emphasis is on entry into and growth in these careers showing the balancing of needs amongst technology, employee, employer, and society. Repeatable up to two times for a total of three credits. Pre: CS 321

CS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

CS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Dance (DNCE) Courses

College of Arts and Sciences (CAS), Performing Arts Department

DNCE 110 Pilates Beginning Matwork (1) Body conditioning program in Pilates method. Emphasis on fundamentals and beginning mat exercises.

DNCE 150 Intro To Dance (3) History, scope, and theory of human movement. Study of the correlation of dance, music, and visual expression. Not a performance course. (Previously offered as DNCE 251) (Attributes: DA)

DNCE 151 Dance Techniques (2) Study of the basic vocabulary of dance and the collaborative contributions of choreographers, dancers and musicians. Experiential work in the development of basic stage movement, including understanding of period demands. May be taken concurrently with music and drama technique courses. Required for all Performing Arts majors.

DNCE 160 Ballet I (3) Introduction to classical ballet. Movements, techniques and appreciation of ballet. Previous experience not required. May be repeated once for credit. (Attributes: DA, GH)

DNCE 170 BegContemp Dance/Hawai'i Themes (3) An introduction to the fundamentals of a combination of both contemporary dance and hula techniques. Explore how both dance forms combine to express Hawai'i's culture and values. (Attributes: DA)

DNCE 180 Jazz Dance I (3) Introductory course in jazz dance style and techniques. May be repeated once for credit. (Attributes: DA, GH)

DNCE 190 Modern Dance I (3) Basic techniques of Modern Dance as an art form. May be repeated once for credit. (Attributes: DA, GH)

DNCE 210 Pilates Intermediate Matwork (1) Continuation of DNCE 110. Emphasis on additional strength and stamina skills. Pre: DNCE 110 or instructor's consent.

DNCE 260 Ballet II (3) Continuation of Ballet I. Movements, techniques, and appreciation of ballet. Emphasis on developing strength, flexibility, and control in classical balletic style. May be repeated once for credit. Pre: DNCE 160 or consent of instructor. (Attributes: DA, GH)

DNCE 270 IntContempDance Hawai'i/Themes (3) A continuation of a combination of both contemporary dance and hula techniques. Explore how both dance forms combine to express Hawai'i's culture and values at an intermediate level. Pre: DNCE 150 or DNCE 170 or Instructor's Consent (Attributes: DA)

DNCE 280 Jazz Dance II (3) A continuation of Jazz Dance I. May be repeated once for credit. Pre: DNCE 180 or consent of instructor. (Attributes: DA, GH)

DNCE 290 Modern Dance II (3) Second level Modern Dance. Designed to develop physical flexibility, body control, and a more acute rhythmic sense. May be repeated once for credit. Pre: DNCE 190 or consent of instructor. (Attributes: DA, GH)

DNCE 360 Ballet III (3) This course will emphasize intermediate ballet techniques for the dancer with previous training. It will begin the study of pointe work for qualified females and jumps and turns specifically for males. May be repeated once for credit. Pre: DNCE 160, DNCE 260, or instructor's consent. (Attributes: DA, GH)

DNCE 371 Choreography (3) An introduction to the basic techniques of creating dance. Public performance required. May be repeated once for credit. Pre: DNCE 180 or DNCE 190, or instructor's consent. (Attributes: DA, GCC)

DNCE 401 Dance Ensemble (3) Preparation and performance of techniques and repertoire at the advanced level. Public performance required. May be repeated for credit. (Attributes: GCC)

DNCE 419 Dance In Education (3) Dance activities for young people. Appropriate for teachers, group workers, recreation majors, and others working with children. Supervised field activities. (Attributes: ALEX, DA, GCC, GH)

DNCE 450 History of Dance (3) Development of Western theatrical dance from Ancient Greece through 19th century ballet to the present, including modern dance, contemporary ballet, and dance forms of musical theater and film. Pre: Performing Arts Core, upper division standing or consent of instructor.

DNCE 459 Topics in Dance (1-3) Topics in movement styles and experience. Repeatable, if topic changes, unlimited times. (Attributes: DA)

DNCE 460 Ballet IV (3) Intermediate/advanced ballet technique with the continuation of pointe work for qualified females. Introduction to classical partnering work. May be repeated once for credit. Pre: DNCE 360 and audition. (Attributes: DA, GH)

DNCE 475 Dance Hawai'i Performance Group (3) Combined contemporary dance and Hawai'i/Pacific traditions in a dance ensemble performance group. Performance required. Pre: Previous DNCE class or Instructor's Consent (Attributes: DA, GCC)

DNCE x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

DNCE x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Data Science (DATA) Courses

College of Natural and Health Sciences (CNHS)

DATA 101 Awesome Data Science Skills (3) Introduction to Data Science. Students will learn super awesome data science skills to better understand the world. No prerequisites are required. (Attributes: GQ)

DATA 171 Data Science Fundamentals in R (3) (lecture/lab) Introduction to the field of data science. Focus on communicating narratives regarding the underlying patterns in the data, i.e. storytelling with data. Topics include R programming fundamentals, data properties, visualization, importing, cleaning, and transforming data. No prior programming experience required. Pre: C or better in MATH 135T or higher, or placement into MATH 140 or higher. (Same as CS 171)

DATA 172 Python for Data Analysis (3) (lecture/lab) Fundamentals of Python programming for the analysis of real-world datasets. Topics include writing scripts and programs in Python and tools for cleaning, manipulating, and visualizing data. Introduction to intelligent analysis techniques. Properties of domain-specific datasets. No prior programming experience required. Pre: C or better in MATH 135T or higher, or placement into MATH 140 or higher. (Same as CS 172)

DATA 200 Intro to Business Analytics (3) An introduction to quantitative modeling and data-driven decision-making used in Business Analytics. Includes the basic concepts and mathematical tools to understand the role of quantitative analytics in organizations; application

of analysis tools and interpretations of model outputs for effective communication. (Same as QBA 200)

DATA 271 Applied Statistics with R (3) Introduction to probability and statistics, with an emphasis on applied use of the R statistical computing system. Topics include categorical and quantitative random variables, probability distributions, descriptive statistics estimation, hypothesis testing, and linear regression. Pre: C or better in MATH 135T or higher, or placement into MATH 140 or higher. Recommended: C or better in CS 171 or computer programming experience. (Same as MATH 271)

DATA 272 Machine Learning for Data Sci (3) How to use data to automatically understand the world, make complex decisions, and even predict the future. Focuses on helping students do more with data by understanding and using a wide variety of machine learning tools. Taught in Python. Pre: CS/DATA 172 and MATH 241, which may be taken concurrently. (Same as CS 272)

DATA 315 Math Methods for Data Science (3) A collection of mathematical and computational techniques for data analysis. Topics include numerical integration and optimization in multiple dimensions, pseudorandom number generation, Markov Chains and MCMC samplers, and an introduction to Bayesian statistics. Pre: MATH 211, MATH 241, MATH 271

DATA 362 Business Analytics (3) Fundamentals of Business Analytics. This course aims to teach students to analyze, formulate, and solve managerial decision-making problems using quantitative models and techniques. Pre: C or better in QBA 200 or QBA 260. (Same as QBA 362)

DATA 370 Data Management (3) Fundamentals of relational database usage and management from a data science perspective. Topics include properties of multi-table data, the entity-relationship data model, SQL for single and multiple table queries and updates, and communicating with databases using R. Pre: C or better in CS/DATA 171. (Same as CS 370)

DATA 371 Multivariate Modeling with R (3) Multivariate statistical methods and model selection using R. Topics include the multivariate normal distribution and covariances, multiple regression, analysis of variance, principal component analysis, logistic regression, and decision trees. The course will emphasize model selection and techniques such as validation sets to address the problem of overfitting. Pre: C or better in MATH 271. (Same as MATH 371)

DATA 373 Data Security & Privacy (3) This course studies the numerous privacy and security issues that arise when gathering, storing, analyzing, and distributing data. This course will teach students about the fundamental underpinnings of security & privacy as well as give practical, hands-on experience designed to help data scientists identify and resolve real-world issues. Topics include differential privacy, database security, server security, data ethics, machine learning safety, and data integrity. Primarily taught in Python. Pre: C or better in CS/DATA 172. (Same as CS 373)

DATA 375 Applied Informatics (3) Introduction to the theory and application of informatics tools used in Marine and Natural Sciences. Students will learn the fundamentals of data management, data analytics, ecoinformatics, bioinformatics, and data visualization. Pre: C or better in CS 171 or CS 172, C or better in MATH 271 or MARE 250 or Instructor's Consent.

DATA 465 Text Mining for Social Science (3) Provides the concepts and tools to understand the role of natural language processing and text

analytics for managerial decision-making and how to apply text analytics tools to real-world problems. Pre: C or better in one of QBA/DATA 260 or QBA/DATA 300 or QBA/DATA 362 or CS/DATA 172, or Instructor's Consent. (Same as QBA 465)

DATA 470 3D Mapping of Ecosystems (3) Introduction and application of 3D habitat mapping to study natural environments. Students will learn the fundamentals of photogrammetry and geomatics and learn to integrate and analyze multiple data products. Pre: C or better in CS 171 or CS 172.

DATA 474 Applied Informatics (3) Introduction to the theory and application of informatics tools used in Marine and Natural Sciences. Students will learn the fundamentals of data management, data analytics, ecoinformatics, bioinformatics, and data visualization. (Previously offered as DATA 375) Pre: C or better in CS 171 or CS 172, C or better in MATH 271 or MARE 250 or Instructor's Consent. (Same as MARE 474) This course is dual listed with CBES 674.

DATA 483 Computer Vision (3) A survey of the field of computer vision. Covers both classic as well as deep learning approaches to analyzing images and video. Topics covered include keypoint features, object detection, multi-object tracking, and interacting with humans. Pre: MATH 211, and either DATA/CS 272 or CS 321. (Same as CS 483)

DATA 490 Data Science Capstone (3) Students are asked to use the skills and techniques they have learned throughout the data science program to create a capstone project. The content of the course will additionally focus on giving students skills in written and oral communication. Note: Restricted to Data Science students only. Pre: Senior class standing or Instructor's Consent.

DATA 495 Data Science Seminar (1) This course will offer lectures, discussions, and research reports of topics in data science presented by faculty, students, invited speakers, and visiting scholars. It will also help students become aware of research and job opportunities, in both academia and industry. Pre: Senior standing with a major in Data Science, or instructor's consent.

DATA x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

DATA x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Drama (DRAM) Courses

College of Arts and Sciences (CAS), Performing Arts Department

DRAM 101 Introduction to Theatre (3) Theatre history and play analysis from the standpoint of production. Lab work in three aspects of play production: acting, directing, design. Previously offered as DRAM 271. (Attributes: DH, FGC)

DRAM 171 Stage Techniques (2) Required for all Performing Arts majors. Study of the basic vocabulary of the stage and the collaborative contributions of directors, actors, technicians, and house personnel. Experiential work in the development of stage presence and etiquette. May be taken concurrently with music and dance technique courses.

DRAM 221 Beginning Acting I (3) Individual exercises and group activities that emphasize voice, movement, and relaxation through in-class improvisation and performance of monologues and two-person scenes. Beginning play analysis. (Attributes: DA)

DRAM 222 Beginning Acting II (3) Continuation of DRAM 221, with emphasis on building the ensemble, basic character work, refining vocal production, and expanding movement vocabulary. Performance of group scenes from modern and contemporary plays. Play analysis based on method acting theory. Pre: DRAM 221. (Attributes: DA)

DRAM 243 Drama of Hawai'i & the Pacific (3) Embedded in a discourse of coloniality and indigenous perspective, this course provides an introduction to a representative range of plays written by, for, and about the people of Hawai'i and other Pacific islands. (Same as SOC 243) (Attributes: DH, HPP)

DRAM 280 Basic Stagecraft (3) Introduction to beginning concepts of design and construction of scenery for the stage. Overview of the development of scenography from Greek theatre to the modern proscenium stage. Study will include two- and three-dimensional scenery, properties, and finishing techniques. Pre: concurrent registration with DRAM 280L. (Attributes: DA)

DRAM 280L Basic Stagecraft Laboratory (1) (lab) Supervised work in stagecraft, lighting and sound. Pre: concurrent registration with DRAM 280.

DRAM 318 Playwriting (3) Basic course in writing for the stage. Development of theme, action, and characterization for the one-act play form. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T; or consent of instructor (Same as Eng 318) (Attributes: DA, GL)

DRAM 321 Styles Of Acting (3) Advanced study for actors who have completed Beginning Acting. Concentrated scene work, script analysis, character development, and style study. Comparative exercises in acting for the stage and camera. Performance of workshop material. Pre: DRAM 221, or Instructor Consent. (Attributes: DA)

DRAM 322 Acting Shakespeare (3) In-depth study of Shakespearean texts from the standpoint of production and acting style. Historical study of Renaissance production techniques. Performance of scenes resulting from work on vocal production, period movement, and text analysis. Pre: DRAM 221, or consent of instructor (Attributes: DA)

DRAM 330 Stage Management (3) Study of the responsibilities of a production stage manager, from rehearsals through mounting a show, as coordinator of a production team. Development of the prompt book and forms needed to organize the technical elements of a production. Pre: DRAM 101 or DRAM 221 or DRAM 280 or Instructor's Consent. (Attributes: DA)

DRAM 340 Stage Makeup (3) Studio work in design and application of stage makeup. Study and development of character, corrective, and three-dimensional makeup. Required work on major production. Pre: DRAM 101 or 221, or previous stage makeup experience, and instructor's consent.

DRAM 350 Stage Costume (3) Study of costume design, theory, and practice. Survey of historical and modern costume. Practical experience in design and construction including required work on major production. Pre: DRAM 101 or 221, or consent of instructor.

DRAM 350L Stage Costume Laboratory (1) (lab) Basic instruction in the use of sewing machines, patterns and hand-sewing techniques for

costume building. Includes understanding of fabrics and specific skills related to garment construction. Required for students in DRAM 350 who do not have previous sewing experience. Pre: Concurrent enrollment in DRAM 350 and permission of the instructor.

DRAM 364 Advanced Theatre Practicum (1-4) (other) Supervised work for the advanced student in one or more of the following areas: stagecraft/construction, properties, lighting, costuming, sound, makeup, publicity, arts administration, box office techniques. May be repeated for a total of 8 semester hours. Pre: DRAM 280, or DRAM 340, or DRAM 350; and consent of the instructor.

DRAM 380 Theatre Design (3) Study of elements of scenic and lighting design for the stage. Production of renderings, models, elevations, and plots. Work on mainstage and/or studio production. Pre: DRAM 264, and art & physics courses required for PARTS degree in Technical Theatre.

DRAM 383 Japanese Theatre & Performance (3) This course introduces the performance traditions in Japan, ranging from rituals to dance and theatre-traditional art forms such as noh/kyogen, kabuki, bunraku, to modern theatre. Students examine the Japanese art forms from the anthropological and sociological perspectives. (Same as JPNS/JPST 383) (Attributes: DH, GAHP, GH, HPP)

DRAM 387 Performance Education (3) In this course, the students are guided through the process researching, writing, rehearsing and performing a series of educational and entertaining presentations that deal with science and Hawaiian culture. Presentations will be shared with the general public in a museum theater setting at Imiloa Astronomy Center of Hawai'i. Course may be repeated once for credit. Pre: COM 251 or DRAM 171 or DRAM 221 or instructor's consent. (Same as COM 387) (Attributes: GCC, HPP)

DRAM 390 Survey Of Drama Literature (3) Analysis and discussion of plays from the canon of Western dramatic literature, focusing on dramatic action, character relationships, play structure, staging, and thematic considerations. (Attributes: DL)

DRAM 419 Drama in Education (3) Study of the theory and application of creative dramatics, developmental theatre, and curriculum-centered drama activities in educational settings serving children and youth. Opportunities for field work will be incorporated into class activities. (Attributes: ALEX, DA, GCC)

DRAM 421 Acting Troupe (3) Rehearsal and performance of works from Western literature and ethnic non-Western sources, including period drama, avant-garde theatre, and the contemporary drama of Hawai'i and the Pacific. Emphasis on ensemble performance. Refinement of individual skill and group interactions acquired in acting classes. Public performance required. May be repeated twice for a total of 6 semester hours. Pre: DRAM 221 or DRAM 243 or Instructor's Consent. (Attributes: DA, GCC)

DRAM 430 Directing (3) Basic practical course in how to direct a play. Students direct one-act plays or scenes from full length plays. Pre: DRAM 101; and DRAM 221 or DRAM 280; or consent of instructor. (Attributes: DA, GCC)

DRAM 445 Lighting Design (3) (other) A seminar in theatrical lighting design and presentation. Development of the lighting plot and paperwork used in implementing designs. Study of lighting technology. Pre: DRAM 280, 380, or consent of instructor.

DRAM 483 Modern/Contemporary Drama (3) A study of works which

have established or refined major traditions in modern and contemporary theater, with some reading in critical theory. Pre: ENG 100T, 100, ESL 100, or 100T and 200-level coursework in literature. (Same as ENG 483) (Attributes: DL)

DRAM x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

DRAM x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Economics (ECON) Courses

[College of Business and Economics \(COBE\)](#)

ECON 100 Intro To Economics (3) Economic principles for non-majors. Emphasis on the applications of theory to problem solving. (Not more than 3 credits may be granted for completion of both ECON 100 and ECON 150 at Hawai'i Community College.) (Attributes: DS)

ECON 130 Intro To Microeconomics (3) How individual prices are determined. Efficient consumer-producer decision making. Pre: One MATH course numbered 125 or higher (any one of which can be taken concurrently); or instructor's consent. (Attributes: DS)

ECON 131 Intro To Macroeconomics (3) The functioning of economic systems with emphasis on the forces determining levels of, and changes in, national income, employment and the price level. (Attributes: DS, GQ)

ECON 300 Inter Macroecon Theory (3) Determination of income, employment, price levels; fiscal and monetary policies. Pre: ECON 131.

ECON 301 Inter Microecon Theory (3) Price determination under monopoly, oligopoly, and competition. Analysis of demand and cost. Pre: ECON 130, One MATH course numbered 125 or higher.

ECON 302 Managerial Economics (3) Application of economic and statistical concepts for business decisions. Subjects cover projection of demand and production, case analysis, problems of forecasting, multifactors and multiproducts, technological change: capital budgeting, input-output analysis, and programming techniques. Pre: ECON 130.

ECON 310 Economic Development (3) Analysis of growth, structural change, development patterns, foreign investment, foreign trade, and development policies and strategies; emphasis on Far East and South Pacific Islands. Pre: ECON 130, 131. (Attributes: GAHP)

ECON 340 Money & Banking (3) Relation of monetary system to price level, employment and income; nature and functions of money and banking; role of money in international trade and inflation. Pre: ECON 131. (Attributes: DS, GQ, GS)

ECON 361 International Finance (3) Balance of payments, foreign exchange rate policies, and their impact on domestic employment, inflation, internal and external balances, and other related topics. Pre: ECON 130, 131.

ECON 370 Government Finance (3) An explicit introduction to the behavior and objectives of government in the economic system. Analysis focuses on the rationale of nonmarket institutions and on the two groups

of agents that operate government, the politicians and the bureaucrats, as these agents allocate expenditures for government activities.

ECON 390 Econometrics (3) Use of mathematical and statistical techniques to model and test the reality of economic theory, tests of hypotheses and forecasting. Pre: MATH 115 or QBA 260.

ECON 414 Global Topics in Game Theory (3) Game theory is a mathematical tool used in a variety of fields such as economics, political science, law, sociology, biology, and computer science. The purpose of this course is to introduce to game theory and to explore its applications. Topics include but not limited to, deterrence, crisis bargaining, people, war, and terrorism. Pre: ECON 130

ECON 417 Health Economics (3) This course applies economic theory to examine the production of health. Issues such as asymmetric information, externalities, and indirect or third party payment are examined. The use of cost/benefit analysis, and reimbursement of expenses on healthcare organizations will be discussed. Pre: ECON 130

ECON 430 Quantitative Forecasting (3) Introductory level of forecasting for business and economics with an emphasis on Hilo and Hawai'i economies and businesses. Topics include time series techniques, linear regression forecasts, several miscellaneous forecasting models, and forecasting evaluation. Pre: QBA 260 or MATH 115 or instructor's consent.

ECON 482 Natural Resource Env Eco (3) An analytical framework for examining the relationships among environmental quality, natural resource use, and economic and political systems; analysis of circumstances that give rise to environmental problems, resource use conflicts, and possible policy solutions to these problems and conflicts. The course will emphasize issues pertaining to Hawai'i, especially sustainable development and climate change. This course is dual listed with CBES 682.

ECON x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ECON x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Education (ED) Courses

College of Arts and Sciences (CAS)

ED 110 Exploration in Education (3) (lecture/other) Introductory course for individuals considering careers as educators. Exploration of schools and educational community resources with a focus on teachers and effective teaching. Includes a practicum field experience component in schools. Pre: Instructor's Consent

ED 210 Introduction to Teaching (3) This course is an introduction to education with an emphasis on the following topics: the teaching profession, the analysis of reasons for entering teaching and factors that influence these reasons; the characteristics of the present teaching force; complexities of teaching; the current trends and issues in education; and the role of the school within the community. Student will be provided an opportunity for voluntary field experience totaling 10

hours. (Attributes: ALEX, DS, GCC)

ED 243 Math for Elementary Teachers I (3) Basic knowledge and skills designed to foster mathematics teaching in the elementary classroom. Includes major mathematics concepts, algorithms, procedures, applications, and practices in varied contexts. (Attributes: GQ)

ED 310 Foundations of Education (3) Introduction to the practice of thinking and the development of intelligence within the complexities of a diverse and transforming society. Historic aspects of education are explored along with philosophical and political movements so students understand education's potential. Critical thinking skills are developed to help students think seriously about education as a potential career. Must be taken for grade. Pre: GPA of 2.5.

ED 314 Tech for Learning & Teaching (3) Basic knowledge and skills designed to foster the integration of instructional technologies across the curriculum in an educationally sound manner. Includes project-based and place-based learning aligned with ISTE-T standards. Pre: GPA 2.5, earned at least 58 credits, or instructor consent. (Attributes: GAHP)

ED 330 Teach/Learn Informal Settings (3) Basic knowledge and skills designed to foster place-based learning in a variety of formal and informal settings. Pre: GPA 2.5, earned at least 58 credits, or instructor consent.

ED 341 Literacy for Elem Teachers (3) Basic knowledge and skill designed to foster literacy teaching in the elementary schools. Includes foundational knowledge of reading and writing processes. Pre: GPA 2.5, earned at least 58 credits, or instructor consent.

ED 342 Science for Elem Teachers (3) Basic knowledge and skills designed to foster science teaching in the elementary classroom. Includes integration of three dimensions of science and engineering practices, cross cutting concepts, and major disciplinary core ideas. Pre: GPA 2.5, earned at least 58 credits, or instructor consent.

ED 343 Math for Elem Teachers II (3) Continuation of knowledge and skills designed to foster mathematics teaching in the elementary classroom. Includes major mathematics concepts, algorithms, procedures, applications, and practices in varied contexts. Pre: ED 243, GPA of 2.5, earned at least 58 credits, or instructor consent.

ED 344 Soc Studies for Elem Teachers (3) Basic knowledge and skills designed to foster social studies teaching in the elementary classroom. Includes understandings, capabilities, and practices associated with the central concepts and tools in civics, economics, geography, and history within a framework of informed inquiry. Pre: GPA of 2.5, earned at least 58 credits, or instructor consent.

ED 346 Teaching Children's Literature (3) This course focuses on children's literature and its impact on social, emotional and intellectual development for elementary school children. Aesthetic appreciation and creative development will be explored by examining theory and practice about the use of literature with children. Must be taken for a grade. Pre: GPA of 2.5 and junior standing or consent of instructor.

ED 347 Intgr Sci/Soc Stud Elem School (3) (lecture/lab) This course is designed to strengthen prospective elementary teacher content knowledge in science and social studies. Students will gain content knowledge by practicing various methods of teaching integrated science/social studies and develop authentic applications in real world situations. The fundamental science content topics covered will include: the inquiry process, physical, life, earth/space, and technology. The

fundamental social studies content topics covered will include: geography, world history, UH history, political science, economics, anthropology, sociology and psychology. Teaching and learning of these content areas will center on place based education with the local environment as the integrating context. Required for admission into the MAT Program. Must be taken for grade. Pre: GPA of 2.5 and junior standing or instructor's consent.

ED 350 Learner Development (3) Theories of development focusing on physical, cognitive, social, and emotional development during school-aged years, children (grades K-6) and adolescents (grades 7- 12). Systematic observation and analysis of behavior of school-aged children at home, in the community, and at school. Pre: GPA of 2.5, earned at least 58 credits, or instructor consent.

ED 355 Sec ELA I:Lit as Exploration (3) What is the relationship between a story and each person who receives it? This course provides an introduction to literature as exploration and reader response theory. An experiential course, students explore how readers engage with story by examining their own reading experiences within a community of learners. Students will further reflect upon their own learning as they imagine how they may teach in the future. The course is designed for anyone who may be considering becoming teachers or would like to deepen their engagement in storytelling and the texts that they read. While the focus is on students interested in middle and high school language arts or the humanities, students thinking about teaching at any level or discipline are welcome.

ED 358 Intro to Adol Writing in Disc (3) This course focuses on exploring the writing skills of adolescents, defined as students in the 6th through 12th grade, and targets pre-MAT students who are interested in becoming secondary teachers. The course will introduce writing curriculum standards and explore instructional strategies that can be used to prepare students in grades 6-12 for writing in college and the workforce. Must be taken for grade. Pre: GPA of 2.5 and junior standing, or instructor's consent.

ED 442 Comm Sci in HI Island Schools (3) For undergraduate and graduate students interested in improving their ability to communicate their scientific knowledge or research by designing and implementing lesson plans in Hawaii Island schools including formal and informal educational experiences. The course provides the knowledge, skills and dispositions needed to use phenomena in NGSS designed lessons grounded in the uniqueness of Hawaii. Students will observe phenomena that occur in Hawaii's natural environment and create hands-on, inquiry-based activities to enhance science content knowledge in K-8 learners. Through place-based exploration and experiences student will develop a deeper understanding of the unique values and qualities of Hawaii's environment, language, values, and culture. Pre: At least 6 credits of 100 level or higher BIOL, CHEM, GEOL, NSCI, PHYS, or MARE courses or instructor approval. This course is dual listed with CBES 642. (Attributes: HPP)

ED 443 Learning Environments (3) Theory and practice for creating and sustaining a culture of connection and belonging in a learning environment grounded in Nā Hopena A'o (HĀ). Pre: GPA of 2.5, junior standing, or instructor consent.

ED 444 Place-Based SEL (3) First part of a two-course sequence on Place-based Social- Emotional Learning (PBSEL). Utilizing project-based authentic learning opportunities, students will gain a greater understanding of PBSEL and valuable skills they can use to support schools and community organizations on Hawai'i Island. Recommended: ED 350 or PSY 320.

ED 445 Community-Based Research (3) Second part of a two-course sequence on place-based social emotional learning (PBSEL). Students will learn about community-based action research by conducting a study at their internship site that supports schools and community organizations on Hawai'i Island. Pre: ED 444 or instructor consent.

ED 447 Robotics in K-12 Schools (3) provides hands on experience with the tools and techniques used to teach robotics and computer programming in K-12 learning environments. There are no prerequisites for this course.

ED 448 Qualitative Research (3) Introduction to several traditions of qualitative inquiry. Students are guided (mentored) through experiences where they design, conduct, analyze, and write-up small-scale qualitative studies in educational settings.

ED 450 Learn/Teach in Hawai'i Schools (3) Introduction to culture-based education. Integrates Hawaiian history, language, and culture practices for meaningful experiences. Pre: GPA 2.5, earned at least 58 credits, or instructor consent.

ED 452 Social Studies/Science Methods (3) Application of social studies and science concepts, skills, and effective instructional practices for planning, designing, and assessing student learning in the elementary classroom. Pre: GPA 2.5, earned at least 58 credits, or instructor consent.

ED 455 Differentiated Instruction (3) Exploration and application of differentiated instructional strategies in the inclusive classroom. Includes learner analysis; practical development of activities for differentiated content, processes, and products to assure maximum learning for all students; and assessment. Pre: GPA 2.5, earned at least 58 credits, or instructor consent.

ED 457 Emerging Bilingual Students (3) Exploration of emerging multilingualism in culturally and linguistically diverse settings. Extends awareness of and skills for trans-linguaging and scaffolding multilingualism integration across the curriculum. Includes sheltered instruction and cultural/social influences. Pre: GPA 2.5, junior standing, or instructor consent.

ED 460 Children of Migration (3) This course uses interdisciplinary multiple lenses to construct practical, grounded, and equity-based approaches to gain understanding of how migration impacts children and youth and the critical role of the education on their adaptation.

ED 485 Field Practicum I (2) (other) First practicum in teaching, internship, or research in an educational setting. Must be taken as CR/NC. Pre: GPA 2.5, senior standing, successful completion of ED 330, or instructor consent.

ED 486 Field Practicum II (3) (other) Second practicum in teaching, internship, or research in an educational setting. Must be taken as CR/NC. Pre: GPA 2.5, senior standing, successful completion of ED 485, or instructor consent.

ED 491 Capstone I (3) Completion of reflective-inquiry project from the first field practicum. Pre: GPA 2.5, senior standing, successful completion of ED 485 or instructor consent.

ED 492 Capstone II (3) Completion of senior capstone project. Pre: GPA 2.5, senior standing, successful completion of ED 486, or instructor consent.

ED 493 Professional Pathways (3) Professional development and exploration of career pathways in a variety of education settings.

Examination of professional ethics when working with children and youth, professional preparation, and career planning. Pre: GPA 2.5, senior standing, and successful completion of ED 485, ED 486, and ED 491.

ED x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ED x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [ED graduate-level courses](#).

Engineering (ENGR) Courses

College of Agriculture, Forestry & Natural Resource Management (CAFNRM)

ENGR 102 Engineering the Future I (1) Overview of the engineering discipline, art and profession, impact on society and the environment, and strategies for studying engineering. CR/NC only.

ENGR 103 Engineering the Future II (1) Continuation of the overview of the engineering discipline, art and profession, impact on society and the environment, and strategies for studying engineering. CR/NC only

ENGR 200 Introduction to Energy Science (3) This course studies the relationship between human societies and the global energy system. Topics will include energy in everyday life, the geography, politics and economics of energy. Case studies will be studied.

ENGR 240 Conventional Energies (3) Fundamentals of thermal physics and fluid mechanics. Chemical Bonds, Energy from fossil fuels. Hydropower. Nuclear power. Energy storage. Pre: 6 credits in Natural Science courses.

ENGR 250 Alternative Energies (3) Wind, solar, geothermal, tide and wave power. Brief survey of bioenergy, energy distribution and microgrids. Pre: 6 credits in Natural Science courses.

ENGR 310 Energy Policy Analysis (3) An introduction to how the production and consumption of energy in the United States are regulated at the Federal, Federal, state and local levels. Stakeholders will be identified, and their roles analyzed. Historical and international dimensions of this topic will also be explored. Hawai'i energy policies will be studied in detail. Pre: ENGR 200 or ENGR 240 or ENGR 241. (Attributes: DS, GCC)

ENGR 340 Sustainable Biofuels (3) This course provides an introductory overview of the relevance of bioenergy production for the global energy supply, bioenergy conversion technologies and feedstocks, and critically evaluates sustainability issues involved with bioenergy production.

ENGR 361 Energy Laboratory (3) (lecture/lab) Desktop experiments on several of the following: energy content and products of combustion, solar cells, biofuel reactors, heat engines, fuel cells and hydroelectric

power. Emphasis will be on quantitative energy balances. Co-req: Either ENGR 240 or ENGR 250, or ENGR 200 with permission of instructor.

ENGR 400 Biochemical Energy Conversion (3) A course on anaerobic digestion and fermentation with application to animal, municipal and industrial wastes, and to the production of synthetic gas and bioethanol. Pre: BIOL 101 or BIOL 125 or BIOL 171, and CHEM 161.

ENGR x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ENGR x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

English (ENG) Courses

College of Arts and Sciences (CAS)

ENG 100 Composition I (3) Instruction and practice in writing clear, effective university-level essays and research paper. Attention to all stages of the process: generating ideas, drafting, revising, and editing. Pre: ENG 100 on Writing Placement Examination. (Attributes: FW, GF)

ENG 100T Composition with Tutorial (3) Instruction and practice in writing clear, effective university-level essays and research paper. Attention to all stages of the process: generating ideas, drafting, revising, and editing. Attending regular sessions is required. Equivalent to ENG 100 or ESL 100. Pre: ENG 100T on Writing Placement Examination. (Attributes: FW, GF)

ENG 200 Intro to Literary Genres (3) An introduction to major genres in literature. The course will be offered at various times with different focuses: (A) Short Story and Novel; (B) Drama; (C) Poetry; (D) Popular Fiction; (E) Mythology and Folklore; (F) Autobiography; (G) Introduction to Graphic Novels and Comics. Pre: C or better in ENG 100, ENG 100T, ESL 100, or ESL 100T. (Attributes: GH)

ENG 201 Global Cinema (3) A course that offers students a critical examination of worldwide cinema. The course will cover film theory and film making techniques from countries such as Germany, Mexico, China, Senegal, Iran, and India. Students will undertake a critical study of various schools of film as they pertain to these national cinemas as well as explore the cultural and socio-political controversies surrounding cinematography. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as WS 201) (Attributes: DL, GH)

ENG 202 Literature of Human Rights (3) This course will explore narratives from a human rights perspective, beginning in the era shortly before the adoption of the Universal Declaration of Human Rights in 1948 and extending into the 21st century. Students will focus on geopolitical conditions that contribute to the suppression of human rights in areas around the globe, including, but not limited to, Chile, India, Nigeria, Iran, the Palestinian Territories, and the United States. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as WS 202) (Attributes: DL, GCC, GH)

ENG 204 Intr Race/Gender Film Studies (3) This course will focus on how race and gender historically shape individual and cultural experiences in America, as expressed in film. Key works that offer

portrayals by and about various groups (i.e. gays/lesbian, immigrants, indigenous communities, mixed-race populations, etc.) will be critically compared and examined. Students will also discuss and address evolving audience responses to these works. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as WS 204) (Attributes: DL, GH, GL)

ENG 205 Hawai'i on Screen (3) A critical look at the development of film in and on Hawai'i. The course will cover a number of silent era films as well as the development of the musical and the war story as popular genres in the Islands. The class will also focus on the problems of cultural, racial and gendered representation in mainstream cinematic depictions of Hawai'i as well as the contemporary emergence of local and indigenous filmmaking. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as WS 205) (Attributes: DH, DL, GAHP, GH, GL, HPP)

ENG 206 Intro to Popular Culture (3) This course offers an introductory study of mainstream manifestations of culture. Students will critically assess the production, distribution, and consumption of various popular cultural genres, such as advertising, talk shows, sports programs, music videos and gossip magazines and websites, among many others. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as WS 206) (Attributes: DL, GH, GL)

ENG 209 Writing for Business (3) Working from logical and rhetorical principles, this course prepares students to write in the informative, analytical, and persuasive modes required for their major field and in their careers. Intended for students majoring in Business and related fields. Includes a formal research project and report. Pre: C or better in ENG 100, ENG 100T, ESL 100, or ESL 100T.

ENG 225 Writing for Sci & Technology (3) Working from logical and rhetorical principles, this course prepares students to write about science and technology in their academic disciplines and careers. Assignments include synthesis, process analysis, and argumentation. Intended for students majoring in the applied and natural sciences. Includes a formal research project and report. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T.

ENG 257 Multicultural Literature (3) A survey of classic and contemporary literature of diverse cultural and ethnic groups, which examines relevant concepts and topics, as well as the historical, social and cultural frameworks of these works, and their application and impact in regional and global contexts. Pre: C or better in ENG/ESL 100/100T. (Same as WS 257) (Attributes: DL, GL) (Attributes: DL, GH, GL)

ENG 275 Literature of the Earth (3) Study of how people from a variety of eras and cultures have shaped their responses in poetry, fiction, drama and essays to changes in the natural world. This class will examine issues of globalization and environmental sustainability, with opportunities for research on connections between local and global environmental problems. Pre: ENG 100, ENG 100T, ESL 100, or ESL 100T. (Attributes: ALEX, DL, GCC, GH, GW, WC)

ENG 285 Introduction to Media Writing (3) An introductory media writing class with a focus on preparing students to write effectively for news media. Integrates skills of research, inquiry, interviews, and media and information literacy, to writing news, culture and feature articles, and other assignments. Pre: ENG 100, ENG 100T, ESL 100, or ESL 100T. (Same as COM 285). (Attributes: DH, GL) (Attributes: DH, GL)

ENG 286 Intro to Creative Writing (3) Introduction to the theoretical, practical and artistic concerns of writing vivid and compelling prose fiction, poetry, and creative non-fiction. Students will be exposed to a range of critical and primary creative writing texts as they produce their

own works in each genre. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T.

ENG 287 Introduction to Rhetoric (3) Survey of rhetorical history, studies and practices from classical to contemporary. Discussion of social, political, legal and ethical aspects of rhetoric and rhetorical theory. Pre: C or better in ENG 100, ENG 100T, ESL 100, or ESL 100T. (Attributes: DH, GH, GL)

ENG 289 The Rhetoric of Food (3) A course designed for students interested in learning how and why food plays a central role in cultures around the world. Attention will be paid to how food affects political, religious, economic, social and cultural activities and decision-making in various countries/regions. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Attributes: DH, GH)

ENG 290 Literature and Medicine (3) English 290 provides students with the opportunity to study writers, poets, and artists confronting timeless issues dealing with the human body. The class will look at how and why novels, short stories, poems, plays and film cover the wide range of biological human conditions, from disease to sexuality to mortality. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Attributes: DL, GH, GL)

ENG 300 Intro to Literary Studies (3) Introduces majors to the methods of research, analysis, close reading and argumentation that are essential to the successful reading of and writing about literature. Included is a comprehensive survey of literary terms, key concepts, literary forms and genres. Pre: C or better in ENG 100, ENG 100T, ESL 100, or ESL 100T, and ENG 200 (A-F) and one additional 200-level writing or literature class (with exception of ENG 209 and ENG 225) or instructor's consent.

ENG 302 Studies in Myth and Folklore (3) A critical, comparative study of myth and folklore, which provides students with knowledge and analytical perspectives on the way various oral traditions inform English literature, past and present. Pre: C or better in ENG 300 or instructor's consent.

ENG 304 Survey of British Lit I (3) Survey of British Literature, Middle Ages to Enlightenment. Pre: C or better in ENG 300.

ENG 305 Survey of British Lit II (3) Survey of British Literature, Romanticism to the Present. Pre: C or better in ENG 300.

ENG 314 Advanced Multimedia Writing (3) An advanced media writing class with a focus on technology-driven multimedia. Applied learning methods are used to examine and effectively implement the principles of media writing while exploring various approaches of digital platforms. Pre: ENG 100, 100T, ESL 100 or 100T, or instructor's consent (Attributes: DH, GL) (Attributes: DH, GL)

ENG 318 Playwriting (3) Basic course in writing for the stage. Development of theme, action, and characterization for the one-act play form. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T; or consent of instructor (Same as DRAM 318) (Attributes: DA, GL)

ENG 321 Morphology And Syntax (3) Introduction to grammatical analysis and theory; practical experience in solving problems in morphology and syntax, using data drawn from a wide variety of languages. Pre: LING 102 or instructor's consent. (Same as ANTH 321, LING 321).

ENG 323 The Literature of Hawai'i (3) A critical analysis of the history of literature in the Hawaiian Islands. Study will touch upon the

politicization of the Hawaiian language, the insider/outsider debate, the emergence of local literature, and ethnic/racial divides in contemporary discussions of literary craft and study. Class will include oral narratives (chants, hula), expatriate literature (Bingham, London, Michener), and a wide range of local texts. Pre: C or better in ENG 300 or instructor's consent (Attributes: ALEX, DL, GAHP, GCC, GH, HPP)

ENG 324 Modern English Grammar & Usage (3) The fundamentals of English grammar and syntax, conventions of written and spoken English, and rhetorical choices at the sentence level. Pre: C or better in ENG 100, ENG 100T, ESL 100, ESL 100T, HAW 201, KHAW 201, JPNS 201, FIL 201, CHNS 201, or SPAN 201. (Same as LING 324)

ENG 345 Children & Literature (3) Literature in English for and by children, with special emphasis on the ways in which literature promotes social, emotional, and intellectual development. Pre: C or better in ENG 100, ENG 100T, ESL 100, ESL 100T or instructor's consent. (Attributes: DL, GH)

ENG 347 Pidgins And Creoles (3) A study of the world's pidgins and creoles with special reference to the Pacific region; the origin and nature of pidgins and creoles; the relationship between Hawai'i Creole English to other Creoles in the world. The link between the development of a Creole and language acquisition. Recommended: LING 102 or 121. (Same as ANTH/LING 347) (Attributes: GAHP)

ENG 350 Second Lang Acquisition Theory (3) Current research and theories of learning a second or additional language from social, psychological and linguistic perspectives. Topics include the attainment of communicative competence, the critical period hypothesis, focus on form, individual learning styles, and learner autonomy. The emphasis is on how the knowledge of second language acquisition theory helps improve the quality of classroom language teaching. Pre: C or better in ENG 100, ENG 100T or ESL 100, ESL 100T and LING 102 or instructor's consent. (Same as LING 350) (Attributes: DH, GL)

ENG 351 Amer Lit: to the Civil War (3) American literature to the Civil War. Pre: C or better in ENG 300 or instructor's consent.

ENG 352 Amer Lit: Civil War-Pres (3) American literature from the Civil War to the present. Pre: C or better in ENG 300 or instructor's consent.

ENG 355 Women in Modern Lit & Film (3) Literature and film by and about women from 1900 to the present. Feminist literary theory. Pre: C or better in in ENG 300 or instructor's consent. (Same as WS 355) (Attributes: DL, GH)

ENG 356 Language and Gender (3) Students engage in the analysis of gender as it relates to language and society. Provides students with analytic resources for thinking critically about the relationship between language and social practice. Students gather and analyze data based on current theories. Pre: C or better in ENG 100, ENG 100T, ESL 100, or ESL 100T and LING 102, or instructor's consent. (Same as LING/WS 356)

ENG 364 Chnse Lit in Eng-Modern (3) Survey of major Chinese writings from 1919 to the present. Knowledge of Chinese is not required. Pre: ENG 100, 100T, ESL 100, or 100T or instructor's consent. (Same as CHNS 364).

ENG 365 Japanese Lit in English (3) Survey of major works from earliest times to the present. Knowledge of Japanese is not required. (Same as JPST 365) (Attributes: DL, GAHP, GH, GL, HPP)

ENG 366 Utopia in Literature (3) A study of the "Utopian" theme in

literature, from Plato's Republic to the modern science fiction novel. Pre: ENG 100, 100T, ESL 100, or 100T and a 200-level literature course, or instructor's consent.

ENG 370 Advanced Film Studies (3) Students undertake a study of film/editing techniques, genres, and critical theories that influence the production and analyses of film and film-making. This course builds upon 200-level film classes in English. Pre: C or better in ENG 300 or instructor's consent. Recommended: ENG 201, 204, 205, or 206.

ENG 371 Topics in Contemporary Lit (3) The development of contemporary fiction, poetry and drama concentrating upon representative works from 1945 to the present. This course may be taken twice provided that different topics are studied. The letter suffix indicates the topic. Pre: C or better in ENG 300 or instructor's consent.

ENG 387 Climate Change Literature (3) A study of modern environmental writing, focusing on climate change fiction and non-fiction. Students will explore how humans transformed the earth and its atmosphere and now live with changes to various physical environments with implications for the future. Pre: C or better in ENG/ESL 100/T and one 200-level ENG course or consent of instructor. (Same as GEOG 387)

ENG 388 Global Englishes (3) The course explores the expanding role of English as a global language and its increasing importance in intercultural and global communication. It traces how English has changed over the years and how culture, history, and politics influence the development of varieties of English. The course will raise students' awareness and understanding of the varieties of English and their function as a global language in the 21st century. It will also enhance the students' communicative competence in written and spoken discourses to a variety of users of Global Englishes around the world. Pre: ENG 100 or ENG100T or ESL 100 or ESL 100T. (Attributes: DH)

ENG 400 Topics in Classical Literature (3) Studies in Greek and Roman literature from various perspectives (historical, cultural, social). May be offered by genre or theme. May be repeated for credit provided a different topic is studied. Pre: C or better in ENG 300 or instructor's consent.

ENG 418 American Women Writers (3) This course will acquaint students with a variety of writings by women in the Americas. In addition to literary analysis, texts will be viewed in cultural, historical and theoretical contexts. Pre: C or better in ENG 300 or instructor's consent.

ENG 419 Adv Topics in American Lit (3) A course which involves critical analysis of key periods and/or themes in American Literature, ranging from the Transcendentalists to the Beats. The course may also explore major ethnic canons, such as Native American, Chicano/a, Asian American, and African American. The course may be repeated, provided that different topics are studied. Pre: C or better in ENG 300 or instructor's consent.

ENG 422 ESL Teaching Practicum (3) A course requiring students to engage in supervised teaching in an authentic classroom setting with actual learners of ESL. Provides the student with opportunities to observe, describe, interpret and understand the classroom environment and to reflect on the personal and professional attributes required for success in teaching. Students design and implement their own lesson plans and analyze and reflect on the classroom environment in relation to current research. Pre: LING 102, 221 or 331, ENG/LING 324, 350, ENG 484.

ENG 423 Post-Colonial Literature (3) A critical analysis of the development of contemporary world literature in the wake of the fall of

European empires. This class is designed to address the importance of writing in an age of changing national identities, shifting alliances, and volatile conflicts. Texts from Africa, Latin America, the Middle East, the Caribbean, and Hawai'i will be featured. Pre: C or better in ENG 300 or instructor's consent. (Same as WS 423). (Attributes: DL, GH, GL)

ENG 430 Pacific Islands Literature (3) A study of a representative range of contemporary poems, short stories, novels, and plays written in English by Pacific Islanders from Polynesia, Micronesia, and Melanesia. Pre: C or better in ENG 100, ENG 100T, ESL 100, or ESL 100T and a 200-level literature course, or instructor's consent. (Same as WS 431) (Attributes: DL, GAHP, GH, HPP)

ENG 431 Fiction Writing (3) Advanced study and writing seminar in fiction. Students may repeat for credit (maximum 6 credits). Pre: C or better in ENG 100/100T or ESL 100/100T, 3 credits from ENG 200A-F, and 3 credits from ENG 286A/286B or instructor's consent.

ENG 432 Non-Fiction Writing (3) Advanced study and writing seminar in non-fiction. Students may repeat for credit (maximum 6 credits). Pre: C or better in ENG 100/100T or ESL 100/100T, 3 credits from ENG 200A-F, and 3 credits from ENG 286A/286B or instructor's consent.

ENG 433 Poetry Writing (3) Advanced study and writing seminar in poetry. Repeatable one time for a maximum of 6 credits. Pre: C or better in ENG 100/100T or ESL 100/100T, 3 credits from ENG 200A-F, and 3 credits from ENG 286A/286B or instructor's consent.

ENG 434 Creative Writing Practicum (3) Students work with a faculty mentor to analyze, write, and workshop a variety of literary genres, and to perform applied learning activities such as teaching a creative writing class, publishing a literary journal, organizing a visiting writer event, giving public readings of their own work, and curating their own creative collections. This course is repeatable once for a total of 6 credits. Pre: Instructor approval.

ENG 436 Flash Fiction Writing (3) Advanced study and writing seminar in flash fiction: short short stories from micro to sudden fiction. Pre: C or better in ENG 100/100T or ESL 100/100T and ENG 286A, or instructor's consent.

ENG 442 Romantic Literature (3) Poetry and prose from 1780 to 1832. Pre: C or better in ENG 300 or instructor's consent. (Same as WS 422).

ENG 445 Victorian Literature (3) Poetry and prose from 1832 to 1900. Pre: C or better in ENG 300 or instructor's consent.

ENG 448 Graphic Novels and Comics (3) Advanced study of major developments, schools and styles in contemporary graphic novels and comics. Emphasis on literary theory and analysis. Pre: C or better in ENG 300 or instructor's consent. (Same as WS 448). (Attributes: DL, GL)

ENG 461 Shakespeare (3) Selected histories, comedies, and tragedies. Pre: C or better in ENG 300 or instructor's consent.

ENG 464 Modern Literature (3) British and American literature from 1900 to WWII with emphasis on the development of Literary Modernism. Pre: C or better in ENG 300 or instructor's consent.

ENG 465 Post-Modern Literature (3) A study of literature (including theoretical essays, plays, film, and poetry) following WWII. The course will address contemporary responses to and against the Modernist Period and may cover movements such as Literature/Theatre of the Absurd, Magical Realism, the San Francisco Renaissance, the Black Mountain Poets, and the Angry Young Men's Movement. Pre: C or better in ENG

300 or instructor's consent.

ENG 466 The Contemporary Fairy Tale (3) A study of a representative range of contemporary fairy tales in English, which incorporates current theories and analytical approaches to literary fairy tales and the politics of interpretation. Pre: C or better in ENG 300 or instructor's consent.

ENG 469 Advanced Topics in Film (3) A course that analyzes advanced theoretical approaches to film and/or stage. The course may explore themes, such as film noir or 3rd Cinema. The course may be repeated, provided that different topics are studied. Pre: C or better in ENG 300 or instructor's consent.

ENG 475 Topics in Literary Criticism (3) Advanced analyses of literature via specific schools of theoretical criticism, such as Psychoanalysis, Deconstruction, Marxism and New Criticism. The course may be repeated for credit, provided that a different topic is chosen. Pre: C or better in ENG 300 or instructor's consent.

ENG 480 Women and Rhetoric (3) Survey of key female figures that have figured (or not figured) into the rhetorical canon. Analysis of women's use of rhetoric in everyday life and at historic moments and consideration of methodological and theoretical issues intersecting women, rhetoric and historical research. Pre: C or better in ENG 300 or instructor's consent. (Same as WS 480).

ENG 482 Teaching Composition (3) Overview of current theory and research informing contemporary English composition instruction at elementary, secondary, and college levels with methods for application to teaching or writing at any level or within any discipline. Pre: C or better in ENG 300 or instructor's consent.

ENG 483 Modern/Contemporary Drama (3) A study of works which have established or refined major traditions in modern theater, with some reading in critical theory. Pre: C or better in ENG 100, ENG 100T or ESL 100, ESL 100T and 200-level coursework in literature. (Same as DRAM 483). (Attributes: DL)

ENG 484 ESL Materials & Methods (3) Overview of current theory and practice in the teaching of English as a Second Language. In addition to studying and evaluating various theoretical approaches to ESL teaching and second-language learning, students will gain experience developing and using their own teaching materials. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T and ENG/LING 350, or instructor's consent. (Attributes: DH, GL)

ENG 488A Single Author Pre-1700 (3) A semester long consideration of the literary output of a single author selected by the instructor. May be repeated for credit provided that a different topic is studied. Credit may be earned in each different period A) Pre-1700; B) Post-1700. Pre: C or better in ENG 300 or instructor's consent.

ENG 488B Single Author Post-1700 (3) A semester-long consideration of the literary output of a single author selected by the instructor. May be repeated for credit provided that a different topic is studied. Credit may be earned in each different period: (A) Pre-1700; (B) Post-1700. Pre: C or better in ENG 300 or instructor's consent.

ENG 489 Major Literary Movements (3) Advanced senior-level studies of schools and movements not covered by the Department's current British Literature offerings or by ENG 419. Possible topics include Realism and Naturalism, the Bengali Renaissance, Avant-Garde and the Era of the Decadents, the Celtic Revival, and Magic Realism. The course may be repeated, provided that different topics are studied. Pre: C or

better in ENG 300 or instructor's consent.

ENG 492 Teaching Literature (3) A course that covers the praxis of teaching literature as well as the theory surrounding literary studies. Students will learn to create creative and analytical exercises and critically evaluate and utilize a wide range of resources for the teaching of poetry and prose at the secondary and post-secondary level. Pre: C or better in ENG 300 or instructor's consent.

ENG x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ENG x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

English Language Institute (ELI) Courses

[English Language Institute \(ELI\)](#)

ELI 091 Listening & Speaking, Int (4) This course is designed for non-native English speakers to gain practice in listening comprehension, conversational skills, discussion skills, and understanding cultural differences. This course does not count towards graduation from UH Hilo. Pre: Placement into ELI 091 on the English Language Placement Assessment. (Previously offered as ESL 061)

ELI 093 Academic Reading, Intermediate (4) This course is designed for non-native English speakers to prepare them for academic reading with work in vocabulary, understanding complex sentence structure, reading strategies, and writing in relation to reading. This course does not count towards graduation from UH Hilo. Pre: Placement into ELI 093 on the English Language Placement Assessment. (Previously offered as ESL 063)

ELI 101 Academic Oral Communication 1 (4) This course is designed for multilingual learners to improve listening comprehension, critical thinking, and communicating ideas in English and meeting American expectations. Native-speaker lectures and speech practice accelerate the learning skills needed for university work. Focus is on taking effective and well-organized notes on lectures, participating in discussions and giving both formal and informal presentations. Pre: Placement into ELI 101 on the English Language Placement Assessment or successful completion (CR) of ELI 091 or successful completion (CR) or ESL 061.

ELI 103 Academic Reading Strategies 1 (4) Designed for non-native English speakers to strengthen academic reading skills. Focus is on building vocabulary, annotating, articulating stated and inferred ideas, distinguishing between fact and opinion, summarizing and responding thoughtfully to academic texts. Pre: Placement into ELI 103 on the English Language Placement Assessment or successful completion (CR) of ELI 093 or successful completion (CR) of ESL 063.

ELI 104 Rhetorical Writing Styles 1 (4) Designed for non-native English speakers to practice writing coherent, well-developed paragraphs and essays in a variety of rhetorical styles. Pre: Placement into ELI 104 on the Writing Placement Assessment or successful completion (CR) of ELI 094, or successful completion (CR) or ESL 064.

ELI 125 Academic Reading Strategies 2 (4) Designed for multilingual

learners to develop effective reading approaches to university-level texts as well as the critical reading skills necessary to comprehend, analyze, conduct research, summarize, synthesize and respond thoughtfully in both writing and speaking to authentic texts. Emphasis is on vocabulary development, main ideas and specific details, and drawing inferences. Pre: ESL 073 or ELI 125 placement on the English Language Placement Assessment. Previously Offered as ESL 083.

ELI 201 Academic Oral Communication 2 (4) Designed for non-native English speakers to practice comprehending authentic American lecture discourse, spoken discourse and cross-cultural communication. Emphasizes effective note-taking, using the information for discussions and debate, giving well-organized and clearly expressed formal and informal presentations, and developing successful strategies for small group communication and collaboration. Pre: Placement into ELI 201 on the English Language Placement Assessment or a C or higher in ELI 101 or Credit (CR) in ESL 071. (Attributes: DH, GL)

ELI 203 Academic Reading Strategies 2 (4) Designed for non-native English speakers to develop an effective reading approach to university-level texts as well as the critical reading skills necessary to comprehend, analyze, conduct research, summarize, synthesize and respond thoughtfully in both writing and speaking to authentic texts. Pre: Placement into ELI 203 on the English Language Placement Assessment or a C or higher in ELI 103 or successful completion (CR) in ESL 073. (Attributes: DH, GL)

ELI 204 Rhetorical Writing Styles 2 (4) Designed for non-native English speakers to practice writing expository essays, with an emphasis on the development of critical thinking skills, organization and support in argumentation. Attention is given to various stages of the writing process and on identifying and editing grammatical errors. Pre: Placement into ELI 204 on the Writing Placement Assessment or a C or higher in ELI 104 or successful completion (CR) in ESL 074. (Attributes: DH, GL)

ELI x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ELI x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

English as a Second Language (ESL) Courses

[English Language Institute \(ELI\)](#), [Center for Community Engagement \(CCE\)](#)

ELI courses, while carrying administrative credit, do not count toward graduation from UH Hilo. All courses listed below are ELI courses, except ESL 100 Composition/Nonnative Speakers (3) and ESL 100T Composition/Non-native Tutorial (3). For tuition and immigration purposes, the courses count as three semester credit hours each.

ESL 061 Listening & Speaking, Int (4) This course is designed for non-native English speakers to gain practice in listening comprehension, conversational skills, discussion skills, and understanding cultural differences. This course does not count towards graduation from UHH. Entry requirement: ESL 061 placement on the English Language

Placement Assessment.

ESL 062 English Grammar, Intermediate (3) This course is designed for non-native English speakers to provide them with practice of the rules of noun and verb forms, connecting words and other forms as they are used in English writing and speaking. This course does not count towards graduation from UH Hilo. Entry requirement: ESL 062 placement in the English Language Placement Assessment.

ESL 063 Academic Reading, Intermediate (4) This course is designed for non-native English speakers to prepare them for college-level academic reading with work in vocabulary, understanding complex sentence structures, reading strategies, and writing in relation to reading. This course does not count towards graduation from UH Hilo. Entry requirement: ESL 063 placement on the English Language Placement Assessment.

ESL 064 Academic Writing, Intermediate (4) This course is designed for non-native English speakers to prepare them for academic writing with work in sentence structure and the development of paragraph skills in a range of rhetorical styles. This course does not count towards graduation from UH Hilo. Entry requirement: ESL 064 placement on the Writing Placement Assessment.

ESL 071 Listening & Speaking, High Int (4) Designed for non-native English speakers to improve listening comprehension, thinking, and communicating ideas in English. Native-speaker lectures and speech practice accelerate the learning skills needed for college work. Focus is on taking effective and well-organized notes on high-intermediate level lectures, participating in discussions and giving both formal and informal presentations. This course does not count towards graduation from UH Hilo. Entry requirement: ESL 071 placement on the English Language Placement Assessment or successful completion of ESL 061.

ESL 072 English Grammar, High Int (3) Designed for non-native English speakers to develop their grammatical accuracy in writing and speaking. Focus is on verb tenses, subject/verb agreement, passive voice, connectives; adjective, noun and adverb clauses; gerunds and infinitives, prepositions and using the conditional. This course does not count towards graduation at UH Hilo. Entry requirement: ESL 072 placement on the English Language Placement Assessment or successful completion of ESL 062.

ESL 073 Academic Reading, High Int (4) Designed for non-native English speakers to build and strengthen academic reading skills. Focus is on building vocabulary, previewing and predicting, skimming and scanning, finding main ideas and details, annotating, articulating stated and inferred ideas, distinguishing between fact and opinion, summarizing and responding thoughtfully to academic texts. This course does not count towards graduation from UH Hilo. Entry requirement: ESL 073 placement on the English Language Placement Assessment or successful completion of ESL 063.

ESL 074 Academic Writing, High Int (4) Introduction and practice in writing coherent, well-organized, well-developed paragraphs and multi-paragraph essays in a variety of rhetorical styles. This course does not count towards graduation from UH Hilo. Entry requirement: ESL 074 placement on the Writing Placement Assessment or successful completion of ESL 064.

ESL 081 Listening & Speaking, Advanced (4) Designed for non-native English speakers to practice authentic listening comprehension and notetaking, use the information for discussions and debate, and give well-organized and clearly expressed formal and informal presentations, thinking, and communicating ideas in English requisite for college study.

Authentic lectures and formal speech practice expose students to the language used and required in academic coursework. This course does not count towards graduation from UH Hilo. Entry Requirement: ESL 081 placement on the English Language Placement Assessment or successful completion of ESL 071.

ESL 082 English Grammar, Advanced (3) (lecture/lab) Designed for non-native English speakers, this is an overview and practice of advanced grammatical structures that are used in university-level speaking and writing. Emphasis is on identifying grammar problems and developing editing skills for academic writing. This course does not count towards graduation from UH Hilo. Entry Requirements: ESL 082 placement on the English Language Placement Assessment or successful completion of ESL 072.

ESL 083 Academic Reading, Advanced (4) Designed for non-native English speakers to develop an effective reading approach to university-level texts as well as the critical reading skills necessary to comprehend, analyze, conduct research, summarize, synthesize and respond thoughtfully in both writing and speaking to authentic texts. Emphasis on vocabulary development, finding main ideas and specific details, and drawing inferences. This course does not count towards graduation from UH Hilo. Entry requirement: ESL 083 placement on the English Language Placement Assessment or successful completion of ESL 073.

ESL 084 Academic Writing, Advanced (4) Designed for non-native English speakers to practice writing expository essays, with an emphasis on the development of critical thinking skills, organization and support in argumentation. Attention is given to various stages of the writing process: generating ideas, drafting, peer review, and revision. Special emphasis and on identifying and editing of grammatical errors. This course does not count towards graduation from UH Hilo. Entry requirement: ESL 084 placement on the Writing Placement Assessment or successful completion of ESL 074.

ESL 085 American English Pronunciation (2) (other) Designed for non-native speakers to improve their Standard American English (SAE) pronunciation. Emphasis is on making speech intelligible. Students will focus on vowel and consonant sounds, word-, phrase-, and sentence-stress, intonation, and rhythm. During class, students will practice differentiating speech sounds in both listening and production. Outside of class, student will use technology to practice. This course does not count towards graduation from UH Hilo. No Prerequisites. Repeatable once for credit.

ESL 086 American Culture & Community (2) This multi-level course for non-native English speakers explores American culture through hands-on learning about topics such as treatment of the elderly, the environment, people with disabilities, addiction, homelessness, education, immigration and the treatment of animals. Topics will change each semester and a culminating project designed by students completes the course. Transportation to each on-site activity will be provided. This course does not count towards graduation from UH Hilo. CR/NC. Repeatable one time for credit. No prerequisites.

ESL 087 American Culture through Film (2) This multi-level course for non-native speakers of English explores American culture through films about topics such as independence, civil disobedience, gender roles, race relations, individuality, overcoming odds, freedom, equality, education and immigration. Films will change each semester and a culminating project designed by students completes the course. This course does not count towards graduation from UH Hilo. No prerequisites. Repeatable one time for credit.

ESL 100 Composition/Nonnative Speakers (3) Instruction in writing

clear, effective university-level essays and research paper. Attention to all stages of the process: generating ideas, drafting, revising, and editing. Pre: ESL 100 recommendation on the Writing Placement Examination and completion or exit by test. (Attributes: FW, GF)

ESL 100T Composition/Non-native Tutorial (3) Instruction and practice in writing clear, effective university-level essays and research paper. Fulfills expository writing (ENG 100) requirement for non-native speakers of English only. Pre: ESL 100T recommendation on Writing Placement Exam and completion or exit by test. (Attributes: FW, GF)

ESL x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ESL x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Entomology (ENTO) Courses

College of Agriculture, Forestry & Natural Resource Management (CAFNRM)

ENTO 262 Intro Beekeeping (3) (lecture/lab) Biology, behavior, and management of honeybees for honey production. Limited enrollment. Pre: instructor's consent. (Attributes: ALEX, GCC)

ENTO 304 General Entomology (3) Structure, classification and identification of insects. Pre: BIOL 171 or 172 or instructor's consent. (Same as BIOL 205)

ENTO 350 Advanced Beekeeping (3) (lecture/lab) Advanced beekeeping practices designed to improve hive quality such as queen rearing, artificial insemination, and requeening, as well as the utilization of products from the hive. Limited enrollment. Repeatable once for a maximum of 6 credits. Pre: ENTO 262 or instructor's consent.

ENTO 374 Insect Pest Control (3) (lecture/lab) Destructive and beneficial insects; principles of cultural, mechanical, legislative, biological, and chemical control. Pre: ENTO 304 or instructor's consent.

ENTO x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ENTO x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Environmental Studies/Science (ENSC) Courses

College of Arts and Sciences (CAS)

ENSC 100 Intro to Environmental Science (3) Introductory course linking the human and physical/ chemical/biological world. Emphasis on

current global and local issues related to pollution, biodiversity, ecosystem services, climate change, resource consumption and sustainability. Focus on critical thinking and the integration of both natural and social science perspectives in understanding and addressing environmental issues. (Attributes: DB, GN, GQ)

ENSC 301 Global Warming/Climate Change (3) Concepts and processes of global warming and climate change: electromagnetic radiation and energy balance, greenhouse effects, past climates, and local and global impacts and mitigation strategies. We will read and analyze classic and current journal articles and gain experience working with simple climate models. Pre: ENSC 100 or GEOG 101. (Same as GEOG 301)

ENSC 384 Primatology (3) Evolutionary approach to the nonhuman primates. Biological and behavioral adaptations of primates to their ecological setting. Implications of primate adaptations for understanding human biology and behavior. Pre: ANTH 215, or BIOL 172. (Same as ANTH, BIOL 384)

ENSC 385 Field Methods in Geog/Env Sci (3) Geographic field methods for assessment and monitoring the physical/biological/anthropogenic environment. Instrumentation, data collection, and analysis; planning and land management applications. Pre: GEOG 201 or instructor's consent. (Same as GEOG 385) (Attributes: GAHP) (Attributes: GAHP)

ENSC 436 Environ Politics in Pacific (3) This course will examine the ways that government policies, economic development and globalization affect the environment in the Pacific region as well as the ways that environmental problems affect political debates and actions. Utilizing the research approach or political ecology this course for advanced students will explore contemporary viewpoints on terrestrial resource management, preservation, population growth, land degradation, marine and terrestrial resource management, environmental contamination, and other environmental issues across Polynesia, Melanesia and Micronesia. Pre: Junior or Senior standing and completion of any upper-level Pacific Island Studies Certificate course, or instructor's consent. (Same as GEOG 436) (Attributes: GAHP) (Attributes: GAHP)

ENSC 441 Environmental Impact Assessment (3) Introduction to the theory and methods of environmental impact assessment (EIA). Emphasis on the biophysical, cultural, social, economic and legal foundations of the federal and state EIA process as well as strategies to mitigate the negative environmental impacts of development. Students engage in critical evaluation and preparation of an EIA. Pre: junior or senior standing or consent of instructor. (Same as GEOG 441).

ENSC 457 Vegetation of the Hawaiian Isl (3) This course explores the major types of vegetation in Hawai'i with respect to physical environments and important species. Basic concepts in taxonomy and identification are emphasized. Coursework includes field excursions at various sites around the island of Hawai'i to develop methods in surveying and monitoring vegetation. This course also examines major human impacts and conservation challenges. Pre: BIOL 156 or BIOL 281. (Same as BIOL 457). This course is dual listed with CBES 657.

ENSC 495 Senior Seminar Environ Science (3) (other) Capstone course for Geography, Environmental Studies and Environmental Science majors, integrating previous coursework into disciplinary framework. Seminar focuses on research, writing and discussion of themes in contemporary geography and environmental studies and science. Pre: Major in Geography or Environmental Science, junior or senior standing and one of the following: GEOG 328, GEOG 336, GEOG 382, GEOG 385, or GEOG 481 (Same as GEOG 495).

ENSC x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ENSC x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Filipino (FIL) Courses

College of Arts and Sciences (CAS), Languages

FIL 101 Elementary Filipino I (4) (lecture/lab) This course involves an introduction to the Filipino language as a tool for communication in simple social situations. Emphases are on developing the four language skills: Speaking, Listening, Reading and Writing. However, the course will focus on Speaking and Listening skills as foundation in the beginner's program. The course will pay close attention to the sounds of the Filipino language, including intonation and stress, as well as vocabulary and simple grammatical structures. The course will present different social situations, which involves the turntaking skills, courtesies, and initiating and ending a communication exchange. (Attributes: DH, GAHP, GH, GL, HPP)

FIL 102 Elementary Filipino II (4) This is a continuation of FIL 101. Emphases are on developing the four language skills: Speaking, Listening, Reading, and Writing. The course will focus on speaking and listening as foundational skills. The course will pay close attention to the sounds of the Filipino (Tagalog) language, including intonation and stress, as well as vocabulary and grammatical structures of the elementary level. The course will present different social situations, which involve turntaking skills, courtesies, and initiating and ending a communication exchange. Pre: FIL 101. (Attributes: DH, GAHP, GH, GL, HPP)

FIL 200 Inter Conversational Filipino (3) Students will be given an introduction to Tagalog, one of the most widely used and understood languages in the Philippines and overseas Filipino communities. Attention will be given to developing language skills in four areas: Speaking, Listening, Reading and Writing. However, this course will focus on speaking and listening skills to establish a foundation at an intermediate level. Students will learn how to apply the skills learned in common social situations through various hands-on activities. Reading material and other sources will be utilized to supplement course learning. Pre or Coreq: FIL 102 or instructor's consent. (Attributes: DH, GAHP, GH, GL, HPP)

FIL 330 Filipino Films (3) This is a survey course on Philippine cinema presented in in Filipino with English subtitles. In this course students will be taught how to watch and listen to films; then identify and analyze various issues within Philippine socio-political contexts. Through lectures, discussions, and various classroom activities, students will develop critical thinking skills necessary for investigating ethical issues in Philippine films. (Attributes: ALEX, DH, GAHP, GCC, GH, HPP)

FIL 331 Lang, Cul, & Soc in the Phils (3) This course is an introduction to the language, culture, and society in the Philippines. Central to every human activity is language that is used in expressing, defining, relating, and interpreting human behavior, experience, and existence in society.

FIL 333 Filipinos in Hawaii (3) This upper-division and interdisciplinary course will provide an overview of the historical and contemporary experiences of Filipinos in Hawai'i, focusing primarily on issues related to race, ethnicity, migration, gender, culture, power, representation, and globalization. (Attributes: DS, HPP)

FIL 354 Filipino Culture (3) This course is an introduction to peoples and cultures of the Philippines. Topics include cultural origins, linguistic and cultural diversity, values, social structure and overseas Filipino adaptation. This course is cross-listed with ANTH 354.

FIL 430 Cont Fil Soc & Cultr in Film (3) This upper division course deals with the contemporary Filipino society and culture in film. Students are introduced to the concepts, structures, and dynamics of culture, society, migration, and diaspora of the Filipinos in the modern period from the year 2000 CE.

FIL 431 Phils and the Malay World (3) This course focuses on the Philippines as part of the greater Malay World. This course introduces the students to the sociopolitical, economic, historical, linguistic, and cultural aspects related to the Filipinos as integral part of the Nusantara or the Maritime Southeast Asia. (Attributes: DH, HPP)

FIL 432 Spanish Heritage in the Phils (3) This course deals with the study of Spanish heritage in the Philippines. It aims to provide the students an introduction to Hispanism and the influence of Spain in the Philippines. It focuses on the Spanish colonial history, language, culture, literature, education, religion, and other institutions of the Philippines. (Attributes: DH, HPP)

FIL x94 Special Topics in Subject Matter (Arr.) (IO) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

FIL x99 Directed Studies (Arr.) (IO) Statement of planned reading or research required. Pre: instructor's consent.

Finance (FIN) Courses

College of Business and Economics (COBE)

FIN 220 Personal Finance (3) A managerial concept is applied to personal financial affairs; traditional life-cycle approach is structured in terms of a personal balance sheet model; begins with various tools and techniques of planning and ends with the ultimate disposition of the estate; brief case problems are used for illustration. (Attributes: DS, GCC, GQ)

FIN 320 Prin Bus Finance (3) Introduction to concepts and techniques of business finance. Topics include organizational forms, agency relationships, financial analysis and planning, the capital formation process and capital markets, risk and return, time value of money, stock and bond valuation, and capital budgeting. Pre: C or better in ACC 201; C or better, or concurrent enrollment, in MATH 125 or higher.

FIN 321 Invest & Secur Analysis (3) Fundamentals of the securities market; development of skills needed to analyze current portfolios and potential investments. Topics include risk reduction, investment analysis, security valuation, portfolio management and option/futures speculation. Pre: C or better in FIN 320; successful completion of 45 college credits.

FIN 322 Corporate Finance (3) Development of tools to help managers analyze and solve financial problems. Topics include capital budgeting, capital structure, dividend policy, lease financing, short and long term asset and liability management, options and futures contracts, merger/take-over analysis and bankruptcy analysis. Pre: C or better in FIN 320.

FIN 325 Small Bus Finance (3) Application of financial principles to small business firms. Topics include planning, valuation, investment decision making (fixed and working capital investments) and procurement of funds. Pre: C or better in FIN 320 and successful completion of 45 college credits.

FIN 370 Prin Real Estate (3) Real estate principles including legal, physical, and economic elements, as well as concepts of valuation, market analysis, and finance. Examined are public and private externalities affecting the allocation and utilization of real estate resources. Pre: FIN 320 and junior standing.

FIN 371 Real Estate Invest & Fin (3) Application of the investment process to produce the optimal decision for the investor in choosing among alternatives. Topics include market research, forecasting cash flows, tax considerations, measuring investment performance, and the risk element. Pre: Fin 370 and junior standing.

FIN 412 Options & Other Derivatives (3) Detailed coverage of derivative securities including options, swaps, forwards and futures. Pricing, arbitrage relationships, use and trading strategies of derivatives are discussed. Contemporary issues in financial engineering. Special emphasis is placed on the use of derivatives by smaller businesses. Pre: C or better in FIN 320.

FIN x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

FIN x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Forestry (FOR) Courses

College of Agriculture, Forestry & Natural Resource Management (CAFNRM)

FOR 202 Forestry & Natural Resources (3) (lecture/lab) Development of forestry and agroforestry, forest biology, soils, ecology, conservation, management, and products. Field trips to various forestry operations.

FOR 340 Remote Sensing GIS in Forestry (3) Application of remote sensing and GIS in forestry. Spatial data structures, map projection, global positioning system. How to create spatial data sets through GPS survey. Utilization of GIS software and performance of basic spatial analyses.

FOR 350 Tropical Silviculture (3) (lecture/lab) Sustainable methods and techniques for manipulation of tropical forest ecosystems to meet management objective; artificial and natural regeneration; site preparation and harvest methods; soil and water resources management; silviculture and the gene pool; intermediate stand tending

and maintenance of forest health.

FOR 360 Urban Forestry (3) Conservation, management and restoration of trees, forests and related natural resources are core topics including the evolution of today's public and private urban forestry programs. Primary focus is urban forestry from ecological, economic, socio-cultural and economic perspectives. Changing demographics of urban areas, urban development and sprawl, resultant impacts and the political landscape are also topics. Sustaining urban forest systems through understanding or organization, structure, function and processes in a stressed environment are emphasized.

FOR 440 Forest Ecosyst Restoration/Mgt (3) (lecture/lab) The course gives the students an introduction to basic knowledge on the interdependent disciplines, restoration ecology and ecological restoration, with specific emphasis on forests. Planning and restoration strategies for natural systems in the tropical regions; assessing the condition and threats to native and planted forests and developing plans for their management; introducing tools used by restoration ecologists to solve practical problems; discussing scope and success of actual restoration projects.

FOR x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

FOR x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

French (FR) Courses

College of Arts and Sciences (CAS), Languages

FR 101 Elementary French I (4) Conversation, laboratory drill, grammar, reading, using film strips, interactive software, slides and tapes. (Attributes: DH, GH, GL)

FR 102 Elementary French II (4) Conversation, laboratory drill, grammar, reading, using film strips, interactive software, slides and tapes. Pre: FR 101 or equivalent. (Attributes: DH, GH, GL)

FR 201 Intermediate French I (4) Reading, conversation, laboratory drill, composition, using film strips, interactive software, slides and tapes. Pre: FR 102 or equivalent.

FR 202 Intermediate French II (4) Reading, conversation, laboratory drill, composition, using film strips, interactive software, slides and tapes. Pre: FR 201 or equivalent.

FR 312 Adv Conver & Composition (3) Major emphasis on strengthening oral and written language skills through reading and discussion of current French-language periodicals, writing informal essays, grammar review, and laboratory drills. Video tapes, movies, interactive software, and film strips also will be used. Pre: FR 311 or equivalent.

FR x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit,

provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

FR x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Geography (GEOG) Courses

College of Arts and Sciences (CAS)

Field trips are sometimes conducted outside of class hours.

GEOG 101 Geog & Nat Environ (3) Survey of the earth's physical environment, including distribution and associations between energy, climate, vegetation, and landforms. Human interrelationships with the physical landscape. (Attributes: DP, GN)

GEOG 102 World Regional Geography (3) Geographic survey of the world's major cultural regions. Processes of spatial integration and differentiation of economic, geo-political, and cultural landscapes. Natural resource distribution and the contrasts and linkages between the developed and under-developed world. (Attributes: FGB, GS, GW)

GEOG 103 Geog And Contemp Soc (3) Examines aspects of culture such as population, agriculture, industry, and religion. Focus on the relationships between people and their environment and resulting regional contrasts. (Attributes: DS, GS)

GEOG 105 Geography Of United States (3) Major features of the United States. Emphasis on what gives character or distinctiveness to various places. (Attributes: GS)

GEOG 107 Hawai'i in the Pacific (3) (lecture/other) Introduction to the geographies of Hawai'i and the Pacific Islands region, emphasizing indigenous world views. Through lecture, discussion, and web based learning, the course focuses on the historical and contemporary links between Hawai'i and Oceania and provides a context for understanding the people, cultures, and environments of the region. (Attributes: DS, GAHP, GS, HPP)

GEOG 120 Weather & Climate Hawai'i (3) For non-science majors and prospective science teachers. Basic meteorology, sun-earth-ocean-atmosphere interrelationships, weather types, seasonal changes, trade winds, clouds, rainfall, with examples drawn from the local weather and climate. (Same as PHYS 120) (Attributes: ALEX, DP, GAHP, GCC, HPP)

GEOG 201 Interp Geog Data (3) Introduction to methods of analysis and display of a variety of geographical data. Introduction to geographical methods, basic computer programs, concepts of computer cartography, map interpretation and design, and more advanced techniques including GIS, GPS, and remote sensing. (Attributes: GQ)

GEOG 280 Introduction to Geostatistics (3) Application of statistical and mathematical models in a geographic context. The use of multivariate techniques in assessing spatial relationships. This course will cover basic theory, methods, and techniques for the statistical analysis of spatial data. Students will learn and employ elementary techniques for describing, modeling, and analyzing spatial data using Excel, ArcGIS, and/or MATLAB. Pre: GEOG 102 or GEOG 103 or GEOG 101 or ENSC 100. (Attributes: GQ)

GEOG 295 Pacific: Brown Bag Seminar Ser (1) (other) Weekly one hour seminars will cover a broad range of topics, current research and topical issues that are of relevance to contemporary ways of life in the

Pacific. Seminars will also explore the application of Pacific Studies to the workforce. Credit is gained by weekly attendance and the submission of short summaries of the weekly seminars. (Same as ANTH 295).

GEOG 300 Climatology (3) Elements and controls of climate. Dynamic processes of atmospheric circulation: the distribution patterns of solar radiation, temperature, precipitation, and evaporation. Energy and water balance concepts, climate classification. Pre: GEOG 101 or consent of instructor.

GEOG 301 Global Warming/Climate Change (3) Concepts and processes of global warming and climate change: electromagnetic radiation and energy balance, greenhouse effect, past climates, and local and global impacts and mitigation strategies. We will read and analyze classic and current journal articles and gain experience working with simple climate models. Pre: ENSC 100 or GEOG 101. (Same as ENSC 301).

GEOG 309 Biogeography (3) Basic evolutionary and ecological principles underlying the dynamics of plant and animal population. Mechanisms of isolation, speciation, dispersal, migration, and competition as they affect past and present world distribution patterns. Island biogeography. Pre: ENSC 100 or GEOG 101 or BIOL 101 or 171 or 172; or consent of instructor. (Same as BIOL 309) (Attributes: GAHP)

GEOG 312 Food and Societies (3) Different types of food production and consumption systems, and the cultural and environmental constraints operating to produce the resultant patterns. Globalization of agricultural production and consumption. Pre: one introductory geography course. (Attributes: ALEX, DS, GCC)

GEOG 319 Nat Hazards/Disasters (3) Survey of origins, processes, distributions, and effects of hazardous physical forces: hurricanes, tornadoes, drought, floods, earthquakes, volcanism, landslides, erosion, and beach degradation. Hazard perception and adjustment by humans also considered. Pre: GEOG 101 or ENSC 100 or consent of instructor.

GEOG 320 Earth Surface Processes (3) Processes of landform development at large and small scales. Theoretical and applied aspects, including human environment considerations. Field excursions may be required. Pre: GEOG 101 or GEOL 111 or equivalent. (Same as GEOL 342)

GEOG 321 Geog Of Economic Activity (3) Factors influencing the distribution of economic activities at different spatial scales: world, national, local. Consideration of general theories of decision making for urban and industrial locations. Pre: GEOG 103.

GEOG 325 Environments of Law (3) Examines elements of law in built, natural, and propeertized environments. Topics include spatiality, eminent domain, borders, linear jurisprudence, fluid jurisdictions, public landscapes, and evolving tensions involving environment and justice. (Same as POLS 325) (Attributes: ALEX, DS, GCC)

GEOG 326 Natural Resources (3) Philosophy and history of the conservation movement in the United States. Ecological considerations in the management of renewable and nonrenewable resources. Current conservation issues in Hawai'i. Pre: GEOG 101 or ENSC 100 or instructor's consent. (Attributes: GAHP) (Attributes: GAHP)

GEOG 328 Cultural Geography (3) Key concepts in cultural geography and introduction to qualitative research methods in geography. Topics include: histories of cultural geography; landscapes; nature-society relations; critical cultural geographies. Pre: one introductory geography course.

GEOG 329 Rethinking Development (3) This course examines the theory and practice of development, whose goals include poverty reduction, improved human health, and environmental sustainability. We will analyze mainstream development's successes and failures and explore alternative development models rooted in Marxist, feminist, and green perspectives. Pre: GEOG 101 or GEOG 102 or GEOG 103 or GEOG 107 or consent of instructor.

GEOG 331 Tourism Geographies (3) Survey of tourism geographies, addressing a wide-range of topics: tourism representations, tourism development strategies, indigenous tourism development, planning for "sustainable" tourism, and tourism's environmental impacts. Pre: junior or senior standing or instructor's consent.

GEOG 332 Geog Of Hawaiian Islands (3) Introduction to the physical and human geography of Hawai'i. Development of island ecosystems. Polynesian pre-history, post-contact resource exploitation and environmental transformation. History of land tenure and management. Spatial aspects of agriculture, urbanization, and tourism. Pre: GEOG 101 or 103, or consent of instructor. (Attributes: GAHP)

GEOG 335 Geog Of Oceania (3) Physical and human geography of the Pacific Islands region including Australia and New Zealand (excluding Hawai'i). Topics include: regional marine and terrestrial resources; human settlement and landscape transformation; population political geography; economic development, and resource management and environmental issues. (Attributes: GAHP, HPP)

GEOG 336 Political Ecology (3) We will use political ecology to examine how societies shape, and are shaped by, nature, with a focus on the powers and limits of capitalism and the state to transform, manage and produce nature. Pre: GEOG 101, GEOG 102, GEOG 103 or GEOG 107 or consent of instructor. (Attributes: DS)

GEOG 340 Intro to Land Use Planning (3) Land use planning and relationship of geographic concepts to urban, regional, and environmental planning. Emphasis on examples from Hawai'i. Pre: Junior or senior standing.

GEOG 382 Qualitative Research (3) Introduction to the ethics, methodologies, and practice of research in human geography, particularly standpoint epistemologies and associated methodologies. Combines lectures, workshops, and assignments. Students will conduct and report upon their own research. Pre: GEOG 103 or 102 or WS 151 or instructor's consent. (Same as WS 382)

GEOG 385 Field Methods in Geog/Env Sci (3) Geographic field methods for assessment and monitoring of the physical/biological/anthropogenic environment. Instrumentation, data collection, and analysis; planning and land management applications. Pre: GEOG 201 or instructor's consent. (Same as ENSC 385). (Attributes: GAHP)

GEOG 387 Climate Change Literature (3) A study of modern environmental writing, focusing on climate change fiction and non-fiction. Students will explore how humans transformed the earth and its atmosphere and now live with changes to various physical environments with implications for the future. Pre: C or better in ENG/ESL 100/T and one 200-level ENG course or consent of instructor. (Same as ENG 387)

GEOG 401 Confronting the Climate Crisis (3) An examination of how people and societies respond to climate change, through the lens of climate justice, and across academic disciplines, political ideologies, and geographical scale. Pre: Junior or senior standing or instructor's consent.

GEOG 409 Principles of Landscape Ecology (3) Introduction to landscape ecology as a framework for landscape research, analysis and management. Emphasis on spatial patterning - the causes, development, importance of ecological processes, and the spatial interactions of dynamic processes. Focus on concepts, methods and applications of landscape ecology through reading classic and contemporary literature. Pre: GEOG 101 or GEOG 201 or GEOG 309 or BIOL 281 or consent of instructor. Some familiarity with geographic information systems (GIS) and statistics desirable. This course is dual listed with CBES 609.

GEOG 430 Gender, Place and Environment (3) Survey of trends in geography of gender related to place, space and the environment. Addresses spatial interactions of gendered bodies of different ages, class and ethnicities. Pre: junior or senior standing or instructor's consent. (Same as WS 430). (Attributes: ALEX, DS, GCC, GS)

GEOG 435 Senior Seminar Pacific Studies (3) (other) A reading and research seminar under the supervision of faculty from Anthropology, Geography, and/or History on indigenous issues in contemporary Oceania. Topics include indigeneity, sovereignty, climate change and sea-level rise, militarism, and ethnic tensions and violence. Pre: Junior or Senior standing. (Same as ANTH 435, HIST 415) (Attributes: GAHP, HPP)

GEOG 436 Environ Politics in Pacific (3) This course will examine the ways that government policies, economic development and globalization affect the environment in the Pacific region as well as the ways that environmental problems affect political debates and actions. Utilizing the research approach or political ecology this course for advanced students will explore contemporary viewpoints on terrestrial resource management, preservation, population growth, land degradation, marine and terrestrial resource management, environmental contamination, and other environmental issues across Polynesia, Melanesia and Micronesia. Pre: Junior or Senior standing and completion of any upper-level Pacific Island Studies Certificate course, or instructor's consent. (Same as ENSC 436) (Attributes: GAHP) (Attributes: GAHP)

GEOG 440 Community Planning (3) An introduction to comprehensive planning in Hawai'i with emphasis on the environmental, infrastructure, social, economic and other issues underlying good land use plans. Examples from General Plans and Community Development Plans. Pre: GEOG 340 or instructor's consent.

GEOG 441 Environmentl Impact Assessment (3) Introduction to the theory and methods of environmental impact assessment (EIA). Emphasis on the physical environmental, cultural, social and legal foundations of the federal and state EIA process as well as how to minimize negative impacts on economic development. Students engage in critical evaluation and preparation of EIS. Pre: junior or senior standing or consent of instructor. (Same as ENSC 441).

GEOG 470 Remote Sensing/Air Photo (3) Analysis of film and digital images of the Earth's surface collected from cameras and sensors aboard aircraft and satellites. Applications to resource planning, forestry, hydrology and geology. Pre: GEOG 201 or consent of instructor.

GEOG 480 Geog Info Sys & Visualization (3) (lecture/lab) Introduction to basic concepts and skills for using Geographic Information Systems (GIS) to analyze and visualize geospatial data. Topics covered include: computer representation of geographic information, construction of GIS databases, geospatial analysis and applications. Additional focus on visualization skills including cartographic principles and techniques. Pre: GEOG 201 or instructor's consent.

GEOG 481 Advance Geo-Spatial Techniques (3) GEOG 481 is an

advanced course in spatial analysis and modeling specific to Geospatial Information Science. This course will emphasize the application of Geospatial software tools along with the underlying theories and practices to analyze, model and visualize data. A focus on concepts and techniques utilized in GIS provides numerous opportunities for applied learning in terrain modeling, suitability modeling, predictive ecosystem mapping and data visualization. Further knowledge and skills will be developed by customization of GIS applications through interface. This course is dual listed with CBES 681. Pre: GEOG 480 or Instructor's Consent

GEOG 488 Advanced Geostatistics (3) This class is about understanding the uncertainty inherent in predictions made from spatial data. Probability theory, spatial analysis, variogram analysis, kriging, and stochastic simulations (conditional and unconditional). Our focus will be on the theory and application of geostatistical interpolation techniques to address real geographic and environmental problems using real data. Pre: GEOG 280, GEOG 480

GEOG 490 Senior Thesis (3) (lecture/other) Independent research on a significant topic related to the student's area of interest under the supervision of one or more faculty members in Geography and Environmental Science/Studies. Pre: Major in Geography and Environmental Studies or Environmental Science; Senior standing; Instructor's Consent; and one of the following: GEOG 328, GEOG 336, GEOG 382, GEOG 385, or GEOG 481

GEOG 494B Gis for Anthro & Geog (1-6) Please contact the department or division office for more information about this course.

GEOG 495 Senior Seminar in Geography (3) (other) Capstone course for Geography, Environmental Studies and Environmental Science majors, integrating previous coursework into disciplinary framework. Seminar focuses on research, writing and discussion of themes in contemporary geography and environmental studies and science. Pre: Major in Geography or Environmental Science, junior or senior standing, and one of the following: GEOG 328, GEOG 336, GEOG 382, GEOG 385, or GEOG 481. (Same as ENSC 495).

GEOG 496 Planning Internship (3) (other) Juniors and seniors majoring in geography may undertake in-service training in government or private agencies. Pre: junior standing and consent of instructor. (Attributes: ALEX, GAHP)

GEOG x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

GEOG x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Geology (GEOL) Courses

College of Natural and Health Sciences (CNHS)

Field trips are sometimes conducted outside of class hours.

GEOL 100 Environmental Earth Science (3) Introduction to geology for non-science majors with an emphasis on the interaction between the Earth and its human population. The focus is on the solid Earth, natural

hazards, natural resources, and pollution. Note: Geology students with an interest in environmental geology are encouraged to take GEOL 300. (Attributes: ALEX, DP, GCC, GN)

GEOL 100L Environmental Earth Sci Lab (1) (lab) Application of basic geological principles toward the understanding of man's relationship with the environment. Laboratory experiences in hazards mapping and assessment, environmental pollution, global change, and management of our geological resources. Develops skills in interpreting maps and remote sensing images. Pre: GEOL 100 or GEOL 300, which may be taken concurrently.

GEOL 111 Understanding the Earth (3) The study of the Earth, with emphasis placed on the materials, surface features, structures, various erosional and depositional processes, and the role of plate tectonics. Prepares students for further studies in geology. (Attributes: DP, GN)

GEOL 111L Understanding the Earth Lab (1) (lab) Investigation of geological processes using observational techniques. Covers plate tectonics, identification and classification of earth materials, analysis of geological hazards, evaluation of natural resources, and development of map interpretation skills. Field trips highlighting Hawaiian geology. Pre: Concurrent or previous enrollment in either GEOL 100 or GEOL 111, or instructor's consent. (Attributes: DY, GN)

GEOL 112 Hist of the Earth & Its Life (3) The evolution of the earth from the origin of the solar system to the present. Emphasis on plate tectonics, the history of life, and techniques used to reconstruct past events from geologic evidence. Pre: GEOL 111 or consent. (Attributes: DB)

GEOL 112L History of the Earth Lab (1) (lab) Includes topics on fossils and fossilization, measurement of geologic time, stratigraphy, biostratigraphy, geotectonics, paleoecology, sedimentology, and the interpretation of geologic maps. Recommended: GEOL 111L. Pre: GEOL 112, which may be taken concurrently.

GEOL 170 Volcanoes and Earthquakes (3) Systematic study of volcanic eruptions and damaging earthquakes. Applications of the scientific method to understanding their underlying causes. Case studies illustrate how catastrophic eruptions and earthquakes impact climate, the environment and society. (Attributes: DP, GN, GQ)

GEOL 195 Introductory Field Experience (1) (other) Pre- or post-semester field trip (1-2 weeks) to exceptional geologic localities. During the semester students will become familiar with the geologic formations, structure, and history of the area to be visited. Pre: GEOL 112. CR/NC grade. Repeatable for credit. Offered in Spring semester only, alternate years.

GEOL 205 Geology Of Hawaiian Islands (3) A survey of the geological phenomena particular to the Hawaiian Islands, including volcanism, rock and mineral occurrences, landform development, and water resources. (Attributes: DP, GAHP, GN, HPP)

GEOL 212 Earth Materials I: Minerals (4) (lecture/lab) A systematic study of the common minerals involving crystallography, optical properties, crystal chemistry, and occurrence. Laboratory work stresses identification of minerals in hand specimen and using the petrographic microscope. Pre: GEOL 111 and either CHEM 151 or 161, or instructor's consent.

GEOL 300 Adv Environmental Earth Sci (3) In-depth study of the interactions between the human population and our planet. Natural resources, pollution and natural hazards, current issues such as the food

supply and the energy crisis. Community concerns such as waste, natural hazards and environmental legislation. Pre: upper division standing and GEOL 100 or GEOL 111 or GEOL 170 or GEOG 101 or ENSC 100 or MARE 201. (Attributes: ALEX, DP, GCC, GN)

GEOL 320 Earth Mat II: Igneous/Meta Rock (4) (lecture/lab) An introduction to the study of rocks, including their origin, occurrence, composition and classification. Laboratory work involves the identification of rocks in hand specimen and thin section by means of composition and texture. Emphasis on igneous and metamorphic rocks. Pre: GEOL 212 or consent of instructor.

GEOL 330 Deformation of the Earth (4) (lecture/lab) Effects and mechanics of deformation of the earth's crust, involving the description, classification, and origin of geologic structures. Aspects of geotectonics are considered. Pre: GEOL 112 and prerequisites listed for MATH 241, or consent of instructor.

GEOL 340 Sedimentary Processes (4) (lecture/lab) Emphasis on sedimentary processes, properties of sediments and sedimentary rocks, environmental interpretation, and stratigraphic principles and nomenclature. Required field trips. Pre: GEOL 112

GEOL 342 Earth Surface Processes (3) Processes of landform development at large and small scales. Theoretical and applied aspects including human environment considerations. Pre: GEOG 101 or GEOL 111 or equivalent. (Same as GEOG 320)

GEOL 344 Coastal Geology (3) Systematic study of coastal processes and the structure and morphology of the world's coastlines. Topics include tectonic, oceanographic, biologic and anthropogenic influences, hazards, and current issues. Required weekend field trips. Pre: GEOL 111 or MARE 201 or GEOG 101 or ENSC 100 or instructor's consent.

GEOL 352 Planets and Exoplanets (3) Study of the geology and geophysics of Earth-like planets and satellites in the Solar System, with emphasis on understanding terrestrial geology in a border, astronomical context and applications to exoplanet research. Study of the atmospheres of Solar System planets and satellites, and also the formation and evolution of the Solar System and extrasolar planetary systems. Pre: GEOL 111, ASTR 180, PHYS 151 or PHYS 170. (Same as ASTR 352).

GEOL 360 Surface Water (3) Introduction to surface hydrology. Topics include the hydrologic cycle, climate change, streamflow, flooding, drought, water quality, water supply, wetlands, lakes, measurement techniques, and quantitative analysis. Pre: GEOL 111 or GEOG 101 or ENSC 100 and competence in algebra.

GEOL 370 Field Methods (3) (lecture/lab) Familiarization with field instrumentation and techniques. The study of methods used to collect, graphically represent, and interpret geological field data. For the last third of the class, students choose between a post-semester geological mapping project in California, or a geologic mapping project in Hawai'i. Pre: GEOL 330 or consent of instructor. (Attributes: ALEX, GCC)

GEOL 431 Geology Of North America (3) Survey of the structure, stratigraphy, and tectonic evolution of the North American continent from Precambrian to recent. Pre: GEOL 112 or instructor's consent.

GEOL 432 Plate Tectonics (3) Theory and working principles of plate tectonics. Includes quantitative solutions of plate velocities and rotations on a sphere and reconstructions of past plate movements. Pre: GEOL 111.

GEOL 445 GIS for Geology (3) (lecture/lab) Introduction to the use of Geographical Information Systems for storing, displaying, and analyzing geospatial data. Theories, applications in earth and environmental sciences, databases, and data analysis. Pre: GEOL 111 and upper division standing or consent of instructor. Basic computer skills are strongly recommended.

GEOL 450 Geological Remote Sensing (3) (lecture/lab) Application of remote sensing to volcanic hazards, global change, and geologic mapping. Exploration of both satellite and airborne sensor imagery with laboratory exercises focused on modern remote sensing visualization tools and interpretation of optical, thermal and thematic data suites. Pre: any lower division geology class.

GEOL 460 Groundwater (3) Introduction to groundwater hydrology. Topics include: aquifer properties, principles of groundwater flow, quantity and quality of groundwater resources, water chemistry, groundwater contamination and the role of groundwater in geologic processes. Quantitative focus. Pre: GEOL 111, 111L, prior course in chemistry at the high school or college level, and MATH 125 or 241 or instructor's consent.

GEOL 470 Volcanology (3) (lecture/lab) In-depth study of volcanic processes, products and phenomena, including the classification of volcanic eruptions, evaluation of volcanic hazards, and an introduction to eruption monitoring. Pre: GEOL 320 or instructor's consent.

GEOL 471 Volcano Monitoring (3) Survey of deformation, seismological, geochemical, and field mapping methods of monitoring active volcanoes, and their use in forecasting eruptions. Emphasis on field applications. Pre: Previous college credit in geology, mathematics, and other physical sciences, or consent of the instructor.

GEOL 472 Volcano Seismology & Geodesy (3) Investigation of seismotectonic processes of active volcanoes including sources of earthquakes, volcanic tremor, seismic tomography, and seismic methods for volcanic monitoring. Geodetic Investigations of volcanic processes including both earth and space-based methods, data analysis and modeling. Pre: GEOL 111, 111L and MATH 125 or MATH 241 or consent of instructor. Field trips are sometimes conducted outside of class hours.

GEOL 485 Advanced Field Mapping (1) (other) An elective course consisting of 10-14 days of intensive field mapping in selected regions of the United States. Students construct a finished geologic map, including a cross-section, explanation, and a summary of geologic history. Additional fees apply. Pre: GEOL 330.

GEOL 495A Seminar (1) (other) Seminar presentations of topics in the physical sciences by faculty, enrolled students and invited speakers. The first semester (495A) is taken CR/NC; in the second semester (495B), students are required to present a seminar for a letter grade. Pre: senior standing or instructor's consent. (Same as ASTR 495A-495B, PHYS 495A-495B and MATH 495A-495B).

GEOL 495B Seminar (1) (other) Seminar presentations of topics in the physical sciences by faculty, enrolled students and invited speakers. The first semester (495A) is taken CR/NC; in the second semester (495B), students are required to present a seminar for a letter grade. Pre: senior standing or consent of instructor. (Same as ASTR 495A-495B, CHEM 495A-495B, PHYS 495A-495B and MATH 495A-495B).

GEOL 496 Tchg Assist & Tutoring Geology (1) Please contact the department or division office for more information about this course.

GEOL x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

GEOL x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Hawaiian Language (HAW) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

HAW 100 Hawn Language in Action (2) A beginning immersion experience in Hawaiian focusing on the spoken use of the language. (A) usage referring to locations and relationships, (E) usage referring to processes and actors, (I) other. May be repeated for credit if subletters are different. Meets two times weekly. No prerequisites. (Attributes: GAHP)

HAW 101 Elementary Hawaiian I (4) Development of listening, speaking, reading and writing and analytical skills at the elementary level of auxiliary language. Taught within the context of the contemporary culture of the Hawaiian people. (Attributes: DH, GAHP, GH, GL, HPP)

HAW 102 Elem Hawaiian II (4) Continuation of HAW 101. Pre: HAW 101 or placement exam. (Attributes: DH, GAHP, GH, GL, HPP)

HAW 201 Intermediate Hawaiian I (4) Continuation of HAW 102 or 105. A second year study of Hawaiian as an auxiliary language. Pre: HAW 102 or HAW 105 or placement exam. (Attributes: DH, GAHP, GH, GL, HPP)

HAW 202 Inter Hawaiian II (4) Continuation of HAW 201. Pre: HAW 201 or equivalent. (Attributes: DH, GAHP, GH, GL, HPP)

HAW x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

HAW x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [HAW graduate-level courses](#).

Hawaiian Studies (HWST) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

HWST 107 Hawai'i: Center of the Pacific (3) An introduction to the unique aspects of the native point of view in Hawai'i and the larger Pacific with regards to origins, language, religion, land, art, history and modern issues.

HWST 111 Hawaiian 'Ohana (3) The culture of the Hawaiian people as expressed in the home and family. The position of the family as the basis of the larger Hawaiian society and culture. Both ancient and modern aspects covered; extensive use of Hawaiian terminology. (Attributes: DS, GAHP, GS, HPP)

HWST 125 Hawai'i Sustainable Dev Goals I (3) Introduces the way in which we are confronted by challenges of sustainability, both in Hawai'i and all around the world. The U.N. Sustainable Development Goals (SDGs 3, 8, 11, 12, 9, 4, 5, 17) provides the framework to examine the broad spectrum of social, environmental, and economic concerns that all nations must confront in the face of issues such as climate change, hunger, and poverty. Special attention will be paid to these shared global challenges' local impacts and the need for sensitivity and adaptation to local contexts in order to tackle them. (Attributes: DH, HPP)

HWST 126 HI Sustainable Dev Goals II (3) Introduces the way in which we are confronted by challenges of sustainability, both in Hawai'i and all around the world. The U.N. Sustainable Development Goals (SDGs 1, 2, 6, 14, 7, 13, 10, 15, 16) provides the framework to examine the broad spectrum of social, environmental, and economic concerns that all nations must confront in the face of issues such as climate change, hunger, and poverty. Special attention will be paid to these shared global challenges' local impacts and the need for sensitivity and adaptation to local contexts in order to tackle them. (Attributes: DH, HPP)

HWST 175 Intro Music Of Polynesia (3) A general survey of the indigenous and acculturated music of eight major Polynesian island groups: Tonga, Samoa, New Zealand, Cook Islands, Society Islands, Marquesas Islands, Easter Island and Hawai'i. Music is viewed as both an organization of sound and as a product of culture and people. (Same as MUS 175). (Attributes: DH, GAHP, GH, HPP)

HWST 176 Hist & Dev Of Hawn Music (3) A general survey of the interrelationships of indigenous and acculturated Hawaiian music. Vocal music genres to be discussed include: chant; Christian hymn singing; secular choral singing; male and female falsetto singing; Chalangalang; Hapa Haole; and contemporary. Instrumental music genres include: Pre-European instrumental styles; slack key guitar; 'ukulele; and steel guitar. (Same as MUS 176) (Attributes: DH, GAHP, GH, HPP)

HWST 181 Indig Leadership thru Hula I (3) Positions hula, folk dance of Hawai'i, as vibrant cultural- academic platform to investigate, develop, exercise, and assess traditional components of indigenous leadership in a 21st century indigenous world context. A whole body hula experience that relies on multiple intelligence and interdisciplinary approaches to build awareness and actions in indigenous leadership for personal,

familial, and community well-being. Community performance of learning is integral. No previous experience in hula and Hawaiian language required. (A) Hā'ulelāu (E) Kupulāu. May be repeated for credit if subletters are different.

HWST 182 Indig Leadership thru Hula II (3) Positions the ho'opa'a of hula, instrumentalist of folk dance of Hawai'i, as vibrant cultural-academic platform to investigate, develop, exercise, and assess traditional components of indigenous leadership in a 21st century indigenous world context. A whole body hula experience that relies on multiple intelligence and interdisciplinary approaches to build awareness and actions in indigenous leadership for personal, familial, and community well-being. Community performance of learning is integral. No previous experience in hula and Hawaiian language required. (A) Hā'ulelāu (E) Kupulāu. May be repeated for credit if subletters are different. Pre: Completion of both HWST 181A and HWST 181E; or instructor's approval.

HWST 205 Hawaiian Music in Action (2) Learning Hawaiian songs as a means of strengthening knowledge of language, poetry and culture. A) mele 'āina, E) mele pili kanaka, I) other. May be repeated for credit if subletters are different. Conducted in Hawaiian. Pre: HAW 101 or higher. (Attributes: GAHP)

HWST 211 Hawaiian Ethnobotany (3) Hawaiian herbs and plants: their identification, their place in the heritage of the Hawaiian people, their medicinal properties, and other practical uses; extensive use of Hawaiian terminology. (Attributes: DH, GAHP, GH, HPP)

HWST 213 Hawaiian Ethnozoology (3) Hawaiian fishes, birds, and other creatures: their identification, their place in the heritage of the Hawaiian people, methods of capture, their practical uses; extensive use of Hawaiian terminology. (Attributes: DH, GAHP, GH, HPP)

HWST x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

HWST x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [HWST graduate-level courses](#).

History (HIST) Courses

College of Arts and Sciences (CAS)

HIST 151 World History to 1500 (3) A global and historical survey focusing on human societies and cross-cultural interactions to 1500 C.E. (Attributes: FGA, GS, GW)

HIST 152 World History since 1500 (3) A global and historical survey focusing on human societies and cross-cultural interactions since 1500 C.E. (Attributes: FGB, GS, GW)

HIST 201 Pathways in History (1) Students are introduced to the history major; requirements and expectations, academic connections, and pathways within the degree, mapping out their focus in the program

to establish their own journey for success within the major.

HIST 280 Topics in Hawaiian History (3) Through various topics this course offers a survey of the history of the Hawai'i, tracing the impact of major events and historical figures upon Hawaiian society while also considering Hawaiian responses to these changes. May be repeated for credit once if topic changes. (Attributes: HPP)

HIST 284 History of Hawai'i (3) A survey course in the history of the Hawaiian Islands from Polynesian origins to contemporary multi-cultural society. Traces the impact of major events and historical figures upon Hawaiian society and also considers the Hawaiian response to these changes. (Attributes: DS, GAHP, HPP)

HIST 300 Historical Methods (3) Methods of conducting historical research, including library, Internet, and archival research, in addition to an introduction to issues of professional historiography. Students will complete a wide variety of exercises designed to prepare them for historical work of the major. Pre: sophomore standing or instructor's consent.

HIST 301 Professional Practice (3) Examination of academic careers, internships, and professional opportunities for History majors and minors. Topics covered include: building a CV, professionalism, ethics, internships, job market/interview process, and graduate school. Pre: sophomore standing or instructor's consent.

HIST 308 Asian American History (3) This course surveys the histories of Asians in the United States from 1850 to the present. After briefly discussing the earliest Asians in America, the course examines the experiences of Chinese, Japanese, Korean, Southern Asian, Filipino, and Southeast Asian immigrants. Students will also use the Asian American perspectives to explore such topics as diaspora, migration, exclusion, assimilation, race, labor, war, nationalism, transnationalism, and so on.

HIST 309 History of Asian Religions (3) The historical development of Asian religious traditions from their origins to the present, with an emphasis on the major traditions of India, China, and Japan. (Attributes: GAHP)

HIST 310 Hist of Japan I: Early Japan (3) Japanese history and culture from prehistory to the mid-seventeenth century. Topics include: origins of Japanese people and culture; the Imperial state; contacts with China and Korea; aristocratic culture, particularly the role of women; the samurai class and the Shogunates; Buddhism and Shinto; late medieval disorder and development; unification and pacification. Pre: sophomore standing or instructor's consent. (Same as JPST 310) (Attributes: GAHP)

HIST 311 Hist Japan II: Tokugawa to Mej (3) Japanese history and culture from the seventeenth through nineteenth centuries. Topics include: samurai and the class system, political change, economic growth and social tensions; urban and rural evolution; popular culture and literature; Japan's isolation and reopening; collapse of the Tokugawa system; the Meiji Restoration; dissolution of the samurai class; social reorganization and rapid modernization; the Meiji Constitution and new Imperial state. Pre: sophomore standing or instructor's consent. (Same as JPST 311) (Attributes: GAHP)

HIST 312 Hist of China I: Early China (3) Chinese history and culture from prehistory through the Ming dynasty. Topics include: Chinese philosophy, culture, religion and literature; the Imperial State; family institutions; China's relationship with border societies; dynastic cycles and creative disorder; technology and economic change; education and the state examination system; Mongol invasion and empire; China's role in world trade. Pre: sophomore standing or instructor's consent.

(Attributes: GAHP)

HIST 313 History Of China II: Qing (3) Chinese history and culture from the seventeenth century through the fall of the Qing in 1912. Topics include: fall of the Ming and establishment of the Qing Dynasty; Manchu-Han relations; economic growth and world trade; opium; international relations; reformers, reform movements and uprisings; adapting Western ideas and technology; collapse of the Qing. Pre: sophomore standing or instructor's consent. (Attributes: GAHP)

HIST 314 Hist of Jpn III: 20th Cent-Pre (3) Japanese history and culture from 1890 to present. Topics include: Meiji and 1947 constitutions; democracy and leadership; militarism and pacifism; evolving Imperial institution; economic growth and social change; tradition and modernity in Japanese culture; Japan's place in world systems and world culture. (Same as JPST 314) (Attributes: DS, GAHP, HPP)

HIST 316 19th C. Pacific (3) This is a survey course in the history of Oceania, up to and including the 19th C. Topics include migration and settlement of the Pacific, development of complex societies of Oceania, encounters with Euro-Americans, cultural exchange, and colonization. Pre: Sophomore standing or instructor's consent. (Attributes: DS, GAHP, GS, HPP)

HIST 317 20th C. Pacific (3) This is a survey course in the history of Oceania, from 1900 to the present. Topics include: colonial exploitation, Pacific involvement in World War I and World War II, nuclear testing, decolonization efforts, cultural revitalization and the search for identity in the contemporary world. Pre: Sophomore standing or instructor's consent. (Attributes: DS, GAHP, GS, HPP)

HIST 318 Hist China III: 20th Cent-Pres (3) Chinese history and culture from 1900 to present. Topics include: Fall of the Qing dynasty; Republic of China; warlordism; imperialism and Chinese resistance; Civil War, Communist reunification of the mainland; People's Republic under Mao Zedong; post-Mao Chinese economic reforms and leadership; Nationalist Taiwan's economic growth and slow democratization; international relations including overseas Chinese. Pre: sophomore standing or instructor's consent. (Attributes: DS, GAHP, HPP)

HIST 319 European Women's History (3) Study of European women from pre-history to the twentieth century with emphasis on women's social and cultural roles in western history. Current feminist theory is also studied. Pre: sophomore standing or instructor's consent. (Same as WS 319)

HIST 321 Hist of Australia & N Zealand (3) Both Australia and New Zealand are part of the broader Pacific region, had colonies in the Pacific and continue to have significant influence in the islands. This course examines the origin and nature of their indigenous populations, the evolving nature of their settler communities with Great Britain in the nineteenth century and their development as independent nations in the twentieth century. Offered in Spring Semester only. Pre: sophomore standing or instructor's consent. (Attributes: GAHP)

HIST 322 The Bible and History (3) Selected books of the Old and New Testaments with reference to their historical and cultural background. Pre: sophomore standing or instructor's consent.

HIST 323 Ancient Greece (3) Political, social, and cultural history of ancient Greece from the Minoan to Hellenistic periods.

HIST 324 Militarization in the Pacific (3) This course examines the role of militarization in the Pacific Islands and the Pacific Rim from the

late 18th century to present day. Diligent attention will be paid to WWII in the Pacific, but the course will also consider social, political, and military history in Oceania as an extension of colonialism, as well as the subsequent reactions to that militarization. Pre: sophomore standing or instructor's consent. (Attributes: DS, GAHP, HPP)

HIST 332 Hawaiian Kingdom (3) History of Hawai'i from early migrations and settlement to the 1890's with emphasis on political and social history; formation of the Kingdom of Hawai'i, changes in land tenure, disease and depopulation issues, the 1893 overthrow of the monarchy, and annexation. (Attributes: DS, GAHP, HPP)

HIST 333 Twentieth Century Hawai'i (3) History of Hawai'i since the overthrow of the monarchy in 1893, covering the Republic of Hawai'i and the period under United States control - immigration, World War II, the labor movement and the red scare, Hawaiian renaissance and the sovereignty movement. Pre: sophomore standing or instructor's consent. (Attributes: GAHP)

HIST 336 Epidemics in Hawai'i (3) With a focus on the nineteenth century, this course considers the role of health, disease and medicine in Hawai'i from the pre-kingdom era to contemporary times by bringing together the approaches of history and medical anthropology, with the understandings of (bio)medicine. Perceptions of health, the role of medicine, and the impact of epidemic diseases on Hawai'i's cultural, social and political history from both Native Hawaiian and Western perspectives are examined. (Attributes: GAHP)

HIST 339 Athletics & Health in Hawai'i (3) This survey course examines the role of fitness/athletics and health-related activities in Hawaiian lifestyles, prior to foreign arrivals through to the late 20th century. The course also examines the consequences of political, economic, and cultural change on Native Hawaiian health-related activities and practices. (Same as KES 339)

HIST 340 History of Religion in America (3) A historical and thematic study of the growth of religion in America from the seventeenth century to the present. Pre: sophomore standing or instructor's consent.

HIST 341 Ancient Rome (3) Political, cultural, and social history of ancient Rome from the Etruscans to 476 C. E. Pre: sophomore standing or instructor's consent.

HIST 352 History of Britain to 1776 (3) Political, social and cultural history of Britain from its origins in prehistory and Roman Britannia to the year 1776.

HIST 353 English History & Shakespeare (3) This course explores the relationship between the events of fourteenth, fifteenth, and sixteenth century English history and Shakespeare's history plays. Pre: sophomore standing or instructor's consent.

HIST 354 Intro to Islamic History (3) A history of the growth and development of Islam from the time of Muhammad to the present. Special attention is given to the relationship of Islam to the history and religious traditions of Europe. Pre: sophomore standing or instructor's consent.

HIST 356 Medieval Europe (3) A survey of the social, intellectual, cultural, and political development of Europe from the fall of the Roman Empire to the late seventeenth century. Topics covered include feudalism, religion, the crusades, trade, epidemic disease, warfare, the Renaissance, Reformation, and the Scientific Revolution. Pre: sophomore standing or instructor's consent.

HIST 357 Renaissance & Reformation (3) Political, social, intellectual, religious, and artistic development of the Renaissance and the Protestant and Catholic Reformations. Pre: sophomore standing or instructor's consent.

HIST 358 Women in Christianity (3) Examines issues relating to sex and gender throughout the history of Christianity. Emphasizing primary texts, the course will explore writings by Christian women and Christian writings about women. Pre: sophomore standing or instructor's consent. (Same as WS 358)

HIST 359 Christianity & Western Tradition (3) An introduction to the history and spirituality of Christianity and its relationship to "The Western Tradition" from its origins to the present. Pre: sophomore standing or instructor's consent.

HIST 360 American Women's History (3) Study of American women from the seventeenth to the twentieth centuries. Special emphasis will be on women's social and cultural roles. Current feminist theory is also studied. Pre: sophomore standing or instructor's consent. (Same as WS 360)

HIST 361 History of Sport (3) A history of sport from the ancient world to the present. Special attention to the history of sport in Europe and the Americas (Same as KES 361)

HIST 365 War & Empire in 18th Cent Eur (3) A survey of the social, intellectual, cultural, and political development of Europe from the War of the Spanish Succession to the advent of the Napoleonic era. Topics covered include absolutism, Enlightenment, mercantilism, military conflict, and revolution. Pre: Sophomore standing or instructor's consent.

HIST 375 Europe in The 19th Century (3) A survey of the social, intellectual, cultural, and political development of Europe from the Napoleonic era to the outbreak of the First World War. Topics covered include industrialization nationalism, socialism, liberalism, imperialism, warfare, and revolution. Pre: sophomore standing or instructor's consent.

HIST 380 United States: 1620-1789 (3) The political, social, and intellectual history of North America from the time of European contact until 1789. Topics include: Native American settlement and polity; European settlement; colonial America; causes and course of the American revolution; development of republican government; constitutional convention; ratification of the federal Constitution. Pre: sophomore standing or instructor's consent.

HIST 381 United States: 1790-1865 (3) The political, social, and intellectual history of the United States from the Early National Period through the Civil War. Topics include: Marshall Court, market revolution and early industrialization, immigration, Jacksonian democracy, social reform movements, sectionalism, Mexican War, Civil War, emancipation. Pre: sophomore standing or instructor's consent.

HIST 382 United States: 1866-1929 (3) The political, social and intellectual history of the United States from Reconstruction through the Stock Market Crash of 1929. Topics include: key Supreme Court issues, Reconstruction, industrialization, immigration, racial tension, US imperialism, Progressivism, World War I, economic change. Pre: sophomore standing or instructor's consent.

HIST 383 United States: 1930 - 1980 (3) The political, social and intellectual history of the United States from the Great Depression through the Carter Presidency. Topics include: FDR's New Deal, World War II, Civil Rights Movement, Cold War, Kennedy's New Frontier, US involvement in Vietnam, the Watergate Crisis. Pre: sophomore standing

or instructor's consent.

HIST 385 Europe in Era Of World War I (3) A survey of the social, intellectual, cultural, and political development of Europe from the late nineteenth century to the interwar period. Topics covered include nationalism, imperialism, art, trade, culture and warfare. Special emphasis on World War I and its effect upon modern European development. Pre: sophomore standing or instructor's consent.

HIST 386 Pre 20th Century US History (3) An examination of pre 20th Century US history focusing on primary sources and the public spaces that interpret the evolving ideals of American styled freedom. Pre: Instructor's consent only.

HIST 389 Oral History Methods (3) This course emphasizes the theories, methods, and debates surrounding oral history. Students will become familiar with the practical aspects of oral history and develop an appreciation for the tools available to historians and other scholars, as well as the necessary skills to begin an oral history project. Pre: One 300-level history course.

HIST 390 Public History in Hawai'i (3) Within the context of the history of Hawai'i, this course examines the role of the historian in representing the historical narrative to the general public. Through exposure to the scholarship, issues, and debates surrounding public history we explore this new and developing field. Along with field-trips to various sites on our island, this course also includes a significant service-learning component. Pre: HIST 284 or instructor's consent. (Attributes: GAHP, GCC, HPP)

HIST 391 Internship (3) (other) The internship is intended to allow students the opportunity to apply their knowledge and skills in public history in a public, private, or government agency/setting. May be taken for a total of six credits. Pre: HIST 390, instructor's consent, and pre-approved placement. (Attributes: ALEX)

HIST 392 Japanese Women (3) History of women in Japan from the earliest historical eras, including the Heian aristocracy and evolving samurai culture, through the present. Topics include: property rights, family structures, the influence of religion and secular philosophies, effects of political and legal changes, women's role in the economy and its effect on their status and lives, and women's activism. Pre: sophomore standing or instructor's consent. (Same as WS 392). (Attributes: GAHP)

HIST 393 Hist Preservation & Archives (3) Introduction to and survey of historic preservation and archives. Topics covered include: preservation movement, legality, properties, sustainability, and planning. Additionally topics of archival theory, organization, and management will be covered. Pre: HIST 390 or instructor's consent.

HIST 395 Europe in Era Of World War II (3) A survey of the social, intellectual, cultural and political development of Europe from the interwar period through the cold war. Topics covered include: the Depression, Fascism, Totalitarianism, the Holocaust, the Cold War, and decolonization. Special emphasis on World War II and its effect upon modern European development. Pre: sophomore standing or instructor's consent

HIST 401 Women in Hawaiian History (3) (lecture/other) This course examines the lives and contributions of women in the history of Hawai'i. It considers how events such as the arrival of foreigners, dismantling of the kapu system, the mahele, epidemics, political changes, world wars, etc., affected the social and cultural lives of women, men, children, and families. Course materials seek to

understand how those gendered as “feminine” negotiated, accommodated, and resisted these changes over the last two centuries. (Same as WS 401). (Attributes: GAHP)

HIST 403 Hawaiian Historiography (3) How have events in Hawai‘i’s past been remembered, recorded, documented, analyzed, and understood? By examining many of the major works in Hawaiian history this course explores significant trends in the re-constructions of Hawai‘i’s past with an emphasis on content, context, and analysis. Pre: HIST 332 or HIST 333 or instructor's consent.

HIST 411 Family & Gender in Oceania (3) (lecture/other) With a focus on the 19th and 20th centuries, this course examines how historical changes affected the social and cultural lives of women, men, children, and families in Oceania. Throughout the course we will endeavor to explore gendered reconstructions of particular events in the history of the Pacific: historiography, exploration, disease & depopulation, missionization, education, imperialism, colonization and de-colonization in general. (Same as WS 411). (Attributes: GAHP)

HIST 415 Senior Seminar Pacific Studies (3) A reading and research seminar under the supervision of the Pacific Island Studies faculty aimed at demonstrating competence in research and writing on issues related to Pacific Island environments, culture, society, and economy. Pre: instructor's consent for students near completion of Pacific Islands Studies Certificate coursework. (Same as ANTH 435 and GEOG 435)

HIST 420 Mao (3) An in-depth investigation into the life, career and legacy of Mao Zedong, China's dominant twentieth century figure. Competing political and historical interpretations will be examined using biography, primary sources in translation and secondary scholarship. Pre: junior standing and previous coursework on Asian history or instructor's consent. Fall semester only. (Attributes: GAHP)

HIST 421 East Asia and the Pacific Rim (3) The course will examine what went on in East Asia since the 19th century, but will spend more time exploring the powerful impact that East Asia's interactions along the Pacific Rim, especially with the United States, on its historical path. The course will pay much attention to United States, China and Japan, the world's first, second, and third largest economies that will shape the world in the years ahead.

HIST 422 East Asia and the Cold War (3) This course, focusing mainly on China and Japan, aims at giving the students an understanding of the Cold War dynamics in East Asia by exploring the regional origins of the historical event and how the East Asian actors redefined their places in the world in the context of the collapse of European/Japanese colonial empires and the rise of the two contending superpowers. The course will highlight that the position of East Asia in the Cold War was not peripheral but central in many key respects.

HIST 425 History Of Russia To 1700 (3) Development of Russian thought, institutions, society, and culture. Warfare, dynastic consolidation, and territorial expansion to 1700. Pre: one 300-level European survey course, or instructor's consent.

HIST 427 Environmental History--Pacific (3) This course in Pacific Islands history analyzes how changes in the environment affected the daily lives of the people of/in Oceania, and how the actions of the people of/in Oceania affected environmental changes, with an emphasis on 19th and 20th century history. Pre: Junior standing or Instructor's consent. This course is Dual Listed with CBES 627. (Previously offered as HIST 327) (Attributes: DS, HPP)

HIST 435 Russia Since Peter The Great (3) The development of

Russian thought, society, government and institutions from 1700 to the Second World War. Special emphasis on Russian westernization and reform as they were encouraged or abandoned during the reigns of Russian leaders from Peter the Great through Stalin. Pre: one 300-level European survey course or instructor's consent. (Attributes: HPP)

HIST 445 European Imperialism (3) The origins and development of European imperialism and its political, social, and environmental impact on the world. Special emphasis on the period from 1850 to the First World War. Pre: one 300-level European survey course or instructor's consent.

HIST 448 Hawai‘i Island to 1850 (3) This course offers a combination of place-based learning and research, through mo‘olelo & ka‘ao; developing connections to place; community outreach and leadership to youth; service-learning and more; all within the context of Hawai‘i Island history to 1850. Pre: HIST 332 or HIST 333 or instructor's consent. This course is Dual Listed with CBES 648. (Attributes: GCC, HPP)

HIST 449 Hawai‘i Island since 1850 (3) This course offers a combination of place-based learning and research, through mo‘olelo, 19th and 20th century histories; developing connections to place; community outreach and leadership to youth; service-learning and more; all within the context of Hawai‘i Island history since 1850. Pre: HIST 332 or HIST 333 or instructor's consent. This course is Dual Listed with CBES 649. (Attributes: GCC, HPP)

HIST 455 Euro Intellect Hist Snce 1789 (3) Intellectual and cultural development of Europe since 1789. Ideas in the arts, philosophy, science, literature, and politics as they have affected Europe. Pre: one 300-level European survey course or instructor's consent.

HIST 459 Germany Snce Frederick The Grt (3) Development of Germany since 1740 in political, social, and economic fields. Special emphasis on the growth of the Prussian state, German unification, the two World Wars and the rise of totalitarianism. Pre: one 300-level European survey course or instructor's consent.

HIST 470 US in the World 1865-2003 (3) U. S. expansion, imperialism, diplomacy and foreign relations from 1865. Pre: one 300-level U. S. survey course or instructor's consent.

HIST 471 US Constitutional History (3) U. S. Constitutional History including discussions of constitutional development, state sovereignty, civil liberties, freedom of contract, affirmative action, and the modern presidency. Pre: one 300-level U. S. history survey course or instructor's consent.

HIST 481 Land & Sovereignty in Pacific (3) Land is fundamental to traditional Pacific Island societies. Colonial rule meant a loss of both political sovereignty and, in many cases, significant amounts of land through private alienation and government acquisition. Using case studies, this course will investigate the historical relationship between land and sovereignty as Pacific people have sought to regain and maintain their independence. (Attributes: GAHP)

HIST 485 Seminar in World History (3) (other) Investigation and discussion of major issues and events in world history. May be applied to any track, depending on area of research. This course is repeatable one time for a total of 6.0 credits. Pre: One 300-level history course or instructor's consent.

HIST 486 Women in Ancient European Civi (3) Study of European women up to the year 800, with primary focus on the Mediterranean Basin. Themes encompass religion, social customs and economic

activities. Pre: one of the following courses: HIST 319, 323, 341, 356, 360, or instructor's consent. (Same as WS 486)

HIST 490 Historiography & Resrch Mthds (3) Course on historiography and research methods in history, results in first half of senior thesis in student's area of emphasis. HIST 490 must be taken before HIST 491. Required of history majors. Pre: senior standing and HIST 300, or instructor's consent.

HIST 491 Senior Thesis (3) Course focuses on drafting and revision of Senior Thesis on a topic in the student's area of emphasis. Presentation at History Symposium required. Course required of all history majors. Cannot be taken concurrently with HIST 490. Pre: HIST 490.

HIST x94 Special Topics in Subject Matter (Arr.) (10) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

HIST x99 Directed Studies (Arr.) (10) Statement of planned reading or research required. Pre: instructor's consent.

Honors (HON) Courses

College of Arts and Sciences (CAS)

HON 100 Opening Colloquium (3) An intensive course in reading, writing, and thinking about major issues with emphasis placed upon interdisciplinary approaches. Students introduced to a representative group of faculty. The colloquium uses a seminar format and will encourage the development of a community of scholars. Pre: Honors student or consent of instructor.

HON 495 Honors Research Symposium (1) (other) This course is a research seminar. With the instructions and guidance provided by the faculty advisor each STEM Honor student will prepare a formal research proposal, write a manuscript on their study and findings, and report them in a 20-minute presentation at the Honors Research Symposium. The research reported can be part of the faculty advisor's research program or of the student's own proposing. The research can be original work of the author(s) or original applications of previous research done by others. Pre: Senior standing and admission to Honors program.

HON x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

HON x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Horticulture (HORT) Courses

College of Agriculture, Forestry & Natural Resource Management (CAFNRM)

HORT 262 Princ Of Hort (3) (lecture/lab) Introduction to the various

divisions of horticulture and the relationship of plants to environment; Plant structure and function with opportunities for observation and practice of various horticultural technologies. Students are required to participate in a garden project. (Attributes: ALEX, DB, GCC, GN)

HORT 263 Hydroponics and Vegetables (3) (lecture/lab) Introduction to circulating and non-circulating hydroponic methods and olericulture. In this course, students are required to participate in the construction and maintenance of a hydroponic system and field-based vegetable production. Pre: HORT 262.

HORT 303 Intro Plant Tissue Culture (3) (lecture/lab) Introduction to the basic concepts and principles of tissue culturing plants. Special emphasis will be placed on setting up a laboratory and other business concerns. Limited enrollment. Pre: HORT 262 or instructor's consent. Recommended: HORT 264.

HORT 352 Orchard & Horticultural Crops (3) (lecture/lab) History, botanical relationships, climatic relationships, culture, management, and marketing. Excursions to various fruit orchards. Pre: HORT 262 or instructor's consent.

HORT 353 Organic Crop Production (3) (lecture/lab) This course will cover the cultural practices (crop rotations, cover crops, pest management, etc.) and biological processes (composting, soil food web, plant and animal health, etc.) that form the basis for organic production of plant and animal products (fruit, nuts, vegetables, grain, forage, pasture, milk, meat, and eggs) and land stewardship. The course will provide an overview of organic agriculture history, philosophy, and sociology in addition to organic production practices and the USDA National Organic Program. Several course topics will be presented as invited guest lectures.

HORT 450 Adv Plant Tissue Cult (3) (lecture/lab) Provides the student with hands-on experience in plant tissue culture techniques. Evaluative and diagnostic skills will be emphasized. Students will design and test techniques most appropriate for tissue culturing plant(s) of interest. Limited enrollment. Repeatable for a maximum of six credit hours. Pre: HORT 303.

HORT 451 Plant Improvement (3) (lecture/lab) Application of plant breeding techniques and methods of improving crops with special emphasis on Hawaiian plants.

HORT 471 Post Harvest Handling (3) (lecture/lab) Methods of handling, storing, and shipping of fresh horticultural commodities with emphasis on Hawaiian fruits, vegetables, and ornamental plants. Pre: CHEM 151 or CHEM 161 or equivalent, and HORT 262.

HORT 481 Weed Science (3) (lecture/lab) Classification, identification, and adaptation of weeds. Principles of weed control, including properties, use, and action of herbicides. Pre: HORT 262 or BIOL 171 and one year of chemistry. (Attributes: GCC, HPP)

HORT 490 Horticulture Internship (3) (other) Practical experience at farms, research institutions and other horticultural production sites. Pre: HORT 262 and two of HORT 263, 264, 353, 481 or Instructor's consent.

HORT x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

HORT x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

field. This course is intended for students in the SHARP program. Pre: Instructor's Consent.

Interdisciplinary Studies (IS) Courses

College of Arts and Sciences (CAS)

IS 110 Exploring the Health Sciences (1) The purpose of Exploring the Health Sciences is to introduce students to the diverse health science programs that UH Hilo has to offer. This course also helps students plan out their educational requirements while at UH Hilo, as well as prepare them for applying to UH Hilo's BSN program, graduate school, and/or careers in the health field.

IS 150 Kuleana & Community (3) An entry-level course preparing students for success at UH Hilo while encouraging connections to our island communities. Through the learning of place names, stories, cultural significance, and mālama 'āina activities, this course introduces students to our island environment and its histories. (Attributes: GCC, HPP)

IS 201 Pre-Pharmacy Orientation (2) This course is a requisite for the Pre-Pharmacy Program at UH Hilo. It will familiarize the student with the academic requirements of the Pre-Pharmacy Program and the Doctorate of Pharmacy degree. Individual lectures will cover the clinical, technical and ethical responsibilities of a Pharmacist in the 21st century, and allow students to become familiar with job opportunities for pharmacists. This course will provide interactions with local pharmacists and doctoral pharmacy students through mentor partnerships. Offered on a CR/NC basis only.

IS 390 Pre-departure Orientation (1) Course provides an overview of logistics, introduction to the basic political, economic, and social conditions of the host country and region, and intercultural preparation for students who will be participating in an approved UH Hilo study abroad program. Must be taken CR/NC. Course is repeatable one time for a maximum of two credits. Pre: Instructor Consent.

IS 391 Change Through Exchange (1) Course provides students currently studying abroad with an opportunity to engage with their cohort online to facilitate their culture and communication learning, while providing a chance for them to reflect on your experiences abroad as they are occurring. Must be taken CR/NC. Course is repeatable one time for a maximum of two credits. Pre: IS 390 or Instructor Consent.

IS 393 Foreign Field Experience (1-15) (other) Academic coursework, research, or internship in foreign locations which may transfer into specific disciplines after completion. (D) Denmark, (E) England, (F) France, (H) Hong Kong, (J) Japan, (K) Korea, (P) People's Republic of China, (R) Republic of China (Taiwan), (T) Thailand. Foreign field experiences are not limited to the countries listed. May be repeated for credit.

IS 480 Research Foundation and Ethics (1) Overview of scientific research that will set a strong foundation for SHARP students scholarly and scientific research endeavors, and delve into some critical issues in research practices and ethics. Basic knowledge of the history of scientific research will be examined from a cross-cultural perspective. This course is intended for students in the SHARP program. Pre: Instructor's Consent

IS 481 SHARP Research Seminar (1) Continuing exploration of research and research ethics, while weaving in practical tools for your development toward the Ph.D. and further professionalization in your

IS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

IS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Japanese (JPNS) Courses

College of Arts and Sciences (CAS), Languages

JPNS 101 Elementary Japanese I (4) (lecture/lab) Development of listening, speaking, reading, writing. Structural points introduced inductively. Laboratory drill. (Same as JPST 101) (Attributes: DH, GAHP, GH, GL)

JPNS 101S Elementary Japanese I, Special (3) Specially designed for students with some language background of Japanese. Same material as JPNS 101 more quickly covered. Development of four skills - speaking, listening, reading and writing - and an adequate entry-level knowledge of Japanese. A variety of classroom activities such as dialogue role-play, presentations, grammar exercises and individualized laboratory work. After reviewing Hiragana and Katakana, the course focuses on strengthening the skill of reading and writing Kanji characters at the beginning level. Pre: Department Approval. (Same as JPST 101S) (Attributes: DH, GAHP, GL)

JPNS 102 Elementary Japanese II (4) (lecture/lab) Development of listening, speaking, reading, writing. Structural points introduced inductively. Laboratory drill. (Same as JPST 102) (Attributes: DH, GAHP, GH, GL)

JPNS 102S Elementary Japanese II Special (3) Japanese 102S, a continuation of 101S (for students with some language background of Japanese), covers the same material as JPNS 102 more quickly. 102S is one of the language core courses required for non-native speakers of Japanese majoring in Japanese Studies. The course is designed to provide students with instruction on elementary level spoken and written Japanese. Pre: JPNS 101S or Instructor's approval. (Same as JPST 102S) (Attributes: DH, GL)

JPNS 107 Accelerated Element Japanese (8) Contents of JPNS 101-102 covered in one semester. Meets two hours daily, Monday through Friday. Language laboratory required. Development of four skills - speaking, listening, reading and writing - and an adequate knowledge at the beginning level of Japanese language. A variety of classroom activities, such as dialogue role-play, individual and group presentations, grammar exercises, individualized laboratory work, and reading/writing practice in the basic scripts (Hiragana, Katakana and Kanji Characters). (Same as JPST 107) (Attributes: DH, GAHP, GH, GL)

JPNS 201 Intermediate Japanese I (4) (lecture/lab) Continuation of JPNS 102. More advanced colloquial structures and additional kanji. Pre: JPNS 102 or equivalent. (Same as JPST 201) (Attributes: DH, GAHP, GH, GL)

JPNS 202 Intermediate Japanese II (4) (lecture/lab) Continuation of

JPNS 201. More advanced colloquial structures and additional kanji. Pre: JPNS 201 or equivalent. (Same as JPST 202) (Attributes: DH, GAHP, GH, GL)

JPNS 280 Introduction to Japan (3) A general introduction to Japan, past and present. The course examines the socio-historical and cultural development of Japan and the Japanese diaspora in the local and global community using a multidisciplinary approach. (Attributes: DH, HPP)

JPNS 301 Third-Year Japanese I (3) Study of modern spoken and written Japanese involving advanced structures, expressions, and kanji. Pre: JPNS 202 or equivalent. (Same as JPST 301) (Attributes: DH, GAHP, GH, GL, HPP)

JPNS 302 Third-Year Japanese II (3) Study of modern spoken and written Japanese involving advanced structures, expressions, and kanji. Pre: JPNS 301 or equivalent. (Same as JPST 302) (Attributes: DH, GAHP, GH, GL, HPP)

JPNS 340 Japanese Composition (3) Writing compositions employing designated patterns, kanji, and themes. Pre: JPNS 202 or equivalent. (Same as JPST 340). (Attributes: DA, GAHP)

JPNS 345 Methods for Teaching Japanese (3) Japanese language teaching and learning from the perspectives of theory and practice. The application of modern applied linguistics and methodologies to specific problems confronting the Japanese language teacher and other foreign language teachers. Pre: JPNS 202. (Same as JPST 345) (Attributes: DS, GAHP)

JPNS 359 Japanese in Hawai'i (3) An examination of the process by which second generation Japanese people in Hawai'i become bilingual and bicultural. Historical and Linguistic contexts for becoming bilingual and bicultural are presented. Topics include Japanese culture and the role of first generation immigrants in Hawai'i. (Same as JPST 359) (Attributes: DH, GAHP, GCC)

JPNS 361 Girls and Women in Japan (3) A survey of the life of Japanese girls and women focusing on Japan's changing aspects from the ancient to the contemporary periods. The course questions the current prevalent image of the subservient Japanese woman and articulates the role of Japanese girls and women in Japanese society. (Same as JPNS 361 and WS 361) (Attributes: DH, GH, HPP)

JPNS 365 Japanese Lit in English (3) Survey of major works from earliest times to the present. Knowledge of Japanese is not required. (Same as JPST 365, ENG 365). (Attributes: DL, GAHP, GH, GL, HPP)

JPNS 370 Lang, Cul & Identity of Japan (3) Relationship of Japanese language to social structure, interpersonal relationships, and way of thinking. Application of general linguistics to social phenomena such as dialects, identity, bilingualism, acculturation. Pre: JPNS 101 or consent of instructor. (Same as JPST 370) (Attributes: DH, HPP)

JPNS 373 Performance Across Cultures (3) This course explores the cultural expressions and traditions through the performance traditions from Asia, Africa, Europe and the Americas, using the transhistorical approach. Under the themes of the body and culture, ritual, performing, cultural literacy and tourism and globalization, the course introduces students to the performance forms across cultures. (Same as ANTH/JPST 373) (Attributes: DS, FGC, GCC)

JPNS 380 Japanese Mythology in Film (3) Interdisciplinary approaches to the study of Japanese myths and legends through contemporary films; mythological contexts related to Taoism, Buddhism,

Shintoism as well as superstitions and legends are examined in relation with selected films from Japan. (Same as JPST 380) (Attributes: DH, GAHP, HPP)

JPNS 382 Gender & Disability in Manga (3) Examination of gender and disability issues using several Japanese comic stories, or manga, which have been translated into English. Analysis of the selected comic stories is based on a trove of scholarly writings about historical as well as contemporary issues concerning gender nonconforming individuals and people with disabilities as marginalized groups in Japanese society. Discussion topics include the influences of manga on the awareness of both the transgender community and differently-abled people in Japan as well as manga's contribution to the destigmatization of these minorities from the 1960s to the present. Class work does not require the ability to read original Japanese texts. (Same as JPST 382.) (Attributes: DH, GAHP, GH, HPP)

JPNS 383 Japanese Theatre & Performance (3) This course introduces the performance traditions in Japan, ranging from rituals to dance and theatre-traditional art forms such as noh/kyogen, kabuki, bunraku, to modern theatre. Students examine the Japanese art forms from the anthropological and sociological perspectives. (Same as JPNS/JPST 383) (Attributes: DH, GAHP, GH, HPP)

JPNS 384 Gender & Japanese Performance (3) This course views how gender is represented in Japanese performance from rituals to dance, music, theatre and everyday performance. Through readings and visual materials, students observe the historical development of Japanese theatre and performance and examine relationship between gender, sexuality and the Japanese cultural forms from the performance studies as well as gender and feminism studies perspectives. (Same as JPST/WS 384) (Attributes: DH, HPP)

JPNS 385 Postwar Japn through Film (3) This course introduces students to Japanese society and culture with emphasis on 1945 to the present, as reflected in film and literature. Students learn about essential issues of Japanese postwar society, including class, family, gender, work, education, and minorities, and examine the change and development of Japanese society after World War II, paying attention to the struggles between traditional cultural values and Americanization/Modernization of society. This semester students will view fourteen films by fourteen leading Japanese directors and read an essay and a novel written by Japanese authors and a variety of articles on film. Pre: ENG 100, 100T, ESL 100 or ESL 100T. (Same as JPST 385) (Attributes: DH, DS, GAHP, GH, HPP)

JPNS 401 Fourth-Yr Japanese I (3) Study of modern spoken and written Japanese involving advanced structures, expressions and additional kanji. Pre: JPNS 302 or equivalent. (Same as JPST 401). (Attributes: GAHP)

JPNS 402 Fourth-Year Japanese II (3) This is an advanced course in conversation and composition covering cultural topics. It develops listening and speaking skills to communicate orally in authentic Japanese and expands spoken and written vocabulary knowledge. Students will practice presenting their ideas in speech and composition effectively. Pre: JPNS 302 or instructor's consent. (Same as JPST 402) (Attributes: GAHP)

JPNS 422 Japanese Teaching Practicum (3) (lecture/lab) This course is designed for students to engage in supervised teaching in a classroom setting with real-life learners of the Japanese language. It provides students with opportunities to develop syllabi, lesson plans, and teaching materials as well as to make class observations and gain some teaching experience in a classroom environment under the guidance of

experienced teachers. Students are also required to write a report analyzing observational notes and reflecting on their teaching experience. Pre: JPNS/JPST 301 and JPNS/JPST 302, or instructor's consent. (Same as JPST 422) (Attributes: DH, HPP)

JPNS 425 Translation Workshop (3) Theory and practice of translation of Japanese materials into English. Emphasis on literary translation, but non-literary texts may also be considered. Pre: JPNS 302 or consent of instructor. May be repeated once for credit. (Same as JPST 425) (Attributes: DL, GAHP, GL)

JPNS 451 Structure Of Japanese I (3) Phonology, morphology, syntax of modern colloquial grammar. Pre: LING 102 and JPNS 202, or instructor's consent. (Same as LING 451, JPST 451) (Attributes: DH, GAHP, GH, HPP)

JPNS 452 Structure Of Japanese II (3) Phonology, morphology, syntax of modern colloquial grammar. Pre: LING 102 and JPNS 202, or instructor's consent. (Same as LING 452, JPST 452). (Attributes: GAHP)

JPNS 481 Rdgs in Modern Japanese Lit I (3) Reading and discussion in Japanese of selected works of fiction, poetry, and drama. Pre: JPNS 302 or consent of instructor. May be repeated once for credit. (Same as JPST 481) (Attributes: GAHP)

JPNS 495 Japanese Studies Seminar (3) The course examines Japanese experiments with the idea of the modern and postmodern, focusing on issues such as modernization/westernization, change in gender roles, urbanization, the power of the state, and nationalism and personal identity. In the course, mainly taught in Japanese students learn how to read and discuss in Japanese, and translate Japanese texts into English. The course introduces a variety of materials written between the end of Russo-Japanese War in 1905 and the current period. Pre: JPNS 302 or instructor's consent. (Same as JPST 495) (Attributes: GAHP)

JPNS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

JPNS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Japanese Studies (JPST) Courses

College of Arts and Sciences (CAS), Languages

JPST 101 Elementary Japanese I (4) (lecture/lab) Development of listening, speaking, reading, writing. Structural points introduced inductively. Laboratory drill. (Same as JPNS 101) (Attributes: DH, GAHP, GH, GL)

JPST 101S Elementary Japanese I, Special (3) Specially designed for students with some language background of Japanese. Same material as JPNS 101 more quickly covered. Development of four skills - speaking, listening, reading and writing - and an adequate entry-level knowledge of Japanese. A variety of classroom activities such as dialogue role-play, presentations, grammar exercises and individualized laboratory work. After reviewing Hiragana and Katakana, the course focuses on strengthening the skill of reading and writing Kanji characters at the beginning level. Pre: Department Approval. (Same as JPNS 101S)

(Attributes: DH, GAHP, GL)

JPST 102 Elementary Japanese II (4) (lecture/lab) Development of listening, speaking, reading, writing. Structural points introduced inductively. Laboratory drill. Pre: JPNS 101 or equivalent. (Same as JPNS 102) (Attributes: DH, GAHP, GH, GL)

JPST 107 Accelerated Element Japanese (8) Contents of JPNS 101-102 covered in one semester. Meets two hours daily, Monday through Friday. Language laboratory required. Development of four skills - speaking, listening, reading and writing - and an adequate knowledge at the beginning level of Japanese language. A variety of classroom activities, such as dialogue role-play, individual and group presentations, grammar exercises, individualized laboratory work, and reading/writing practice in the basic scripts (Hiragana, Katakana and Kanji characters). (Same as JPNS 107) (Attributes: DH, GAHP, GH, GL)

JPST 200 Intro to Jpns & Chns Studies (3) This course studies the two regions of East Asia (Japan and China) with emphasis on philosophical, religious and cultural traditions, and patterns of social, economic and political change. Students will gain a general understanding of each region through a broad survey of important cultural movements and historical events that have made Japan and China what it is today. (Same as LANG 200) (Attributes: DH, GAHP, GCC, HPP)

JPST 201 Intermediate Japanese I (4) (lecture/lab) Continuation of JPNS 102. More advanced colloquial structures and kanji. Pre: JPNS 102 or equivalent. (Same as JPNS 201) (Attributes: DH, GAHP, GH, GL)

JPST 202 Intermediate Japanese II (4) (lecture/lab) Continuation of JPST 201. More advanced colloquial structures and additional kanji. Pre: JPNS 201 or equivalent. (Same as JPNS 202) (Attributes: DH, GAHP, GH, GL)

JPST 280 Introduction to Japan (3) A general introduction to Japan, past and present. The course examines the socio-historical and cultural development of Japan and the Japanese diaspora in the local and global community using a multidisciplinary approach. (Attributes: DH, HPP)

JPST 301 Third-Year Japanese I (3) Study of modern spoken and written Japanese involving advanced structures, expressions, patterns, kanji. Pre: JPNS 202 or equivalent. (Same as JPNS 301) (Attributes: DH, GAHP, GH, GL, HPP)

JPST 302 Third-Year Japanese II (3) Study of modern spoken and written Japanese involving advanced structures, expressions, patterns, kanji. Pre: JPNS 301 or equivalent. (Same as JPNS 302) (Attributes: DH, GAHP, GH, GL, HPP)

JPST 310 Hist of Japan I: Early Japan (3) Japanese history and culture from prehistory to the mid-17th century. Topics include: origins of Japanese people and culture; the Imperial state; contacts with China and Korea; aristocratic culture, particularly the role of women; the samurai class and the Shogunates; Buddhism and Shinto; late medieval disorder and development; unification and pacification. (Same as HIST 310) (Attributes: GAHP)

JPST 311 Hist Japan II: Tokugawa to Mei (3) Japanese history and culture from the 17th through 19th centuries. Topics include: samurai and the class system; political change, economic growth and social tensions; urban and rural evolution; popular culture and literature; Japan's isolation and reopening; collapse of the Tokugawa system; the Meiji Restoration; dissolution of the samurai class; social reorganization and rapid modernization; the Meiji Constitution and new Imperial state.

(Same as HIST 311) (Attributes: GAHP)

JPST 314 Hist of Jpn III: 20th Cent-Pre (3) Japanese history and culture from 1890 to present. Topics include: Meiji and 1947 constitutions; democracy and leadership; militarism and pacifism; evolving Imperial institution; economic growth and social change; tradition and modernity in Japanese culture; Japan's place in world systems and world culture. (Same as HIST 314) (Attributes: DS, GAHP, HPP)

JPST 315 East Asian Religions (3) The development of Buddhism, Confucianism, Taoism, Shinto and folk religion in China, Korea and Japan. Pre: junior standing or instructor's consent. (Attributes: GAHP)

JPST 340 Japanese Composition (3) Writing compositions employing designated patterns, kanji, and themes. Pre: JPNS 202 or equivalent. (Same as JPNS 340). (Attributes: DA, GAHP)

JPST 345 Methods for Teaching Japanese (3) Japanese language teaching and learning from the perspectives of theory and practice. The application of modern applied linguistics and methodologies to specific problems confronting the Japanese language teacher and other foreign language teachers. Pre: JPNS 202. (Same as JPNS 345) (Attributes: DS, GAHP)

JPST 353 Politics Of Japan (3) Aspects of Japanese politics, emphasizing the post-1945 period. Topics include: political development and change, the political economy of Japan, major political institutions and organizations, policy-making processes, and controversial political issues. (Same as POLS 353). (Attributes: DS, GAHP, HPP)

JPST 356 Japan (3) Culture origins and development with emphasis on contemporary Japanese culture. (Same as ANTH 356) (Attributes: GAHP)

JPST 358 Japanese Immigrants (3) Examination of social and cultural adaptations of Japanese immigrant populations, with foci on Hawai'i and Brazil. Topics include the role of the Japanese government and emigration companies, the factors of generation, kinship, ethnicity, and contemporary Japanese migrants. (Same as ANTH 358) (Attributes: DS, GAHP, HPP)

JPST 359 Japanese in Hawai'i (3) An examination of the process by which second generation Japanese people in Hawai'i become bilingual and bicultural. Historical and Linguistic contexts for becoming bilingual and bicultural are presented. Topics include Japanese culture and the role of first generation immigrants in Hawai'i. (Same as JPNS 359) (Attributes: DH, GAHP, GCC)

JPST 361 Girls and Women in Japan (3) A survey of the life of Japanese girls and women focusing on Japan's changing aspects from the ancient to the contemporary periods. The course questions the current prevalent image of the subservient Japanese woman and articulates the role of Japanese girls and women in Japanese society. (Same as JPNS 361 and WS 361) (Attributes: DH, HPP)

JPST 365 Japanese Lit in English (3) Survey of major works from earliest times to the present. Knowledge of Japanese is not required. (Same as JPNS 365, ENG 365). (Attributes: DL, GAHP, GH, GL, HPP)

JPST 370 Lang, Cul & Identity of Japan (3) Relationship of Japanese language to social structure, interpersonal relationships, and way of thinking. Application of general linguistics to social phenomena such as dialects, identity, bilingualism, acculturation. Pre: JPNS 101 or consent of instructor. (Same as JPNS 370) (Attributes: DH, HPP)

JPST 373 Performance Across Cultures (3) This course explores the

cultural expressions and traditions through the performance traditions from Asia, Africa, Europe and the Americas, using the transhistorical approach. Under the themes of the body and culture, ritual, performing, cultural literacy and tourism and globalization, the course introduces students to the performance forms across cultures. (Same as ANTH/JPNS 373) (Attributes: DS, FGC, GCC)

JPST 375 Japanese Music (3) Historical survey of traditional, contemporary, and Western-influenced music of Japan and study of major genres. No previous musical knowledge is required. Pre: junior standing or instructor's consent. (Same as MUS 375). (Attributes: GAHP)

JPST 380 Japanese Mythology in Film (3) Interdisciplinary approaches to the study of Japanese myths and legends through contemporary films; mythological contexts related to Taoism, Buddhism, Shintoism as well as superstitions and legends are examined in relation with selected films from Japan. (Same as JPNS 380). (Attributes: DH, GAHP, HPP)

JPST 381 Art of Japan (3) A brief survey of the Arts of Japan beginning with pre-history through the Edo and Meiji periods, with a more analytical emphasis on contemporary and New Media Art of the most recent decades. Recommended ART 176 or a JPST course. Pre: Junior/Senior standing or permission of instructor. (Same as ART 381) (Attributes: GAHP, HPP)

JPST 382 Gender & Disability in Manga (3) Examination of gender and disability issues using several Japanese comic stories, or manga, which have been translated into English. Analysis of the selected comic stories is based on a trove of scholarly writings about historical as well as contemporary issues concerning gender nonconforming individuals and people with disabilities as marginalized groups in Japanese society. Discussion topics include the influences of manga on the awareness of both the transgender community and differently-abled people in Japan as well as manga's contribution to the destigmatization of these minorities from the 1960s to the present. Class work does not require the ability to read original Japanese texts. (Same as JPNS 382) (Attributes: DH, GAHP, GH, HPP)

JPST 383 Japanese Theatre & Performance (3) This course introduces the performance traditions in Japan, ranging from rituals to dance and theatre-traditional art forms such as noh/kyogen, kabuki, bunraku, to modern theatre. Students examine the Japanese art forms from the anthropological and sociological perspectives. (Same as JPNS/JPST 383) (Attributes: DH, GAHP, GH, HPP)

JPST 384 Gender & Japanese Performance (3) This course views how gender is represented in Japanese performance from rituals to dance, music, theatre and everyday performance. Through readings and visual materials, students observe the historical development of Japanese theatre and performance and examine relationship between gender, sexuality and the Japanese cultural forms from the performance studies as well as gender and feminism studies perspectives. (Same as JPNS/WS 384) (Attributes: DH, HPP)

JPST 385 Postwar Japn through Film (3) This course introduces students to Japanese society and culture with emphasis on 1945 to the present, as reflected in film and literature. Students learn about essential issues of Japanese postwar society, including class, family, gender, work, education, and minorities, and examine the change and development of Japanese society after World War II, paying attention to the struggles between traditional cultural values and Americanization/modernization of society. This semester students will view fourteen films by fourteen leading Japanese directors and read an essay and a novel written by Japanese authors and a variety of articles on film. Pre: ENG 100, 100T,

ESL 100, or ESL 100T. (Same as JPNS 385) (Attributes: DH, DS, GAHP, GH, HPP)

JPST 401 Fourth-Year Japanese I (3) Study of modern spoken and written Japanese involving advanced structures, expressions and additional kanji. Pre: JPNS 302 or equivalent. (Same as JPNS 401). (Attributes: GAHP)

JPST 402 Fourth-Year Japanese II (3) This is an advanced course in conversation and composition covering cultural topics. It develops listening and speaking skills to communicate orally in authentic Japanese and expands spoken and written vocabulary knowledge. Students will practice presenting their ideas in speech and composition effectively. Pre: JPNS 302 or instructor's consent. (Same as JPNS 402) (Attributes: GAHP)

JPST 410 History of Chinese Characters (3) This course introduces Chinese civilization and history through an investigation of the evolution of Chinesescript and the socio-cultural factors related to it. Archaeological and historical materials are used in introducing its various forms in history: from tortoiseshellscrip to seal and clericalscripts as well as regularscript. Historical and cultural setting of creating and using the specificscript are examined. The transformation of Chinesescript into Japanese "kanji" and cultural exchange between Asian countries are also discussed. Pre: one of the following: CHNS 101, CHNS 107, JPNS 101, JPNS 101S, or JPNS 107. (Same as LANG/CHNS 410) (Attributes: GAHP)

JPST 422 Japanese Teaching Practicum (3) (lecture/lab) This course is designed for students to engage in supervised teaching in a classroom setting with real-life learners of the Japanese language. It provides students with opportunities to develop syllabi, lesson plans, and teaching materials as well as to make class observations and gain some teaching experience in a classroom environment under the guidance of experienced teachers. Students are also required to write a report analyzing observational notes and reflecting on their teaching experience. Pre: JPNS/JPST 301 and JPNS/JPST 302, or instructor's consent. (Same as JPNS 422) (Attributes: DH, HPP)

JPST 425 Translation Workshop (3) Theory and practice of translation of Japanese materials into English. Emphasis on literary translation, but non-literary texts may also be considered. Pre: JPNS 302 or consent of instructor. May be repeated once for credit. (Same as JPNS 425) (Attributes: DL, GAHP, GL)

JPST 430 Philosophy of Zen (3) Chief philosophical teachings of Zen, its methods and cultural influences. Comparative study of Zen and Western thought. Pre: previous work in philosophy or religious studies, or consent of instructor. Recommended: PHIL 302. (Same as PHIL 430) (Attributes: DH, GAHP, HPP)

JPST 450 Mahayana Buddhist Phil (3) Important tenets and major schools of Mahayana Buddhist philosophy in India, China, Japan, Tibet, and Hawai'i. Comparative study of Mahayana and Western philosophy. Pre: previous work in philosophy, religious studies, or instructor's consent. Recommended: PHIL 302. (Same as PHIL 450) (Attributes: DH, GAHP, HPP)

JPST 451 Structure Of Japanese I (3) Phonology, morphology, syntax of modern colloquial grammar. Pre: LING 102 and JPNS 202, or instructor's consent. (Same as LING 451, JPNS 451) (Attributes: DH, GAHP, GH, HPP)

JPST 452 Structure Of Japanese II (3) Phonology, morphology, syntax of modern colloquial grammar. Pre: LING 102 and JPNS 202, or instructor's consent. (Same as LING 452, JPNS 452). (Attributes: GAHP)

JPST 457 Japanese Culture & Commun (3) This course explores aspects of Japanese communication from cross-cultural perspectives and examines problems in intercultural interactions between Japanese and non-Japanese. (Same as COM 457) (Attributes: GAHP)

JPST 481 Rdgs in Modern Japanese Lit I (3) Reading and discussion in Japanese of selected works of fiction, poetry, and drama. Pre: JPNS 302 or consent of instructor. May be repeated once for credit. (Same as JPNS 481) (Attributes: GAHP)

JPST 495 Japanese Studies Seminar (3) The course examines Japanese experiments with the idea of the modern and postmodern, focusing on issues such as modernization/westernization, change in gender roles, urbanization, the power of the state, and nationalism and personal identity. In the course, mainly taught in Japanese students learn how to read and discuss in Japanese, and translate Japanese texts into English. The course introduces a variety of materials written between the end of Russo-Japanese War in 1905 and the current period. Pre: JPNS 302 or instructor's consent. (Same as JPNS 495) (Attributes: GAHP)

JPST x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

JPST x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Ke'elikōlani Education (KED) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KED 321 Ho'olauna Hakalama (1) Taught through the medium of Hawaiian language. An introduction to Hakalama and related Hawaiian cultural concepts. Hawaiian literacy history, initial steps in the Hakalama pedagogy, and related resources will be covered. Pre: KHAW 303 or Instructor's consent.

KED 343 Ma Ka Hana Ka 'Ike I (3) Examine the curriculum and pedagogy of the Punana Leo Indigenous language medium early childhood education. Learn the main components of the Punana Leo curriculum including scope and sequence, daily routines, and classroom learning centers---particularly the makau ola and makau lonoa centers and lessons. (A) Hawaiian, (E) Other. Pre: KHAW 204 or equivalent, which with permission may be taken concurrently; or Indigenous language equivalent to KHAW 204.

KED 344 Ma Ka Hana Ka 'Ike II (3) Examine the curriculum and pedagogy of the Punana Leo Indigenous language medium early childhood education. Learn Punana Leo curriculum scope and sequence, daily routines, focusing on makau makemakika and makau 'olelo learning centers and lessons. (A) Hawaiian, (E) Other Language. Pre: KHAW 204 or equivalent, which with permission may be taken

concurrently; or Indigenous language equivalent to KHAW 204.

KED 462 Enrichg Holistic Lrng Maui Ola (1) Continuation of KED 461. Advanced level for increasing teacher effectiveness through culturally appropriate classroom practices and curriculum development. Course work focuses on improving culture-based instruction through evaluation and revision of a unit plan. Must be taken CR/NC. Conducted in Hawaiian. Pre: KED 361 and KED 461; minimum of 3 years college-level Hawaiian language course work, and permission from the College.

KED 463 Substitute Tcher Sem in Maui (1) Preparation to teach in an Hawaiian medium environment as a substitute teacher. Content includes the completion of Hawai'i State requirements for substitute teacher certification, basic classroom management, lesson design and delivery, learning and implementation of policies and procedures to be employed as a substitute in Hawai'i DOE schools. Must be taken as CR/NC. Conducted in Hawaiian.

KED 481 Fdtns Tching in Hwn/Indig Med (1-3) Development and delivery of Indigenous language and culture-based based curriculum and instructional practices for learning and teaching in the Hawaiian/Indigenous medium-immersion classroom. (A) Introductory Level Content, Hawaiian; (E) Foundational Level Content, Hawaiian; (I) Intermediate Level Content, Hawaiian; (O) Introductory Level Content, Other Language (U) Foundational Level Content, Other Language; (H) Intermediate Level Content, Other Language. May be repeated for credit if subletters are different. Pre: KHAW 303 or equivalent; or approval from Division Chair.

KED 483 Sub Tch Sem Haw & Indig Med Ed (2) Preparation to teach in a Hawaiian/Indigenous medium education environment as a substitute teacher. Content includes the completion of Hawai'i State requirements for substitute teacher certification, basic classroom management, lesson design and delivery, learning and implementation of policies and procedures to be employed as a substitute in Hawai'i DOE schools. Must be taken as CR/NC. (A) Hawaiian, (E) Other Language. Conducted in Hawaiian/Indigenous language. Pre: KHAW 303 or equivalent; or approval from Division Chair.

KED x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KED x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KED graduate-level courses](#).

Ke'elikōlani Hawaiian Language (KHAW) Courses

Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g.

HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KHAW 103 First Lvl Trans Hawn Immersion (4) Development of analytical skills to improve existing listening, speaking, reading and writing skills at the first level. Taught partially in Hawaiian from a Kumu Honua Maui Ola philosophical base. This course is designed primarily for students with previous high school/beginning college level Hawaiian. (Attributes: DH, GH, GL, HPP)

KHAW 104 First Lvl Partial Hawn Immers (4) Strengthens and increases analytical skills as well as listening, speaking, reading and writing skills from KHAW 103 or HAW 102 or 105. Taught primarily in Hawaiian from a Kumu Honua Maui Ola philosophical base. Pre: KHAW 103, or HAW 102 or 105 or placement exam. (Attributes: DH, GH, GL, HPP)

KHAW 108 Accel First Lvl Hawn Immersion (8) Contents of KHAW 103-104 covered in one semester. Development and strengthening of analytical skills to improve existing listening, speaking, reading and writing skills at the first level. Taught partially in Hawaiian from a Kumu Honua Maui Ola philosophical base. This course is designed primarily for student with previous high school/ beginning college level Hawaiian. Meets two hours daily, Monday through Friday. (Attributes: DH, GH, GL, HPP)

KHAW 133 First Lvl Hawn for Speakers (4) Focus on strengthening skills in language analysis, vocabulary development, and writing at a university level Hawaiian. This course is designed primarily for students educated through the medium of Hawaiian, first language speakers of Hawaiians and native speakers. Pre: Placement exam. (Attributes: DH, GH, GL, HPP)

KHAW 190 Fluency Community Support (1) Fluency needed as a supporter of Hawaiian Revitalization. Stages/Subletters parrallel units of structure and vocabulary topics in KHAW 103 & KHAW 104 as follows: (A) Nā Pepeke Kumu; (E) Heluna, 'Awe, Wā; (I) Nono'a, 'Ohana; (O) Kuana'ike, Ho'ohālike; (U) Wae'anona; (H) Alohuli (K) Pāku'i Pepeke (M) Kālele, Kino 'Oko'a. May be repeated if subletters are different. Pre: Permission of the Department Chair.

KHAW 203 Second Lvl Univ Hawn Immers I (4) Second year skills in Hawaiian developed from KHAW 104 base or higher. Focus on accurate personal communicative use and connections to oral Hawaiian of earlier generations. Pre: C or better in KHAW 104, 108 or 133 or HAW 202 or 205 or placement exam or equivalent approved by dept chair. (Attributes: DH, GL, HPP)

KHAW 204 Second Lvl Univ Hawn Immers II (4) Continuation and expansion of KHAW 203. Pre: C or better in KHAW 203 or equivalent as approved by Dept chair. (Attributes: DH, GL, HPP)

KHAW 208 Accel Sec Lvl Univ Hawn Immers (8) Contents of KHAW 203 and 204 covered in one semester. Second year skills in Hawaiian developed from KHAW 104 base or higher. Focus on accurate personal communicative use and connections to oral Hawaiian of earlier generations. Meets 2 hours daily, Monday through Friday. Pre: C or higher in KHAW 104 or KHAW 108 or KHAW 133 or equivalent. (Attributes: DH, HPP)

KHAW 233 Second Level Hawn for Speakers (4) Continuation of HAW 133. Pre: B or better in HAW 133 or equivalent as approved by dept chair. (Attributes: DH, GL, HPP)

KHAW 290 Fluency 'Ohana Support (1) Develops fluency as 'ohana and community supporters of Hawaiian Revitalization to support one's children, grandchildren, and neighbors in Hawaiian medium/immersion schools. Stages/subletters parallel units of structure and vocabulary topics in KHAW 203 & KHAW 204 as follows: (A) NKE I 1-7; (E) NKE I 8-15; (I) NKE II 15-21; (O) NKE II 22-27; (U)NKE III 1-2; (H) NKE III 3-4; (K) NKE III 5-6; (M) NKE III 7-8. May be repeated if subletters are different. Pre: Permission of the Department Chair.

KHAW 303 Third Level Hawaiian I (4) Continuation of KHAW 204 and KHAW 208 and KHAW 233. Focus on analysis as the key to strong community use as a modeled in 19th and 20th century native speaker produced writings and tapes. Pre: C or better in KHAW 204 or KHAW 208 or KHAW 233 or equivalent as approved by dept chair.

KHAW 304 Third Level Hawaiian II (4) Continuation of KHAW 303. Leadership development of informal use of Hawaiian among students from HAW 104-303. Pre: C or better in KHAW 303 or equivalent as approved by department chair.

KHAW 333 Applied Skills (3) Practice skills developed in KHAW 304. Pre: Previous or simultaneous enrollment in KHAW 304.

KHAW 390 Ho'oikaika Mākau 'Ōlelo Hawai'i (1) Enhances Hawaiian language skills by analyzing various aspects of the Hawaiian language such as context, registers, domains, grammar, and pronunciation & intonation. 'O ke kahua ma mua, ma hope ke kūkulu. "Set the foundation first, then build." Simple grammatical forms will be reviewed to set the foundation so that more advanced forms can be added to that foundation. Language forms commonly found and used in instruction also examined. Pre: Instructor's Consent

KHAW 403 Fourth Level Hawaiian I (4) Continuation of KHAW 304. Advanced structures, expressions and patterns. Conducted in Hawaiian. Pre: C or better in KHAW 304 or permission of the instructor.

KHAW 404 Fourth Level Hawaiian II (4) Continuation of KHAW 403. Advanced structures, expressions and patterns. Conducted in Hawaiian. Language laboratory required. Pre: C or better in KHAW 403 or permission of the instructor.

KHAW 453 Hawn Phonetics & Phonol (3) Sound system of the Hawaiian language. Stylistic and regional variation. Interaction of the Hawaiian sound system with the sound system of other languages, especially that of English. Conducted in Hawaiian. Pre: KHAW 204 or equivalent, which, with permission, may be taken concurrently. Recommended: LING 102, LING 111, LING 311. (Attributes: GCC, HPP)

KHAW 454 Hawn Morphology & Syntax (3) Grammatical system of the Hawaiian language. Conducted in Hawaiian. Pre: KHAW 204 or equivalent, which, with permission, may be taken concurrently Recommended: LING 102.

KHAW 490 Base-level Fluency Hawn Med Ed (1) A review and strengthening of Hawaiian language fluency skills with focus on the applicability to Hawaiian medium education. Must be taken CR/NC. Conducted in Hawaiian. Pre: KHAW 303 or simultaneous enrollment.

KHAW x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KHAW x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KHAW graduate-level courses](#).

Ke'elikōlani Hawaiian Studies (KHWS) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KHWS 120 Kalaikepilihelu (3) Taught through the medium of Hawaiian language. An introduction to statistical processes with strategies pertaining to the Hawaiian Language Medium Education based in Hawaiian culture and history. Application, analysis and decision-making skills through Hawaiian historical and contemporary lens. Topics incorporate measures of central tendency and dispersion; classification of variables, sampling techniques, elementary probability; normal probability distributions; tests of hypothesis; linear regression; and correlation to solve programs. Pre: KHAW 303 or Instructor's Consent. (Attributes: GQ)

KHWS 381 Ka Nohona Kaulana Mahina (4) (lecture/other) Examine traditional Hawaiian relationships relative to temporal and spatial time. (A) Hā'ulelau (E) Kupulau. May be repeated for credit if subletters are different. Instruction through the medium of Hawaiian. Pre: KHAW 204 or equivalent which, with permission, may be taken concurrently.

KHWS 462 Haku Mele (3) Hawaiian poetry with emphasis on sample of traditional literature and geographical sites of cultural importance of Hawai'i Island. Examine a variety of traditional and modern Hawaiian poetry and discover what inspired the composers relative to that time period. Focus on composing poetry in Hawaiian. Conducted in Hawaiian. Pre: KHAW 304, which may be taken concurrently, or instructor's consent. Recommended: KHWS/HWST 461.

KHWS 463 Intro Hawn Narrative Lit (3) Introduction to Hawaiian narrative literature both oral and written. Traditional stories, excerpts from longer forms, comparison of narrative literature with poetry and conversation event recordings. Pre: KHAW 303, which, with permission, may be taken concurrently.

KHWS 465 Ha'i'ōlelo Ku'una (3) This course will develop a foundational understanding and practice in classical Hawaiian speech making. Through the Kumu Honua Maui Ola Philosophy of Hawaiian Being, this course will focus on reading comprehension of classical Hawaiian literature, mainly to analyze ethno-literary devices and lexical items. Pre: KHAW 403 or equivalent, may be taken concurrently with permission. Same as HWST 465.

KHWS 466 Mele Kū I ka Wā (3) An analysis of the poetic compositions of Na Lani 'Eha, the royal four siblings Kalakaua, Lili'uokalani, Leleiohoku, and Likelike. Includes examination of royal genealogies, song contexts in

political and personal relations, and the performance of their songs in friendly competition. Pre: KHAW 303, which, with permission may be taken concurrently.

KHWS 473 Oli/Mele Kahiko (3) Hawaiian musical forms initiated previous to 1778 (e.g. chanted lamentations, chanted greeting, dance chants, etc.) Traditions concerning their sources and history. Some attention given to performance. Conducted in Hawaiian. Pre: KHAW 204 or equivalent, which with permission, may be taken concurrently. Recommended: KHWS/HWST 461. KHWS/HWST 462, KHWS/HWST 471.

KHWS 475 Nā Mele Hula Kahiko (3) Traditional dance and musical forms within the traditional halau hula continued until the present. Traditions concerning their sources and history. Emphasis is placed on performance of these traditional forms of dance and music. Conducted in Hawaiian. Pre: KHAW 204 or equivalent, which, with permission may be taken concurrently. (Attributes: GCC, HPP)

KHWS 476 Na Mele Hula 'Auana (3) Hawaiian Dance forms initiated since 1778. Traditions concerning their sources and history. Emphasis is placed on performance of contemporary Hawaiian dance forms. Conducted in Hawaiian. Pre: KHAW 204 or equivalent, which, with permission, may be taken concurrently.

KHWS 496 Hawaiian Studies Seminar (3) Readings, research and field work on the traditional and contemporary Hawaiian community. Conducted in Hawaiian. Pre: KHAW 303 and senior standing, or instructor's consent. (Attributes: GCC, HPP)

KHAW x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KHAW x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KHWS graduate-level courses](#).

Ke'elikōlani History (KHIS) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

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KHIS 151 Moaukala Ao Pae I (3) Taught through the medium of Hawaiian language. A study of the history of humanity upon the face of the earth from initial beginnings until the spread of Europeans into the lands of indigenous peoples. A study of the breadth of that history focusing on aspects that have being integrated into contemporary living Native Hawaiian culture and identity as well as those areas with parallels in the specific history of Hawai'i. Students learn to develop a historical perspective and research skills using primary resources. Prereq: KHAW

303 or with permission from instructor. (Attributes: FGA)

KHIS 152 Moaukala Ao Pae II (3) Taught through the medium of Hawaiian language. A study of the history of humanity upon the face of the earth from the initial spread of Europeans into the lands of indigenous peoples (approximately 1500 C.E) until the present. A study of the breadth of that history focusing on aspects that have been integrated into contemporary living Native Hawaiian culture and identity as well as those areas with parallels in the specific history of Hawai'i. Students learn to develop a historical perspective and research skills using primary resources. Pre: KHAW 303 or with permission from instructor. (Attributes: FGB)

KHIS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KHIS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Ke'elikōlani Indigenous Language (KLAN) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KLAN 441 Advanced Structures I (2) First semester advanced level study of an indigenous or lesser studied language focusing on structure, e.g. Blackfeet, Rapanui. May be repeated if the topic is different. Alpha varies according to the language. Pre- requisite or concurrent enrollment in KIND 441; consent of department and of instructor.

KLAN 442 Advanced Structures II (2) Second semester advanced level study of an indigenous or lesser studied language focusing on structure, e.g. Blackfeet, Rapanui. Alpha varies according to the language. May be repeated if the content if different. Pre: KIND 441, KLAN 441, concurrent enrollment in KIND 442; consent of department; consent of instructor.

KLAN x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KLAN x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KLAN graduate-level courses](#).

Ke'elikōlani Indigenous Studies (KIND) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KIND 240 Culture Revitalization Movement (3) Efforts throughout the world to preserve the linguistic and cultural distinctiveness of indigenous and regional minorities. The interrelationship of such efforts with political, cultural, educational, and economic structures. Focus on comparison of other movements with that of Hawai'i. (When followed by H, taught through Hawaiian.) (Attributes: FGC)

KIND 441 Advanced Language in Culture I (2) First semester advanced level study of an indigenous language focusing on the use of the language in its cultural context. Alpha varies according to the language, e.g. Blackfeet, Rapanui. May be repeated if the content is different. Prerequisite or concurrent enrollment in KLAN 441; consent of department and of instructor.

KIND 442 Advanced Language in Culture II (2) Second semester advanced level study of an indigenous language focusing on the use of the language in its cultural context. Alpha varies according to the language, e.g. Blackfeet, Rapanui. May be repeated if the content is different. Pre: KIND 441 and KLAN 441, concurrent enrollment in KLAN 442; consent of department and of the instructor.

KIND x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KIND x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KIND graduate-level courses](#).

Ke'elikōlani Psychology (KPSY) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

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(Anthropology), ED (Education), etc.

KPSY 341 Ulu Ke Keiki (3) Examine child development from a Hawaiian or other Indigenous people's perspective. Hawaiian principles and philosophy of child development, current child development research and studies, and appropriate curriculum, pedagogy and evaluation aligned with child growth and development. (A) Hawaiian, (E) Other Language. Pre: KHAW 204 or equivalent, which with permission may be taken concurrently; or Indigenous language equivalent to KHAW 204. (Attributes: DH, HPP)

KPSY 341A Ulu Ke Keiki (3) Examine child development from a Hawaiian or other Indigenous people's perspective. Hawaiian principles and philosophy of child development, current child development research and studies, and appropriate curriculum, pedagogy and evaluation aligned with child growth and development. (A) Hawaiian, (E) Other Language. Pre: KHAW 204 or equivalent, which with permission may be taken concurrently; or Indigenous language equivalent to KHAW 204. (Attributes: DH, HPP)

KPSY 341E Ulu Ke Keiki (3) Examine child development from a Hawaiian or other Indigenous people's perspective. Hawaiian principles and philosophy of child development, current child development research and studies, and appropriate curriculum, pedagogy and evaluation aligned with child growth and development. (A) Hawaiian, (E) Other Language. Pre: KHAW 204 or equivalent, which with permission may be taken concurrently; or Indigenous language equivalent to KHAW 204. (Attributes: DH, HPP)

KPSY x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KPSY x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Ke'elikōlani Sociology (KSOC) Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KSOC 342 He 'Ohana Lanakila (3) Examine concept of 'ohana as it relates to Indigenous Hawaiian education or other indigenous people's education from a macro to micro perspective and the Hawaiian language movement, e.g., family and community; the school family and community; and working with families. History of Indigenous education and the Pūnana Leo's place as the early childhood education component in this history. Further examine the role and responsibilities of the teacher in a specific Indigenous language medium early childhood education program. (A) Hawaiian, (E) Other Language. Pre: KHAW 204 or equivalent, which with permission may be taken concurrently; or Indigenous language equivalent to KHAW 204. (Attributes: DS, HPP)

KSOC x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KSOC x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Korean (KOR) Courses

College of Arts and Sciences (CAS), Languages

KOR 101 Elementary Korean I (4) A course designed to teach the linguistic fundamentals of the language and the culture of Korea. Emphasis is placed on the reading and writing of Han'gul, speaking and listening, and developing oral conversational skills. (Attributes: HPP)

KOR 102 Elementary Korean II (4) Korean 102 Further builds on the basic foundation established by KOR 101 that will enable students to acquire and develop language skills in listening, speaking, reading, and writing in Korean in a linguistically and culturally appropriate manner. Emphasis is also given to understanding the linguistic ties between Korean and Chinese and Japanese. Pre: C or better in KOR 101. (Attributes: HPP)

KOR x94 Special Topics in Subject Matter (Arr.) (IO) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KOR x99 Directed Studies (Arr.) (IO) Statement of planned reading or research required. Pre: instructor's consent.

Kinesiology and Exercise Sciences (KES) Courses

College of Natural and Health Sciences (CNHS)

KES 101 Physical Fitness (1) Conditioning exercises and activities to develop and maintain physical efficiency. Motor fitness tests administered to measure status and progress.

KES 103 Swimming: Beginning (1) Adjusting to water, immersing in water, floating, sculling, correct arm stroke, leg kick, breathing techniques and their coordination.

KES 104 Swimming: Intermediate (1) Perfecting and integrating basic strokes with added emphasis on swimming for distance and speed.

KES 107 Tennis: Beginning (1) Rules, etiquette, grip, forehand and backhand strokes, serving, volleying, singles and doubles play.

KES 108 Tennis: Advanced (1) Improving the serve, forehand and backhand strokes, volleying, chop strokes, competitive strategy, problems in rules.

KES 110 Golf: Beginning (1) Rules, etiquette, and skill (grip, stance,

stroke) in using the irons, woods, and putter. Driving range and play on golf course require additional fees.

KES 117 Mountain Biking (1) Basic knowledge and skills of mountain biking. Emphasis will be placed on the safe operation and maintenance of the bike for recreational purposes. Uses such as commuting and racing will be discussed.

KES 120 Badminton (1) Rules, etiquette, grip, forehand and backhand strokes, serving, smash, drive, netplay, offensive and defensive strategy in singles and doubles play.

KES 121 Advanced Badminton (1) Competitive singles and doubles strategy, rules and etiquette. Perfecting fundamental strokes: smash, clear, drops, net, and drive shots.

KES 123 Yoga (1) This course provides a foundation for exploring classical yoga postures as well as the history and philosophy of yoga. Each class includes stretching, strengthening, relaxation techniques, pre- and post-flexibility evaluation, proper alignment, focus and breathing techniques.

KES 124 Intermediate Yoga (1) This course enhances the basic yoga poses and fundamentals covered in KES 123 (or equivalent yoga experience). Pre: KES 123.

KES 128 Table Tennis (1) This is an introductory course teaching the fundamental skills of table tennis including, basic strokes, grip and serve styles and positioning.

KES 134 Volleyball: Beginning (1) Rules, fundamental skills of passing, setting, hitting, blocking, digging, and team strategies.

KES 136 Team Sports (1) Skills, knowledge, attitudes and appreciation. Combination of soccer and softball.

KES 138 Basketball: Beginning (1) Rules, etiquette, skills in footwork, body balance, passing, shooting, dribbling, rebounding, individual and team strategies, and plays.

KES 139 Basketball: Advanced (1) Improving fundamental skills, advanced strategies, ball control and shooting skills, offensive and defensive tactics, and officiating.

KES 142 SUP - Stand Up Paddle Boarding (1) Explore and connect with the spiritual and traditional aspects of our Hawaiian culture through the physical application of the ancient and contemporary sport of stand up paddle boarding.

KES 143 Canoe Paddling (1) (lab) Explore and connect with the spiritual and traditional aspects of our Hawaiian culture through the physical application of the ancient and contemporary sport of canoe paddling.

KES 144 Ocean Safety (1) (lab) Gain an appreciation and awareness of the ocean habitat within the District of Hilo as well as develop general ocean safety skills.

KES 145 Surfing (1) (lab) Explore and connect with the spiritual and traditional aspects of our Hawaiian culture through the physical application of the ancient and contemporary sport of surfing.

KES 146 Edventure (1) Students will be exposed to a variety of experiential physical activities over the course of seven all day sessions. The experiential physical activities that students will be exposed to will be unique to the island of Hawai'i.

KES 152 Weight Training (1) Fundamental techniques of weight training which includes safety and precautions, diet and nutrition, basic weight training principles and individualized exercise programs for total physical fitness.

KES 202 Health Promotion (3) This course is designed for students to understand health in the broadest sense of the word -- as an integrated process for discovering, using, and protecting all possible resources within the individual, 'ohana, community, and environment.

KES 203 Intro to Physical Education (2) Nature, scope, aim and objectives of physical education; basic principles of human movement; physical education as academic discipline and its relationship to fields such as recreation, health education, and athletics.

KES 204 Intro to Coaching Athletics (2) Nature, responsibilities, personal and professional requirements of a coach. Scientific principles applicable to coaching methodology and athletic competition.

KES 207 Basic Human Nutrition (3) Fundamental principles of normal nutrition and the importance of nutrition in promoting growth and health. (Attributes: DB, GN)

KES 209 Data and Stats in Kinesiology (3) This course focuses on the data management and the basic statistics in exercise sciences. Content includes research methods and designs, data collection, organization and management, descriptive and inferential statistics, central tendency, variability, correlation, regression, t-tests, analysis of variance and various nonparametric tests. Computerized statistical analyses are embedded throughout the course.

KES 210 Introduction to KES (3) Introduction to professions available for individuals graduating with a Kinesiology and Exercise Sciences degree (e.g. Public Health and Health Promotion, Sports Psychology, Strength and Conditioning Specialist, Kinesiologist, Exercise Physiologist, and various allied health professions Athletic Training, Physical Therapy, etc). This course serves as helpful tool in providing students with the information necessary to pursue a degree/focus program within Kinesiology and Exercise Sciences. KES program focuses, degree expectations, course maps, and advising will be provided; emerging evidence-based topics will be discussed.

KES 212 Anatomical Kinesiology (3) This course provides a thorough guide of human anatomy and its application to human movement through an in- depth evaluation tissues (bones (joints), muscle, nerve, and connective tissue) during motor activities. (Attributes: DB)

KES 224 Human Physiology & Spaceflight (3) This course explores the effects of microgravity and spaceflight on the physiology of passengers. Topics addressed in this course include space travel effects on: the skeletal system; the muscular system; the cardiovascular and cardiorespiratory systems; and the neurovestibular system. Effects of radiation exposure, psychosocial issues in spaceflight, and medical risks and preventions will be presented in this course.

KES 250 Foundation of Public Health (3) An introduction to public health practice and history, with focus on principles and tools for population health, disease prevention, health promotion, health professions and healthcare systems. (Attributes: DS)

KES 260 Exercise Science Anat & Phys I (3) This course will cover basic human anatomy, physiology and chemistry of cells, organelles, cell division, metabolism, genetics, tissues, the integumentum, bone and muscle tissue. Each subject is presented with the emphasis on its response to activity and exercise.

KES 261 Exercise Science Anat & Phy II (3) This course is a continuation of Exercise Sciences Anatomy and Physiology I. The course will cover basic human anatomy and physiology of the endocrine, circulatory, lymphatic, respiratory, digestive, urinary and reproductive systems. Each subject is presented with the emphasis on its response to activity and exercise. Pre: KES 260.

KES 263 Intramural Athletics (2) The organization, administration, and supervision of intramural sports programs in schools with emphasis on leadership, program content, facilities, scheduling, rules and regulations, promotion, financing, and evaluation.

KES 300 Psyc-Soc Aspects Of Sport (3) The functions and dysfunctions of the sporting system will be examined from sociological perspectives. In addition, specific psychological constructs are presented in order to examine the relationship between environmental sources of influence and the individual's capacity for self-management in the sporting world.

KES 302 Sport & Spirituality (3) The spiritual experience of sport is central both to our basic motivation to take part in sports, and to achieving success. This course explores human aspects of the sport experience through the perspectives of sport psychology, philosophy, ethics, theology and religious studies.

KES 307 Biomechanics of Human Movement (3) This course provides an introduction to the principles and analysis of biomechanics, emphasizing the contribution of biomechanics to understanding human movement, and develops an understanding of mechanical and anatomical concepts related to human performance. Pre: PHYS 151, PHYS 151L.

KES 307L Biomechanics Lab (1) (lab) This course provides an introduction to the principles and analysis of biomechanics, emphasizing the contribution of biomechanics to understanding human movement, and develops an understanding of mechanical and anatomical concepts related to human performance. Pre: KES 307; may be taken concurrently.

KES 308 Principles of Strength & Cond. (3) This course will introduce the students to the fundamental principles of strength and conditioning while providing the skills necessary for proper selection, administration, and interpretation of athletic assessment across various modes of sport and activity, enabling the effective application of evidence-based training methodologies.

KES 310 Motor Learning (3) Basic understanding of the principles of motor learning and performance in a variety of contexts including teaching, coaching, design of performer-friendly equipment and work environments, and everyday motor skill learning.

KES 311 Tests & Meas. in Sports & Exer (3) In this course, Students will have the opportunity to experience, evaluate and discuss a wide variety of tests and assessments from the field of sport and exercise science. Also, a basic understanding and appreciation of why and how of testing is a critical factor in health, physical education and athletics will be provided.

KES 312 Personal Trainer Cert. Prep. (3) This course prepares students for personal trainer certification by developing knowledge and skills in major areas of exercise science like physiology, nutrition, assessment, program design, and exercise techniques, with an emphasis on safely instructing clients of diverse ages and fitness levels through consultations, evaluations, coaching and monitoring. Students will gain real-world preparation to provide attentive, safe, and goal-oriented services to clients while becoming eligible for leading personal trainer

certifications. Pre: KES 212 and KES 308

KES 320 Drug Awareness (3) For students interested in the prevention and treatment of victims of legal and illegal use, misuses, and abuse of drugs and related substances. Examines the problems and consequences of people who have to deal with this dilemma.

KES 321 Sociology of Sports (3) This course explores the intersection of sports and society. This course will examine a broad range of topics including the intersections of sports and culture, intersections of race, ethnicity, gender and class, ethics and the use of performance-enhancing drugs, economics, sports media, politics, and social justice. Pre: KES 210

KES 330 Applied Motor Learning (3) Applying the principles of motor learning in different contexts such as teaching, coaching, design of performer-friendly equipment and work environments, rehabilitation, and everyday motor skill learning. Developing of motor learning programs. Pre: KES 310.

KES 333 Endocrinology: Our Hormones (3) The endocrine system is the tissue and glands that secrete chemical messengers called hormones into the circulation to target specific receptors. This course will explore how the body depends upon this complex system to grow and maintain itself, and to respond to outside and inside perturbations, and fight diseases. Exercise and the endocrine system will be a prevalent topic in this course. Pre: KES 260 and KES 261 or BIOL 243 and BIOL 244.

KES 335 Care & Prevention Athletic Inj (3) Introduction to allied health professions (e.g. Athletic Training, Physical Therapy, etc) that specialize in the care and prevention of musculoskeletal injuries in an active population. Course focuses on the recognition, orthopedic evaluation, treatment, management, and rehabilitation of various musculoskeletal injuries. (Previously Offered as KES 234 and KES 334) Pre: BIOL 243-243L and BIOL 244-244L

KES 339 Athletics & Health in Hawai'i (3) This survey course examines the role of fitness/athletics and health-related activities in Hawaiian lifestyles, prior to foreign arrivals through to the late 20th century. The course also examines the consequences of political, economic, and cultural change on Native Hawaiian health-related activities and practices. (Same as HIST 339)

KES 340 Science: Diet & Weight Cntrl (3) This course presents a basic understanding of the multiple factors involved with body weight control and health. This course centers on the important scientific factors of body weight control, including energy balance, basal metabolism, hunger versus appetite, nutritional function and needs, nature versus nurture of obesity, treatment of obesity, physical activity and it's importance in weight control and maintenance. Eating disorders and medical interventions such as gastric bypass surgery will be presented.

KES 343 Musculoskeletal Anatomy (3) Basic understanding of human anatomy from the perspective of movement, with emphasis on the skeletal and muscular systems. Pre: BIOL 243 and BIOL 243L

KES 344 Musculoskeletal Physiology (3) Basic understanding of human musculoskeletal physiology from the perspective of internal function, with emphasis on aerobic and anaerobic metabolism during muscular function. Pre: KES 343

KES 348 Exercise Physiology (3) Basic understanding of human physiology and its response to exercise and adaptations to various types of training. Physiological systems are reviewed as they respond to acute bouts of exercise and long-term exposure to exercise. Pre: BIOL 243 &

BIOL 244.

KES 348L Exercise Physiology Lab (1) (lab) The objective of this course is to explore the physiological bases of exercise. We will perform laboratory experiments, collect, analyze and interpret data. Students should bring the lab manual, supplement and calculator to each class. Pre: KES 348; may be taken concurrently.

KES 350 Health Promotion Prog Planning (3) Student develop skills to effectively plan, design, implement, and evaluate health promotion programs in community/public health settings. Pre: KES 202

KES 351 Epidemiology (3) This course introduces students to epidemiology principles and methods. Topics covered include: measures of morbidity and mortality; vital statistics; incidence and prevalence measurements; adjustment of rates; measurements of risk; biological variability; screening; measurements of error; sampling; statistical significance; surveillance; study design; association and causation; and outbreak investigation.

KES 355 Philosophy of Sport (3) A philosophical treatment of the role of sports in society and a meaningful life. Topics include the phenomenology of sport, the ethics of doping and artificial enhancement, leadership ethics, sports in the context of Hawai'i, and sport fandom. Pre: Previous work in philosophy or two courses in Kinesiology or instructor's consent. (Same as PHIL 355).

KES 361 History of Sport (3) A history of sport from the ancient world to the present. Special attention to the history of sport in Europe and the Americas (Same as HIST 361)

KES 368 Sports and Exercise Nutrition (3) This course will introduce the student to the importance of nutrition in the field of exercise sciences. The purpose of this course is to bridge between nutritional concepts and exercise concepts, and the practical applications. Pre: KES 207.

KES 370 Sport Psychology (3) Survey of methods and findings in the application of psychological principles in sport. Topics include arousal and anxiety, cognitive processes, team performance, coaching behavior and techniques to maximize sports performance. (Same as PSY 370)

KES 371 Indigenous Health & Wellness (3) This course examines contemporary issues affecting the status of indigenous health and wellness. Emphasis is placed on indigenous perspectives of health and wellness and indigenous ways of knowing in Hawai'i, Oceania and Turtle Island.

KES 375 Indigenous Kinesiology (3) This course offers students an opportunity to explore indigenous perspectives on movement, exercise and sport and it's relation to health with emphasis on Hawai'i, Oceania, and Turtle Island. This course considers the impacts of colonization, globalization and commodification of exercise and movement on indigenous health and well-being.

KES 380 Applied Sport Psychology (3) Based on the principles of sport and exercise psychology. Focus on methods and programs applying sport psychology in the field of health and physical education to enhance performance, adhere people to physical exercise programs and support the overall well-being. Pre: KES/PSY 370.

KES 401 Sem in KES: Profess.Develop (2) This course will study selected topics and research in Kinesiology and Exercise Science professions. The purpose of this class is to provide an on-going forum for presentation and discussion of emerging issues within various

professions (e.g. health promotion, sport psychology, strength and conditioning, and allied health professions). Students will inventory their core values, interests, skills, and strengths and utilize them towards the application process. Students will learn about resume/curriculum vitae preparation, cover letter construction, interview preparation, the importance of social media presence (e.g. LinkedIn, facebook), and negotiation when applying for jobs/graduate school. Pre: Junior or Senior Standing

KES 440 Physiology of Aging (3) Study of the physiological mechanisms and the effects of aging on the human systems including the cardiopulmonary, musculoskeletal, neurological, sensory, metabolic, and endocrinological. This course will present the topic of physiology of exercise and aging.

KES 443 Adapted Physical Education (3) Understanding the basics of various disabilities, how to assess the physical and motor skills of the disabled and how to develop individual activity programs for children and youth with disabilities.

KES 450 Health Promotion Practicum (3) A planned, supervised, and evaluated practice experience. The goal of the practicum is to provide an opportunity for students to synthesize, integrate, and apply practical skills, knowledge, and knowledge, and training learned through courses. Students will gain professional experience in a professional health work environment, and work on health practice projects that are of particular interest to them. Pre: KES 202 and instructor consent. (Attributes: GCC)

KES 470 Physical-Occupational Therapy (3) The Purpose of this course is to introduce students who are interested in pursuing post-graduate degrees and professional careers in the fields of physical therapy and occupational therapy to these professions. This course is divided into three separate sections: The Profession; The Practitioner; and The Practice. Pre: KES 260 and KES 261, or BIOL 243 and BIOL 244.

KES 480 Sports Medicine (3) This course provides an opportunity for the study and application of the components of sports medicine, including, but not limited to: sports medicine related careers, organization, evaluation, and immediate care of athletic injuries, recognition, evaluation, and immediate care of athletic injuries, rehabilitation and management skills, emergency procedures, human anatomy and physiology, therapeutic modalities, and therapeutic exercise. Pre: KES 260 and KES 261, or BIOL 243 and BIOL 244.

KES x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KES x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Language (LANG) Courses

College of Arts and Sciences (CAS), Languages

LANG 200 Intro to Jpns & Chns Studies (3) This course studies the two regions of East Asia (Japan and China) with emphasis on philosophical, religious and cultural traditions, and patterns of social, economic and political change. Students will gain a general understanding of each region through a broad survey of important

cultural movements and historical events that have made Japan and China what it is today. (Same as JPST 200) (Attributes: DH, GAHP, GCC, HPP)

LANG 240 Classical Languages (3) This course surveys the classical languages. It aims to provide the students the overview of the development of classical languages from the antiquities until the Middle Ages. In this course, the students will be introduced to the religious, literary, cultural, educational, political, and international functions and roles of the classical languages and the related aspects of classics. It encompasses classical language families, literary traditions, linguistic geographies, history of classical languages, and language as a social means of international understanding from the classical period until the Middle Ages.

LANG 350 Fundamentals of Language Educ (3) This course introduces the students to the theories, methods, and research in language education. It makes use of applied linguistics and other associated interdisciplinary fields in dealing with the pedagogies, literacies, proficiencies, competencies, and trajectories related to human linguistic experiences. Learning these processes and concepts provides the students the analytical skills and knowledge to be used in interrogating and comprehending the various aspects encompassing language learning and acquisition, sociopolitical contexts, cultural processes, language policies, and historical trajectories. (Attributes: DS)

LANG 360 Language and Migration (3) This course introduces the students to the theories, methods, and research in language and migration studies. It makes use of applied linguistics and other allied interdisciplinary fields of inquiry. Students of this course are provided with the knowledge and skills in comprehending and analyzing the benefits of language learning & acquisition, competencies, and proficiencies in relation to the human mobility. (Attributes: DS)

LANG 410 History of Chinese Characters (3) This course introduces Chinese civilization and history through an investigation of the evolution of Chinesescript and the socio-cultural factors related to it. Archaeological and historical materials are used in introducing its various forms in history: from tortoiseshellscrip to seal and clericalscripts as well as regularscript. Historical and cultural setting of creating and using the specificscript are examined. The transformation of Chinesescript into Japanese "kanji" and cultural exchange between Asian countries are also discussed. Pre: one of the following: CHNS 101, CHNS 107, JPNS 101, JPNS 101S, or JPNS 107. (Same as CHNS/JPST 410) (Attributes: GAHP)

LANG x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

LANG x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Linguistics (LING) Courses

Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language (KHUOK)

LING 102 Introduction to Linguistics (3) A broad introduction to general linguistics: survey of phonology, morphological, syntactic, and semantic analysis, and historical and comparative linguistics. (Formerly LING/ ENG 203). (Attributes: DH, GL)

LING 133 Elem Indig Lang (3) Examine formal study of indigenous languages and issues of formal writing systems. For highly fluent native speakers, immersion school students, and others with similar levels of fluency. May be specific to language spoken or systematic attention to target skills with students speaking several different languages. A) Systematic for multiple languages, B) Navajo, C) Chuukese, D) Central Alaskan Yup'ik E) Samoan, F) Other. May be taken again if the sub-letters are different. Pre: LING 102 and fluency in an indigenous or minority autochthonous language appropriate to the sub-letter. NOTE: Fluency in Hawaiian cannot be used to enroll in sub-letter A of this course.

LING 221 Intro to Language (3) Linguistically oriented approaches to human behavior, including ethnolinguistics, sociolinguistics, and psycholinguistics. The way language functions in culture, society, and the cognitive processes. (Same as LING 221)

LING 233 Inter Indig Langs (3) Continuation of LING 133. A) systematic for multiple languages, B) Navajo, C) Chuukese, D) Central Alaskan Yupik, E) Samoan, F) Other. May be taken again if the sub-letters are different. Pre: LING 133 with same sub-letter.

LING 311 Phonetics and Phonology (3) Provides a conceptual framework and practical skills to engage in work in phonetics and phonology. Course includes training in the production and perception of speech sounds, as well as the physiological and acoustic description of them. Students learn IPA transcription symbols and practice analyzing phonological data based on the languages of the world. Pre: LING 102 or 121 or instructor's consent.

LING 320 Hist Of The English Lang (3) The major developments in the English language from the 5th century to the present day. Pre: ENG/ESL 100, LING 102 or LING 121, or instructor's consent. (Same as ENG 320)

LING 321 Morphology And Syntax (3) Introduction to grammatical analysis and theory; practical experience in solving problems in morphology and syntax, using data drawn from a wide variety of languages. Pre: LING 102 or instructor's consent. (Same as ANTH 321 and ENG 321)

LING 324 Modern English Grammar & Usage (3) The fundamentals of English grammar and syntax, conventions of written and spoken English, and rhetorical choices at the sentence level. Pre: C or better in ENG 100, ENG 100T, ESL 100, ESL 100T, HAW 201, KHAW 201, JPNS 201, FIL 201, CHNS 201, or SPAN 201. (Same as ENG 324)

LING 331 Lang in Culture & Society (3) An examination of the articulation of language in social and cultural context, including topics relevant to sociolinguistics and ethnolinguistics. Pre: ANTH/LING 221 or LING 102 or instructor's consent. (Same as ANTH 331)

LING 333 Psycholinguistics (3) Theory and method in the investigation of the relationship between language and cognition, first and second language acquisition, speech pathologies. Pre: LING 102 or PSY 100 or instructor's consent. (Same as PSY 333)

LING 344 Children And Language (3) Strategies of language acquisition used by children; emphasis on investigative skills and methods, including some field work. Pre: LING 102 or ANTH/LING 221.

LING 345 Historical & Comparative Ling (3) This course provides an introduction to the principles of historical linguistics beginning with a survey of the features of the world's language families. A problem-solving approach is adopted as students learn the comparative method of reconstruction and actually engage in the linguistic reconstruction of

protolanguages.

LING 347 Pidgins And Creoles (3) A study of the world's pidgins and Creoles with special reference to the Pacific region; the origin and nature of pidgins and Creoles; the relationship of Hawaiian Creole English to other Creoles in the world; the link between the development of a Creole and language acquisition. Recommended: LING 102 or 121. (Same as ANTH 347 and ENG 347) (Attributes: GAHP)

LING 350 Second Lang Acquisition Theory (3) Current research and theories of learning a second or additional language from social, psychological and linguistic perspectives. Topics include the attainment of communicative competence, the critical period hypothesis, focus on form, individual learning styles, and learner autonomy. The emphasis is on how the knowledge of second language acquisition theory helps improve the quality of classroom language teaching. Pre: LING 102 or instructor's consent. (Same as ENG 350) (Attributes: DH, GL)

LING 351 Method Foreign Lang Tchg (3) Foreign language teaching and learning from the perspectives of theory and practice. The application of modern linguistics to specific problems confronting the teacher. Pre: LING 102 or instructor's consent.

LING 356 Language and Gender (3) Students engage in the analysis of gender as it relates to language and society. Provides students with analytic resources for thinking critically about the relationship between language and social practice. Students gather and analyze data based on current theories. Pre: ENG/ESL 100 or 100T and LING 102, or instructor's consent. (Same as ENG 356 and WS 356)

LING 410 Semantics & Pragmatics (3) Introduction to the fundamentals and modern theories of meaning, reference and the relations between language and knowledge of the world. Ways in which the interpretation of sentences in natural languages depends upon the literal meaning of propositions and their logical (semantic) and contextual (pragmatic) inferences. Pre: LING 102 or instructor's consent.

LING 412 Discourse Analysis (3) This course examines the structure of function of language as its actually used in different contexts, including newspaper articles, poetry, doctor-patient interactions, news broadcasts, classrooms, and court trials. Students also gain experience in gathering, presenting, and analyzing their own data. (Attributes: DH, DS, GL)

LING 432 Critical Applied Linguistics (3) This course examines issues in applied linguistics such as language teaching, language learning, language policy, language ideology, linguistic human rights, and linguistic imperialism by considering indigenous language situations, dominant and minority languages as well as the notion of English as global language in order to appreciate the complex relationship between language and power. (Attributes: ALEX, DS, FGB, GCC)

LING 434 Indigenous Languages of the US (3) This course surveys Indigenous languages of the US and the communities that speak them, focusing on a representative sample for closer study. The role of languages in maintaining cultural identity is examined and prospects for the future of Indigenous languages are assessed. Pre: LING 102

LING 442 Languages in Hawai'i (3) This course explores the linguistic situation of Hawai'i with a focus on the history, structure, and political situation of the diverse set of languages spoken in the Islands. Languages to be examined include, but are not limited to, Hawaiian, Hawaiian Creole English, Japanese, Chinese, Ilocano, Portuguese, and Korean. Pre: LING 102 (Attributes: ALEX, GCC, HPP)

LING 445 Explor Bilingual & Immers Ed (3) This course provides students with the opportunity to learn about, experience, and engage in research about bilingual and immersion education, which serves as the basis for many language revitalization efforts throughout the world. Prerequisite: Linguistics 102.

LING 451 Structure Of Japanese I (3) Phonology, morphology, syntax of modern colloquial grammar. Pre: LING 102 and JPNS 202 or instructor's consent. (Same as JPNS 451) (Attributes: GAHP)

LING 452 Structure Of Japanese II (3) Phonology, morphology, syntax of modern colloquial grammar. Pre: LING 102 and JPNS 202 or instructor's consent. (Same as JPNS and JPST 452) (Attributes: GAHP)

LING 490 Res and Methods in Linguistics (3) This course serves as a capstone course in Linguistics, offering student the opportunity to engage in in-depth research on a linguistic topic of their choice. Students first read articles and write reaction papers to those articles, then write a proposal describing and defending and their topic choice, and next engage in research on their topic and produce an outline of their final paper. Then, at the conclusion of the semester, students present their papers to their peers and faculty and submit a research paper of at least 15 pages. Pre: LING 102, 311 and 321. (Attributes: ALEX)

LING x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

LING x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Management (MGT) Courses

College of Business and Economics (COBE)

MGT 300 Mgt, Orgs & Human Behavior (3) Survey of classical and modern management theory and practice. Management implications of organization theory. Basic concepts in work motivation, communication, group dynamics, leadership, organizational change, conflict, personality, and leadership. Pre: C or better in QBA 260 or MATH 115; C or better in ENG 209 or 287 or 225 or COM 240/WI; C or better in BUS 290.

MGT 330 Human Resource Mgt (3) The contemporary theory and practice relating to the management of human resources; recruiting, selection, psychological testing, interviewing, job evaluation, performance review, training and development, wage and salary administration, benefit and service programs, and labor-management relations. Pre: C or better in MGT 300.

MGT 332 Org Behavior & Manage (3) The human relations movement; basic concepts in behavior pertaining to organizations including personality, motivation, leadership, communication, change, conflict, and group dynamics. Course includes the relationship of these concepts to performance, job satisfaction and organizational commitment. Pre: C or better in MGT 300.

MGT 333 International Business Mgt (3) Provides a systematic introduction to international business management, drawing examples from Pacific Rim business and commerce. Course introduces multinational marketing and international aspects of personnel

management, plus introductory material on international business financial transactions. Pre: C or better in ECON 130 (Attributes: DS, GAHP, HPP)

MGT 341 Project Management (3) This course focuses on the technical and social aspects of project management. The basic principles of project management will be introduced to prepare students for possible Project Management Institute (PMI) certification. Topics covered include contract proposal, project definition and planning, identification and sequencing of project deliverables, automated scheduling, resource planning, cost estimation and budgeting, risk analysis, project tracking, building a project team and strategic issues of project management. Students will be assigned to teams to complete a project. Pre: C or better in CS 201 or QBA 362

MGT 379 Hist Of Entrepreneurship in Am (3) The role of entrepreneurship in developing the American business system from its European origins to its current global manifestations and its future prospects. Focus on the values, characteristics, and practices of entrepreneurs and on the changing relations over time between business, labor and government. Pre: 45 college credits successfully completed.

MGT 423 Business Ethics (3) Examination of the ethical and social responsibilities of businesses and management, including introductions to prominent ethical theories as they pertain to business ethics. Pre: C or better in BUS 240; C or better in MGT 300.

MGT 425 Bus Planning for New Ventures (3) Development of a business plan for a new venture with attention to form of business organization; competitive advantage; accounting systems and controls; financial, marketing, human relations, operations and risk management; government regulation and compliance; social responsibility. Identification of sponsors and sources of help for small business. Pre: C or better in any 200-level ENG course; C or better in ECON 130 or BUS 110 or BUS 100; C or better in QBA 260 or MATH 115. (Attributes: ALEX, GCC)

MGT 490 Strategic Mgt (3) Integrative capstone course using concepts of strategy formulation, competitive analysis, and strategy implementation as models for problem solving and decision making in an organizational setting. Computer software applications are used to aid in comprehensive case analysis. Pre: 75 successfully-completed college credits; C or better BUS 290, MGT 300, QBA 300, MKT 310, and FIN 320.

MGT x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

MGT x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Marine Science (MARE) Courses

College of Natural and Health Sciences (CNHS)

MARE 100 Marine Option Program Seminar (1) (other) Orientation to the Marine Option Program with statewide overview of ocean issues and organizations involved with marine activities, management, education, research, and business. Exploration of opportunities for

internships, research projects, independent study and careers. Portions on HITS with participation of students and faculty from throughout the UH system. CR/NC only. Repeatable one time.

MARE 101L Intro Marine Sci Field Lab (2) (lab) A basic introduction to field techniques in marine science including: the use of marine charts, measuring bathymetry, marine sediment sampling, techniques for measuring salinity, temperature, and ocean circulation, plankton sampling and identification, marine fishes and invertebrates, and marine wildlife management techniques used in tagging sea turtles. Field trips required.

MARE 103 Marine Option Program Proposal (2) Introduction to the fundamentals of proposal writing and project development. Students will incorporate topics from MARE 100, identify a faculty mentor, and expand the project into a written proposal. This proposal is a prerequisite for the completion of a marine skills project required for the Marine Option Program Certificate. Pre: MARE 100 or instructor's consent.

MARE 104 Marine Option Program Project (2) Fundamentals of proposal writing and project development. Students assistance of a mentor and MOP coordinators. This course will provide strategies, methods, and techniques for successful project completion. Pre: MARE 100 or instructor's consent. Repeatable twice for a maximum of 6 credits.

MARE 105 Marine Option Presentation (1) A continuation of the marine skills project completed in MARE 104. Students expand their marine skills project, required for the Marine Option Program Certificate, into an oral or poster to be presented at the annual MOP symposium. This course will provide instruction on creating effective presentations, developing scientific posters, and explaining scientific results to both peers and the general public. Pre: MARE 100, MARE 103, MARE 104, or instructor's consent.

MARE 110 Current Issues in Marine Sci (3) Introduction to marine science via the controversies and problems facing our ocean environment. Topics may include coastal population growth, sonar, fisheries, dolphin-safe tuna, cruise ship waste, global warming, mercury in fish, beach erosion, alien species, and coral reef decline. Designed for non-majors. This course applies toward general education requirements in the Natural Sciences. (Attributes: DB)

MARE 140 Intro to Hawaiian Coral Reefs (3) Explore the underwater world of the Big Island of Hawai'i while learning about unique marine ecosystems found nowhere else on Earth. Students will acquire an appreciation for local aquatic fauna in the classroom including the basics of marine biology and natural history. Pre: concurrent enrollment in MARE 140L required. (Attributes: DB, GAHP, HPP)

MARE 140L Intro Hawaiian Coral Reefs Lab (1) (lab) Students will enter the natural laboratory that is Hawai'i and investigate coral reefs, coastal beaches and tide pool systems with mask, snorkel and fins. Learn to identify common marine inhabitants while enjoying an unparalleled educational experience under the sea. Concurrent enrollment in MARE 140 is required. (Attributes: DY, GAHP, HPP)

MARE 156 Nat Hist & Conservatn Hawn Isl (3) The formation of the Hawaiian Islands, establishment and evolution of their native terrestrial and marine flora and fauna, and human impacts and conservation. (Same as BIOL 156). (Attributes: DB, GAHP, HPP)

MARE 171 Marine Biology-Diversity (3) Marine organisms: classification, structure, physiology, ecology and adaptations to the marine environment. This course satisfies College of Arts and Sciences

General Education Natural Science requirement. (Attributes: DB)

MARE 171L Marine Biology Laboratory (1) (lab) Provide students with direct exposure to the biota of Hawai'i via laboratory and field trips to sites around Hilo. The course focuses on identification, natural history, and ecology of common marine organisms. Pre: Current or previous enrollment in MARE 171. (Attributes: DY)

MARE 172 Marine Biology-Cellular Proc (3) Introduction to the fundamentals of biology as they pertain to marine organisms. Principles of cell biology, molecular biology and biochemistry. Focuses are biological molecules, prokaryotic and eukaryotic cell structure and function, basic metabolism, and cellular processes. Emphases will be given to cellular level adaptations to marine environment. Pre: High school Biology; or BIOL 101 and high school Chemistry; or CHEM 151 recommended. (Attributes: DB)

MARE 201 Oceanography (3) Geological, chemical, physical and biological aspects of the ocean; structure, formation, and features of ocean basins; seawater's properties and their distribution; currents, waves; tides; characteristics of marine organisms; marine ecological principles. Pre: Two high school or college science courses recommended. (Attributes: DP)

MARE 201L Oceanography Lab (2) (lab) The basic techniques of oceanography including; marine charts and navigation, bathymetry, marine sediments, techniques for measuring salinity, temperature, dissolved oxygen, and surface and deep circulation, light and sound in seawater, wave dynamics, tides, plankton sampling and identification. In-class field trips required. Pre: Concurrent or previous enrollment in MARE 201. (Attributes: DY)

MARE 211 Marine Animal Response (3) An introduction to marine animal stranding and response. Includes responding to sea turtles, pinnipeds, cetaceans, manatees, and sea otters. Pre: C- or better in MARE 171 or instructor's consent. Concurrent enrollment in MARE 211L.

MARE 211L Marine Animal Response Lab (1) (lab) Laboratory focused investigations and response practices for sea turtles and marine mammals. Students will participate in mock trainings for stranding response, animal recovery, and data collection procedures. Pre: Concurrent enrollment in MARE 211.

MARE 240 Small Boat Operations/Research (3) (lecture/lab) This course is intended to provide the novice boater with skills needed to safely operate and conduct research from a small boat. Topics include: state and federal regulations, safety, navigation, small boat handling, and conducting research operations. The course will consist of lectures, lab sessions, and time on the water in a small boat. Participants must be able to swim. Pre: Instructor's consent.

MARE 250 Statistical Apps in Marine Sci (3) Hands-on approach to designing field experiments, collection of ecological data, analysis of data on computers using statistical methods, and presentation of results. Requires completion of a project using data collected in the field followed by the preparation of both written and oral reports. Pre: MARE/BIOL 171 or MARE 201, or instructor's consent. (Attributes: GQ)

MARE 264 Quest (3) The application of commonly utilized nearshore underwater ecological surveying techniques using SCUBA. Intensive two-week course combining lecture and field work. Data will be collected in the field, reduced, analyzed and presented in an oral report. Pre: Authorization as a scientific diver in training before start of course and instructor's consent.

MARE 265 Marine Ecology and Evolution (3) Principles of ecology and evolution for Marine Science majors stressing integrative approach and recent advances. Topics include but are not limited to evolutionary mechanisms, macroevolution, systematics and the origin of life, population and community ecology and ecological processes, marine communities, dispersal, biodiversity and biogeography. Pre: MARE 171/171L, MARE 172 and MARE 201 or instructor's consent.

MARE 282 Global Change (3) Principal components of global change and impacts on the marine environment. Course focuses on the interdisciplinary nature of global change and interrelationships to biological, physical, anthropological, economic, and political concepts. Pre: College-level science course. (Attributes: DP)

MARE 282L Global Change Lab (1) (lab) Elements of global change in the physical, chemical and biological properties of the Hawaiian Islands using laboratory exercises and field trips. Involves shipboard water sampling and analysis, snorkeling on coral reefs, and hiking in rain forests. Pre: MARE 282 or concurrent enrollment.

MARE 310 The Atoll Ecosystem (3) Formation, structure, distribution, oceanography, biota and ecology of atolls. Human interactions, historical and modern, with atoll ecosystems. Atoll resource management issues and actions. Pre: MARE/BIOL 171, MARE 201, or BIOL 156 or instructor's consent. (Attributes: GAHP, HPP)

MARE 317 Ocean Technology (3) Various types of oceanographic instrumentation are introduced, focusing on instrument operating principles, calibration, operation, maintenance and repair. Students will learn various software for interfacing with instruments and an introduction to Python scientific computing for processing, analyzing and visualizing data. Pre: MARE 201, MARE 250.

MARE 325 Coral Reef Ecology (3) Provides a background in evolutionary and natural history of tropical reefs, coral reef community structure and interactions, and coral reef ecosystem processes/functions. Students will learn ecology of Hawaiian and global coral reefs. Students will review information on the increasingly important conservation issues related to tropical reef systems and review present management strategies employed. Pre: C- or better in MARE 265 or instructor's consent.

MARE 350 Coastal Methods and Analyses (3) Planning of field and laboratory data collection and experimentation in the coastal environment. Course covers hypothesis development, experimental design, statistical analysis of data, data interpretation, scientific writing, and presentations. Pre: junior standing; a grade of C- or better in MARE 201; MARE 250; MARE 265; CHEM 162, and must be taken concurrently with MARE 350L. Offered Fall semester only.

MARE 350L Coastal Methods & Analyses Lab (2) (lab) Implementation of field and laboratory data collection and experimentation in the coastal environment. Techniques include measuring geological, chemical and physical coastal properties; estimating the abundance and diversity of plankton, nekton, and benthos; and use of modern data recording and analyzing systems. Pre: junior standing; a grade of C- or better in MARE 201; MARE 250; MARE 265; CHEM 162; must be taken concurrently with MARE 350. Offered fall semester only.

MARE 353 Pelagic Methods and Analyses (3) Planning of field and laboratory data collection and experimentation in the neritic and pelagic marine environment from an oceanographic vessel platform. Course covers hypothesis development, experimental design, statistical analyses of data, data interpretation, scientific writing, and

presentations. Pre: junior standing; a grade of C- or better in MARE 201; MARE 250; MARE 265; CHEM 162; must be taken concurrently with MARE 353L. Offered Spring semester only.

MARE 353L Pelagic Methods & Analyses Lab (2) (lab) Implementation of field and laboratory data collection and experimentation in the neritic and pelagic marine environment from an oceanographic vessel platform. Techniques include measuring geological, chemical, and physical properties; estimating the abundance and diversity of plankton, nekton and benthos; and use of modern data recording and analyzing systems. Pre: junior standing; C- or better in MARE 201; MARE 250; CHEM 162; MARE 265. Must be taken concurrently with MARE 353. Offered Spring Semester only.

MARE 360 Marine Resources (3) A survey of human use of the marine environment including physical and biological resources. Topics covered include: fisheries, mariculture, marine mineral and energy resources, chemical resources of sea water, the use of coastal Islands and waste disposal in the sea. Pre: MARE 201 or BIOL/MARE 171, or instructor's consent. (Same as BIOL 360)

MARE 364 Advanced Quest (3) Students lead a dive team learning underwater ecological surveying techniques; supervise field data collection, data reduction and analysis, and team presentation of written and oral reports; and assist in training students in identification of marine organisms. Pre: MARE 264, authorization as a scientific diver in training before start of course, and instructor's consent. Student receives CR/NC for the course.

MARE 366 Trop Marine Research Investiga (3) Research projects on marine-related problems. Students will do a literature search; develop experimental design; collect, reduce and analyze data; do a written final report; and present findings at a symposium. Projects will be selected from a list of topics or can be original with the consent of the instructor. Pre: instructor's consent (Same as BIOL 366).

MARE 371 Biology Of Marine Invertebrate (3) A survey of the major groups of invertebrates focusing on those dominant in the marine environment. Students will learn methods used to identify and classify invertebrates and will survey the anatomy, physiology, and natural history of the major groups. Pre: MARE 265 or BIOL 172 or equivalent, and concurrent enrollment in MARE 371L. (Same as BIOL 371)

MARE 371L Bio Of Marine Invertebrate Lab (1) (lab) The course will provide direct exposure to the major groups of invertebrates in the marine environment through laboratory exercises and field trips around the island. Students will learn to identify and classify invertebrates and will survey the anatomy and natural history of the major groups. (Same as BIOL 371L).

MARE 372 Biology Of Marine Plants (3) Diversity, distribution and ecology of marine macroalgae and seagrasses. Students will learn methods to identify common marine plants of the Hawaiian Islands and the tropical Pacific. Marine plants and their relation to human affairs will be discussed. Pre: MARE 171 or BIOL 171 or instructor's consent. Concurrent enrollment in MARE 372L.

MARE 372L Biology of Marine Plants Lab (1) (lab) Laboratory activities relating to the taxonomy, biology, chemistry, physiology and human uses of seaweeds and seagrasses. Includes field trips. Pre: concurrent enrollment in MARE 372.

MARE 380 Nat. Hist. of Sharks and Rays (3) This course will examine the natural history of the Elasmobranchs, an ancient group of fishes that have existed for almost 450 million years. Comprehensive

investigations of sharks, rays, skates, sawfishes, and chimera, along with representative species from Hawai'i, will be conducted. Subjects will include evolution, taxonomy, anatomy, physiology, ecology, conservation and management of these unique animals. Discussions of current research papers along with group research projects will be covered during lectures. Pre: MARE 171 or instructor's consent. Concurrent enrollment in MARE 380L.

MARE 380L Nat. Hist. of Sharks Lab (1) (lab) This course will further examine Elasmobranchs using a hands-on approach to compliment the work done in Lecture using both laboratory and field-based activities. Laboratory sessions will involve detailed dissections of shark, ray, skate, and chimera functional anatomy. Students will also participate in a tagging study of coastal shark species throughout the Big Island of Hawai'i. Pre: Concurrent enrollment in MARE 380.

MARE 390 Biology of Marine Mammals (3) Comprehensive investigation of a diverse group of highly adapted marine vertebrates. Whales, dolphins, porpoises, seals, sea lions, walrus, manatees, dugongs, sea otters and polar bears will be covered. Focus will be on taxonomy, anatomy and physiology, behavior, reproductive ecology, adaptations to the marine environment, and conservation and management. Pre: MARE 171 or instructor's consent. Concurrent enrollment in MARE 390L.

MARE 390L Biol of Marine Mammals Lab (1) (lab) Field and lab techniques employed by professional marine mammal biologists including shore and boat-based surveys, photo-identification, and acoustic sampling. Investigations will focus on local species of marine mammals. Pre: MARE 390 or concurrent enrollment.

MARE 405 Watersheds (3) This course is designed to provide a mountain to ocean overview of tropical and temperate watersheds with regards to their hydrology, geology, biogeochemistry, and ecology, as well as their function in maintaining environmental quality in freshwater, coastal, and marine ecosystems. Natural and human disturbances to watersheds will be examined, as well as their impacts on watershed function and downstream riparian, coastal, and marine environments. Restoration and management of watersheds to improve freshwater and coastal environmental quality will be discussed. Pre: CHEM 162.

MARE 410 Marine Debris in the Pacific (3) Scientific study of marine debris issues in the Pacific Ocean, including sources, dispersal, distribution, degradation, effects, persistent organic pollutants, plastic additives, monitoring efforts, and solutions. Pre: MARE 171 and MARE 201, or instructor's consent. (Attributes: GAHP)

MARE 423 Marine Policy (3) Introduction to marine policy, law, and environmental regulations. Topics include protected species, fisheries, clean water, clean air, coastal wetlands, pollution, marine protected areas, climate change. Pre: C- or better in MARE 265 or instructor's consent. This course is dual listed with CBES 623.

MARE 425 Chemical Oceanography (3) Chemical processes occurring in marine and estuarine waters and their impact on the near shore and oceanic environments. Topics include: salinity, chlorinity, major and minor elements, and dissolved gases in seawater; macro and micronutrients, dissolved and particulate organic matter; geochemistry of marine sediments; radiometric dating and stable isotopes as water mass tracers. Pre: C- or better in CHEM 162 and MARE 201.

MARE 434 Teaching Marine Science (3) Marine science concepts and teaching strategies for pre-service and inservice teachers. Includes geological, chemical, physical and biological topics. Pre: MARE/BIOL 171, MARE 201, and MARE 265. (Attributes: ALEX, GCC)

MARE 435 Marine Field Exper Tchrs (3) (other) Training for pre-service and inservice teachers in marine science field experiences content and strategies. Includes geological, chemical, physical and biological topics. Pre: MARE/BIOL 171, MARE 201, and MARE 265. (Attributes: ALEX, GCC)

MARE 440 Physical Oceanography (3) Topics in physical oceanography include: distribution of water characteristics in the ocean; dynamics of circulation; water masses; wave characteristics including formation, propagation, dispersion and refraction; dynamic and equilibrium theories of tides as well as tsunami, seiche, and internal waves; sound and optics; and the latest methods and instrumentation in physical oceanography. Pre: MARE 201, MATH 241, and PHYS 151/151L or PHYS 170/170L, or instructor's consent. Recommended: MATH 242.

MARE 444 Biological Oceanography (3) This course focuses on the interaction of phytoplankton, zooplankton, and pelagic organisms in the open ocean environment. Students will learn aspects of plankton taxonomy, physiology, and pelagic population dynamics. Students will survey the current research status of the field using primary literature. The student's knowledge will then be applied to the study of local and global productivity and trophodynamics. Pre: junior standing, MARE 265 and CHEM 162 or instructor's consent.

MARE 445 Marine Microbial Ecology (3) Marine microorganisms in a diversity of roles within the marine environment including microbial food webs, biogeochemical cycling, symbioses as well as host-pathogen interactions, extreme environments and bioremediation. Microbial interactions in tropical and temperate systems are presented. Pre: MARE 265 or instructor's consent.

MARE 446 Phytoplankton (3) Phytoplankton are the microbial primary producers in marine ecosystems and are sensitive indicators of the ecosystem change. The lecture section will give students baseline information on phytoplankton ecology and their roles in marine ecosystems. We will also discuss phytoplankton in the context of global environmental change. Corequisite: 446L. Pre: MARE 250 and MARE 265.

MARE 446L Phytoplankton Ecology Lab (2) (lab) Phytoplankton are the microbial primary producers in marine ecosystems and are a sensitive indicator of ecosystem change. This laboratory and field-based course will give students hands-on experience with the theory and techniques of phytoplankton ecology. Corequisite: MARE 446. Pre: MARE 250 and MARE 265.

MARE 460 Marine Conservation (3) Concepts and issues in marine conservation and marine resource management. Topics include resource exploitation, invasive species, eutrophication, marine pollution and global climate change. Ecological impacts of resource depletion, environmental modification, and biodiversity loss will be discussed along with methods used to address impacts. Pre: C- or better in MARE 265 or instructor's consent.

MARE 461 Geological Oceanography (3) A detailed study of the ocean floor to include marine stratigraphy, plate tectonics, oceanic sediments and paleoceanography. Pre: MARE 201, GEOL 111 and CHEM 162.

MARE 463 Fisheries Ecology (3) Case studies, lectures, and class discussions provide an interactive exploration of the ecology of fishes related to management and conservation. Topics include: predator-prey theory, reproduction and early life-history, habitat selection, fish biodiversity, and response to anthropogenic climate change. Pre: MARE 265 or BIOL 281 or instructor's consent. This course is dual listed with CBES 663.

MARE 470 Senior Thesis Research (3) (other) Practical experience in designing and completing a marine-related research project. Students will submit project proposals for evaluation and approval. Once approved, students will do a thorough literature review, develop an experimental design, collect and record data and present preliminary results. Pre: MARE 265, MARE 350 or 353 and ENG 225 or instructor's consent.

MARE 471 Senior Thesis Report (3) (other) Second-semester continuation of MARE 470. Students finish their research projects and prepare a final oral and written report. Pre: MARE 470. (Attributes: ALEX, GCC)

MARE 474 Applied Informatics (3) Introduction to the theory and application of informatics tools used in Marine and Natural Sciences. Students will learn the fundamentals of data management, data analytics, ecoinformatics, bioinformatics, and data visualization. (Previously offered as MARE 375) Pre: C or better in CS 171 or CS 172, C or better in MATH 271 or MARE 250 or instructor's consent. (Same as DATA 474) This course is dual listed with CBES 674.

MARE 480 Senior Internship (3) Applications of knowledge and skills in public, private, or government agency involved in marine science education or research. Pre: Current or previous enrollment in MARE 350 or MARE 353. Junior or senior class standing, instructor's consent, and preapproved placement. (Attributes: ALEX, GCC) (Attributes: ALEX, GCC)

MARE 484 Biology Of Fishes (3) The biology of marine and freshwater fishes. Topics covered include: general anatomy, locomotion, respiration, osmoregulation, sensory systems, reproduction, electrosensitive and electrogenic fishes, coloration and bioluminescence in fishes, genetic interrelationships. Students are encouraged to enroll in MARE/BIOL 484L, the corresponding lab course when offered. Pre: C- or better in MARE 171 or BIOL 172 or their equivalent; C- or better in MARE 265 or equivalent; or instructor's consent. (Same as BIOL 484)

MARE 484L Biology Of Fishes Laboratory (1) (lab) Anatomy of jawless, cartilaginous and bony fishes. Review of common local reef fishes. Laboratory and field trips for Biology of Fishes. Co-req: MARE 484. (Same as BIOL 484L).

MARE 488 Kū'ula: Integrated Science (3) This course will compare content, context, and methodology of Native Hawaiian and Western sciences and explore ways to apply both to understand the environment of Hawai'i. Students will be exposed to scientific knowledge and endeavors of Native Hawaiians through field trips and will also explore ways to integrate sciences to address research and management issues facing Hawai'i today. Pre: MARE 171, MARE 201, and MARE 250 or instructor's consent. (Attributes: ALEX, GCC)

MARE 490 Sea Turtle Conserv & Ecology (3) All-encompassing look at the natural history of these ancient marine vertebrates. Topics include investigations of sea turtles, sea snakes, saltwater crocodiles and marine iguanas throughout the world. Subjects will consist of conservation and management, human impacts, reproductive and feeding ecology, evolution, taxonomy, and anatomy and physiology of these unique marine animals. Pre: MARE 265 or equivalent or instructor's consent. Concurrent enrollment in MARE 490L.

MARE 490L Sea Turtle Conserv & Ecol Lab (1) (lab) Field and lab techniques employed by sea turtle biologists including shore and underwater photo-surveys, forage surveys, and evaluation of nests and hatchlings. Investigations will focus on local species of sea turtles. Pre: MARE 490 or concurrent enrollment.

MARE 495 Senior Seminar (3) (other) Lectures, discussions, and research reports of topics in marine science presented by faculty, students, invited speakers, and visiting scholars. Students will be expected to present a seminar, as well as participate in other course activities. Pre: Current or previous enrollment in MARE 350 or MARE 353. Senior standing or instructor's consent. (Attributes: GCC) (Attributes: GCC)

MARE 496 Tchg Asst & Tutorng in Mare (1-3) (lab) Practice in individual tutoring, and in the preparation of the selected topics in Marine Science lecture or laboratory courses, under direct instructional supervision. This course may be repeated for a maximum of 6 credits and may not be used to replace any specific course or elective requirements of the Marine Science major. Pre: supervising instructor and department chair consent.

MARE x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

MARE x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Marketing (MKT) Courses

College of Business and Economics (COBE)

MKT 310 Princ of Marketing (3) Fundamental marketing concepts and contemporary marketing issues are analyzed within present economic, social and legal environments; consumer and functional analysis are emphasized. Pre: C or better in ECON 130 and ACC 201.

MKT 311 Marketing Management (3) Planning, evaluation, and control of the marketing function. Procedures for developing the analysis and solution to common marketing management problems involving pricing, distribution, product development and promotion. Pre: MKT 310.

MKT 313 Promotional Strategy (3) The role of promotion in an organization's communication processes from a theoretical and managerial perspective. Advertising, personal selling and sales promotion are analyzed from the view of both the organization and its consumer groups. Pre: MKT 310

MKT 315 Consumer Behavior (3) An integrated framework for understanding consumer behavior from a marketing perspective. Course focuses on environmental issues, as well as consumer decision processes. Pre: C or better in MKT 310.

MKT 318 Internet Marketing (3) Marketing principles applied to Internet commerce. This course examines the tools and techniques currently used to harness the potential of the Internet. Internet marketing strategies that effectively blend the product, price, distribution channels and communication variables will be discussed along with the use of relationship marketing through on-line strategies. The preparation and use of an Internet marketing plan will be developed through case studies and/or student projects. Pre: C or better in MKT 310

MKT 319 Market Research (3) An overview of the marketing research process as part of an organization's decision support systems. Topics include research design, attitude measurement, along with data sources,

collection and analysis. A research application component will emphasize the planning, execution, and analysis of a real-world marketing research project. Pre: MKT 310, and C or better in MATH 115 or QBA 260.

MKT 333 International Marketing (3) Focused on identifying and satisfying global customer needs better than the competition, both domestic and international, and coordinating marketing activities within the context of the global environment. Pre: C or better in MKT 310. (Attributes: GAHP)

MKT 351 Professional Selling (3) This course includes the principles of personal selling for both industrial and retail sales persons covering topics of prospecting, approaching, presenting, closing and follow-up. A major emphasis is placed on understanding the customer's needs and contributing to the success of the customer, with a focus on building long-term relationships based on trust. Pre: C or better in MKT 310.

MKT x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

MKT x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Mathematics (MATH) Courses

College of Natural and Health Sciences (CNHS)

MATH 100 Survey Of Math (3) Survey of Mathematics course is intended primarily for non-science liberal arts majors to satisfy the university's quantitative reasoning requirement. Core topics include mathematical logic and mathematical thinking and problem solving. Additional topics may include number systems, computers, algebra, and probability. Pre: None. (Attributes: FQ, GQ)

MATH 103 Intro to College Algebra (3) For students who need to improve algebraic skills prior to taking Pre-calculus or Applied Calculus, or for courses in Introductory Chemistry, Physics or Statistics. Topics include exponents and radicals, factoring, systems of equations, linear equations, quadratic equations, general properties of functions, graphing, polynomial functions, exponential and logarithmic functions.

MATH 115 Intro to Stats and Prob (3) (lecture/lab) Utilizes basic statistical topics including measures of central tendency and dispersion, classification of variables, sampling techniques, elementary probability, normal and binomial probability distributions, tests of hypothesis, linear regression and correlation in order to solve problems. (Attributes: FQ, GQ)

MATH 125 Applied Calculus (3) The course emphasis is on computations and applications to Business and Life Sciences. Topics include exponential and logarithmic functions, right triangle trigonometry, derivatives, optimization, integration and applications in these areas. Pre: C or better in MATH 103, or C or better in MATH 135T or higher, or recommendation from the Math Placement Test. (Attributes: FQ, GQ) (Attributes: FQ, GQ)

MATH 135 Precalc: Elementary Functions (3) Investigates linear, quadratic, polynomial, rational, exponential, logarithmic functions, and relevant topics. This course is the first part of the precalculus sequence.

Pre: C or better in MATH 103, or an appropriate recommendation on the Math Placement Test. (Attributes: FQ, GQ)

MATH 135T Precal: Elem Funct w/ Tutorial (4) The main topics of the course are graph sketching, definition and properties of functions, polynomial and rational functions, and exponential and logarithmic functions. In addition, this course provides supplemental algebra instruction that directly supports the main topics of the course. Pre: An appropriate recommendation on the Math Placement Test (Attributes: FQ, GQ)

MATH 140 Precalc:Trig/Analytic Geometry (3) Studies trigonometric functions, analytic geometry, polar coordinates, vectors, and related topics. The course is the second part of the precalculus sequence. Pre: C of better in MATH 135T or higher, or an appropriate recommendation on the Math Placement Test. (Attributes: FQ, GQ)

MATH 140X Precalculus (4) MATH 140X is an accelerated one semester course on the material covered in the sequence 135-140. Topics include the essential pre-calculus skills needed for success in calculus: functions, with special attention to polynomial, rational, exponential, logarithmic and trigonometric functions; plane trigonometry; and polar coordinates. Credit may not be earned for both MATH 140 and MATH 140X Pre: B+ or better in MATH 103, or C or better in Math 135, or an appropriate recommendation on the Math Placement Test. (Attributes: FQ, GQ)

MATH 211 Matrix Algebra w/Applications (3) Matrix Algebra with Applications. (3) Focus on computation, intuition, and applications: elementary row reduction, matrix multiplication and inversion, linear systems, least squares, eigensystems and SVD. Prerequisite: C or better in MATH 140 or higher, or placement into MATH 241 or higher. (Attributes: FQ, GQ)

MATH 241 Calculus I (4) First half of a standard first year calculus sequence intended primarily for Natural Science majors. Topics include differential calculus, applications, and an introduction to integration. Pre: C or better in MATH 140X or MATH 140, or an appropriate recommendation on the Math Placement Test. (Previously offered as MATH 205). (Attributes: FQ, GQ)

MATH 242 Calculus II (4) Second semester of a standard first year calculus sequence intended primarily for Natural Science majors. Topics include applications of the definite integral, techniques of integration, an introduction to differential equations, and infinite series. Pre: C or better in MATH 241. (Previously offered as MATH 206) (Attributes: FQ, GQ)

MATH 243 Calculus III (3) Introduction to calculus of functions of several variables. Topics include partial differentiation; gradient, divergence, curl, and multi-variable optimization. Pre: C or better in MATH 242 (Previously offered as MATH 231). (Attributes: FQ, GQ)

MATH 244 Calculus IV (3) Introduction to calculus of functions of several variables. Topics include multiple integrals, line integrals, and surface integrals; Green's Theorem and Stoke's Theorem. Pre: C or better in MATH 243. (Previously offered as MATH 232).

MATH 271 Applied Statistics with R (3) Introduction to probability and statistics, with an emphasis on applied use of the R statistical computing system. Topics include categorical and quantitative random variables, probability distributions, descriptive statistics, estimation, hypothesis testing, and linear regression. Pre: C or better in MATH 135T or higher, or placement into MATH 140 or higher. Recommended: C or better in CS 171 or computer programming experience. (Same as DATA 271)

MATH 300 Ordinary Diff Equations (3) Theory and methods of solutions of ordinary differential equations and systems of linear differential equations with constant coefficients. Power series solutions, Laplace transforms, and applications. Pre: C in MATH 242.

MATH 301 Partial Differential Equatns (3) Construction and behavior of solutions of partial differential equations in physical and engineering applications, classical equations of mathematical physics, initial and boundary value problems, and eigenvalue problems. Pre: C in MATH 300 and MATH 243. Recommended: MATH 244 or concurrent.

MATH 303 Complex Variables W/ Apps (3) An introduction to the theory of functions of a complex variable. Complex differentiation and the Cauchy-Riemann equations. Analytic functions, conformal mappings, and Laurent series. Cauchy's Theorem, residue theory, and their applications. Additional topics include Riemann surfaces and the algebraic closure of the complex numbers. Pre: C or better in MATH 243. Recommended: C or better in MATH 244.

MATH 310 Discrete Mathematics (3) Topics from discrete mathematics, including logic, proof techniques, recurrence relations, set theory, combinatorics, relations, functions, graphs, Boolean algebraic structures and applications to coding theory. Pre: C or better MATH 242

MATH 311 Intro Linear Algebra (3) A formal investigation of linear algebra, real and complex vector spaces. There is an emphasis on concepts and abstraction, and instruction of careful mathematical writing. Pre: C or better in MATH 211 and MATH 242

MATH 314 Topology (4) A study of topological spaces and their continuous functions. A focus on properties of topologies, including compactness, Hausdorff, and connectedness. The construction of topologies, including the metric, quotient, product, and subspace topologies. Additional topics include manifold theory and functional analysis. Pre: C or better in MATH 242 or higher Math course excluding MATH 271, and MATH 243 which can be taken concurrently.

MATH 317 Intro To Theory Of Equations (3) Algebraic systems as related to solutions of polynomial equations, division algorithms and factorization for polynomials and integers, fundamental theorem of algebra, and related topics from elementary number theory including linear congruencies and rings of residue classes. Pre: C or better in MATH 310 or instructor's consent.

MATH 324 Ring Theory (4) An introduction to algebraic structures with two binary operations. A focus on the properties of the ring of integers, ring of integers modulo n , polynomial rings, and quotients of polynomial rings. Topics include the normal structure of rings: subrings; ideals, homomorphisms and quotients with focus on the above examples. Additional topics include an introduction of fields. Pre: C or better in MATH 242 or higher math course excluding MATH 271.

MATH 360 Mathematical Physics (3) Special functions of mathematical physics which arise from Sturm-Liouville equations: Bessel, beta, elliptical, gamma and Legendre functions. Generating functions, complex integral representations. Other topics may include integral transforms, Fourier analysis and linear algebra. Pre: MATH 244, or MATH 243 and 300 or instructor's consent. (Same as PHYS 360)

MATH 371 Multivariate Modeling with R (3) Multivariate statistical methods and model selection using R. Topics include the multivariate normal distribution and covariances, multiple regression, analysis of variance, principal component analysis, logistic regression, and decision trees. The course will emphasize model selection and techniques such as validation sets to address the problem of overfitting. Pre: C or better in

MATH 271. (Same as DATA 371)

MATH 380 Chaos (3) An introduction to nonlinear dynamical systems for science majors. Topics include dynamics in one and several dimensions, stability, excitable media, fractals, and time series analysis. Applications in physics, chemistry, ecology and other fields are illustrated. Pre: C or better in MATH 242 and C or better in PHYS 272 or Math 244. (Same as PHYS 380)

MATH 407 Intro To Numerical Analysis I (3) Solutions of equations in one variable, direct and iterative methods for systems of linear equations, the algebraic eigenvalue problem, interpolation and polynomial approximation, error analysis and convergence for specific methods. Offered spring semester. Pre: C in MATH 242 and MATH 211 and programming experience. (Same as CS 407).

MATH 408 Intro To Numerical Analysis II (3) A continuation of MATH 407. Topics will include approximation theory, numerical integration and differentiation, solution of systems of nonlinear equations, numerical solutions to differential equations. Pre: C in MATH 407. (Same as CS 408).

MATH 421 Elem Probability Theory (3) Sets, sample spaces, combinatorial probability, random variables, mathematical expectation, classical distributions applications. Pre: C or better MATH 242

MATH 422 Elementary Math Statistics (3) Statistical inference, estimation, hypothesis testing, regression, correlation, introduction to analysis of variance. Pre: C or better in MATH 421 and one of the following: MATH 115; or MATH 271; or instructor's consent.

MATH 424 Group Theory (4) An introduction to the theory of groups. Topics include the normal structure of groups: subgroups; normal subgroups, homomorphisms and quotients; direct products, and the structure of finite Abelian groups. Additional topics may include the Sylow theorems and/or Galois Theory. Pre: C or better in MATH 310, MATH 317, MATH 324, or MATH 431, and MATH 311 which may be taken concurrently.

MATH 431 Real Analysis (4) A rigorous axiomatic development of single variable calculus. Completeness, limits (functions, sequences, and series), continuity, differentiation, and integration. Topics covered: The real number system; the complete ordered field axioms with emphasis on completeness; sequences and series of real numbers, limits and continuity, differentiation, Riemann Integral, uniform and pointwise convergence. Pre: C or better in Math 310, Math 314, or MATH 424.

MATH 432 Real Analysis II (4) This course is a continuation of MATH 431, classical analysis concepts and theorems, including the topology of the real number and higher dimensional Euclidean spaces, convergence, continuity, uniform and pointwise convergence, differentiability, and integration Pre: C or better in MATH 431.

MATH 441 Geometry I (3) The course is specifically designed for future Math teachers Emphasis is equally split between content and pedagogy of teaching high school Geometry. Topics include: foundations of Geometry, formal direct and indirect geometric proofs, geometric constructions, Euclidean Geometry in 2D and 3D. Pedagogy topics include: learning and practicing different teaching methods and techniques, developing lesson plans, teaching experience in a real classroom environment. Pre: C or better in MATH 243; and C or better in MATH 310, MATH 314, or MATH 324; and MATH 311 which may be taken concurrently.

MATH 442 Geometry II (3) Axiomatic system-independence and consistency, advanced concepts in Euclidean geometry, elements of non-

Euclidean geometries: spherical, elliptic, hyperbolic, introduction to classical Riemann geometry and modern geometry of manifolds. Pre: C or better in MATH 441 or instructor's consent.

MATH 454 Modern Algebra I (3) Theory of groups, rings, and fields. Polynomial rings, unique factorization, and Galois Theory. Pre: C or better in MATH 310 and MATH 311 or instructor's consent. Recommended: MATH 317 and PHIL 345.

MATH 455 Modern Algebra II (3) This course is a continuation of Modern Algebra I. Pre: C or better in MATH 454.

MATH 495A Seminar (1) (other) Seminar presentations of topics in the physical sciences by faculty, enrolled students and invited speakers. The first semester (495A) is taken CR/NC; in the second semester (495B), students are required to present a seminar for a letter grade. Pre: senior standing or consent of instructor. (Same as ASTR 495A-495B, GEOL 495A-495B, CHEM 495A-495B and PHYS 495A-495B.)

MATH 495B Seminar (1) (other) Seminar presentations of topics in the physical sciences by faculty, enrolled students and invited speakers. The first semester (495A) is taken CR/NC; in the second semester (495B), students are required to present a seminar for a letter grade. Pre: senior standing or instructor's consent. (Same as ASTR 495A-495B, GEOL 495A-495B, CHEM 495A-495B, and PHYS 494A-494B.)

MATH 496 Tchg Assist & Tutoring Math (1-3) Practice in individual tutoring and in the preparation of the selected topics in mathematics lecture or laboratory courses, under direct instructional supervision. This course may be repeated for a maximum of 6 credits and may not be used for substitution for any specific course or elective requirements of Mathematics major. Pre: consent of the supervisor and the department chair.

MATH x94 Special Topics in Subject Matter (Arr.) (10) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

MATH x99 Directed Studies (Arr.) (10) Statement of planned reading or research required. Pre: instructor's consent.

Music (MUS) Courses

College of Arts and Sciences (CAS)

MUS 106 Intro to Music Literature (3) Appreciation of western art music through discussion, listening and reading. Study of elements, textures, forms and style characteristics. No previous music knowledge required. (Formerly offered as MUS 160) (Attributes: DA, DH)

MUS 107 Music in World Cultures (3) Explores music as an aspect of human culture focusing on selected non-Western music styles from Asia, Africa, and the Americas. (Formerly offered as MUS 166) (Attributes: FGC)

MUS 108 Fundamentals of Western Music (3) Musical notation: pitch, rhythm, tonality, and chord structure. Aural skills and first experiences at the piano also included. (Formerly offered as MUS 180) (Attributes: DA)

MUS 108L Fund of Western Music Lab (1) Development and application of aural skills through analysis, dictation, and sight-singing. Reinforces concepts presented in MUS 180. Pre: Concurrent enrollment with MUS 108. (Formerly offered as MUS 180L)

MUS 109 Music & Pop Culture in America (3) A survey of American musical styles of the 20th century, including rock, blues, jazz, country, Motown, R & B, and other folk idioms, as well as American art music. Emphasis will be on stylistic evolution, interactions, and social context. No previous musical knowledge is required. (Formerly offered as MUS 163) (Attributes: DA)

MUS 110 Introduction to Jazz (3) A survey of classic and modern jazz in a historical framework. Study of elements, trends, genres, forms and style characteristics. Appreciation of jazz through discussion, listening and reading. No previous musical knowledge is required. (Formerly offered as MUS 165) (Attributes: DA, DH)

MUS 114 University Chorus (3) Large ensemble singing of various genres of choral music including classical, choral/orchestral, world and Hawaiian, traditional as well as contemporary. Study of composers and compositional styles from selected cultures and periods of music. Public performance required. No audition required. May be repeated for credit as many times as desired. (Formerly offered as MUS 102) (Attributes: DA) (Attributes: DA)

MUS 121 Class Instruction I (1) Basic principles of voice technique and performance; relevant problems in literature. (B) Voice; (C) Piano; (D) Guitar. Repeatable in different sections. Cannot be audited. Must be taken for letter grade. (Formerly offered as MUS 123 and MUS 125)

MUS 122 Class Instruction II (1) A continuation of MUS 123. Basic principles of performance; relevant problems in literature. (B) Voice; (C) Piano; (D) Guitar. Repeatable in different sections. Cannot be audited. Must be taken for letter grade. Pre: MUS 121 or Instructor's Consent. (Formerly offered as MUS 124 and MUS 126)

MUS 125 Class Piano I (1) Basic principles of piano technique and performance. Relevant problems in piano literature. Course may be repeated once for credit.

MUS 126 Class Piano II (1) A continuation of MUS 125. Principles of piano technique and performance. Relevant problems in piano literature. Pre: MUS 125 or instructor's consent.

MUS 130 Convocation (1) Seminar in music performance. Study of best practices in preparation/performance of music drawn from each student's Applied Music lessons. In-class solo performances; and public performance required at the end of semester Convocation Student Recital. Co-req: MUS 231 or 331. May be repeated for credit as many times as desired.

MUS 131 Beginning Applied Music (1) Individual instruction in solo vocal or instrumental performance. Course fees are in addition to regular tuition. For course fee amount, see Applied Music Coordinator and consult instructor at time of registration. May be repeated for credits three times.

MUS 175 Intro Music Of Polynesia (3) A general survey of the traditional and acculturated music of eight major Polynesian island groups: Tonga, Samoa, New Zealand, Cook Islands, Society Islands, Marquesas Islands, Easter Island, and Hawai'i. Music is viewed as both an organization of sound and as a product of culture and people. (Same as HWST 175) (Attributes: DH, GAHP, GH, HPP)

MUS 176 Hist & Dev Of Hawn Music (3) A general survey of the interrelationships of traditional and acculturated Hawaiian music. Vocal music genres to be discussed include: chant; Christian hymn singing; secular choral singing; male and female falsetto singing; Chalangalang; Hapa Haole; and contemporary. Instrumental music genres include: pre-European instrumental styles; slack key guitar; 'ukulele; and steel guitar. (Same as HWST 176) (Attributes: DH, GAHP, GH, HPP)

MUS 195 Contemporary Island Music (3) Survey of contemporary music in Hawai'i from the 1970's to today's popular music. Emphasis on performance, via the understanding of multi-cultural influences, styles of composers, and development of musical trends in Hawai'i. Practical experience with singing and 'ukulele. (Attributes: DA, HPP)

MUS 225 Music Synthesis (3) The use of computer-controlled synthesizers in musical composition, recording and performance; Music Instrument Digital Interface procedures and applications. Pre: MUS 126 and MUS 131C (Applied Music/Piano) or conference.

MUS 230 Voice Class (3) (lecture/lab) An experiential study of singing techniques and vocal repertoire, including historical study of the techniques and repertoire studied in class. Focus on current scientific understanding of vocal technique. Course includes required in-class performances. (Attributes: DA)

MUS 231 Applied Music (1) Individual instruction in solo vocal or instrumental performance at a foundational level. Performance at end of semester Convocation and Juries required. (B) voice; (C) piano; (D) organ; (F) recorder; (G) classical guitar; (H) violin; (I) viola; (J) cello; (K) double bass; (M) flute; (N) oboe; (O) clarinet; (P) bassoon; (Q) saxophone; (R) trumpet; (S) French horn; (T) trombone; (U) tuba; (X) euphonium; (Y) percussion; (Z) other. Repeatable for four semesters. A-F only. Pre: Audition or Instructor's Consent. Co-Req: MUS 130. (Formerly offered as MUS 135, MUS 136, MUS 235, and MUS 236)

MUS 240 Creative Apps of Music Tech (3) Fundamental technology concepts learned through creative projects. Exposure to a variety of music and audio software. Pre: MUS 108 or Instructor's consent. (Attributes: DA)

MUS 276 Music, Gender, and Sexuality (3) An examination of the connections between gender, sexuality, and music, with emphasis on the music's relation to cultural, social, political, and historical contexts. Pre: ENG 100/100T or ESL 100/100T. (Attributes: DH)

MUS 281 Theory I (2) Materials and organization of music; analysis, writing, and keyboard application. Pre: MUS 108 or Instructor's consent. Co-Req: MUS 283 or Instructor's consent. (Formerly offered as MUS 185)

MUS 282 Theory II (2) Continuation of MUS 281. Pre: MUS 281 or Instructor's consent. Co-Req: MUS 284 or Instructor's consent. (Formerly offered as MUS 186)

MUS 283 Aural Training I (1) Perception, identification, and notation of musical sounds through dictation and sight singing. Pre: MUS 108 and ability to sing diatonic melodies at sight, or Instructor's consent. (Formerly offered as MUS 185L)

MUS 284 Aural Training II (1) Continuation of MUS 283. Pre: MUS 283 or Instructor's consent. Co-req: MUS 282 or Instructor's consent. (Formerly offered as MUS 186L)

MUS 285 Music Theory III (3) Detailed study of theory: writing, analysis, keyboard application. Pre: MUS 282. Co-req: MUS 287 or Instructor's consent.

MUS 286 Theory IV (3) Continuation of MUS 285. Pre: MUS 285. Co-req: MUS 288 or Instructor's consent.

MUS 287 Aural Training III (1) Advanced level of perception, identification, and notation of musical sounds through dictation and sight-singing. Pre: MUS 284. Co-req: MUS 285 or Instructor's consent. (Formerly offered as MUS 285L)

MUS 288 Aural Training IV (1) Continuation of MUS 287. Pre: MUS 287. Co-req: MUS 286 or Instructor's consent. (Formerly offered as MUS 286L)

MUS 324 Choral Conducting (3) Basic conducting technique and its application to the directing of choral organizations. Includes score reading, lyric dictation, rehearsal techniques, and interpretative problems. Research in conducting skills and problems. Required: Concurrent enrollment in a choral ensemble. Pre: MUS 282 or Instructor's consent. (Formerly offered as MUS 390)

MUS 331 Applied Music (1) Individual instruction in solo vocal or instrumental performance at a foundational level. Performance at end of semester Convocation and Juries required. (B) voice; (C) piano; (D) organ; (F) recorder; (G) classical guitar; (H) violin; (I) viola; (J) cello; (K) double bass; (M) flute; (N) oboe; (O) clarinet; (P) bassoon; (Q) saxophone; (R) trumpet; (S) French horn; (T) trombone; (U) tuba; (X) euphonium; (Y) percussion; (Z) other. Repeatable for four semesters. A-F only. Pre: Advancement from MUS 231 or Instructor's consent. Co-req: MUS 130. (Formerly offered as MUS 335, MUS 336, MUS 435, and MUS 436)

MUS 340 Electronic Music (3) Basic techniques of electronic sound synthesis. Pre: MUS 240 or Instructor's consent. (Formerly offered as MUS 325)

MUS 359 Music and Activism (3) An exploration of the ways in which music has been used to create and support social change. The role of music in movements involving resistance, protest, and activism for political, social, and environmental justice, both in the U.S. and globally. (Same as WS 359)

MUS 365 History of Western Music I (3) Development of Western music from its origins to the 1750. Styles, schools, and composers. Pre: MUS 160 or instructor's consent. (Attributes: DA)

MUS 366 History Of Western Music II (3) Development of Western music from its origins to the twentieth century. Styles, schools, and composers. Pre: MUS 160 or instructor's consent. (Attributes: DA)

MUS 367 History of Pop Music (3) MUS 367 History of American Pop Music (3) An examination of American popular music from the 16th through 21st centuries with emphasis on the music's relation to cultural and historical contexts, and technological and aesthetic developments. Listening and discussions focus on a variety of music including jazz, blues, rock and roll, reggae and hip hop. Pre: ENG 100. (Attributes: DH)

MUS 375 Japanese Music (3) Historical survey of traditional, contemporary, and Western-influenced music of Japan and study of major genres. No previous musical knowledge is required. Pre: Junior standing or consent of instructor. (Same as JPST 375). (Attributes: GAHP)

MUS 383 Orchestration (3) Survey of instruments for the orchestra and band. Study of selected scores. Basic principles of scoring and transcribing for the orchestra or band. Two semester projects. Pre: MUS 282 or Instructor's consent. (Formerly offered as MUS 349)

MUS 400 Topics in Music (3) Topics in history, literature, theory, world

music, and applied music. May be repeated for credit once. Pre: ENG 100. (Formerly offered MUS 465) (Attributes: DA, DH)

MUS 401 Vulcan Band (2) Rehearsals and performances for athletic events, pep rallies, and other similar events. Public performance required. May be repeated for credit. Pre: Audition.

MUS 402 Jazz Orchestra (3) Instruction and rehearsal in various types/genres of depending on instrumentation and personnel. Emphasis instrumental music. Public performance may be required, on music literacy and individual performance skills. May be repeated for credit. Pre: audition or instructor's consent.

MUS 404 Kapili Choir (3) Performance of choral literature, including accompanied, a capella, and major choral works. Includes pan-Pacific music and features Hawaiian language and place-based mele. May be repeated for credit as many times as desired. Pre: audition or instructor's consent. (Attributes: DA, GCC)

MUS 406A Jazz Ensemble (2) (lecture/other) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406B Collegium Musicum (Early Mus) (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406D Keyboard Accompanying (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406E Saxophone Quartet (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406F Chamber Music Ensemble (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406G Brass Ensemble (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406H String Ensemble (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406I Woodwind Ensemble (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406J Percussion Ensemble (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406L New Music Ensemble (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition and consultation.

MUS 406M Musical Theatre Ensemble (2) Rehearsals and performance of chamber music for small instrumental/vocal groups. Public performance required. May be repeated for credit. Pre: audition

and consultation.

MUS 410 Ensembles (3) Performance of literature for ensembles and performing groups of various sizes and kinds; (A) Musical Theatre; (B) Vocal Chamber Ensemble; (C) Instrumental Chamber Ensemble; (Z) Other. May be repeated for credit as many times as desired. Pre: Audition and Instructor's consent. (Formerly offered as MUS 406)

MUS 419 Music in Education (3) Study of practical methods and materials used in teaching basic musical concepts in educational settings serving children and youth. Opportunities for field work will be incorporated into class activities. (Attributes: DA, GCC)

MUS 485 Form & Analysis (3) Form, texture, and style in music literature from Renaissance to present. Formal analysis and writing. Larger forms with various textures; recent contemporary approaches to continuity. Pre: instructor's consent.

MUS 487 Counterpoint (3) Form, texture, and style in music literature from Renaissance to present. Formal analysis and writing. Contrapuntal textures and forms. Pre: Instructor Consent.

MUS 490 Lyric Theatre (3) Examination of history, theory, and techniques that shaped American Musical Theatre, with emphasis on major composers, choreographers, and performers. Lab work in singing and other performance requirements, leading to a final performance project. Previously offered as DRAM 490. (Attributes: DA)

MUS 490L Lyric Theatre Lab (1) (lab) Experiential study of actors/singers, choreographers, and directors through scenes, songs and dances that represent the major periods and styles within musical comedy from the 1920s to the present. Emphasizes in-class performance derived from training in voice, acting, and dance. Previously offered as DRAM 490L.

MUS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

MUS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Natural Resources (NRES) Courses

College of Agriculture, Forestry & Natural Resource Management (CAFNRM)

NRES 196 Intro to Natural Resource Mgmt (3) This course highlights the biological and physical science aspects of natural resource management at local, national, and global scales. Topics covered will include resource management of soil, water, forests, rangelands, wetlands, coasts and wildlife. This is an intro-level course designed to introduce key concepts and topical areas in natural resources and environmental management. (Attributes: DB, HPP)

NRES 230 Philippines Environ & Nat Resou (3) Examination of the Philippines environment and natural resources from a long-term perspective. Analysis of the effects of resource management practices on environmental quality, agroecosystems, the economy, and food security. Consideration of conflicting values and resolution. (Attributes: GAHP)

NRES 320 Environ Issues in Asia-Pacific (3) (lecture/lab) Impact of rapid agricultural development, deforestation, industrialization and urbanization on air, soil and water in the Asian-Pacific environment. Causes, consequences and corrective measures for pollution in the region. Combinations of expert approaches and geo-information systems, including introductory modeling are used to predict contaminant fate, behavior and critical load. Recommended: CHEM 151 or 161 or equivalent. (Attributes: GAHP)

NRES 410 Invasive Species & Ecosystems (3) Invasive species comprise one of the greatest immediate threats to global biodiversity. This course will focus on the ecological impacts of such species, the factors influencing their establishment, and the theory and practice of controlling invasive species. Pre: FOR 202 or BIOL 171 or BIOL 281 or Instructor's consent.

NRES 420 Hydrology and Watershed Mgmt (3) (lecture/lab) Managing human impact on watershed and water resources and understanding the relationships among forest, soil, water, land-use, and people. Management of wildland watershed for control of the amount and timing of water yield, stormflow, water quality, erosion, and sedimentation with socio-economic and policy considerations. Emphasis on forest and water resources management.

NRES 425 Marine Biogeochemistry (3) Marine Biogeochemistry examines the chemical processes occurring in marine and estuarine waters, their impact on near shore and oceanic environments, and their connection to climatic stability. Marine biogeochemistry is inherently interdisciplinary, involving aspects of biology, earth science and physics, as well as chemistry. Pre: CHEM 151 or CHEM 161 or consent of instructor.

NRES 430 GIS Application in Nat Res Mgt (3) GIS and spatial techniques in natural resource management. Spatial data structures, map projection, global positioning system. How to create spatial data sets through GPS survey. Utilization of GIS software and performance of basic spatial analysis. Pre: Instructor consent required.

NRES 455 Pac Climate Change Adaptation (3) This course focuses on three major components: 1) understanding the basic science of climate change; 2) impacts on productive sectors and coastal activities; and 3) vulnerability assessments and adaptation strategies for integrated coastal management initiatives as well as for individual sectors. Pre: Junior standing. (Attributes: GAHP)

NRES x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

NRES x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Natural Sciences (NSCI) Courses

College of Natural and Health Sciences (CNHS)

NSCI 476 Communicating Science (3) Introduction to theory and practice of communicating science to general audiences, focusing on adults but including teens and children. Pre: Senior standing and six credits from upper division courses in ASTR, BIOL, CHEM, ENSC, GEOL,

MARE, or PHYS.

NSCI x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

NSCI x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Nursing (NURS) Courses

College of Natural and Health Sciences (CNHS), School of Nursing

NURS 202 Health Promotion (3) This course is designed for students to understand health in the broadest sense of the word -- as an integrated process for discovering, using, and protecting all possible resource within the individual, 'ohana, community, and environment. (Same as KES 202)

NURS 203 General Pharmacology (3) Pharmaceuticals discussed with emphasis on methods and sites of administration, mechanisms of action, toxicity, rate and uses of major therapeutic agents. Intended for undergraduates in the health sciences and related fields. Pre: MATH 100, BIOL 243, 243L, 244, 244L or instructor's consent.

NURS 347 Health Assessment (3) Introduction to comprehensive health assessment of clients across the life span using critical thinking skills. Emphasis on the pathophysiologic influences on subjective and objective findings of selected systems. Detailed health assessment techniques will be introduced as well as methods of comprehensive history-taking. Note: Restricted to Nursing students only.

NURS 347L Hlt Assessment Practicum (1) (other) Application of the nursing process in the comprehensive health assessment of clients across the life span. Emphasize the pathophysiologic and/or pathopsychologic influences on subjective and objective findings of selected systems. Detailed health assessment techniques as well as comprehensive history-taking. Note: Restricted to Nursing students only.

NURS 348 Human Pathophysiology (3) This course explores concepts of the biological basis for disease in adults and children. Alterations in normal body functions leading to disease and discomfort of the individual will be presented with an organized framework. Note: Restricted to Nursing and Pre-Nursing students only.

NURS 350 Transcultural Care & Hlth Prom (3) The course introduces basic principles of teaching-learning, adult learning, group process and basic transcultural care and health promotion concepts. Note: Restricted to Nursing Students Only. (Attributes: DS, GAHP, HPP)

NURS 351 Professnl Nsg Issues & Trends (3) Introduction of contemporary health reform issues and trends affecting the nursing profession. Overview of the history of nursing, significant national nursing studies, code of ethics, relationship of nursing theory to nursing practice and nursing research. Includes introduction to client care management. Pre: junior standing. Restricted to Nursing Students Only.

NURS 352L Nursing Skills Laboratory (1) (lab) Practice of basic clinical skills in a campus laboratory setting to prepare student for clinical practice in community settings. Includes faculty demonstrations,

student return-demonstrations, and performance testing. Course offered CR/NC only. Note: Restricted to Nursing Students Only.

NURS 353 Nursing Concepts & Skills (3) (other) Introduction to the art and science of the professional role of transcultural nursing care. Fundamental nursing concepts, process, and practice will provide the novice nursing student with a firm foundation for advanced nursing study. Note: Restricted to Nursing students only.

NURS 353L Nsg Concepts & Skills Practicum (3) (other) Introduction to the application of the nursing process in the delivery of care to medical/surgical populations. Comprehensive, faculty-guided experiences in developing a beginning knowledge base for entry into the nursing profession. Note: Restricted to Nursing students only.

NURS 355 Adult Health Care I (3) (lecture/other) Care of adult clients with acute medical/surgical problems. Integration of pathophysiology in the understanding of human responses to health deviations. Use of the nursing process to develop individualized, culturally congruent care plans. Note: Restricted to Nursing students only.

NURS 355L Adult Hlt Care I Practicum (5) (other) Application of the nursing process in providing individualized, culturally congruent care to adult clients with acute medical/surgical problems. Note: Restricted to Nursing students only.

NURS 357 Mental Health Care (3) (other) Application of mental health concepts, transcultural caring and professional nursing skills in delivering mental health care. Includes study and application of treatment modalities appropriate to selected psychopathological conditions. Note: Restricted to Nursing students only.

NURS 357L Mental Hlt Care Practicum (3) (other) Application of nursing process in the delivery of mental health care to selected populations. Faculty guided clinical experience in acute and community settings. Note: Restricted to Nursing students only.

NURS 358 Nursing Research (3) Introduction to the research process and the application of scientific method in nursing. Note: Restricted to Nursing students only.

NURS 359 Foundation of Health Promotion (3) Exploration of the relationship between health promotion, health policy, and the impact on health conditions in diverse populations. Examination of the importance of health behavior and social determinants of health as contributors to current health problems, and the role of health promotion and education programs in addressing them.

NURS 360 Health Care Policy (3) Analyses of local, national and global economic, legal and social factors impacting health care policies. Discussion of relationship between emerging social issues/trends and health care disparities and capacities. Discussion of social justice, cultural competence, and equity in access and delivery of health care services. Opportunities are provided to participate in political processes impacting nursing and health care policy. (Same as SOC 360)

NURS 361 BSN Nursing Preview (3) Preview of academic and clinical opportunities for baccalaureate level nurses with an emphasis on leadership roles and advanced practice. Exploration of strategies for success as a life-long learner. An experiential component is included in this course which will supplement didactic content. The course is restricted to licensed registered nurses who are in the RN to BSN option of the BSN Program, or by instructor's consent. Offered every spring.

NURS 362 Nursing Professional Writing (3) The professional writing course is tailored for students planning careers in nursing. This class assists the student in developing professional writing skills. Writing is an essential component of the communication skills that help define professional nursing practice. The APA style is included to guide clear and professional communication. It encompasses standards for the content and organization of a paper and ways to express ideas clearly while reducing bias in language.

NURS 370 Transcultural Health Care (3) Introduces theories of transcultural nursing and human caring with an emphasis on exploring the caring values, beliefs, client/family lifeways and health practices of different ethnic groups and self by using culturalogical care assessment skills. Note: Restricted to Pre-nursing and Nursing students only.

NURS 371 Health Information Technology (3) Overview of information technology. Topics cover concepts and methodologies to plan, analyze, design, implement and evaluate health information systems. Note: Restricted to Pre-nursing and Nursing students only.

NURS 372 Spirituality in Health Care (3) An examination of the role of spirituality in patient care for clients of multicultural backgrounds across the life span. Exploration of spirituality as an integral part of self.

NURS 373 Gerontological Health Care (3) Care of the aging adult with an emphasis on successful aging and health promotion. Integration of theory and evidence-based practice in providing culturally congruent care.

NURS 374 Skills Nursing Leadership & Mgmt (3) Development of effective leadership skills, communication skills, interpersonal skills, presentation and technical writing skills necessary for nursing leadership and management. Emphasis on team management and conflict resolution skills are included.

NURS 375 Applied Human Nutrition (3) Applied nutrition in human health and disease, and the nurse's role in supporting nutritional care. Pre: one chemistry and one anatomy/physiology course, or consent of instructor. Note: Restricted to Pre-nursing and Nursing students only.

NURS 376 Human Lactation (3) No prerequisites, corequisites, cross-listing, special grading options or repeatability for credit. An in-depth focus on the anatomical and physiological basis of lactation and breastfeeding. This course includes the history of infant feeding in the US, the role of culture, benefits of breastfeeding, anatomy and physiology of human lactation including composition of human milk, evidence-based breastfeeding support for expectant and new mothers, and identification of barriers and common breastfeeding problems

NURS 377 End of Life Care (3) This course will introduce, explore and assist interdisciplinary providers (nursing physicians, social workers, spiritual counselors, volunteers, etc) and other individuals to recognize and understand issues related to end of life care.

NURS 409 Perinatal & Pediatric Health (3) Emphasizes the nursing process in providing culturally appropriate care to perinatal women and to children, in the context of the family. Explores preventative health care, anticipatory guidance and health promotion in a developmental context. Note: Restricted to Nursing students

NURS 409L Perinatal & Pediatric Hlt Prac (3) Application of the nursing process in providing culturally congruent nursing care to perinatal women, and to infants, children, adolescents, and their families. Supervised clinical experiences in labor/delivery, nursery, postpartum, inpatient pediatrics and/or community settings. Note:

Restricted to Nursing students only.

NURS 411 Community & Collaborative Hlt (3) Emphasis on culturally sensitive care to families and other groups in community health delivery settings. Identification of organizational resources and delivery patterns are investigated for effectiveness in addressing client needs in a variety of community settings. Note: Restricted to Nursing students only

NURS 411L Community & Collaboration Prac (3) Application of the nursing process in delivery of nursing care to individuals, families, groups, and communities. Integration of a service learning project utilizing organizational resources in collaborative relationships with community agencies. Note: Restricted to Nursing students only.

NURS 455 Adult Health Care II (3) (other) Prevention intervention and therapeutic modalities in caring for adult clients with acute medical and/or surgical problems. Emphasis on increasing medical-surgical nursing expertise with incorporation of client management skills and more advanced problem-solving. Note: Restricted to Nursing students only.

NURS 455L Adult Hlt Care II Practicum (5) (other) Continued care of adult clients with acute medical and/or surgical problems. Emphasis on increasing medical-surgical nursing expertise with incorporation of patient management skills and more advanced problem solving. Note: Restricted to Nursing students only.

NURS 457 Ldrshp & Transition to Practic (3) Management and leadership concepts in delivering comprehensive nursing care to clients with complex health care needs. Emphasize critical thinking and evaluation of clinical judgments in nursing practice. Note: Restricted to Nursing students only. (Attributes: ALEX, DS, GCC)

NURS 457L Ldrshp & Tran to Prac Practicu (2) (other) Application of management and leadership concepts in delivering comprehensive nursing care to clients with complex health care needs. Emphasize critical thinking and evaluation of clinical judgments in nursing practice. Note: Restricted to Nursing students only.

NURS 458 Nursing Review (3) Review of human body systems, nursing management, concepts, and skills in client health care. This review includes math and pharmacology with emphasis on critical thinking by discussion of NCLEX practice questions and related rationales. Note: Restricted to Nursing Students Only.

NURS 458L Nursing Review Practicum (2) Application of nursing skills in concentrated clinical experience in the acute care setting. Note: Restricted to Nursing Students Only.

NURS 459 Nursing Review (2) Review of human body systems, nursing management, concepts, and skills in client health care. Note: Pre: Nursing Major

NURS 459L Nursing Review Practicum (1) (lab) Application of nursing skills in concentrated clinical experience in the acute care setting. Pre: Nursing Majors

NURS 471 Intro Rural-Home Health Care (3) Introduction to the theory and role of the nurse in providing culturally congruent care in rural and home settings for client/family systems. Will examine the establishment of cooperative relationships with appropriate rural agencies. Note: Restricted to Pre-nursing and Nursing students only.

NURS 480 Nursing Remediation Theory (4) This course prepares the registered nurse who has been out of nursing for 5 years or more years

to return to work. This course also meets the requirement as a remediation course for any applicant who has not passed their NCLEX 3 times within the past 3 years. Students needing NCLEX remediation are only required to complete this theory course. Students enrolling in this course must have graduated from an accredited school of nursing in good standing, have attempted the NCLEX examination within the past 3 years and must be eligible to sit for the NCLEX exam upon completion of the course. PRE: Instructor's Consent.

NURS 481L RN Refresher Lab (2) (lab) This laboratory course is designed to prepare the registered nurse who has been out of nursing for 5 years or more years to return to work. The main areas of instruction will include: general medical and surgical nursing, pediatrics, and maternal newborn nursing. Additionally, new equipment, procedures, charting, documentation, medication, IV therapy, and physician's orders will be reviewed. The course content is derived from the Hawai'i Nursing Scope of Practice and the Hawai'i Nursing Practice Act. The lab participation is on site at the University of Hawai'i at Hilo. Students enrolling in this course must have completed initial licensure in United States, must be eligible for licensure in Hawai'i upon completion of program and must have been previously licensed as a RN. Pre: Instructor's Consent.

NURS 490 Contemporary Healthcare Ethics (3) Contemporary Healthcare Ethics provides a thorough grounding in ethical principles and theories as evidenced in current healthcare issues and policies. Introduction of various frameworks for ethical decision-making, as well as current trends in the political, economic and legal spheres of the contemporary health care arena. Pre: Enrollment in UH Hilo School of Nursing. Open to other non-nursing majors with permission from instructor.

NURS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

NURS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [NURS graduate-level courses](#).

Pacific Islands Studies (PACS) Courses

[College of Arts and Sciences \(CAS\)](#)

PACS 108 Pacific Worlds (3) Introduces students to the geography, societies, histories, cultures, contemporary issues, and arts of Oceania, including Hawai'i. Combines lectures and discussion that emphasize Pacific Islander perspectives and experiences. (Attributes: HPP)

PACS x94 Special Topics in Subject Matter (Arr.) (IO) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PACS x99 Directed Studies (Arr.) (IO) Statement of planned reading

or research required. Pre: instructor's consent.

Performing Arts (PART) Courses

College of Arts and Sciences (CAS)

PART 395 Senior Seminar (1) (other) A seminar course focusing on the logistics of business and production in the performing arts. Topics covered include employment opportunities, self-produced work, royalties, licensing and intellectual property rights, marketing, public relations, and other knowledge required for a career in the performing arts. These skills are necessary for implementation of the Senior Project. Pre: DRAM 101

PART 495 Senior Project (3) Senior project in the performing arts. Pre: Senior Standing

PART x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PART x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Philosophy (PHIL) Courses

College of Arts and Sciences (CAS)

PHIL 100 Intro to Philosophy (3) Major philosophers, methods, and issues in Western and non-Western philosophy. Discussion of such problems as our knowledge of reality, the freedom of the will, the relations between the mind and body, morality, the meaning of life and the existence of God. (Attributes: FGC)

PHIL 101 Intro to Asian Philosophy (3) Philosophical teachings of Hinduism, Buddhism, Jainism, Confucianism, Taoism, Neo-Confucianism, and Shintoism. (Attributes: DH, GAHP, HPP)

PHIL 209 Reasoning (3) Informal logic: Study of practical reasoning, argument, and the use and misuse of language. Emphasis on development of critical thinking skills. (Attributes: DH)

PHIL 211 History of Ancient Philosophy (3) Philosophy of the Pre-Socratics, Plato, Aristotle and Roman thinkers. (Attributes: DL)

PHIL 213 History of Modern Philosophy (3) From the Renaissance to the 19th century. Recommended: PHIL 211. (Attributes: DH)

PHIL 220 Social Ethics (3) Contemporary ethical issues, such as abortion, euthanasia, the death penalty, sexual equality, sexual integrity, discrimination and reverse discrimination, violence, pornography, ethnic injustice, and environmental and population control. (Attributes: DH)

PHIL 230 Belief, Knowledge & Truth (3) The sources and limits of human knowledge. Classical and contemporary epistemological theories, and their application to the everyday search for knowledge. (Attributes: DH)

PHIL 270 Love and Sex (3) Survey of classical and contemporary

perspectives of the philosophy of love, marriage, relationships, sex, sexual identity, representations of sex and sexuality. (Previously offered: PHIL 180; Same as WS 270). (Attributes: DH, GCC)

PHIL 300 History of Indian Philosophy (3) The historic Indian schools of thought, Brahmanism, Jain, Carvaka, Buddhist, Samkyha, Yoga, Nayaya, Vaishesika, Mimamsa, and Vedanta. The main philosophers and thinkers of India including Gandhi, Radhakrishnan, and Tagore. Recommended: previous work in philosophy or religious studies. (Attributes: DH, GAHP, HPP)

PHIL 301 Hist Of Chinese Philosophy (3) History of the Confucian, Taoist, and Buddhist philosophies and their interaction in China. The pivotal thinkers including Mao. Recommended: previous work in philosophy or religious studies. (Attributes: DH, GAHP, HPP)

PHIL 302 Hist Of Buddhist Philosophy (3) History of Buddhist philosophy and its cultural influence and intellectual development in Asia and Hawai'i. Recommended: previous work in philosophy or religious studies. (Attributes: DH, GAHP, HPP)

PHIL 304 Race, Ethics & Cultural Diversity (3) Philosophical examination of the meaning of cultural diversity and pluralism for questions concerning community and knowledge from a variety of American and non-western cultures as well as their interactions with categories of identity, based upon nation, race, class, gender and sexuality. Addresses the interactions of the social experience of individuals based upon categories of identity and the emergence of forms of community and knowledge. A global or transnational section will be one component of the course. (Same as WS 304). (Attributes: ALEX, DH, FGB, GCC)

PHIL 307 Social Epistemology (3) The sources and limits of human knowledge. Classical and contemporary epistemological theories, and their application to the everyday search for knowledge. The course will cover various themes of social epistemology including feminist, indigenous, and alternative epistemologies. (Same as WS 307)

PHIL 310 Metaphysics (3) Puzzling problems in Western thought, such as the nature of personal identity, the freedom of the will, time, and the relation between mind and body. Pre: previous work in philosophy. (Attributes: DH)

PHIL 313 19th Century Philosophy (3) The history of 19th century philosophy, with an emphasis on the philosophers of continental Europe, including Hegel, Schopenhauer, Kierkegaard, and Nietzsche. (Attributes: DH)

PHIL 315 Ethical Theory (3) Classical and contemporary theories of right and good. Pre: previous work in philosophy. (Attributes: DH)

PHIL 320 Social & Political Phil (3) Good and right applied to economic, political, and religious establishments; obligation, freedom of dissent, capital punishment, violence, rights, revolution, and war. Pre: previous work in philosophy. Recommended: PHIL 220. (Attributes: DH)

PHIL 323 Professional Ethics (3) Professional conduct is being questioned as never before—lawyers, physicians, engineers, accountants, etc., are criticized for disregarding the rights of clients and the public interest. The course addresses the ethical problems of "the professions" in general and will focus on professions in business, law, and health care. Pre: previous course work in philosophy. (Attributes: DH)

PHIL 325 Philosophy Of Law (3) Problems and controversies in the nature of law and its bearing on human conduct. Topics: legal and moral

obligation, obedience and respect, enforcement of morality, punishment and responsibility, justification of practices such as plea bargaining, bail, prosecutorial discretion, etc. Pre: previous work in philosophy. (Attributes: DH)

PHIL 327 Bioethics (3) An examination of controversial topics related to life and health, such as euthanasia, treatment of animals, genetic engineering, individual autonomy, and the health care system. Pre: Previous course work in philosophy. (Attributes: DH)

PHIL 328 Visual Politics (3) Exploration of the visual, the sensory, and the embodied across legal, social, political, and cultural frameworks involving materialism, mobility-ies, place/placelessness, and public memory (same as POLS 328). (Attributes: DS)

PHIL 329 Environmental Ethics (3) Central ethical questions concerning the natural world, including environmental justice, responding to climate change and environmental devastation, and the relationship between human beings and the environment. (Attributes: DH)

PHIL 330 Philosophy of Art (3) The aesthetic object, form in art, representation, meaning in art, and claims of knowledge in art. Pre: previous work in philosophy and in art or music. (Attributes: DH)

PHIL 340 Philosophy Of Religion (3) Philosophical problems in religious beliefs and religious knowledge. The existence of God, immorality, the problem of evil. Pre: previous work in philosophy or religious studies. (Attributes: DH)

PHIL 343 Comparative Philosophy (3) A study of the mutual influences of Western and Eastern philosophical traditions and the potential each has to respond to the programs of the other. Pre: previous work in philosophy or instructor's consent. (Attributes: DH, HPP)

PHIL 345 Symbolic Logic (3) Techniques of symbolic logic, including propositional logic, predicate logic and the logic of relations. (Attributes: GQ)

PHIL 350 Hawaiian Phil: Aloha 'Āina (3) Introduction to Indigenous Hawaiian philosophy and how to engage with Aloha 'Āina relying upon a methodology and pedagogy consistent with the philosophy being discussed. Pre: previous work in philosophy. (Attributes: HPP)

PHIL 355 Philosophy of Sport (3) A philosophical treatment of the role of sports in society and a meaningful life. Topics include the phenomenology of sport, the ethics of doping and artificial enhancement, leadership ethics, sports in the context of Hawai'i, and sport fandom. Pre: Previous work in philosophy or two courses in Kinesiology or instructor approval. (Same as KES 355). (Attributes: DH)

PHIL 360 Existentialism (3) The themes which recur in the works of existential philosophers from the 19th century to the present. Pre: junior standing or instructor's consent. (Attributes: DH)

PHIL 370 Indigenous&American Philosophy (3) (lecture/other) Survey of significant areas of the American tradition, e.g. 19th, 20th, 21st century thought, African, Native American, Latin American thought, feminism, recent pragmatism, pluralism, and philosophy of education. (Attributes: ALEX, DH, GCC)

PHIL 375 Feminist Philosophy (3) Exploration of the feminist contributions to traditional philosophical questions in metaphysics, epistemology, and ethics as well as examining the philosophical implications of the intersections of race, class, gender and sexuality. (Same as WS 375) (Attributes: ALEX, DH, GCC)

PHIL 381 Philosophy Of Wittgenstein (3) Topics in the philosophy of Ludwig Wittgenstein, such as: meaning, understanding, pain, private language, "family resemblance," language-games, knowledge and certainty, other minds, forms of life and the purpose of philosophy. Pre: previous work in philosophy. (Attributes: DH)

PHIL 385 Philosophy of Marxism (3) History and philosophy of Marxism from the early Marx through recent times, including such topics as: dialectical materialism, alienation, exploitation, surplus value, class struggle, revolution, socialism, communism, and the Marxian critique of capitalism, imperialism, fascism, terrorism, and capitalist cultural hegemony. Pre: Previous work in philosophy or instructor's consent.

PHIL 390 History & Phil of Science (3) Natural science as a knowledge-seeking activity. Major episodes in the history of the physical and biological sciences; philosophical understanding of scientific observation, theory, and revolutionary change. Pre: previous work in philosophy or consent of instructor. (Attributes: DH)

PHIL 392 Biology & Philosophy (3) Philosophical examination of the implications of modern biology for how we understand ourselves and our relations to the natural world. Evolutionary, genetic, developmental, and ecological topics will be discussed. Pre: previous work in philosophy and biology, or consent of instructor. (Same as BIOL 392)

PHIL 393 Normality, Abnormality & Soc (3) Philosophical study of how human diversity interacts with social norms. Topics include health and illness, disability, gender, and sexual orientation. Perspectives from biology and the social sciences are included in a study of how beliefs about normality vary between cultures, change through time, and affect human relations. Pre: Previous work in philosophy or instructor's consent. (Same as WS 393). (Attributes: DH)

PHIL 410 Philosophy of Language (3) (lecture/other) Modern and historical theories of meaning, reference and the relationship between language and knowledge. Discussion of ordinary language, ideal languages and current developments in linguistics. Pre: previous work in philosophy or instructor's consent.

PHIL 412 Philosophy of Nature (3) Examination of the philosophical theories of nature from classical to contemporary texts, and their interaction with questions of metaphysics, identity, the environment, and human freedom.

PHIL 416 Science, Technology & Human Values (3) Impact of science and technology on various philosophical issues. Through a variety of readings that exemplify the field's content, students will examine the social, political, aesthetic, ethical, economic, and environmental constructs that shape modern institutions in science and technology. (Same as WS 416)

PHIL 430 Philosophy of Zen (3) Chief philosophical teachings of Zen, its methods and cultural influences. Comparative study of Zen and Western thought. Pre: previous work in philosophy or religious studies, or consent of instructor. Recommended: PHIL 302. (Same as JPST 430) (Attributes: DH, GAHP, HPP)

PHIL 435 Daoism (3) Philosophical ideas of Lao Tzu, Zhuangzi, and the Neo- Daoists, and their influences upon the lives of the Chinese and Japanese peoples. Comparative study of Daoist and Western philosophy. Pre: previous work in philosophy or religious studies, or instructor's consent. Recommended: PHIL 301 (Attributes: DH, GAHP, HPP)

PHIL 450 Mahayana Buddhist Phil (3) Important tenets and major schools of Mahayana Buddhist philosophy in India, China, Japan, Tibet,

and Hawai'i. Comparative study of Mahayana and Western philosophy. Pre: previous work in philosophy, religious studies, or instructor's consent. Recommended: PHIL 302. (Same as JPST 450) (Attributes: DH, GAHP, HPP)

PHIL 480 Nietzsche (3) Philosophy of Friedrich Nietzsche. Topics include the death of God, the problem of morality, perspectivism, the overhuman, the will to power, the eternal recurrence, and the relationship between philosophy and art. Pre: PHIL 213 or PHIL 313 or PHIL 360 or consent of instructor.

PHIL 484 ConservEthics & EnvironJustice (3) A study of a range of environmental ethical theories, conservation ethics and environmental justice paradigms. An examination of the historical, political, and social context in conservation management: the problem of wilderness, biocultural frameworks, and the ethics of invasive species. This course is dual listed with CBES 684. (Attributes: DH, GCC)

PHIL 496 Seminar in Philosophy (3) For serious students of philosophy. The topics vary and the course may thus be repeated for credit.

PHIL x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PHIL x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Physics (PHYS) Courses

College of Natural and Health Sciences (CNHS)

PHYS 110 Physics of Contemporary Issues (3) Contemporary issues of political interest such as nuclear warfare and waste, the greenhouse effect and alternative energies will be studied at a physics level appropriate for any college student. A course objective is to develop scientific reasoning. Pre: none. (Attributes: ALEX, GCC)

PHYS 111 Intro to Space Exploration (3) Survey of applied science, social, cultural and engineering topics in space science, focusing on exploration. Past, present and future aspects of space exploration. Relationship to Hawaiian views of cosmology and Hawaiian traditions such as Wayfaring and relationship to the land. (Same as ASTR 111)

PHYS 115 Phys for Liberal Arts (3) Designed for non-science majors. Basic physical concepts through student's active participation and practical experience in a manner that is simple and intuitive.

PHYS 120 Weather & Climate Hawai'i (3) For non-science majors and prospective science teachers. Basic meteorology, sun-earth-ocean-atmosphere interrelationships, weather types, seasonal changes, trade winds, clouds, rainfall, with examples drawn from the local weather and climate. (Same as GEOG 120). (Attributes: ALEX, DP, GAHP, GCC, HPP)

PHYS 150 World Models (3) This course examines computer and mathematical models of the world that take into account how its subsystems (environment, resources, politics, finance) affect each other.

PHYS 151 College Physics I (3) Provides a general overview of the

concepts of motion, force, energy, rotation, momentum, wave motion, fluids, and thermal physics. It is the first semester of a year-long introductory algebra-based physics sequence. Pre: C or better in either MATH 125 or MATH 140 or MATH 140x or MATH 241 or MATH 242 or placement into MATH 241. See also PHYS 151L which serves as the lab course. (Previously offered as PHYS 106.) (Attributes: DP)

PHYS 151L College Physics I Lab (1) (lab) A required laboratory supplement for PHYS 151; covers basic principles of experimentation and physical measurement. Presents illustrative experiments in mechanics, heat and waves. Pre: C or better in either MATH 125 or MATH 140 or MATH 140X or MATH 241 or MATH 242 or placement into MATH 241. (Attributes: DY)

PHYS 152 College Physics II (3) Provides a general overview of the concepts of electricity and magnetism, EM waves, and optics. It is the second semester of a year-long introductory algebra-based physics sequence. Pre: PHYS 151 or PHYS 170. See also PHYS 152L which serves as the lab course. (Attributes: DP)

PHYS 152L College Physics II Lab (1) (lab) A required laboratory supplement for PHYS 152; presents illustrative experiments in electricity, magnetism and optics. Pre: PHYS 151 (may be taken concurrently) and PHYS 151L and MATH 125 or MATH 140 or MATH 140X or MATH 241 or MATH 242 or placement into MATH 241. (Attributes: DY)

PHYS 170 Gen Phys I: Mechanics (4) Introductory physics designed for students majoring in physical sciences or engineering. Covers mechanics of particles, extended bodies, rotational dynamics, conservation laws, fluids, and wave motion. Pre: MATH 241 (Attributes: DP)

PHYS 170L Gen Phys I Lab (1) (lab) A required laboratory supplement for PHYS 170; covers basic principles of experimentation and physical measurement. Presents illustrative experiments in mechanics, heat and waves. Pre: MATH 241 (Attributes: DY)

PHYS 211 Electronics (4) (lecture/lab) Theory and application of circuit design and analysis. AC and DC circuits and filters; circuits based on diodes and transistors and operational amplifiers; digital circuits and filters. Laboratory will consist of the design, assembly and testing of circuits. Pre: PHYS 272, 272L, and MATH 242.

PHYS 224 Spaceflight (3) All aspects of manned and unmanned spaceflight, with emphasis on actual technologies and procedures used in space exploration. For students interested in Astronomy, Physics, Planetary Sciences, Aerospace Engineering or with a general interest in spaceflight. Pre: Any one of the following: PHYS 151 or higher; CHEM 151 or higher; MATH 140X or higher. Students lacking these pre-requisites who believe they have sufficient science background may be admitted with the instructor's permission. (Same as ASTR 224)

PHYS 230 Applied Electronics I (4) (lecture/lab) Theory and applications of circuit design and analysis with an emphasis on analog devices. AC and DC series and parallel RLC circuits, diodes, transistors and operational amplifiers. Laboratory will consist of construction and analysis of representative circuits. Pre: PHYS 272 and PHYS 272L. (Same as ASTR 230)

PHYS 260 Computational Physics & Astron (3) Computational techniques in physics and astronomy, with an emphasis on fundamental algorithms and development of code in high-level languages. Topics include least squares, interpolation, random number generators and numerical integration of differential equations. Pre: CS 172 and MATH 242. PHYS 272 (may be taken concurrently). (Same as ASTR 260)

PHYS 260L Computational Phys & Astr Lab (1) (lab) Offers an introduction to unix based command language and programming skills relevant to astronomy and physics. Emphasis on writing algorithms and code programming in Python. Numerical problems are drawn from physics and astrophysics using numerical methods and mathematical algorithms covered in the ASTR/PHYS 260 lecture. Topics covered are integration methods, interpolation, error estimation, eigenvalues and eigenvectors, linear and non-linear equations, Fourier methods, random numbers and Monte Carlo methods. Pre: CS 172 and MATH 242 and PHYS 272 (may be taken concurrently) and PHYS/ASTR 260 (may be taken concurrently). (Same as ASTR 260L)

PHYS 272 Gen Phys II: Elec & Magnetism (4) Introductory calculus-based physics designed for students majoring in physical sciences or engineering. Covers electric fields and potentials, magnetic fields, Maxwell's equations and basic optics. One class hour is dedicated to the development of problem-solving skills in small-group sessions. Pre: MATH 242 and C or better in PHYS 170. (Attributes: DP)

PHYS 272L Gen Phys II Lab (1) (lab) A required laboratory supplement for PHYS 272; presents illustrative experiments in electricity, magnetism and optics. Pre: PHYS 170 (may be taken concurrently), PHYS 170L, MATH 242. (Previously offered as PHYS 171L) (Attributes: DY)

PHYS 274 Gen Phys III: Intro Modern Phy (3) Survey of contemporary physical theory and applications: special relativity; quantum physics; atomic structure and spectra, nuclear structure and reactions; elementary particles and fundamental forces. Pre: MATH 300 which can be taken concurrently and PHYS 170 and 272. (Previously offered as PHYS 270)

PHYS 330 Electromagnetism (3) Intermediate-level electrostatics and electrodynamics; electric and magnetic properties of ideal and real materials; Maxwell's equations of electromagnetism; conservation laws; electromagnetic waves and boundary value problems. Pre: MATH 243, MATH 244, PHYS 272 and MATH 300 which may be taken concurrently.

PHYS 331 Optics (3) Intermediate optics. Topics include plane waves, multiple interfaces, polarization, light propagation in real materials, Fourier optics, coherence theory, paraxial rays, diffraction and blackbody radiation. Pre: PHYS 272 and MATH 243.

PHYS 332 Applied Optics (3) (lecture/lab) This class introduces students to elements and techniques for setting up optical experiments and making measurements in the lab. Topics in optics and optoelectronics will be covered and delivered in a lecture and applied exercises and application. Class will emphasize hands-on experience in data acquisition, sampling theory, signal-to-noise prediction and measurement, optimization through the use of common optical and electronic diagnostic tools. Pre: PHYS 170, 170L, 272, 272L, and PHYS 331

PHYS 341 Thermodynamics (3) Thermodynamics at the intermediate level. Includes energy, entropy, engines and refrigerators, free energy, classical and quantum statistical mechanics. Pre: PHYS 274 and MATH 243.

PHYS 360 Mathematical Physics (3) Special functions of mathematical physics which arise from Sturm-Liouville equations: Bessel, beta, elliptical, gamma and Legendre functions. Generating functions, complex integral representations. Other topics may include transforms, Fourier analysis and linear algebra. Pre: MATH 244, or MATH 243 and MATH 300 or instructor's consent. (Same as MATH 360)

PHYS 371 Classical Mechanics (3) Intermediate-level kinematics and

dynamics. Central force motion; rotations, noninertial frames, normal modes of vibrations; introduction to Lagrangian and Hamiltonian formalism. Pre: PHYS 170, PHYS 272 and MATH 300 (MATH 300 may be taken concurrently).

PHYS 380 Chaos (3) An introduction to nonlinear dynamical systems for science majors. Topics include dynamics in one and several dimensions, stability, excitable media, fractals, and time series analysis. Applications in physics, chemistry, ecology and other fields are illustrated. Pre: C or better in MATH 242 and C or better in PHYS 272 or MATH 244. (Same as MATH 380).

PHYS 430 Quantum Mechanics I (3) Postulates and formalisms of quantum mechanics. The Schrodinger equation in one and several dimensions: scattering, the harmonic oscillator, tunneling and the hydrogen atom. Orbital angular momentum and spin. The statistical interpretation and the uncertainty principles. Quantum statistical mechanics. Fermions and bosons. Pre: PHYS 274 and MATH 300.

PHYS 431 Quantum Mechanics II (3) A continuation of PHYS 430. Topics may include perturbation theory, the adiabatic approximation, foundations of quantum theory and/or quantum computation. Pre: PHYS 430.

PHYS 432 Senior Lab/Thesis Project (3) (lab) Individual research projects conducted in the college laboratory, library, or observatory; or at an external research facility; under the direct guidance of a member of the physics and astronomy faculty or an affiliated faculty member. Students must propose and complete a research project and present a final report to the department. Pre: Permission of the department is required. May be repeated once for a maximum of 6 credits. (Same as ASTR 432)

PHYS 495A Seminar (1) (other) Seminar presentations of topics in the physical sciences by faculty, enrolled students and invited speakers. The first semester (495A) is taken CR/NC, in the second semester (495B), students are required to present a seminar for a letter grade. Pre: senior standing or instructor's consent. (Same as ASTR 495A, CHEM 495A, GEOL 495A, and MATH 495A).

PHYS 495B Seminar (1) (other) Seminar presentations of topics in the physical sciences by faculty, enrolled students and invited speakers. The first semester (495A) is taken CR/NC, in the second semester (495B), students are required to present a seminar for a letter grade. Pre: senior standing or instructor's consent. (Same as ASTR 495B, CHEM 495B, GEOL 495B, and MATH 495B)

PHYS 496 Space Studies Seminar (1) Seminar presentations of topics related to space exploration by invited speakers, faculty, and enrolled students. Students are required to prepare and submit reaction papers/essays.

PHYS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PHYS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Plant Pathology (PPTH) Courses

College of Agriculture, Forestry & Natural Resource Management
(CAFNRM)

PPTH 404 Tropical Plant Pathology (3) (lecture/lab) Principles of plant pathology, major diseases in the tropics caused by fungi, bacteria, nematodes, and viruses; their nature, diagnosis and control. Pre: BIOL 171 or Instructor's Consent. (Previously offered as PPTH 301). This course is dual listed with CBES 604.

PPTH 405 Plant Disease Diagnosis (3) (lecture/lab) Practical skills in field and laboratory to determine the cause of a plant disease. Recognition of characteristic symptoms of diseased plants and signs of pathogens; use of confirming tests. Pre: PPTH 404.

PPTH 412 Plant Disease Control (3) (lecture/lab) Methods and principles of plant disease control, including chemical and nonchemical means, based on epidemiology and the disease cycle. Formulation and application of control recommendations. Pre: PPTH 404.

PPTH x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PPTH x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Plant Physiology (PPHY) Courses

College of Agriculture, Forestry & Natural Resource Management
(CAFNRM)

PPHY 310 Plant Growth/Develop (3) The chemistry and physiology of growth regulators and their involvement in plant growth and development. Experiments and demonstrations illustrating both basic and applied aspects of chemical growth regulation. Pre: HORT 262 or BIOL 171 and one year of college chemistry.

PPHY 415 Plant Nutrition (3) Mineral nutrition of plants, symptoms of mineral deficiency, corrective measures, water relations and nitrogen cycle. Special attention will be given to the role of nutrients in essential physiological and behavioral process. Pre: HORT 262 or BIOL 171 and one year of college chemistry.

PPHY x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PPHY x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Political Science (POLS) Courses

College of Arts and Sciences (CAS)

POLS 100 Intro to Political Science (3) Provides students with an introductory broad approach to the discipline of political science. This course relates current events at the global, national, local, and state levels to a wide array of political science scholarship. This course also includes a career opportunities component, which will feature speakers from the community who can speak to the questions of "What can you do with a major in Political Science?" (Attributes: DS)

POLS 101 Am Politics: National (3) Organization and functioning of the American political system at the national level. (Attributes: DS)

POLS 201 Politics of the Ordinary (3) Introduction to political theory. (Attributes: DS)

POLS 220 Law, Politics, & Society (3) Examination of formal and informal institutions of law according to the U.S. Constitution, courts, and associated cultural, social, and political contexts of governance and everyday jurisprudence. (Attributes: DS, GCC)

POLS 242 Intro To World Politics (3) The theory and substance of international politics, with emphasis on the international behavior of nations. Topics include war, regional integration, the United Nations, and the gap between rich and poor nations. (Attributes: DS)

POLS 251 Intro to Comparative Politics (3) Comparative study of politics, government and economic development in several different countries including Britain, Japan, Russia, China, Mexico, India and Egypt. (Attributes: FGB)

POLS 270 Negotiation (3) An examination of negotiation theory and practice in various domains including interpersonal, intergroup, and international settings

POLS 304 Politics of Power (3) Political theory course that explores conceptualizations of fairness, representation, access, liberty, consumption, work, ownership, and justice in theories and applications from contemporary and historical contexts. (Attributes: ALEX, DS, GCC)

POLS 321 Civil Liberties & Civil Rights (3) Study of the U.S. Constitution and judicial doctrine of the U.S. Supreme Court involving rights and freedoms of the Bill of Rights, suffrage, and equal protection frameworks involving race and ethnicity, sex and gender, class and ability. (Attributes: DS)

POLS 325 Environments of Law (3) Examines elements of law in built, natural, and propertized environments. Topics include spatiality, eminent domain, borders, linear jurisprudence, fluid jurisdictions, public landscapes, and evolving tensions involving environment and justice. (Same as GEOG 325) (Attributes: ALEX, DS, GCC)

POLS 327 Law and Culture (3) Law's relationship with culture as constructed and contested through social, political, and economic frameworks of belonging, identity, and place (Same as WS 327). (Attributes: DS)

POLS 328 Visual Politics (3) Exploration of the visual, the sensory, and the embodied across legal, social, political, and cultural frameworks involving materialism, mobility-ies, place/placelessness, and public memory (same as PHIL 328). (Attributes: DS)

POLS 330 Mock Trial (3) Experiential learning in a courtroom trial

setting. Preparation includes knowledge of functions and roles of court personnel, elements of proof, techniques of direct and cross-examination. Includes role-playing in six mock trial cases. (Formerly offered as POLS 320)

POLS 332 Race, Gender, & the Body (3) This course explores the politics of the body according to the intersectional and dynamic constructions of race, ethnicity, sex, gender, ability, and size. (Same as WS 332)

POLS 335 Environmental Politics (3) This course examines the complexities of environmental politics through such topics as environmental justice, pollution, energy, waste, consumption, conservation, and the Anthropocene.

POLS 337 Politic of Hawai'i: State/Local (3) An examination of the institutions and political forces shaping Hawai'i's contemporary state and local governance, focusing on executive, legislative and judicial institutions and their relations, political culture, leadership patterns and recruitment, voter participation in politics, electoral analysis, political economy, local political parties and interest groups. (Attributes: GAHP)

POLS 340 U.S. Foreign Policy (3) The policy-making process with special attention to the role of the President, the Congress, the military, organized lobbies, and the public. Pre: POLS 101 or consent of instructor. (Formerly POLS 440)

POLS 342 International Law (3) Development, functions, and sources of public international law. Survey of major areas: law of the sea; laws of air and space; laws of warfare; pacific settlement of disputes; and rule-making in international organizations. (Attributes: DS)

POLS 345 Model United Nations (3) An examination of the organization of the United Nations, its rules of procedure and major UN issues. The course prepares selected students to represent the University at the National MUN (New York) or Western MUN (San Francisco). May be repeated three times for credit, but only six credits may be applied to the major.

POLS 346 International Organizations (3) Survey of the theories of international political integration, the United Nations and its specialized agencies, the European Union, NATO, the Organization of American States, OPEC, and other supranational and regional economic, security, and political international organizations. (Attributes: DS)

POLS 348 International Human Rights (3) An examination of the theory and practice of international human rights including debate on universalism, empirical cases of human rights violations, the roles of states, international organizations, and non-governmental organizations, and effectiveness of enforcement of human rights. (Attributes: DS, GCC)

POLS 351 Politics Of China Through Film (3) This course will study contemporary Chinese politics and government. Major topics include the Chinese Communist Revolution, Mao Zedong's socialism, Deng Xiaoping's economic reforms and opening policy, recent development and changes, the Party-state political system, the Hong Kong and Taiwan issues, and the peaceful rise foreign policy. Pre: POLS 251 or instructor's consent. (Attributes: DS, GAHP, HPP)

POLS 353 Politics Of Japan (3) Aspects of Japanese politics, emphasizing the post-1945 period. Topics include political development and change, the political economy of Japan, major political institutions and organizations, policy-making processes, and controversial political issues. (Same as JPST 353) (Attributes: DS, GAHP, HPP)

POLS 355 Internatl Political Economy (3) Topics include world powers and the world economic systems, the third world economic development, political and economic reforms, and Asian development models.

POLS 357 Politics of Pac Rim Thru Film (3) This course will study politics of the Pacific Rim region, focusing on (1) the political economy of the Asia-Pacific nations, (2) models of development of the U.S., Japan, South Korea, China, Russia, India, and major Southeast nations, and (3) the challenging issues of the region in the twenty-first century. (Attributes: HPP)

POLS 374 Indigenous Dispute Resolution (3) An examination of the theory and practices of indigenous forms of dispute resolution from around the world.

POLS 377 Restorative Justice (3) This course will provide an introduction to the principles and practices of Restorative Justice, including the historical and indigenous roots, and will explore specific models of practice used both globally and locally.

POLS 380 Methods Of Research (3) The logic and approaches used by social scientists; concept formation, design of research projects, choice of techniques and interpretation of results. Pre: POLS 100 or POLS 101 or consent of instructor. (Previously POLS 280) (Attributes: DS, GQ)

POLS 391 Internship (3-12) (other) Application of knowledge and skills in a public, private, or government agency/setting. A total of 15 credits of POLS 391 and POLS 481 may be applied to the POLS major. Pre: instructor's consent, preapproved placement, statement of learning objectives, and completed internship contract. (Attributes: ALEX, DS, GCC)

POLS 402 Critical Aesthetics (3) Advanced course in political theory.

POLS 442 War and the State (3) This course will study the major wars between states in the world in the past hundred years, focusing how these wars started and ended and how they shaped the development of nations and the world. We will focus on World War I, World War II, the Korean War, the Vietnam War, the India-Pakistan conflicts, the Israeli-Arab wars, the Iraq War, the Afghan War, and the recent conflicts in the Middle East.

POLS 443 Int'l Conflict Management (3) An examination of a variety of international conflict management strategies that employ diplomacy or coercion, such as negotiation, mediation, economic sanctions, peacekeeping, and humanitarian intervention. (Previously offered as POLS 343)

POLS 444 Law, Property, and Nature (3) Examines the relationship between nature, property, and legal regulation. Topics will include takings jurisprudence, land use management and ownership, riparian rights, air rights, public spaces, and the evolving relationship between culture, law, and the environment. Pre: junior or senior standing. This course is dual listed with CBES 644. (Attributes: DS, GCC)

POLS 457 U.S.-China Relations (3) This course surveys the history of U.S.-China relations to the present and gives in-depth consideration to contemporary issues including China's human rights record, the issue of Taiwan, U.S.-China trade relations, and China's global role in the twenty-first century. (Attributes: HPP)

POLS 470S Seminar in Political Science (3) (other) This course provides an intensive examination of the major concepts, categories and methods of political science. Topics include political ideologies, attitudes,

voting behavior, institutions of government, public policy, law, justice and world politics. Pre: Junior or senior standing.

POLS 479 ADR in Action (3) Survey and practice of different types of alternative dispute resolution (ADR). Focusing on a skill training component using different ADR techniques. Pre: POLS 270

POLS 490 Senior Thesis (3) Individual research in problems of special interest. Pre: consent of instructor.

POLS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

POLS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Psychology (PSY) Courses

College of Arts and Sciences (CAS)

PSY 100 Survey Of Psy (3) Principles of human behavior, individual differences, motivation, emotion, perception, learning. This introductory course provides a general survey of the entire field of psychology and serves as the prerequisite for all upper-division psychology courses. (Attributes: DS)

PSY 213 Statistical Techniques (4) Frequency distributions; graphic methods; central tendency and variability; correlation and regression; inferential statistics; non-parametric statistics. Pre: PSY 100 with a grade of C- or better, and a grade of C- or better in MATH 115 or higher. (Attributes: GQ)

PSY 214 Research Methodology (4) Methods of scientific observation, nature of experiments, the use of quasi-experimental designs, control group experimental designs, and single-subject experimental designs. Potentials and problems in research and clinical uses of these designs. Ethical considerations involved in conducting research. Pre: A grade of C- or better in both PSY 100 and PSY 213.

PSY 312 Evaluation Research (3) The application of research methods in the planning, monitoring and evaluation of social programs. Needs assessment, program monitoring impact assessment and efficiency analysis will be surveyed. Pre: PSY 100, 213, 214.

PSY 313 Testing & Measurements (3) Principles, concepts, and procedures of psychological testing, including construction, validation, interpretation, and use of tests in intellectual and personality assessment. Pre: PSY 100, 213.

PSY 314 Learning & Motivation (3) Major conditions influencing learning and forgetting; role of practice, reward, motivation, drive and emotion; theoretical interpretations of learning and motivation. Pre: A grade of C- or better in PSY 100, PSY 213, and PSY 214

PSY 315 Sensation And Perception (3) Psychophysics, vision, audition, taste, smell, theories of perception. Pre: A grade of C- or better in PSY 100, PSY 213, and PSY 214.

PSY 319 Experimental Psychology (3) Original experiments with emphasis upon laboratory techniques. Control of variables, apparatus

design, statistics in research. Pre: PSY 100, 213, 214.

PSY 320 Developmental Psy (3) General trends and variability in lifespan human development. Systematic change and continuity in mind and behavior from conception to death. Interaction among psychological, social and biological aspects of development. Normative and problematic development; risk and protective factors. Pre: PSY 100.

PSY 321 Psy Of Personality (3) Scientific study of personality through examination of major theoretical approaches: personality functioning, development, and change; assessment and research strategies; empirical data on central concepts and social-cultural determinants. Pre: PSY 100.

PSY 322 Social Psychology (3) Interpersonal relations, social attitudes; group dynamics; intergroup relations, class and cultural influences. Pre: PSY 100.

PSY 323 Community Psychology (3) Community factors such as urbanization, social service programs, and schools as they affect the psychological well-being of individuals. Social system intervention techniques to better the fit between individuals and environments. Pre: PSY 100. (Attributes: ALEX, DS, GAHP, GCC, HPP)

PSY 324 Psychopathology (3) Broad survey of emotional and behavioral health problems including description, epidemiology, etiology and treatment of various psychological disorders. Pre: PSY 100.

PSY 325 Psychology Of Women (3) Issues and topics relevant to the psychological development and functioning of women including sex differences in abilities and behavior, achievement motivation, work, sexuality, pregnancy, childbirth and motherhood, mental health and domestic violence. Pre: PSY 100. (Same as WS 325)

PSY 326 Child Psychopathology (3) Broad survey of emotional and behavioral health problems in youth. Uses a developmental psychopathology perspective to understand how psychological disorders (e.g., ADHD, Autism, Conduct Problems) develop in children and teens. Includes discussion of professional issues in clinical child psychology. Pre: PSY 100.

PSY 333 Psycholinguistics (3) Theory and method in the investigation of the relationship between language and cognition, first and second language acquisition, speech pathologies. Pre: LING 102 or PSY 100 or consent of instructor. (Same as LING 333)

PSY 335 Animal Psychology (3) Biological, ecological, social and learned bases of animal behavior based on laboratory and field investigations. Pre: PSY 100 or consent of instructor.

PSY 350 Cognitive Psychology (3) Theories, assumptions, empirical findings, and applications of cognitive psychology. Topics include memory, inference, prediction, and mental imagery. Pre: A grade of C- or better in PSY 100, PSY 213 and PSY 214.

PSY 352 Introduction to Biopsychology (3) Survey of the study of behavior from the viewpoint of the natural sciences. Genetics, neural mechanisms, pharmacology, and biological development of behavior will be discussed. Pre: A grade of C- or better in PSY 100, PSY 213 and PSY 214.

PSY 353 Clinical Psychopharmacology (3) This course will offer a discussion of psychopathology from a biological perspective including the neurochemical, neuroanatomical, and genetic causes of psychological disease. Emphasis will be placed on the pharmacotherapeutic treatment of psychopathology. Pre: PSY 352 or

instructor's consent.

PSY 355 Science of Sex (3) This course will examine the scientific study of sexual behavior in both human and non-human animals from the perspectives of behavioral genetics, psychoneuroendocrinology, ethology, psychology, and neuroscience. Pre: PSY 214 or instructor's consent.

PSY 360 Cross-Cultural Psy (3) Application of psychological methodology and theories to the study of behavior in selected cultures, with a focus on Polynesia. Topics to include child-rearing and socialization, cognition, personality, and social behavior patterns. Pre: PSY 100 and upper division standing. (Attributes: GAHP)

PSY 369 Evolutionary Psychology (3) The course is a synthesis of modern psychology and evolutionary biology. It introduces students to the basic mechanisms of behavioral evolution. The course emphasizes adaptive problems and how humans of different sexes, cultures, ages and developmental stages solve them. Pre: PSY 100.

PSY 370 Sport Psychology (3) Survey of methods and findings in the application of psychological principles in sport. Topics include arousal and anxiety, cognitive processes, team performance, coaching behavior and techniques to maximize sports performance. Pre: PSY 100. (Same as KES 370).

PSY 377 Counseling Psychology (3) This course covers the various theoretical approaches to counseling, the therapeutic relationship, techniques of counseling, ethical issues, research, diagnosis and assessment, cross-cultural counseling, as well as career, family and couples, and group interventions. Pre: PSY 100.

PSY 380 Health Psychology (3) Psychosocial factors in physical health, illness, and the health care system. Topics include stress and coping, personality and social factors affecting health, adaptation to chronic illness, death and dying, patient-practitioner relationships, the institutional context, and health promotion. Pre: PSY 100.

PSY 385 Women & Health (3) Reproductive health, immune activity, autoimmune disease and mental health in women are covered from physiological, psychological, historical and cross-cultural perspectives. Pre: PSY 100. (Same as WS 385)

PSY 390 Industrial & Organizational Psy (3) The application of the methods, facts, and principles of psychology to people at work in diverse group and organizational settings.

PSY 416 Emotion (3) A comprehensive introduction to the topic of emotion as it has been treated in the field of Psychology. Different theories and approaches to the scientific study of emotion, including basic neuroscientific principles, and recent human brain imaging techniques are discussed. Pre: PSY 350 or PSY 352 or consent of instructor.

PSY 420 Adolescent Develop & Mental Hlt (3) Normative and problematic development during adolescence. Cross-cultural differences and similarities in adolescent development. Theoretical approaches to adolescent mental health. Causes and effects of maladjustment. Approaches to prevention and intervention. Pre: PSY 214, PSY 320.

PSY 422 Psychology of Sustainability (3) This course takes a service-learning approach to the study of theory and research in the areas of psychology that affect sustainable living. Research in the areas of attitudes, persuasion, behavior change, risk perception, social dilemmas, and social norms will be included. Classes will be seminars

with the addition of students working in small groups to investigate and develop recommendations for a community client on a problem related to the promotion of sustainable living. Pre: PSY 214 or instructor's consent. (Attributes: ALEX, GCC)

PSY 425 Career Development (3) Work-related behavior over the span of life. Theory, research, and counseling about career development. Work values, career goals, career decision-making, and occupational choice. Work adjustment and satisfaction. Work within the context of human lives. Interaction between career development processes and other domains of life, such as family, education, leisure. Course is conducted as a seminar with an emphasis on discussion. Pre: PSY 214, PSY 320.

PSY 430 Physiological Psychology (3) Relationship between physiology and behavior. Topics include neuroanatomy, the hormone systems associated with feeding, drinking, reproduction, aggression, and stress, and the neurological and hormonal basis of mental disorders. Pre: PSY 100, 213, 214, or instructor's consent.

PSY 430L Physiol Psy Lab (1) Laboratory to accompany PSY 430.

PSY 431 Brain Disease (3) Neurobiological mechanisms of central nervous system diseases and disorders. Pre: PSY 100, 213, 214 and either PSY 350 or 352.

PSY 432 Psy Of Motivation (3) Theories of arousal and activation, incentive and reinforcement, and behavior suppression. Pre: PSY 100 and instructor's consent.

PSY 436 Animal Cognition (3) (lecture/other) A survey of the historical and contemporary scientific literature on animal cognition using a wide variety of species. The course covers a broad array of topics that may include concept formation, memory processes, numerical competence, social learning and imitation, self-awareness, theory of mind, referential communication and grammatical skills. Pre: PSY 213, 214, and PSY 314 or 350, or instructor's consent. (Same as BIOL 436)

PSY 437 Marine Mammal Behavior (3) An introduction to marine mammals with emphasis on the behavior of marine mammals. Special attention given to those species found in Hawaiian waters. Individual species are examined within a comparative framework. Topics include: behavioral ecology, social behavior, cetacean societies, mating systems, communication, sensory perception, and cognition. Pre: PSY 213, PSY 214 and PSY 314 or PSY 315 or PSY 350 or PSY 352 or instructor's consent. (Same as BIOL 437)

PSY 438 Child Cognition (3) How children think. A survey of how human perceptual and cognitive skills and intellectual abilities develop from infancy through early adolescence, and how cognitive development corresponds to brain development. Topics include theories of cognitive development, perception and attention, mental representation, concept development, categorization, social awareness, theory of mind, memory systems, language development, numerical competence, and approaches to the study of intelligence. Pre: PSY 100, 213, 214, and PSY 320 or instructor's consent.

PSY 439 Psychology of Aging (3) Within the field of psychology, aging is perhaps the least understood aspect of life. What is aging? Is there a "normal" process aging? This course explores the diverse aspects of psychological aging. Pre: PSY 320 OR PSY 324

PSY 440 History Of Psychology (3) Historical origins and development of contemporary psychology. Pre: 12 semester hours in psychology.

PSY 445 Practicum in Psychology (3) Supervised experience in human service, mental health and other community agencies in the local community. Pre: 12 semester hours in Psychology and instructor's consent. (Attributes: ALEX, DS, GCC)

PSY 450 Child Behavior Therapy (3) This is an advanced seminar on the practical application of behavioral theory to treatment of child and adolescent psychological disorders. Special emphasis will be given to the integration of science and practice with topics including behavioral assessment, basic principles and procedures of behavior modification, and evidence-based treatment for children and adolescents. Pre: PSY 100, PSY 213, PSY 214 and PSY 320 or PSY 324.

PSY 451 Adult Behavior Therapy (3) Theory, research, and practice in cognitive behavior therapy applied to adult disorders and problems. Treatment applications of relaxation, exposure and prevention, desensitization, aversion therapy, biofeedback, self-control, imagery and cognitive strategies. Pre: PSY 324

PSY 452 Drugs of Abuse (3) Effects and consequences of drugs of abuse from both psychological and biological perspectives. Implications for substance abuse treatment will be discussed. Pre: PSY 350 or PSY 352 or instructor's consent.

PSY 453 Clinical Psychopharmacology (3) This course will offer a discussion of psychopathology from a biological perspective including the neurochemical, neuroanatomical, and genetic causes of psychological disease. Emphasis will be placed on the pharmacotherapeutic treatment of psychopathology. Pre: PSY 350 or PSY 352 or instructor's consent.

PSY 454 Methamphetamine: Clinic/Forens (3) Effects and consequences of methamphetamine from both psychological and biological perspectives. Methamphetamine, politics and the law. Implications for substance abuse treatment will be discussed. Pre: PSY 352 or instructor's consent.

PSY 460 Psychology of Culture & Health (3) This course examines research and theory on how culture influences the occurrence, symptoms, diagnosis, and treatment of disease in an individual. In seminar-format, we will explore behaviors and attitudes that affect health and prevention of disease in the individual and how they are affected by culture, such as cultural definitions of health, culture and the conception of the body, as well as cultural influences on attitudes and beliefs related to health and disease. Pre: PSY 214, PSY 360, or instructor's consent.

PSY 461 Psychology and Cancer (3) This course examines the state of behavioral and social science research regarding the impact of psychological, biological, behavioral, and social factors on cancer onset, progression, treatment, and survival. These factors are considered across the entire cancer continuum and at multiple levels of analysis. Pre: PSY 100, 213, 214, 323. (Attributes: GCC, HPP)

PSY 465 Interpersonal Relationships (3) This course will examine relationships from a scientific standpoint. A number of different perspectives will be utilized including social, developmental, counseling, and clinical psychology. A variety of questions will be addressed such as what are relationships and why are they important to study, what are the different kinds of relationships and how do they affect people differently, attachment style, relationship formation and termination, social support, relationships and health, and relationship therapy. Pre: PSY 100, PSY 213, PSY 214, and PSY 322.

PSY 469 Social Behavior of Primates (3) The course examines

primate social systems. Emphasis is on a comparative analysis of primates' socioecology, group life, communication and intelligence. Pre: PSY 352 or PSY 335, or instructor's consent.

PSY 470 Clinical Psychology (3) Nature, history, and contemporary state of the profession of clinical psychology. Theories, methods, and findings in assessment, intervention, research, and clinical practice. Multiple roles of the clinical psychologist, ethical and professional issues, standards of care, legal regulations of practice, and the mental health care system. Pre: PSY 324.

PSY 471 Child Abuse and Neglect (3) A survey of topics related to physical, sexual and psychological child abuse and neglect, including: the prevalence and incidence of different forms of abuse and neglect, scientific theories and findings about the causes and consequences of abuse and neglect, forensic and clinical assessment of abuse and neglect, mandated reporting and other legal issues, and psychological interventions for abused and neglected children and their families. Pre: PSY 214 and PSY 320, or instructor's consent. This course is dual listed with PSY 656.

PSY 472 Positive Psychology (3) This course provides an overview of the field of positive psychology, which is the study of happiness, life satisfaction, subjective well-being and, more generally, what goes right in human lives from birth to death. We will review research findings that examine the associations and causal connections between (1) genetics, physical health, work, leisure, upbringing, education, money, fame, sex, love, family, friendship, religion, culture, and life decisions and (2) happiness, life satisfaction, subjective wellbeing and flourishing. The course also provides an introduction to applied positive psychology—the development, validation, and implementation of psychotherapeutic techniques designed to enhance subjective well-being. Students will participate in several applied positive psychology interventions that may improve the quality of their lives. Pre: PSY 100, PSY 213, PSY 214, PSY 320 or 321 or 322 or 324, or instructor's consent.

PSY 475 Asian American Psychology (3) The course examines the personality and mental health issues of Asian Americans. Special emphasis is given to how minority group status, adaptation processes and bicultural development influence various aspects of psychological functioning. Specific topics include stereotypes and racism acculturation and enculturation, cultural values and behavioral norms, family roles, ethnic identity, communication styles, gender and interracial relationships, academic and career achievement, stressors and social support systems, psychopathology and culturally competent mental health treatment. Pre: PSY 100 and any one of the following: PSY320 or PSY324 or PSY360 or PSY377, or instructor consent. (Attributes: DS, GAHP, HPP)

PSY 489 Research Seminar (3) (other) Research in Psychology. Statement of 3 semester hours of planned reading or research required. Attendance at bimonthly seminar required. Seminars include lectures, discussions and research reports of topics in psychology presented by faculty, students, and visiting scholars. Pre: consent of instructor.

PSY 496 Tchg Asst & Tutoring in PSY (1-3) Practice in individual tutoring, and in the preparation of the selected topics in Psychology lecture or laboratory courses, under direct instructional supervision. This course may be repeated for a maximum of 6 credits and may not be used to replace any specific course or elective requirements of the Psychology major. Pre: supervising instructor and department chair consent.

PSY x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PSY x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [PSY graduate-level courses](#).

Quantitative Business Analysis (QBA) Courses

College of Business and Economics (COBE)

QBA 200 Intro to Business Analytics (3) An introduction to quantitative modeling and data-driven decision-making used in Business Analytics. Includes the basic concepts and mathematical tools to understand the role of quantitative analytics in organizations; applications of analysis tools and interpretations of model outputs for effective communication. (Same as DATA 200) (Attributes: GQ)

QBA 260 Business Statistics (3) Application of statistics to business. Includes an introduction to probability and sampling; descriptive statistics, inference, regression and one-way analysis of variance. Pre: One MATH course numbered 125 or higher (may be taken concurrently). (Attributes: GQ)

QBA 300 Operations Management (3) This course is intended to provide students with an understanding of the principles of operations management. Topics covered include productivity, project management, forecasting, managing quality, human resource work studies, capacity planning, location and layout planning, supply-chain, inventory management, optimization, queuing, and simulation. Pre: C or better in QBA 260 or MATH 115.

QBA 362 Business Analytics (3) Fundamentals of Business Analytics. This course aims to teach students to analyze, formulate, and solve managerial decision-making problems using quantitative models and techniques. Pre: C or better in QBA 200 or QBA 260. (Same as DATA 362)

QBA 365 Managing Electronic Commerce (3) Topics in advanced electronic commerce (EC) management. Issues include: defining EC in its various forms; exploring EC strategies; economics of EC; global EC issues. The class will complete a semester-long hands-on-project requiring students to: assess a business' needs and opportunities; plan a Web site corresponding to the needs assessment; design a fully functional and interactive commercial Web site; plan and implement administrative parameters and functions for customer service, security, site monitoring, site maintenance, business performance, and site effectiveness. Pre: MGT 341, QBA 362, or consent of instructor.

QBA 367 Applied Business Analytics (3) This is an advanced course in business analytics with applications. It provides the advanced concepts and tools to understand the role of business analytics in organizations, how to apply business analysis tools, communicate effectively, and use and interpret analytical models in real world settings. This course focuses on applying business analytics tools and techniques

such as predictive models, statistical analysis, and operations research on real-world problems and datasets for managerial decision-making. Pre: C+ or better in QBA 260 or QBA 300 or QBA 362 or MATH 115, or MATH 271.

QBA 465 Text Mining for Social Science (3) Provides the concepts and tools to understand the role of natural language processing and text analytics for managerial decision-making and how to apply text analytics tools to real-world problems. Pre: C or better in one of QBA/DATA 260 or QBA/DATA 300 or QBA/DATA 362 or CS/DATA 172, or Instructor's Consent. (Same as DATA 465)

QBA x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

QBA x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Sociology (SOC) Courses

College of Arts and Sciences (CAS)

SOC 100 Principles Of Sociology (3) An introduction to the theories, scientific methods and empirical findings of contemporary sociology. (Attributes: DS)

SOC 200 Career Opportunities in Soc (1) A forum for the presentation of career opportunities for Sociology majors and minors. The course features speakers, and the development of practical professional skills, including writing a resume. Offered on a CR/NC basis only. Required for Sociology majors and minors. Formerly SOC 490.

SOC 240 Social Psychology (3) An introduction to how sociologists view the relationship between social institutions, social groups and individual actions. (Attributes: DS)

SOC 243 Drama of Hawai'i & the Pacific (3) Embedded in a discourse of coloniality and indigenous perspective, this course provides an introduction to a representative range of plays written by, for, and about the people of Hawai'i and other Pacific islands. (Same as DRAM 243) (Attributes: DH, HPP)

SOC 260 Social Problems (3) An introduction to the study of social problems in contemporary society, including their nature, sociological causes and possible solutions. Course may focus on a single social problem. (Attributes: ALEX, DS, GCC)

SOC 280 Statistical Reasoning (3) An introduction to basic descriptive, correlational, and inferential statistics used in the social sciences and education. Pre: concurrent enrollment with SOC 280L. (Attributes: DS, GQ)

SOC 280L Lab in Statistical Reasoning (1) (lab) An introduction to the techniques and usage of statistical applications involving computation and interpretation of statistics. (Attributes: DS, GQ)

SOC 300 Family in World Perspective (3) A comparative analysis of family and marriage patterns, mate selection, parent-child interaction, divorce rates, socialization of gender roles, legal sanctions, trends in

organization and function. Pre: SOC 100 or instructor's consent. (Same as WS 300).

SOC 301 Intro Social Work (3) The sociological analysis of social welfare institutions and their relationship to meeting human needs and solving social problems. Course designed for students intending careers in the helping professions. Pre: SOC 100 or instructor's consent.

SOC 305 Org Theory & Analysis (3) Contemporary theories and techniques used in the analysis of organizations. Designed for students intending careers in administration or the human services. Pre: junior standing or consent of instructor.

SOC 310 Race & Ethnic Relations (3) Sociological analysis of the patterns of intergroup relations. Topics include the meaning of race, ethnicity, prejudice and discrimination, and the interactive strategies used by various groups. Emphasis on ethnic processes on Hawai'i and the Pacific region. Pre: SOC 100 or instructor's consent. (Same as WS 310).

SOC 320 Stratification & Inequality (3) This course examines social stratification theory and research; definition and measurement of socioeconomic status; racial, ethnic and gender inequality. Pre: SOC 100 or instructor's consent. (Same as WS 321) (Attributes: DS)

SOC 324 Criminology (3) Examines patterns of crime; types of offenders; theories of crime; police, courts, prisons, probation, and parole in relation to criminal behavior. Pre: SOC 100 or instructor's consent.

SOC 325 Sociology Of Disaster (3) The ways in which human communities and organizations bring about, prepare for, and respond to calamitous environmental changes. Case studies selected from many societies.

SOC 326 Juvenile Delinquency (3) Examination of the causes and control of juvenile delinquency. The major theories of juvenile delinquency will be reviewed. The course will also explore the organization and processes of juvenile justice. Pre: SOC 100 or consent of instructor.

SOC 328 Gender, Crime, and Justice (3) This course will examine theoretical perspectives on gender, crime, and the criminal justice system. Students will analyze the intersecting roles played by gender, race, and class in criminal offending, victimization, and institutional responses. Additional topics may include masculinity and crime, women and punishment, female delinquency, gender violence, sex work, and the role of women in the criminal justice system. Pre: Soc 100 or WS 151 (Same as WS 328).

SOC 331 Queer Studies & Contem Society (3) A review of current issues using queer and sociological perspectives on sexualities and social change. Pre: SOC 100 or WS 151 or permission of instructor. (Same as WS 331)

SOC 340 Socialization & Identity (3) The process by which an individual becomes a functioning member of society. Pre: SOC 100 or instructor's consent. (Same as WS 340).

SOC 352 Sociology Of Education (3) Formal education as an aspect of socialization. Emphasis is on the American system from a historical and comparative perspective. Pre: SOC 100 or instructor's consent.

SOC 355 Sociology Of Religion (3) A comparative analysis of religion. Topics include religious movements, secularization and social change, conversion and faith dynamics, and meaning and belonging functions. Case studies drawn from different societies and historical periods. Pre:

SOC 100 or instructor's consent.

SOC 360 Health Care Policy (3) Analyses of local, national and global economic, legal and social factors impacting health care policies. Discussion of relationship between emerging social issues/trends and health care disparities and capacities. Discussion of social justice, cultural competence, and equity in access and delivery of health care services. Opportunities are provided to participate in political processes impacting nursing and health care policy. (Same as NURS 360)

SOC 365 Sociology of Deviance (3) This course examines social deviance, focusing on theory and contemporary research in the field. Topics to be covered may include sexual deviance, physical and cognitive deviance, substance use and mental illness. Pre: SOC 100 or consent of instructor.

SOC 370 Political Economy of Hawai'i (3) An exploration into the political and economic processes of Hawai'i and how the two interrelate and affect each other. Emphasis on current issues and practices as well as processes. Pre: SOC 100 or consent of instructor. (Attributes: DS, GAHP, HPP)

SOC 380 Methods Of Research (3) A survey of the logic, purposes, techniques, terminology, and issues of social research methodology. Pre: SOC 100, 280 and 280L or instructor's consent.

SOC 390 Sociological Theory (3) A critical examination of the theoretical foundations of contemporary sociological theories. Beginning with Marx, Weber, Durkheim, and Simmel, examines contemporary examples of social theory, including post-structuralism, critical theory, hermeneutics, and phenomenology. Pre: SOC 100 or instructor's consent.

SOC 391 Internship (3-12) Application of knowledge and skills in a public, private, or government agency/setting. May be taken for at total of 12 credits, only six of which can apply to the Sociology major or three to the minor. Pre: instructors consent, preapproved placement, statement of learning objectives, and completed internship contract. (Attributes: ALEX, GCC, HPP)

SOC 400 Sem in Social Psych (3) The relationship between social pressures/structure and the individual. Emphasis upon current research and theory in the area. Pre: SOC 100 and junior standing or instructor's consent.

SOC 405 Sem in Social Organizatn (3) Social organization in all its forms, dynamics, and structures. While appealing to an historical and comparative perspective, primary attention will be directed to contemporary forms of social organization with an emphasis upon current research and theory in the area. Pre: Soc 100 or consent of instructor.

SOC 407 Gender Inequality inPopCulture (3) Exploration of gender and sexuality as systems of inequality, as social constructions, as performance, and as dynamic forces within American popular culture. Students develop skills to sociologically research and analyze artifacts of popular culture. Pre: SOC 100 or WS 151 or instructor's consent. (Same as WS 407).

SOC 409 Seminar in Social Movements (3) An exploration of the ways in which social movements have shaped politics, policy and social culture in the United States. Students will research and analyze historical and contemporary social movements. Pre: SOC 100 or WS 151 or instructor's consent. (Same as WS 409)

SOC 410 Sociology of Food (3) Examination of food ingredients,

foodways, the culinary industry, cultural food practices, and more. Students will develop a critical understanding of how food is imbued with a multitude of meanings, feelings, politics, and social inequalities. Pre: SOC 100 and Junior standing or instructor's consent.

SOC 420 Sem in Social Institutions (3) Institutions in contemporary society, with focus upon the process and structures of modern institutions such as the polity, economy, health care, and law. Emphasis upon current research and theory in the area of specific institutions examined. Pre: SOC 100 or consent of instructor.

SOC 430 Sem in Social Change (3) Change in human societies from a comparative and historical perspective. Topics covered include modernization, development, tradition, and secularization. Emphasis upon current research and theory in the area. Pre: SOC 100 or instructor's consent. (Attributes: DS)

SOC 470 Indigenous Health & Well-Being (3) This course is concerned with indigenous health and well-being, emphasizing indigenous perspectives and ways of knowing across indigenous societies including Hawai'i and Oceania, Latin America, Turtle Island, and Sub-Saharan Africa. Pre: SOC 100 or SOC 250.

SOC 480 Practicum in Social Research (3) (other) Direct involvement in all facets of the research process. Students have the option of working on their own projects or on projects initiated by the faculty. May be counted only once toward the required 35 semester hours of the major, but may be repeated once for upper division credit. Pre: SOC 280 and 380 or instructor's consent. (Attributes: DS, GAHP, HPP)

SOC x94 Special Topics in Subject Matter (Arr.) (IO) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

SOC x99 Directed Studies (Arr.) (IO) Statement of planned reading or research required. Pre: instructor's consent.

Soil Science (SOIL) Courses

College of Agriculture, Forestry & Natural Resource Management (CAFNRM)

SOIL 304 Tropical Soils (3) (other) Origin, development, properties, classification, use and management of soils with emphasis on applications in the tropics. Pre: CHEM 151 or CHEM 161 or consent of instructor.

SOIL 350 Soil Fertility (3) (lecture/lab) Nutrient availability in relation to chemical and physical properties of tropical soils; fertility evaluation by plant response and soil tests; cycling of carbon, nitrogen, and minerals; nutrient management for enhanced plant productivity and maintenance of environmental and soil quality. Pre: CHEM 151 or CHEM 161 or consent of instructor. SOIL 304 recommended.

SOIL 351 Soil Health (3) (lecture/lab) This course includes an introduction to soil health, plant and soil nematology, nematode community indices and soil health biological indicators (nematodes) and soil health analysis. A semester-long experiment on soil health and presentation of experiment results are required.

SOIL x94 Special Topics in Subject Matter (Arr.) (IO) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

SOIL x99 Directed Studies (Arr.) (IO) Statement of planned reading or research required. Pre: instructor's consent.

Spanish (SPAN) Courses

College of Arts and Sciences (CAS), Languages

SPAN 101 Elementary Spanish I (4) Beginning course, primarily emphasizing oral practice. Laboratory drill. (Attributes: DH, GL)

SPAN 102 Elementary Spanish II (4) Beginning course, primarily emphasizing oral practice. Laboratory drill. Pre: SPAN 101 or equivalent. (Attributes: DH, GL)

SPAN 200 Interm Conversational Spanish (3) This course is intended for students who have gained some basic knowledge of Spanish language but need to improve their fluency and vocabulary necessary for practical functions in life: greetings and self-introduction, being or hosting guests, shopping, travel, airport situations, study abroad, etc. SPAN 200 will enhance SPAN 102 and 102 and complement SPAN 201, enabling the student to acquire oral fluency. Prereq or coreq: SPAN 102 or instructor's consent.

SPAN 201 Intermediate Spanish I (4) Continuation of oral practice with increasing emphasis on reading and written composition. Laboratory drill. Pre: SPAN 102 or equivalent. (Attributes: DH, GL)

SPAN 202 Interm Spanish II (4) Continuation of oral practice with increasing emphasis on reading and written composition. Laboratory drill. Pre: SPAN 201 or equivalent. (Attributes: DH, GL, HPP)

SPAN 301 Adv Spanish Conversation (3) (lecture/lab) Advanced Spanish Conversation will place emphasis on 2 of the 4 language skills: listening and speaking. The study of Spanish conversation in 15 common contexts will give the student a much deeper awareness of cultural expectations and norms in the Latin world. Knowledge of their courtesies and respect, their customs and situational idiosyncrasies is critical to create business or interpersonal relations. The student will also learn how Anglo customs overstep bounds and create offense in the Hispanic collective cultures. Student will gain fluidity and comprehension as well as cross-cultural understanding.

SPAN 302 Adv Spanish Reading/Writing (3) (lecture/lab) Advanced Spanish Reading and Writing (302) will markedly extend the student's ability to read and write in a second language. Cultural expectations and practice are necessary to produce articles, journalism, business writing and literary analysis. The 302 is for students with Intermediate Spanish experience or with immersion experience in a Spanish or Latin culture. This course will teach students to critically comprehend Spanish texts, requiring them to reflect on these texts by producing written Spanish. Fifteen cultural texts will be read; fifteen papers and their corrections will be required.

SPAN 306 Medical Spanish (3) This class will develop students linguistically to work with Spanish speakers in nursing, pharmacy and medicine. The purpose of this course is to give the students the skills to

communicate with patients and customers whose English is not adequate for intercommunication. The emphasis will be on medical vocabulary and the taking of medical histories by oral interview in Spanish. Vocabulary for heart patients, diabetes patients, gynecological patients and common ailments such as urinary tract discomforts will be covered and reviewed repetitively. The student will participate in 40 oral interviews.

SPAN 307 Business Spanish (3) This course is for students of business, finance, tourism, or law. It provides linguistic tools in Spanish for employment purposes in line with students' respective majors. The course will build appropriate vocabulary, emphasizes Spanish and Latin protocols, perceptions in business, and address major mistakes made by North Americans in Latin or Hispanic business situations. The course is divided into three units: Business Situations, Written Forms of Business Communications and Business Practice, which will combine and reinforce the first two units.

SPAN 368 Gender & Women LatAm Lit/Film (3) Latin American men and women of alternative genders in the 20th century have lived in vastly different conditions and upheaval spanning feudalism to postcolonial thought. From genocide to authoritarian institutions of torture, the people in the texts and films had to endure turmoil and violent clashes of ideas. This course captures the Latin perspective of four different sociological spaces that women occupy in Latin America: the Indigenous space, the patriarchal latifundio, the mestizo space of markets, and the professional women under the military governments. Latin American and French feminist theories are used to clarify these contexts. (Same as WS 368). (Attributes: DH)

SPAN 369 Lat&Glob Docum&Film: Crit Analy (3) This course will engage students in Latin and Global documentaries and films in the context of their perspectives, providing an excellent window into culture and world conflicts. The students lives in a global world today in which expansion of mindsets must become elastic with the practice of cultural exposure and analysis. (Same as WS 369) (Attributes: DH, HPP)

SPAN x94 Special Topics in Subject Matter (Arr.) (10) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

SPAN x99 Directed Studies (Arr.) (10) Statement of planned reading or research required. Pre: instructor's consent.

Tourism (TOUR) Courses

[College of Business and Economics \(COBE\)](#)

TOUR 317 Mkt & Mgt Of Travel & Tourism (3) Principles of marketing and management applied in hotel/ motel, resort, restaurant, travel, transportation, tourism and leisure industries. Course looks at who travels, where and why. Focus is on cases involving both small and large firms in the travel and tourism area. Pre: C or better in MKT 310

TOUR 320 Tourism Economics (3) Microeconomics of travel: determinants of demand, empirical studies, demand forecasting; production cost analysis, market structure in major travel industries. Macroeconomic impacts. Pre: C or better in ECON 130

TOUR 340 Interntl Travel & Tourism Plcy (3) Tourism in international trade, legal environment of international travel, political

implications of tourism, social and cultural aspects of tourism, public and private policy issues for developed and developing destinations. Pre: 45 college credits successfully completed.

TOUR 350 Intro to Sustainable Tourism (3) Management and marketing issues faced by communities, business and government in developing sustainable tourism. Product development, pricing, capacity management, promotion and distribution channels. The strategic planning approach is introduced and applied in hands-on casework. Special resources include guest speakers with working knowledge of sustainable tourism and field trips to on-island tourism sites. Pre: 45 college credits successfully completed.

TOUR x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

TOUR x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

University (UNIV) Courses

[College of Arts and Sciences \(CAS\)](#)

UNIV 101 Paths to Acad/Lifelong Success (1) Designed for the first-time college student, this course is intended to promote the attitudes, behaviors, competencies, and skills that will increase students' academic success and foster their social integration into the college environment.

UNIV 102 Career and Major Decisions (3) A course designed to introduce students to the UH Hilo colleges, major areas they offer, and how to connect your major choices to potential career paths. Students will utilize activities and assignments in and out of the class in order to reach this goal.

UNIV 191 General Internship (1-3) (other) Application of knowledge and skills in a public, private, or government agency/setting. Pre: Instructor's consent. May be repeated for a total of six credits.

UNIV x94 Special Topics in Subject Matter (Arr.) (10) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

UNIV x99 Directed Studies (Arr.) (10) Statement of planned reading or research required. Pre: instructor's consent.

Gender and Women's Studies (WS) Courses

[College of Arts and Sciences \(CAS\)](#)

WS 151 Intro Gender & Women's Studies (3) An interdisciplinary survey of gender issues in contemporary U.S. society. Introduces foundational concepts regarding social constructions of gender, race, class, and sexual orientation. Topics include history, religion, sexuality, body image, reproductive rights, family, work, and violence. (Attributes:

DS, GCC)

WS 200 Gender Leadership & Soc Just (3) This course offers students the opportunity to think critically about leadership concepts, activism, and social change. Students will reflect on how social justice and multiculturalism influence the community and leadership of woman. Students will critically examine leadership theories and how to apply personal leadership styles. Pre: WS 151 or permission of the instructor. (Attributes: ALEX, GCC)

WS 200E Lit Genres: Myth/Folklore (3) An introduction to major genres in literature: Mythology and Folklore. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as ENG 200E) (Attributes: DL)

WS 201 Global Cinema (3) A course that offers students a critical examination of worldwide cinema. The course will cover film theory and film making techniques from countries such as Germany, Mexico, China, Senegal, Iran, and India. Students will undertake a critical study of various schools of film as they pertain to these national cinemas as well as explore the cultural and socio-political controversies surrounding cinematography. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as ENG 201) (Attributes: DL, GH)

WS 202 Literature of Human Rights (3) This course will explore narratives from a human rights perspective, beginning in the era shortly before the adoption of the Universal Declaration of Human Rights in 1948 and extending into the 21st century. Students will focus on geopolitical conditions that contribute to the suppression of human rights in areas around the globe, including, but not limited to, Chile, India, Nigeria, Iran, the Palestinian Territories, and the United States. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as ENG 202) (Attributes: DL, GCC, GH)

WS 204 Intr Race/Gender Film Studies (3) This course will focus on how race and gender historically shape individual and cultural experiences in America, as expressed in film. Key works that offer portrayals by and about various groups (i.e. gays/lesbian, immigrants, indigenous communities, mixed-race populations, etc.) will be critically compared and examined. Students will also discuss and address evolving audience responses to these works. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as ENG 204) (Attributes: DL, GH, GL)

WS 205 Hawai'i on Screen (3) A critical look at the development of film in and on Hawai'i. The course will cover a number of silent era films as well as the development of the musical and the war story as popular genres in the Islands. The class will also focus on the problems of cultural, racial and gendered representation in mainstream cinematic depictions of Hawai'i as well as the contemporary emergence of local and indigenous filmmaking. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as WS 205) (Attributes: DH, DL, GAHP, GL, HPP)

WS 206 Intro to Popular Culture (3) This course offers an introductory study of mainstream manifestations of culture. Students will critically assess production, distribution, and consumption of various popular cultural genres, such as advertising, talk shows, sports programs, music videos and gossip magazines and websites, among many others. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T. (Same as ENG 206) (Attributes: DL, GH, GL)

WS 207 Gender and Communication (3) This course is an introduction to gender research in communication, studying ways in which language, interpersonal communication, the media, and various social institutions influence conceptions of gender. (Same as COM 207).

WS 210 Gender and Communication (3) This course is an

introduction to gender research in communication, studying ways in which language, interpersonal communication, the media, and various social institutions influence conceptions of gender. (Same as COM 210)

WS 257 Multicultural Literature (3) A survey of classic and contemporary literature of diverse cultural and ethnic groups, which examines relevant concepts and topics, as well as the historical, social and cultural frameworks of these works, and their application and impact in regional and global contexts. Pre: C or better in ENG/ESL 100/100T. (Same as WS 257) (Attributes: DL, GL) (Attributes: DL, GH, GL)

WS 270 Love and Sex (3) Survey of classical and contemporary perspectives of the philosophy of love, marriage, relationships, sex, sexual identity, representations of sex and sexuality. (Previously offered: PHIL 180; Same as WS 270). (Attributes: GCC)

WS 300 Family in World Perspective (3) A comparative analysis of family and marriage patterns, mate selection, parent-child interaction, divorce rates, socialization of gender roles, legal sanctions, trends in organization and function. Pre: Soc 100 or instructor's consent. (Same as SOC 300).

WS 301 Women in Science (3) The interrelationships of women and science examined from historical, sociological, philosophical, and biological perspectives. Factors contributing to underrepresentation, feminist critiques of science, examination of successful strategies.

WS 304 Race, Ethics & Cultural Diversity (3) Philosophical examination of the meaning of cultural diversity and pluralism for questions concerning community and knowledge from a variety of American and non-western cultures as well as their interactions with categories of identity, based upon nation, race, class, gender and sexuality. Addresses the interactions of the social experience of individuals based upon categories of identity and the emergence of forms of community and knowledge. A global or transnational section will be one component of the course. (Same as PHIL 304). (Attributes: DH, FGB, GCC)

WS 305B Themes in Regnl Geog: Mid East (3) Surveys regional landscapes of the Middle East, including North Africa; focuses on historical and contemporary influences of physical, cultural, and economic landscapes. Pre: Junior or senior status, or consent of instructor. (Same as GEOG 305B)

WS 307 Social Epistemology (3) The sources and limits of human knowledge. Classical and contemporary epistemological theories, and their application to the everyday search of knowledge. (Same as PHIL 307)

WS 310 Race & Ethnic Relations (3) Sociological analysis of the patterns of intergroup relations. Topics include the meaning of race, ethnicity, prejudice and discrimination, and the interactive strategies used by various groups. Emphasis on ethnic processes on Hawai'i and the Pacific region. Pre: SOC 100 or instructor's consent. (Same as SOC 310).

WS 316 Science, Technology & Values (3) Impact of science and technology on various philosophical issues. Through a variety of readings that exemplify the field's content, students will examine the social, political, aesthetic, ethical, economic, and environmental constructs that shape modern institutions in science and technology. (Same as PHIL 316)

WS 319 European Women's History (3) Study of European women from pre-history to the 20th century with emphasis on women's social and cultural roles in western history. Current feminist theory is also

studied. (Same as HIST 319)

WS 320 Cross-Cultural Study Of Women (3) Comparative analysis of women's roles and women's lives in different societies. Topics include women's status, life stages, gender roles, images of women and power. (Same as ANTH 320) (Attributes: DS, FGC)

WS 321 Stratification & Inequality (3) This course examines social stratification theory and research; definition and measurement of socioeconomic status; racial, ethnic and gender inequality. Pre: SOC 100 or instructor's consent. (Same as SOC 320) (Attributes: DS)

WS 324 Culture, Sex And Gender (3) A cross-cultural examination of the development of gender systems and gender roles. Consideration of sex roles and activities as part of the larger gender system. Pre: ANTH 150 or 205 or instructor's consent. (Same as ANTH 324) (Attributes: DS, FGC)

WS 325 Psychology Of Women (3) Issues and topics relevant to the psychological development and functioning of women including sex differences in abilities and behavior, achievement motivation, work, sexuality, pregnancy, childbirth and motherhood, mental health and domestic violence. Pre: PSY 100. (Same as PSY 325)

WS 327 Law and Culture (3) Law's relationship with culture as constructed and contested through social, political, and economic frameworks of belonging, identity, and place (Same as POLS 327). (Attributes: DS)

WS 328 Gender, Crime, and Justice (3) This course will examine theoretical perspectives on gender, crime, and the criminal justice system. Students will analyze the intersecting roles played by gender, race, and class in criminal offending, victimization, and institutional responses. Additional topics may include masculinity and crime, women and punishment, female delinquency, gender violence, sex work, and the role of women in the criminal justice system. Pre: Soc 100 or WS 151 (Same as SOC 328).

WS 331 Queer Studies & Contem Society (3) A review of current issues using queer and sociological perspectives on sexualities and social change. Pre: SOC 100 or WS 151 or permission of instructor. (Same as SOC 331)

WS 332 Race, Gender & the Body (3) This course explores the politics of the body according to the intersectional and dynamic constructions of race, ethnicity, sex, gender, ability, and size. (Same as POLS 332).

WS 340 Socialization & Identity (3) The process by which an individual becomes a functioning member of society. Pre: SOC 100 or instructor's consent. (Same as SOC 340).

WS 342 Sociology of Human Aging (3) Aging as a social phenomenon, including social impact of a growing elderly population, and emerging social patterns among the elderly. Emphasis on the interplay of biological, psychological, sociological and cultural factors of human aging. Pre: SOC 100 or instructor's consent. (Same as SOC 342).

WS 352 Gender and Sexuality (3) An interdisciplinary exploration of concepts, constructions, and behaviors associated with gender and sexuality. Course materials examine historical, contemporary, and cross-cultural definitions and expectations, and correlations with social power and hierarchies. In addition, the course aims to illuminate the multiplicity of personal and social identities relating to sex, race/ethnicity, class, age, etc. (Attributes: DS)

WS 355 Women in Modern Lit & Film (3) Literature and film by and about women from 1900 to the present. Feminist literary theory. Pre: C or better in ENG 300, or instructor's consent. (Same as ENG 355) (Attributes: DL)

WS 356 Language and Gender (3) Students engage in the analysis of gender as it relates to language and society. Provides students with analytic resources for thinking critically about the relationship between language and social practice. Students gather and analyze data based on current theories. Pre: ENG/ESL 100 or 100T and LING 102, or consent of instructor. (Same as ENG 356, LING 356)

WS 357 Women and Religion (3) (other) Examines roles of, and attitudes towards, women in various religious traditions. Through both chronological and comparative approaches, explores depictions of women in scriptures and other primary texts as well as women's contributions to each tradition. (Attributes: FGC)

WS 358 Women in Christianity (3) Examines issues relating to sex and gender throughout the history of Christianity. Emphasizing primary texts, the course will explore writings by Christian women and Christian writings about women. (Same as HIST 358)

WS 359 Music and Activism (3) An exploration of the ways in which music has been used to create and support social change. The role of music in movements involving resistance, protest, and activism for political, social, and environmental justice, both in the U.S. and globally. (Same as MUS 359) (Attributes: DH)

WS 360 American Women's History (3) Study of American women from the 17th to the 20th centuries. Special emphasis on women's social and cultural roles. Current feminist theory is also studied. Pre: HIST 151, 152 or instructor's consent. (Same as HIST 360)

WS 361 Girls and Women in Japan (3) A survey of the life of Japanese girls and women focusing on Japan's changing aspects from the ancient to the contemporary periods. The course questions the current prevalent image of the subservient Japanese woman and articulates the role of Japanese girls and women in Japanese society. (Same as JPNS 361 and JPST 361) (Attributes: DH, HPP)

WS 368 Latin American Women's Lit (3) Latin American women of the 20th century have lived in vastly different conditions and upheaval spanning feudalism to postcolonial thought. From genocide to authoritarian institutions of torture, Latin women have had to endure turmoil and violent clashes of ideas. This course captures the Latin perspective of four different sociological spaces that women occupy in Latin America: the Indigenous space, the patriarchal latifundio, the mestizo space of markets, and the professional woman under the military governments. Latin American and French feminist theories are used to clarify these contexts. (Same as SPAN 368). (Attributes: DH)

WS 369 Lat&Glob Docum&Film: Crit Analy (3) This course will engage students in Latin and Global documentaries and films in the context of their perspectives, providing an excellent window into culture and world conflicts. The students lives in a global world today in which expansion of mindsets must become elastic with the practice of cultural exposure and analysis. (Same as WS 369). (Attributes: DH, HPP, WI)

WS 375 Feminist Philosophy (3) Exploration of the feminist contributions to traditional philosophical questions in metaphysics, epistemology, and ethics, as well as examining the philosophical implications of the intersections of race, class, gender and sexuality. (Same as PHIL 375) (Attributes: DH, GCC)

WS 382 Qualitative Research (3) Introduction to the ethics, methodologies, and practice of research in human geography, particularly standpoint epistemologies and associated methodologies. Combines lectures, workshops, and assignments. Students will conduct and report upon their own research. Pre: GEOG 103 or 102 or WS 151 or consent of Instructor. (Same as GEOG 382).

WS 384 Gender & Japanese Performance (3) This course views how gender is represented in Japanese performance from rituals to dance, music, theatre and everyday performance. Through readings and visual materials, students observe the historical development of Japanese theatre and performance and examine relationship between gender, sexuality and the Japanese cultural forms from the performance studies as well as gender and feminism studies perspectives. (Same as JPNS/JPST 384) (Attributes: DH, HPP)

WS 385 Women & Health (3) Reproductive health, immune activity, autoimmune disease, and mental health in women are covered from physiological, psychological, historical and cross-cultural perspectives. Pre: PSY 100. (Same as PSY 385)

WS 391 Intern Gender & Women Studies (3) Application of knowledge and skills in a field placement or engaged scholarship project setting. May be taken for a total of 12 credits, only 6 of which can be applied to the major or three to a minor. Pre: WS 151, instructor's consent. (Attributes: ALEX)

WS 392 Japanese Women (3) History of women in Japan from the earliest historical eras, including the Heian aristocracy and evolving samurai culture, through the present. Topics include property rights, family structures, the influence of religion and secular philosophies, effects of political and legal changes, women's role in the economy and its effect on their status and lives, and women's activism. Pre: sophomore standing or instructor's consent. (Same as HIST 392) (Attributes: GAHP)

WS 393 Normality, Abnormality & Soc (3) Philosophical study of how human diversity interacts with social norms. Topics include health and illness, disability, gender and sexual orientation. Perspectives from biology and the social sciences are included in a study of how beliefs about normality vary between cultures, change through time and affect human relations. Pre: Previous work in Philosophy. (Same as PHIL 393) (Attributes: DH)

WS 401 Women in Hawaiian History (3) (lecture/other) This course examines the lives and contributions of women in the history of Hawai'i. It considers how events such as the arrivals of foreigners, dismantling of the kapu system, the mahele, epidemics, political changes, world wars, etc., affected the social and cultural lives of women, men, children, and families. Course materials seek to understand how those gendered as "feminine" negotiated, accommodated, and resisted these changes over the last two centuries. (Same as HIST 401). (Attributes: GAHP)

WS 407 Gender Inequality in PopCulture (3) Exploration of gender and sexuality as systems of inequality, as social constructions, as performance, and as dynamic forces within American popular culture. Students develop skills to sociologically research and analyze artifacts of popular culture. Pre: SOC 100 or WS 151 or instructor's consent. (Same as SOC 407).

WS 409 Seminar in Social Movements (3) An exploration of the ways in which social movements have shaped politics, policy and social culture in the United States. Students will research and analyze historical and contemporary social movements. Pre: SOC 100 or WS 151 or instructor's consent. (Same as SOC 409)

WS 411 Family & Gender in Oceania (3) (lecture/other) With a focus on the 19th and 20th centuries, this course examines how historical changes affected the social and cultural lives of women, men, children, and families in Oceania. Throughout the course we will endeavor to explore gendered reconstructions of particular events in the history of the Pacific: historiography, exploration, disease & depopulation, missionization, education, imperialism, colonization and decolonization in general. (Same as HIST 411). (Attributes: GAHP)

WS 416 Science, Technology & Human Values (3) Impact of science and technology on various philosophical issues. Through a variety of readings that exemplify the field's content, students will examine the social, political, aesthetic, ethical, economic, and environmental constructs that shape modern institutions in science and technology. (Same as PHIL 416)

WS 420 Family Communication (3) Foundational concepts and theories are introduced. Communication dynamics within families are explored. Narrative, functional, interpretive, and systems approaches to family communication are included. Cultural influences are examined. Conditions necessary for optimal family functioning are addressed. (Same as COM 420)

WS 423 Post-Colonial Literature (3) A critical analysis of the development of contemporary world literature in the wake of the fall of European empires. This class is designed to address the importance of writing in an age of changing national identities, shifting alliances, and volatile conflicts. Texts from African, Latin American, the Middle East, the Caribbean, and Hawai'i will be features. Pre: ENG 300 or instructor's consent. (Same as ENG 423). (Attributes: DL, GH, GL)

WS 430 Gender, Place and Environment (3) Survey of trends in geography of gender related to place, space and the environment. Addresses spatial interactions of gendered bodies of different ages, class and ethnicities. Pre: junior or senior standing or instructor's consent. (Same as GEOG 430). (Attributes: ALEX, DS, GCC, GS)

WS 431 Pacific Islands Literature (3) A study of a representative range of contemporary poems, short stories, novels, and plays written in English by Pacific Islanders from Polynesia, Micronesia, and Melanesia. Pre: C or better in ENG 100, ENG 100T, ESL 100, or ESL 100T and a 200-level literature course, or instructor's consent. (Same as ENG 430) (Attributes: HPP)

WS 442 Romantic Literature (3) Poetry and prose from 1780 to 1832. Pre: C or better in ENG 300 or instructor's consent. (Same as ENG 442).

WS 448 Graphic Novels & Comics (3) Advanced study of major developments, schools and styles in contemporary graphic novels and comics. Emphasis on literary theory and analysis. Pre: C or better in ENG 300 or instructor's consent. (Same as ENG 448) (Attributes: DL, GL)

WS 461 Race and Gender in Media (3) This course explores the dynamic interactions between race, gender and the mass media. Specifically, it examines media representations of race and gender and their cultural, sociological, and psychological effects in the society. Pre: COM 260, 360 or instructor's consent. (Same as COM 461).

WS 465 Comm and Popular Culture (3) Popular culture influences identity (gender, race, ethnicity, etc.), interpersonal relationships, and worldview perspectives. This course helps to understand popular culture's influence on society. Three approaches of popular culture are focused on: production and industry practices; evaluating texts; and audience reception of popular culture. Same as COM 465.

WS 470 Dark Side of Communication (3) Using the “dark side” metaphor, this course investigates important, yet neglected, issues of personal relationships. The class has two goals—(1) understanding the influence communication has on personal relationships, and (2) how contexts and relational challenges influence personal relationships. (Same as COM 470)

WS 480 Women and Rhetoric (3) Survey of key female figures that have figured (or not figured) into the rhetorical canon. Analysis of women's use of rhetoric in everyday life and at historic moments and consideration of methodological and theoretical issues intersecting women, rhetoric, and historical research. Pre: C or better in ENG 300 or instructor's consent. (Same as ENG 480).

WS 486 Women in Ancient European Civi (3) Study of European women up to the year 800, with primary focus on the Mediterranean Basin. Themes encompass religion, social customs, and economic activities. Pre: HIST 319 or 323 or 341 or 356 or 360; or consent of instructor. (Same as HIST 486).

WS 495 Women's Studies Seminar (3) (other) Capstone seminar to be taken in the senior year (or as a second-semester junior). Readings, discussions, presentations, and guest lectures involving advanced analysis of theories about social systems and women's lives. Seminar will facilitate student's application of theoretical material and research toward particular areas of interest. Seminar topics may vary from year to year. Pre: WS 151; 6 credits of upper-division WS courses or instructor's consent.

WS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

WS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Graduate Education General Information

UH Hilo Graduate Division

College of Business and Economics Building, Room 201

Tel: (808) 932-7927

Email: hilograd@hawaii.edu

Website: hilo.hawaii.edu/academics/graduate/

UH Hilo currently offers several graduate and professional programs. Information on admission policies and procedures, tuition and fees, registration, and degree requirements can be found in the following sections.

- [Graduate Admission Policies](#)
- [Graduate Admission Procedures](#)
- [Registration and Degree Requirements](#)
- [Requirements for Candidates for Masters Degrees](#)
- [Requirements for Candidates for Doctoral Degrees](#)
- [Graduate Student Rights and Responsibilities](#)

Graduate Admission Policies

The University of Hawai'i at Hilo is an equal opportunity institution of higher education and does not discriminate on the basis of race, gender, sexual identity, age, disability, religious affiliation, or country of origin.

Students are expected to be familiar with and follow the guidelines and policies set forth in the UH Hilo Catalog and [Graduate Student Handbook](#). Students are ultimately responsible for selecting courses appropriate to the program degree objective.

Professional programs' policies may vary slightly from graduate program policies. Please check with your program chair for details.

Application Requirements

Note: The following requirements are the **minimum** requirements for any UH Hilo graduate program. Particular graduate programs' requirements may differ from the minimum. Therefore, prospective students must also check the requirements of their program of interest.

Applicants applying for admission to graduate programs must submit the following items (except for the app and fee) directly to the Graduate Division:

1. A completed application form and appropriate fee. The application form and fee information are available online [UH Online Application Form](#). Application deadlines for graduate programs differ from deadlines posted for undergraduate programs. Priority deadlines for graduate programs are posted on the [graduate division website](#).
2. One official transcript from each post-secondary institution attended. These transcripts must be sent directly from the institution or submitted by the applicant in a sealed institutional envelope if accompanying the application. Official electronic transcripts are acceptable if sent directly from the institution to hilograd@hawaii.edu. Official transcripts from within the UH system are not required.
3. Official Graduate Record Examination scores or other qualifying test scores as determined by the program (check admissions requirements in each program description).
4. A minimum of three letters of recommendation attesting to the academic ability or other qualifications of the applicant.
5. Statement of academic and/or long range goals.

International Applicants

In addition to the above requirements, international applicants must submit:

1. International applicants whose native language is not English, or who have not attained a baccalaureate or higher degree from an English-speaking institution, also must submit TOEFL or Cambridge IELTS scores.
2. Verification of financial status using the [Confidential Financial Statement Form \(PDF\)](#)
3. International students and students who attended colleges outside of the U.S. and whose transcripts are in languages other than English must submit official academic records in the original language accompanied by certified English translations. These translations must bear the embossed seal or inked stamp of the issuing institution or government agency and the original signature of the translator. Translations must be complete and exact word-for-word translations of the original documents. International applicants with a Grade Point Average of less than a B (or equivalent) in their undergraduate work or less than a B in 12 or more credits of post-baccalaureate work are **not** eligible for admission.

More information for International Students can be found at: [International Graduate Students](#)

Minimum Qualifications for Acceptance

Baccalaureate Degree

Each applicant must hold a baccalaureate degree or graduate degree from a regionally accredited U.S. college or university, or its equivalent from a recognized non-U.S. institution of higher learning. The standards of the degree in question must be equivalent in scholarship requirements to those maintained in the undergraduate program at the University of Hawai'i at Hilo.

Graduate Record Examination (GRE)

The GRE is required for most applicants for consideration of acceptance. Some programs may require a professional test specific to the program of study in lieu of the GRE for admission purposes. Minimum scores on the GRE or professional tests are set individually for each program. Applicants who have completed a graduate program at a regionally-accredited U.S. institution or its equivalent from a recognized non-U.S. institution are not required to submit GRE scores.

Applicants for doctoral programs should check with the specific program to see if submission of the GRE is required.

Test of English As A Foreign Language (TOEFL or Cambridge IELTS)

In addition to above requirements, an applicant whose native language is not English must demonstrate English language proficiency as a partial admissions requirement. Evidence of proficiency in English is successful completion of the Test of English as a Foreign Language (TOEFL) with a minimum score of 550 (paper version), 213 (computer version), or 79 (internet version). The minimum Cambridge IELTS score is 6.0. Applicants who have baccalaureate degrees from English-speaking institutions are exempt from the TOEFL and Cambridge IELTS requirement.

International Transcripts

Transcripts from international institutions where a bachelor's degree was awarded must be submitted to a transcript evaluation service. See [International Transcript Information](#) for more info.

Please plan ahead to allow adequate time for processing of the evaluation of international transcripts, which may take a month or longer.

Grade Point Average (GPA)

The applicant must have a GPA of 3.0 or the equivalent from the last 60 semester credits (or equivalent) in the undergraduate degree completed, or must hold a graduate degree with a GPA of 3.0 or better in his/her graduate program.

Please note: The meeting of minimum requirements does not assure acceptance into a UH Hilo graduate degree program. Acceptance into a graduate program is competitive and decided upon by each individual graduate program.

An applicant whose GPA in the last 60 semester credits (or equivalent) falls between 2.75 and 2.99 on a 4.0 scale may be eligible for provisional acceptance. See the [Classification of Students](#) section below for more information.

Classification of Students

Regular Admission

Regular admission may be granted to applicants who hold a baccalaureate degree with a grade point average (GPA) of 3.0 or better for the last 60 semester credits (or equivalent), or who hold a graduate degree with a GPA of 3.0 or better from an accredited institution. Determination of acceptance, however, is made by the admissions committees of individual programs. Students accepted by program admission committees are defined as "classified students."

Provisional Admission

An applicant whose GPA in the last 60 credits (or equivalent) falls between 2.75 and 2.99 may be admitted under provisional status. To be accepted, the applicant must have program approval and otherwise meet program requirements. Some conditions may apply; the student will be notified at the time of acceptance of any conditions in place.

The student must:

1. Sign and return a form acknowledging receipt and understanding of the conditions listed in the acceptance letter and agreeing to the conditions;
2. Attain B- grades or higher in all classes required by the graduate program in the first academic year;
3. Register for the same classes required of other students entering the same program. The program will monitor the student's academic progress at the end of the first semester to confirm that conditions have been successfully met.
4. Complete any additional required coursework as specified by the Program Director in the provisional acceptance letter. Coursework may be required to be completed prior to enrollment in the graduate program or during enrollment in the program.

A hold will be placed on the student's record to prevent registration for courses in the second and third semesters (the hold will be removed once the program reports satisfactory progress to the Graduate Division). Failure to meet the conditions will result in dismissal from the program.

Denied Admission

Students whose academic records do not meet the minimum requirements, whose applications are incomplete, and/or whose admission is not supported by the program and the Graduate Division, will be denied admission.

Visiting Graduate Student

Applicants who are pursuing an advanced degree at another institution and who wish to study at UH Hilo for a limited time may apply for admission as visiting graduate students. To be eligible, applicants must be enrolled in and actively pursuing a graduate degree program at a regionally accredited institution of higher education or an equivalent degree at a recognized non-U.S. institution of higher learning, and be in good academic standing. Current transcripts from the home institution must be provided in order to determine academic standing and eligibility for specific classes at UH Hilo.

Visiting graduate students register on a space available basis and only in courses for which they are judged to be eligible by the instructor of the course and the chair of the individual graduate program. Generally, visiting graduate students are limited to two (2) semesters of study.

Visiting Graduate Students must provide the same application materials as applicants for regular admission: the application, the application fee, statement of research interest/goals in the program, resume, three letters of recommendation, and official transcripts from all colleges and universities attended. The exception is that Visiting Graduate Students do not need to provide official GRE scores.

The program chair must approve their acceptance into the program. Visiting Graduate Students will be accepted as “classified graduate students.”

Visiting international graduate students must comply with certain application and enrollment regulations in order to qualify for an I-20 certificate of eligibility, which permits them to request an F-1 student visa. Regulations include providing a copy of a current passport, providing proof of adequate financial support, and maintaining full time enrollment (6 credits per semester) while at UH Hilo. Please contact the UH Hilo Graduate Division for details.

Admission as a visiting graduate student does not guarantee subsequent admission as a regularly admitted graduate student. A visiting graduate student who decides to apply for admission as a regular graduate student must apply for acceptance via the standard admissions process as do all other applicants.

Visiting graduate students who later become admitted as regular students may request to have courses taken under the visiting student status credited toward the new degree objective. They should consult with their graduate programs. The visiting student will submit the form [Petition to Substitute and/or Waive Courses-Graduate \(PDF\)](#) to the Graduate Division.

Unclassified Graduate Student

Students with documented baccalaureate degrees who do not meet the minimum requirements for admission to a program, or who for any other reason have not been formally accepted into a program, may attempt to register for selected graduate level courses.

Such registration is done on a space-available basis, and is at the discretion of the Graduate Program Chair of the program that the course falls within. Permission to enroll as an unclassified student may be granted with the permission of the instructor and the graduate program chair using the [Permission to Enroll in Graduate Coursework as an Unclassified Student \(PDF\)](#). The form must be accompanied by a brief statement of objectives specific to each class in which the applicant hopes to enroll and should be submitted to the Graduate Division.

Admission into a course as an unclassified graduate student does not guarantee admission as a regularly classified graduate student at a future date.

Applicants who are sponsored by an educational institution or governmental agency and who wish to undertake a special program of study, research, or training without a degree objective may apply as unclassified graduate students.

All applicants for unclassified graduate student status are required to submit the following:

1. A UH Hilo application to the [UH Hilo Admissions Office](#)
2. Proof of baccalaureate degree if earned degree was outside of the UH System;

Unclassified graduate students are not required to submit the application

fee, GRE scores, or letters of recommendation. If an unclassified graduate student later applies, and is accepted, into a graduate program, the student may petition for acceptance of credits taken while in unclassified status, but acceptance of the petition by the graduate program is not assured.

Taking Graduate Level Coursework as an Undergraduate Student

Undergraduate students with senior standing, and with a cumulative GPA of at least 2.5, before being granted a baccalaureate degree may petition to take graduate coursework for credit in the status of an Unclassified Graduate Student. Permission must be received from the student’s undergraduate academic advisor, the graduate course instructor, and graduate program chair. This coursework must be in excess of the requirements for the baccalaureate degree. Submit the completed form [Permission to Enroll in Graduate Coursework as an Undergraduate Student \(PDF\)](#) to the Graduate Division.

Completion of graduate coursework does not guarantee future admission into a UH Hilo graduate program.

Additional Considerations

Concurrent Degrees

An applicant may apply to more than one graduate program but may enroll in only one program initially. Concurrent enrollment in more than one program is strongly discouraged. The individual programs applied for, however, will determine individually what constitutes the minimum course load, and the student (with the approval of both program chairs) may decide to attempt both programs.

Reapplication

Applicants who have been denied admission to a graduate program at UH Hilo because of failure to meet academic standards may reapply for admission after completing additional credits of post-baccalaureate course work and attaining a GPA of at least 2.75 in the last 60 credits. If subsequently accepted with a recalculated GPA of between 2.75-2.99 in the last 60 credits, the student will begin the program under provisional acceptance policies.

Completion of additional course work does not guarantee admission. To be reconsidered for admission, applicants must follow the standard application process and will be considered along with all other applicants.

If Admitted, But Not Enrolled

Admission may not be postponed or deferred. Newly-admitted students who do not register during the semester for which they are admitted or who withdraw from all courses before the last day to drop are considered no-shows. Their admission status will be rendered invalid. To reapply for admission, they must contact the Graduate Division for instructions.

Returning Student

If a student has not registered continuously, that student must reapply for admission. Readmission is not guaranteed. Please see the policies on [Continuous Registration](#) and on [Leave of Absence](#).

International Student Documents

International student documents are processed by the Graduate Division in consultation with the International Admissions Officer. Visa questions will be handled by [International Student Services](#).

Graduate Admission Procedures

The Graduate Division is responsible for accepting application materials for all graduate programs not administered by the College of Pharmacy. The Graduate Division screens each application for minimum qualifications and distributes completed applications to each respective program for decision of acceptance or rejection. The admissions committee within individual programs will make the final decision on applications that meet minimum university qualifications.

For programs with summer or fall semester initial enrollment, the priority application deadline for receipt of all application documents varies by program, and ranges between December 1 and January 15. Applications that are complete as of the program's specific priority deadline receive priority consideration for acceptance. The application deadline for spring semester admission, if appropriate, is November 1. Applications received after the priority deadlines will be considered on a space available basis. Each applicant will be notified of receipt of the application. Incomplete applications will be held in the Graduate Division until complete and ready for review by the graduate program. Applications that remain incomplete at the end of the selection process will be labeled as "incomplete," and applicants will be denied admission. Applicants will be notified of this action. Specific priority deadlines are posted under the program's Checklist and on the [Graduate Division home page](#).

Official notification of acceptance or rejection generally is mailed by the Graduate Division between January 1 and May 30 for summer and fall admission. For spring admission, notification is generally mailed between November 15 and December 15. Applicants should not make definite arrangements to attend the University until they receive formal notice of acceptance from the Graduate Division.

Evaluation of transcripts of international students and of non-traditional grading will be done at the program level if the applicant meets other minimum qualifications. The Graduate Division and Office of Admissions will help with interpreting unusual grading practices and other special cases.

Graduate Tuition and Fees

Tuition for the 2024-2025 Academic Year

Graduate students other than Pharmacy and Nursing

Classification	Per Credit Hour	Full Time
Resident	\$ 489	\$ 5,868/semester
Non-resident	\$ 1,107	\$ 13,284/semester

Pharmacy Doctoral Students

Classification	Per Credit Hour	Full Time
Resident	\$ 1,004	\$ 12,048/semester
Non-resident	\$ 1,710	\$ 20,520/semester

Graduate Nursing Students

Classification	Per Credit Hour	Full Time
Resident	\$ 797	\$ 9,564/semester
Non-resident	\$ 1,574	\$ 18,888/semester

Tuition for Summer 2025

Graduate students other than Pharmacy and Nursing

Classification	Per Credit Hour
Resident	\$ 489
Non-resident	\$ 641

Graduate Nursing Students

Classification	Per Credit Hour
Resident	\$ 797
Non-resident	\$ 1,574

Fees for the 2024-2025 Academic Year (Per Semester)

Fee	1+ credits
Media Broadcasting	\$24.00
Student Association	28.50
Student Publications	28.50
Campus Center	29.50
Student Activities	28.50
Student Health	30.00
Student Life Center	78.00
Total:	\$ 247.00

Application Fee

A \$50 fee is required for all applicants. **This fee is not refundable, not transferable to another semester, and is required each time an application is submitted.**

Late Registration Fee

Students will be assessed a \$30.00 fee for registering during the late registration period, which begins on the first day of instruction.

Special Fees and Charges

Fee/Charge	Amount
Student Identification Card	\$ 10.00
Transcript of Record	5.00
Rush Transcript	15.00
Institutional Credit by Examination	15.00
Replacement of laboratory equipment	Cost of item(s) broken or lost

Registration and Degree Requirements

Registration

Entering graduate students register during the official registration period posted under the [Registration Timetable](#) for the relevant semester. Registration for classes is done using the

STAR for Students system by tapping on the tab “STAR GPS Registration”. Students may also register in the period just prior to the start of fall classes, or in the case of programs that begin in the spring or summer, prior to the beginning of the semester.

Continuing graduate students are encouraged to participate in early registration whenever possible. Graduate students must meet general guidelines for tuition and fee payments set by the university.

Full-Time Registration Requirements for Students

Graduate students must register for six or more credits during the Fall or Spring semesters and when applicable, three credits during the summer to be considered full time. 1/2 time is defined as three credits, and students taking 1-2 credits are considered less than half time.

International students must be enrolled for at least 6 credits in each regular semester of the graduate program. Please check with the [International Student Services](#) Office for details.

Fall & Spring Classification	Description
Graduate Full-time	6
Graduate Three-quarter time	4-5
Graduate Half-time	3
Summer Classification	Description
Graduate Full-time	3
Graduate Three-quarter time	N/A
Graduate Half-time	2

Academic Standards

A cumulative grade point average (GPA) of at least 3.0 (on a scale where A = 4.0) in courses required by the graduate program is required in order to maintain satisfactory academic standing and graduate degree certification. When the cumulative GPA falls below 3.0, the student will be placed on academic probation. Once a student is placed on probation, the student has two semesters to attain a cumulative GPA of 3.0 or higher, or the student will be dismissed.

Students admitted under Provisional status must earn a grade of B- or better in all courses taken in the first year. Failure to meet this requirement will result in dismissal from the program.

No credit is granted for graduate courses in which a grade lower than a B- has been received. For courses offered as CR/NC, to qualify for “credit”, the work of the student must be at the B- level or higher. Grades lower than a B- and NC, however, will appear on the student’s transcript and letter grades will be computed into the student’s GPA, although these courses will not fulfill degree requirements.

Graduate students who do not meet other academic/program standards will be dismissed from their graduate program. This process entails a warning letter from the chair of the graduate program to the student. If

the necessary academic standards are not attained within a period specified by the graduate program, the graduate program’s chair informs the appropriate Dean that the student be dismissed from the program.

Students will be notified of the intended action. Appeals of such action may be made in writing to the Vice Chancellor for Academic Affairs (VCAA) or designee within ten business days. The VCAA’s decision on the appeal will be final.

Graduate Committees and Primary Academic Advisors

With the exception of certain professional programs, most graduate programs utilize a graduate committee system for advising and evaluating graduate students. At the Master’s level, the committee is comprised of a minimum of three faculty members. One member will chair the committee and serve as the student’s primary academic advisor. At least two members of a student’s graduate committee must be full time tenured or tenure track faculty at UH Hilo.

For students in a non-thesis option, the graduate committee serves as an examination and evaluation body of the student’s requirements as listed by the graduate program. For students utilizing a thesis option, the committee serves as the thesis committee. Acceptance or rejection of a student’s work as fulfilling degree requirements is determined by a majority of the graduate committee.

Some professional programs may not utilize a graduate committee system. In these cases, a designated faculty member serves as the student’s primary academic advisor. Acceptance or rejection of a student’s work as fulfilling degree requirements is determined by a majority vote of the graduate program’s faculty.

Minimum Residence Credits for Degree Certification

Regardless of any previous graduate experience, a minimum of 24 credit hours must be taken at UH Hilo before a degree can be granted. This is known as the “residence requirement,” and applies to all graduate degree programs at UH Hilo. At the graduate level, a maximum of six credit hours earned under courses designated as “thesis” may be counted toward the Graduate Division’s minimum residence requirement.

Students continuing their studies for a doctoral degree in the same UH Hilo program from which they earned their masters’ degree need not fulfill a second residence requirement.

Minimum Credits in Graduate Level Courses

Students are required to complete a minimum of 24 credits in courses at the graduate level before a degree may be granted. Specific graduate programs may require additional credits at the graduate level. Students are advised to read program requirements and discuss them with their primary academic advisor.

Use of Undergraduate Courses for Graduate Credit

Graduate students may take up to six credits in 400-level courses toward their graduate degree requirements with the prior approval of the primary academic advisor, graduate program chair and the Graduate Division. Courses numbered 499 may not be used for graduate credit.

Credits used to meet requirements for an undergraduate degree may not be used to meet graduate program requirements. To register for 400-level courses, complete the [Petition to Transfer, Substitute, and/or Waive Courses](#) form and submit it to the Graduate Division.

Dual Level Courses

Some courses are dually listed at the 400- and 600-level. Courses identified by graduate programs as core courses are not eligible as dual level offerings. For dual level courses, credit in the graduate course is not available to students who have already received credit in the corresponding undergraduate course.

Dual level courses must be evaluated as a unit based upon their specific content, including specification of differences in expectations for undergraduate and graduate students.

Overload Policy

Students may register for up to 15 credits without the approval of the graduate program chair. Any course load above 15 credits requires approval by both the graduate program chair and the Graduate Council Chair as indicated on the [Student Overload Approval Form](#). After obtaining the primary advisor's and graduate program chair's signatures, the form is submitted to the Graduate Division for the Graduate Council Chair's signature; the form is then submitted to the Office of the Registrar by the Graduate Division. The Overload Form must be approved before the end of the add deadline, and will be retained in the student's file in the Graduate Division.

Incomplete Grades

An instructor may assign an Incomplete (I) grade when a student has done most of the course work satisfactorily, but because of unforeseen circumstances has not completed all course requirements. The Incomplete is not for the purpose of converting a failing grade, or unsatisfactory work, to a passing grade. The student must request the Incomplete option from the instructor, but it is the instructor's decision as to whether it is appropriate or not.

Graduate students who are given a grade of "I" must complete the coursework before the due date listed in the University [Academic Calendar](#). "I" grades that are not completed by this due date automatically are converted into "NC" grades. The instructor may set a deadline sooner than that listed in the University Academic Calendar, reflecting the instructor's availability to extend his/her commitment beyond the course. The instructor, however, cannot extend the due date unless granted a specific waiver by the college Dean.

Some departments and programs may have more restrictive policies regarding incomplete grades. Students should confer with their academic advisors concerning departmental rules and expectations.

The incomplete policy has specific implications for students receiving tuition scholarships and other kinds of financial aid and for international students holding visas. Graduate students who receive federal or state aid may lose their eligibility if they receive Incompletes. See the [Financial Aid Satisfactory Academic Progress Policy](#).

All courses taken by graduate students are subject to the above policy. **Incomplete grades must be resolved before students can receive a graduate degree.**

Repeating Courses for Credit

A few graduate courses (numbered 600 and above) are repeatable for credit. Examples include thesis research and courses that are approved via the curriculum review process as "repeatable for credit" (e.g. Special Topics classes).

Retaking Courses for a New Grade

With the exception of courses that are explicitly repeatable for credit (see above), graduate courses cannot be retaken unless approved by the primary advisor, program chair and Graduate Council Chair prior to registration. With the permission of the primary advisor and the graduate program chair, courses may be retaken, but not for additional credits. No more than two courses may be retaken, and no graduate level course may be retaken more than once during the student's graduate career.

The grade received will be averaged with the previous grade in that course in computing the UH Hilo cumulative grade point average (GPA). For graduation purposes, however, a program grade point average may be computed which includes only the grades earned in the courses that are part of the student's graduate program. A statement which specifies the recomputed program GPA will be reflected on the student's academic records and transcript. Submit the completed [Graduate Repeat Course Notification form \(PDF\)](#) to the Graduate Division, where the final signature will be obtained.

Continuous Registration

All students admitted to a degree-granting program must maintain continuous registration each semester for at least one credit hour. Even students pursuing research or work opportunities off campus must register if they intend on completing their degrees. The purpose of the continuous registration policy is to ensure that students and programs remain in contact and that steady progress is made each semester towards completion of the degree.

Students who do not register and who have not been granted a leave of absence (see below) will be removed from their graduate programs. In order to return to their programs, students must reapply for admission and include in their application an explanation for the absence from the program. Readmission is not guaranteed and students may be subject to changes in the degree or additional requirements deemed necessary by the program and graduate council. In addition, if students are readmitted, they will be required to pay an additional one credit of tuition for each semester not continuously registered for up to three semesters.

Students do not need to be enrolled during the summer session unless final degree requirements are to be completed during this period.

Students must be registered during the semester when the degree is granted.

Leave of Absence

Under exceptional situations, students may apply for a Leave of Absence. Students on leave are excused from the continuous registration requirement during the period of the leave and thus are not required to pay tuition and fees.

Leaves are normally granted for six months with a possible extension of 6 months for a total of up to one year. A Leave of Absence is granted only in exceptional circumstances, such as illness or other unusual

personal hardship, and requires detailed justification. Students must submit a Returning Student Application to the Graduate Division prior to return.

Leaves of Absence are not granted to students who wish to absent themselves to undertake thesis or dissertation research elsewhere.

Requests for Leaves of Absence should be submitted one month prior to the semester for which the leave is requested. Students may NOT apply retroactively for a Leave of Absence because they have failed to register for a current semester. Students not submitting Leaves of Absences or requests to extend their Leaves of Absence must comply with the Continuous Registration policy.

In order to request a Leave of Absence, or an extension to a Leave of Absence, students must submit the [Petition for Leave of Absence \(PDF\)](#) with the signed approval of the chair of their program for his or her signature.

Additional signatures must be obtained from the [Financial Aid Office](#), and if the student is an international student, from the [Director of International Student Services](#). The completed Leave of Absence form is submitted to the Graduate Division Office for approval by the Graduate Council Chair and the Vice Chancellor for Academic Affairs.

Withdrawals

Once classes begin, a student can withdraw from his/her last or only class via MyUH until the Last Day to Drop a Class Online with a "W". Please see the [Academic Calendar](#) for the appropriate corresponding date.

After the Last Day to Drop a Class Online with a "W", students must submit a Complete Withdrawal form and follow official procedures. Please be sure to review the Tuition and Fee Refunds schedule to determine the financial implications of doing a complete withdrawal.

For students who completely withdraw by the last day to withdraw without a "W", the courses will not be reflected on their transcript. Students who completely withdraw after that date will receive a "W" for each of the courses in progress at the time of withdrawal. See [Academic Calendar](#) for corresponding dates. Tuition and fees will be assessed according to the UH system policy.

Students may completely withdraw through the last day of instruction.

A student who completely withdraws without an approved Leave of Absence must reapply for admissions. The student may be required to fulfill the requirements in force upon return to UH Hilo.

Withdrawal from classes may affect financial aid eligibility. See the [Financial Aid Satisfactory Academic Progress Policy](#) in the UH Hilo Guide to Financial Aid.

Withdrawal may also negatively impact the [Continuous Registration policy](#). For international students, student visas require that students be registered full time (6 credits in Fall and Spring; 3 credits in Summer, if the student chooses to attend classes in the summer). Withdrawal from courses may result in a failure to meet visa requirements. Please consult with the International Student Services director for more information prior to withdrawing from any courses.

Transfer of Graduate Credits

Students matriculated in advanced degree programs must petition to

have previously earned graduate credits from other institutions transferred toward their University of Hawai'i at Hilo graduate degrees within their first semester at UH Hilo. Using the Graduate Division's [Petition to Transfer, Substitute, and/or Waive Courses](#) form, students submit this petition to their graduate program. A copy of the official transcript from the other institution must be on file with the Graduate Division, and a course description or syllabus should be provided by the student.

Credits petitioned for transfer must be relevant to the student's UH Hilo degree program, must have been earned at a regionally accredited university, must not have been used to satisfy the requirements of another degree, and must have been earned in graduate-level courses for which the student earned at least a B. In cases where the transferring institution awards Credit or No Credit instead of a letter grade, the course may be eligible for transfer if the transferring institution awards Credit when the student has earned the equivalent of at least a B grade had a letter grade been used. In cases where a graduate student wishes to take graduate coursework elsewhere for transfer credit during their tenure at UH Hilo, the course work must be pre-approved, using the [Petition to Substitute, and/or Waive Courses](#), by the student's primary academic advisor and graduate program chair. Petition for transfer of these credits must be completed within a semester of completion of the course work, and will otherwise be subject to the same regulations as credits petitioned for transfer from before the student's acceptance to UH Hilo.

Credits earned through correspondence courses or through courses or experiences offered under the auspices of proprietary schools, business or industrial training programs, or schools conducted by federal agencies such as the Department of Defense normally are not considered for transfer.

Courses taken more than five years prior to matriculation on in the Graduate Division are accepted only when the graduate program chair attaches a statement justifying the transfer.

The graduate chair in the student's program forwards all approved petitions to the Graduate Division or designee for final approval. Approved transfer credits will be included on the student's official Graduate School transcript as a single entry of total credits accepted in transfer. Letter grades from transfer credits are not considered in the determination of grade-point average.

Limitations on the number of credits acceptable in transfer are set in the first instance by the minimum residence requirement of 24 credit hours for any advanced degree; transfer credits cannot be applied toward the residence requirement. For example, for a master's program requiring a minimum of 30 credit hours, no more than six transfer credits may be applied toward the degree. When graduate programs require more than 30 credit hours, the Graduate Division or designee may accept a correspondingly larger number of transfer credits.

Prohibiting the Awarding of a Second Degree in the Same Field

The UH Hilo policy is that a second degree at the same level (master's or doctoral) can be awarded only when a significant amount of additional coursework in a different field is completed. Normally students who have already earned a master's or doctoral degree in a given discipline at either a foreign or U.S. institution may not earn a second degree in a similar field at the same level from UH Hilo.

Transcript Notations of Approved Concentrations Within a Major Program

For each advanced-degree recipient, approved concentrations, or specializations, may be listed on the official graduate transcript, along with the graduate major. Such listings are limited to two concentrations. In addition to the titles of approved and satisfactorily completed majors and concentrations, official graduate transcripts show the titles of doctoral dissertations and master's theses. All such special transcript listings are made only at the time of completion of final degree requirements.

Courses Taken in Other Graduate Programs at UH Hilo

Graduate students may take courses offered by other graduate programs at the University with the consent of the course's instructor. These other courses may count toward the student's degree program only with the authorization of the student's graduate program, and this authorization must be obtained before the student registers for the course using the [Petition to Substitute and/or Waive Courses-Graduate form \(PDF\)](#).

Waiver of Regulations and Requirements

Some Graduate Division regulations and/or program requirements may be waived by the VCAA or designee in exceptional individual instances. A petition for waiver must be endorsed by the student's graduate program committee or graduate chair, who append their reasons for believing that the waiver request would not breach the spirit of the specified regulation or requirement.

Requirements for Candidates for Masters Degrees

Advising and Guidance from the Graduate Committee

At the beginning of a student's work toward the master's degree, the chair of the student's graduate program, in consultation with the student, designates a primary academic advisor. The primary academic advisor may be the chair of the graduate program or another faculty member. This advisor also may serve as chair of the student's graduate committee. The graduate committee, when required by the program, will consist of a minimum of three members who meet periodically with the student to discuss his or her progress.

Requirements for a Master's Degree

This Catalog stipulates the specific requirements for a master's degree in each program of the University. The minimum requirements include the following:

1. Students must maintain continuous registration, including the semester in which the degree is awarded.
2. Students must complete at least 24 credit hours of graduate coursework in residence. A minimum total of 30 credit hours of graduate coursework are required for all master's degrees. A maximum of six hours of transfer credit is allowed for programs requiring 30 credit hours; additional credit hours may be accepted for transfer if more than 30 credit hours are earned, as long as the 24 credit minimum in residence is maintained.
3. Graduate students must maintain at least a B average in courses approved by the program or graduate committee and presented for the degree.
4. Students must fulfill all departmental or school course requirements. (No credit is granted for graduate courses in which a grade lower than a B- has been received).
5. Students must complete all other requirements as listed by the specific graduate program.
6. Students must complete all requirements, including thesis if required by the program, within five years after admission to the Graduate Division.

There are specific [Graduate Level Forms](#) (Form 1, Form 2, Form 3) used to mark the student's progress through the graduate program; they are available online through the Office of the Registrar's website. They should be completed in collaboration with the primary academic advisor and submitted within the stated deadlines. Other useful forms are also posted at this site.

All graduate level forms are submitted to the Graduate Division, with signatures as noted. The Graduate Division obtains final signature(s) and submits forms to the Office of the Registrar.

Examination

If a general examination is required for the student's master's degree, the examination may be written, oral, or a combination of both. The decision for pass or fail shall be by majority vote of the graduate committee in programs that utilize a graduate committee. In programs that do not use graduate committees, the program faculty by majority vote shall determine whether the student has passed or failed.

Thesis

Evaluation

If a thesis is required for the student's master's degree, the graduate committee, or the program faculty in programs that do not use graduate committees, will supervise and approve the thesis. Programs may designate additional examiners for the master's thesis beyond the student's graduate committee. Students must receive approval from the [Institutional Review Board \(IRB\)](#) for theses involving human subjects or from the [Institutional Animal Care and Use Committee \(IACUC\)](#) for theses involving use of vertebrate animals. Approval from these institutional committees, where appropriate, must be sought at the time of approval of the thesis topic, and research on the thesis may not commence until after IRB and/or IACUC approval is granted. Where appropriate, permission from other entities, such as the [Office of Research Services](#) and the UH Hilo [Environmental Health & Safety Office](#) may be required.

Submission and Publication

It is the student's responsibility to prepare a final manuscript that meets the style requirements of both the UH Hilo Graduate Division and his or her graduate program. Details on these requirements may be found in the Graduate Student Handbook.

Publication is required for the thesis. UH Hilo uses ProQuest/UMI's [ETD Administrator](#), a web-based service for the submission and publication of student theses and dissertations. If online submission is unfeasible, please contact the [Mookini Library](#) or call (808) 932-7296 for assistance.

Annual Review Form

The primary academic advisor will submit an annual review form for each graduate student under her or his charge to the chair of the graduate program, using the form provided by their graduate program. This form will include data concerning number of credits earned; progress toward meeting other requirements such as papers, projects or theses; GPA; and other specific requirements for the graduate degree.

Awarding of the Degree

When a student has satisfied the requirements for a master's degree, the chair of the student's graduate program submits [Form 3: Thesis/Project/Dissertation Completion \(PDF\)](#) to the Graduate Division by the required deadline. If submitting a thesis, this form should be submitted to the library for acknowledgement of submission of the thesis.

Deadlines

Degree completion dates will be posted on the [academic calendar](#). Those who have not completed all degree requirements by the established deadlines will be required to register the following semester.

Degree Conferral and Commencement

Graduating from a program and participating in Commencement are two separate activities. Graduating from a program means the student has successfully completed all requirements identified by the program. It is an academic milestone whose indicator is conferral of the graduate degree.

Commencement is a public celebration of the academic completion of a degree program. Separate applications are required to graduate from a program and to participate in Commencement. A student may complete the degree and decide not to participate in Commencement. A student may not participate in Commencement before completing the degree.

Degrees are conferred three times each year: December, May, and August. Commencement exercises are conducted twice a year, in December and in May. Students who complete degree requirements in the summer or in the fall semester may participate in Commencement in December. Students who complete degree requirements in the spring semester may participate in Commencement in May. More information can be found in the Graduate Handbook- [Degree Conferral and Participating in Commencement](#)

Commencement exercises are held only in December and May.

Completion Letter

Students who complete all requirements for the degree well in advance of the award of the degree may, upon request, receive a statement from the Office of the Registrar certifying that all requirements for the degree have been completed.

Checklist for Completion of Degree Requirements

Master's Degree (non-thesis option)

1. **Graduate program:** Appoints primary academic advisor and, where appropriate, graduate committee, in consultation with the

- student.
2. **Student:** Submits [Form 1: Graduate Committee Formation \(PDF\)](#) to the Graduate Division Office, indicating the student will complete the Non-Thesis track.
3. **Student:** Satisfies residence and course requirements.
4. **Student:** Maintains continuous enrollment in program.
5. **Student:** Completes any other program requirements.
6. **Student:** Registers for semester in which degree requirements will be completed.
7. **Student:** Submits [Graduation Application form](#) to the Cashiers Office by the required deadline. If student wants to participate in Commencement exercises, student submits the separate Commencement Registration by the required deadline.
8. **Student:** Submits the [Authorization to Participate in Commencement Form \(PDF\)](#) to the Graduate Division by the required deadline.
9. **Student:** Passes final examination, and/or passes requirements for papers or projects as specified by the graduate program.
10. **Student:** Completes all other requirements specified by the graduate program.
11. **Student:** Submits [Form 3: Thesis/Project/Dissertation and Degree Requirements Completion \(PDF\)](#) with appropriate signatures to the Graduate Division by the required deadline.
12. **Graduate Division:** Obtains final signatures.

Master's Degree (thesis option)

1. **Graduate program:** Assigns primary advisor and committee.
2. **Student:** Submits [Form 1: Graduate Committee Formation \(PDF\)](#) to the Graduate Division Office.
3. **Student:** Submits [Form 2: Thesis/Project/Dissertation Proposal \(PDF\)](#) to the Graduate Division Office when ready to begin thesis.
4. **Student:** Satisfies residence and course requirements.
5. **Student:** Maintains continuous enrollment in program.
6. **Student:** Completes coursework required for the degree.
7. **Student:** Completes any other program requirements.
8. **Student:** Passes general examination if required.
9. **Student:** Registers for semester in which degree requirements will be completed.
10. **Student:** Submits [Graduation Application form](#) by the required deadline. If student wants to participate in Commencement exercises, student submits the separate Commencement Registration by the required deadline.
11. **Student:** Submits a copy of the [Thesis Defense Schedule Form \(PDF\)](#) to the Graduate Division one month prior to the defense deadline posted in the University Academic Calendar. Student retains the original until the time of the defense, and submits the completed form to the Graduate Division with the Primary Advisor's signature indicating successful (or unsuccessful) completion of the defense.
12. **Student:** Defends and completes thesis.
13. **Student:** Submits original completed Thesis Defense Schedule Form to the Graduate Division)
14. **Student:** Obtains signatures of committee members on [Form 3: Thesis/Project/Dissertation and Degree Requirements Completion \(PDF\)](#).
15. **Student:** Submits thesis on ETD Administrator.
16. **Student:** Obtains initials of the Collection Development Librarian (or designee) on Form 3, then submits form to the Graduate Division by the required deadline posted in the University Academic Calendar.
17. **Graduate Division:** Obtains final signatures.

Requirements for Candidates for Doctoral Degrees

Admission to Doctoral Work

For masters' degree candidates intending to continue into the doctoral program in the same graduate program, the student's graduate committee, at a designated time near the completion of the student's masters' work, decides whether or not to admit the student to the doctoral program. For entry into a UH Hilo doctoral program from a masters' program at another university, or from a masters' program in a different discipline at UH Hilo, students follow the regular graduate application and admission procedures.

Beginning the Program

At the beginning of the student's doctoral work, the chair of the graduate program appoints a primary academic advisor or graduate committee (whose chair is the principal advisor). The initial advisor assists the student in planning coursework and in understanding the program structure and requirements; the advisor has primary responsibility for monitoring the progress of the student's work. The advisor may or may not become the student's graduate committee chair at a later stage in his or her studies. The initial advisor should meet with the student at least once each semester.

Requirements for a Doctoral Degree

The Graduate Catalog stipulates the specific requirements for the doctoral degree in each program. The requirements include:

1. Maintenance of at least a B average in courses approved by the program's graduate committee and presented for the degree.
2. Fulfillment of all program course requirements (no credit is granted for graduate courses in which a grade lower than B- has been received).
3. Completion of at least 24 credit hours in residence regardless of any previous graduate coursework elsewhere. Students continuing their studies for a doctoral degree in the same UH Hilo program from which they earned their masters' degree need not fulfill a second residence requirement.
4. Continuous registration including the semester in which final degree requirements are completed.
5. Demonstration to the graduate committee by means of a comprehensive examination (written and/or oral) of familiarity with basic hypotheses and techniques of the discipline and competence in applying them.
6. Fulfillment of any research skills requirements.
7. Submission of a dissertation on a topic approved by the department or school, embodying the results of original research and giving evidence of high scholarship.
8. Successful defense of the dissertation at a final oral examination.
9. Completion of any other requirements specific to the graduate program.

Research Skills Requirements

Each graduate program establishes foreign language reading competency or equivalent research skills for its students. The graduate program determines the method(s) to be used to fulfill these requirements. Graduate students may register for research skills courses that have been established in each program.

Formation of Dissertation Committee

By the end of the second semester of course work in a doctoral program, [Form 1: Graduate Committee Formation](#) should be submitted.

Committees are formed and modified (if necessary) by mutual agreement between the student and the faculty. The principal dissertation supervisor serves as chair of the graduate committee. Faculty are not required to serve on a particular dissertation committee if they do not wish to, and they are entitled to withdraw from a dissertation committee for reasonable cause. Faculty members from outside the student's own department or school may serve on the dissertation committee, but they do not replace the outside examiner, who is appointed by the VCAA before the final oral examination is scheduled.

Visiting, affiliate, and research faculty of UH Hilo (not holding the rank of Professor, Associate Professor, or Assistant Professor) may be appointed to a dissertation committee by the VCAA or designee upon recommendation of the program for a period not to exceed their term appointment at UH Hilo. If such term appointment is renewed, the member may continue to serve on the student's graduate committee.

Outside Member

1. In consultation with his or her committee chair, the student will identify a UH faculty member from outside of the student's graduate program to serve as an outside voting member of the dissertation committee.
2. The outside member must possess sufficient familiarity with the student's research topic to be able to review and comment on the manuscript.
3. The committee chair must ascertain that the outside member is indeed independent of the faculty in the student's graduate program and that his or her membership on the committee will not constitute any conflict of interest.

The outside member fulfills the following functions:

1. Represents the University faculty on the committee, ensuring administration of proper procedures and fair treatment of the student;
2. Ensures that the level of research is indeed appropriate to the student's degree objective; and
3. Provides disciplinary expertise and an academic perspective that may not be possessed by the faculty of the student's graduate program.

The approval process for the outside member is as follows:

1. The student and committee chair will forward the name of the proposed outside committee member to the Graduate Council.
2. If the Graduate Council affirms the selection, the name will be sent forward to the VCAA for final approval.
3. If the Graduate Council does not affirm the selection, the VCAA will determine how to resolve the disagreement; final selection will rest with the VCAA if the disagreement cannot be resolved between the candidate/committee chair and the Graduate Council.

External Examiner

The VCAA or designee, upon recommendation from the graduate program, adds an external examiner to the examination committee as the representative of the Graduate Division and the university. The external examiner is either a UH Hilo faculty member from a related area outside the student's graduate program or someone from a related

discipline outside the University. Normally, the external examiner will have no involvement in the supervision of the student's dissertation. The external examiner's function on the examination committee is to render an independent judgment and to assure that the dissertation satisfies Graduate Division standards. Because the external examiner is supposed to serve the Graduate Division, s/he therefore must have substantial experience evaluating the scholarship/research of doctoral students (e.g., by being part of a graduate program, on graduate committees, supervising graduate research).

In special circumstances, particularly when a student would benefit from early counsel from a faculty member outside UH Hilo, the department chair or director of graduate studies can petition the VCAA or designee to appoint an external examiner while the dissertation is still being written. If the nominee is from another institution, the program chair should forward the nominee's academic credentials, including a vita, to the VCAA or designee to be evaluated. The VCAA or designee then invites the nominee or another faculty member to serve as external examiner.

Comprehensive Examination

A comprehensive or proficiency examination is used to test candidates' specialized knowledge in the discipline and to demonstrate that they are qualified to undertake advanced-level dissertation work. The comprehensive examination may be written and/or oral.

The student's graduate committee serves as the examination committee, and this body determines the outcome of the examination. The student may repeat all or part of the comprehensive examination only once without prior approval from the Vice Chancellor for Academic Affairs (VCAA) or designee. The student has five years to complete the doctorate after passing the comprehensive examination.

Once the comprehensive examination has been successfully passed, the program should complete the [Comprehensive Exam Reporting Form \(PDF\)](#) and submit it to the Graduate Division.

Dissertation Planning

After the student passes the comprehensive examination, the student's graduate committee will oversee the dissertation work. The committee will include an additional member chosen from a field outside the graduate program or from a similar field but from a different university, approved by the VCAA or designee. Based on the student's recommendations, the committee is appointed by the chair of the student's graduate program. Two of the three regular members of the committee must be full time faculty at UH Hilo. Students must receive approval from the [Institutional Review Board \(IRB\)](#) for theses involving human subjects or from the [Institutional Animal Care and Use Committee](#) for dissertations involving use of vertebrate animals. IRB approval, where appropriate, must be sought at the time of approval of the dissertation topic, and research on the dissertation may not commence until after IRB approval is granted. Where appropriate, permission from other entities, such as the [Institutional Biosafety Committee][1], may be required.

Prospectus

The prospectus functions to identify the topic to be undertaken in the dissertation and to formalize the approval of the project by a faculty committee. The timing, format, length, and conventions governing the prospectus are set by each graduate program. If the student's program requires a prospectus, the student should submit it within six months after being admitted to candidacy; the prospectus must first be approved by the dissertation committee. In a conventional prospectus, a student is

asked to identify a topic, to summarize relevant backgrounds, and to explain the approach. Some programs substitute for the prospectus another means of ensuring that the student's project has been identified clearly and has received written approval by each member of the committee.

Before approving the dissertation project, the chair of the graduate committee is encouraged to arrange a conference with the student and the other committee members for the purpose of discussing the research topic. Each program must inform doctoral students of its expectations, standards, and procedures regarding the prospectus or other approval of dissertation projects and must provide access to samples of accepted proposals or prospectuses. Graduate programs should include specific information about their expectations for a prospectus in advising manuals for graduate students.

Admission to Candidacy

After the student has passed the comprehensive examinations and met all research skills and coursework requirements, as certified by the program's submission of the [Form 2: Thesis/Project/Dissertation Proposal \(PDF\)](#) form, he or she will be officially admitted to candidacy for the doctoral degree by the VCAA. Intra- and inter-program majors and minors should be declared at this time where applicable.

At least two semesters normally elapse between admission to candidacy and the granting of the degree. Doctoral candidates must complete all requirements for the degree, including the dissertation, within five years after admission to doctoral candidacy.

Dissertation Defense

The graduate committee has direct charge of all matters pertaining to the dissertation. The student's dissertation must have the unanimous approval of his or her dissertation committee and of the chair of the graduate program before arrangements are made for the final examination for the degree. Members of the student's graduate committee serve as the examination committee.

Final Oral Exam (Dissertation Defense)

After the student's program has been notified of the appointment of an external examiner, the program director, in conjunction with the chair of the examination committee, may proceed to schedule the final oral examination. Because of the time required to give adequate consideration to the student's research, the student should submit the dissertation to the graduate committee well in advance of the final oral defense. Normally, two months is recommended; the student should consult the committee.

The final oral examination is open to any person wishing to attend. Members of the graduate committee must be given sufficient time to question the candidate about the dissertation. The final defense is a public examination, however, and the committee chair is responsible for the conduct of an open and impartial examination, including reasonable participation by observers. At the conclusion of the examination, it is customary for the chair to request that everyone except the graduate committee leave the room, so that the members may reach a decision. This procedure should not be invoked at any other time during the examination and should not preclude questions from either committee members or outside observers. The final oral examination shall not exceed 4 hours in length. No member of a graduate committee can be expected to participate in a dissertation defense if that member has not had at least two weeks to read and consider the dissertation beforehand.

At the final examination, the student will be required to respond to examiners' questions concerning the dissertation and to defend the validity of the dissertation. To pass, the student must receive unanimous approval from the total graduate committee present. All members of the graduate committee who accept the dissertation in partial fulfillment of requirements for the doctorate shall so attest by their signatures on Form 3: Thesis/Project/Dissertation and Degree Requirements Completion (PDF). If the external examiner does not signify approval in this manner, he or she should give the reason for dissent by submitting a separate memorandum to the VCAA or designee within three days of the examination.

If at the final examination the examiners generally approve of the dissertation but require significant changes and are not yet prepared to sign [Form 3: Thesis/Project/Dissertation and Degree Requirements Completion \(PDF\)](#), the chair of the graduate committee will coordinate with other members of the committee to compile all required changes and will inform the student of the scope and substance of those changes. The committee will establish how the changes will be reviewed and approved.

Following the oral exam and approval of the dissertation, and with the signatures of the members of the dissertation committee, the student submits Form 3: Thesis/Project/Dissertation and Degree Requirements Completion to the Graduate Division, indicating that the student has now fulfilled all academic requirements for the doctoral degree, including submission to Mookini Library via ETD Administrator, and has successfully defended the dissertation. The Graduate Division obtains the final two signatures.

Remote Participation

Normally, all members of the graduate committee and the outside examiner are present at the defense. At the discretion of the program, with the unanimous consent of all members of the graduate committee and the student, committee members or the outside examiner may participate in the defense via real-time teleconferencing or real-time videoconferencing. In all cases, the chair and at least one other member of the dissertation committee must be physically present.

If in exceptional circumstances one member of the graduate committee cannot be present (either physically or *virtually*), they may submit questions and comments in writing. Such arrangements must be approved in advance by the program and must have the unanimous consent of all other members of the graduate committee and the student.

Deadlines

Degree completion deadlines are noted in the [University calendar](#).

Degree Conferral and Commencement

As noted under Master's degree requirements.

Completion Letter

Students who complete all degree requirements well in advance of the awarding of the degree may, upon request, receive a statement from the Office of the Registrar certifying that all requirements for the degree have been completed.

Checklist for Completion of Degree Requirements of Doctoral Degree

1. **Graduate program:** Assigns principal academic advisor and graduate committee.
2. **Student:** Submits [Form 1: Graduate Committee Formation \(PDF\)](#).
3. **Student:** Satisfies residence and course requirements.
4. **Student:** Passes research skills examinations (if required).
5. **Graduate program:** Arranges comprehensive examination.
6. **Student:** Takes comprehensive examination.
7. **Student:** Writes a prospectus.
8. **Student:** Submits [Form 2: Thesis/Project/Dissertation Proposal \(PDF\)](#) when ready to begin the dissertation and advance to candidacy.
9. **Student:** Maintains appropriate registration for dissertation credit each semester, including semester in which all degree requirements will be completed.
10. **Student:** Completes dissertation.
11. **Graduate program:** Nominates Outside Member by memo to the Chair of Graduate Council who then forwards his/her recommendation to the VCAA or designee.
12. **VCAA or designee:** Appoints Outside Member and so notifies the graduate program.
13. **Graduate program:** Nominates External Examiner by memo to the VCAA or designee.
14. **VCAA or designee:** Appoints External Examiner and so notifies the graduate program.
15. **Student:** Submits Graduation Application form and fee to the Business Office by the required deadline. If student wants to participate in Commencement exercises, student submits the separate Commencement Registration by the required deadline.
16. **Student:** Submits a copy of the [Thesis/Project/Dissertation Defense Schedule \(PDF\)](#) form to the Graduate Division one month prior to the defense deadline posted in the University Academic Calendar. Student retains the original until the time of the defense, and submits the completed form to the Graduate Division with the Primary Advisor's signature indicating successful (or unsuccessful) completion of the defense.
17. **Student:** Defends and completes dissertation.
18. **Student:** Obtains signatures of committee members on [Form 3: Thesis/Project/Dissertation and Degree Requirements Completion \(PDF\)](#).
19. **Student:** Submits dissertation on ETD Administrator.
20. **Student:** Obtains initials of the Collection Development Librarian (or designee) on Form 3, then submits form to the Graduate Division by the required deadline posted in the University Academic Calendar. The Graduate Division obtains final signatures.

Graduate Student Rights and Responsibilities

Policy on Academic Dishonesty

Graduate students are subject to the policies and procedures governing student conduct as described in the UH Hilo Student Conduct Code. This includes acts of academic dishonesty, including, but not limited to, plagiarism, cheating, and falsifying data. Students can find these policies in the [Academic Dishonesty](#) section of this Catalog.

Policy on Conduct Violations Other than

Academic Dishonesty

Instances in which graduate students are alleged to have violated the UH Hilo Student Conduct Code in areas other than academic dishonesty will be handled following the procedures described in the Student Conduct Code. These procedures are described in the [Student Conduct Code](#) section of this catalog.

Conduct and Removal of Financial Support

All other recommendations to dismiss a student from the Graduate Division or one of its programs, or to break a student's assistantship contract or to revoke a fellowship, tuition scholarship, or other source of financial support, are made to the VCAA, accompanied by appropriate documentation. The student will be informed of the basis for any such decision. The student may appeal the decision by using first the grievance procedure of the student's program and then, if needed, the appeals procedures of the Graduate Council Grievance Committee. Action on a recommendation to remove support from or to dismiss a student in good academic standing will await the outcome of the grievance procedure.

Academic Complaints

The process for handling academic complaints by graduate students will follow the same general procedure as utilized for undergraduate students at UH Hilo. This procedure is outlined in the [University of Hawai'i at Hilo Student Academic Complaint Policy](#). The following exception is made for graduate students:

Under Part III (Procedures for the Resolution of Academic Complaints Filed During the Regular Academic Year) Letter B (Complaint of Academic Impropriety), for complaints relating to academic impropriety involving graduate students, the Dean shall refer the written complaint to the UH Hilo Graduate Council (Academic Complaints Committee) for timely review and recommendation (10 calendar days) before taking action.

M.A. in Heritage Management

Program Chair: Peter R. Mills, Ph.D.

Dept. of Anthropology
Social Sciences Division Office
200 W. Kāwili Street
Hilo, HI 96720

Email: millsp@hawaii.edu

Professors:

- Joseph H. Genz, Ph.D., Professor of Anthropology
- Peter R. Mills, Ph.D., Professor of Anthropology
- Lynn A. Morrison, Ph.D., Professor of Anthropology

Associate Professors:

- Kathleen L. Kawelu, Ph.D., Associate Professor of Anthropology

Lecturers:

- Hans Van Tilburg, Ph.D., NOAA (adjunct)
- Lynne M. Wolforth, Ph.D., Lecturer, Dept. of Anthropology

Program Description

The M.A. in Heritage Management is for students who seek careers in a multitude of governmental agencies, private-sector consulting firms, and in education, who work with the interpretation and preservation of cultural heritage. UH Hilo's MA in Heritage Management responds to House Resolution No. 130 of the 24th Legislature (2008).

There are five main objectives:

1. to apply anthropological concepts to guide a workforce of historic preservationists who are committed to the long-term management of Hawaiian cultural resources;
2. increase the number of individuals of local ancestry in leadership positions in heritage management;
3. provide better assistance to community planners in developing plans that are more sensitive to traditional cultural properties, human burials, sacred sites, ancient habitation sites, agricultural systems, and trails;
4. provide training to meet the professional qualifications of principal investigators as defined in Hawai'i Administrative Rules (HAR)13-281 for conducting archaeological fieldwork and for conducting cultural impact assessments; and
5. provide training to meet the federal professional standards for archaeologists as defined in 36 CFR Part 61.

Although the program is focused primarily within Hawai'i, we address heritage training across the Pacific Islands. The proposal fills a clear need to produce individuals who are well-trained in the specific issues of Oceanic heritage. Despite dozens of similar MA programs around the globe, none of the major extant programs focus on the Pacific Islands. The region has unique cultural historical, social, and environmental characteristics that would make localized training more effective in creating qualified, culturally sensitive professionals.

Program Learning Outcomes

Upon graduation with this degree, students will be able to:

1. Demonstrate the value of community engagement in Heritage Management through sustained efforts in community-outreach during their graduate program.
2. Develop and apply technical skills in heritage management including:
 1. Technical Report preparation following an accepted style guide.
 2. Successful implementation of fieldwork, such as archaeology, oral history, and ethnography.
3. Demonstrate professional familiarity with federal and state laws and regulations that affect preservation programs.
4. Apply an anthropological context to original Heritage Management fieldwork.

Program Curriculum

Required Courses (12):

- ANTH 600 Thesis Design, Method, Theory (3)
- ANTH 601 Ethics of Heritage Management (3)
- ANTH 602 Historic Preservation Laws (3)
- ANTH 603 Qualitative & Quant. Methods (3)

Topical Courses (3): [choose 1]

- ANTH 611 Cultural Impact Assessments (3)

- ANTH 612 Indigenous Museum Studies (3)
- ANTH 613 Human Paleocology (3)
- ANTH 614 Submerged Cultural Resources (3)

Area Courses (3): [choose 1]

- ANTH 623 Archaeology of Oceania (3)
- ANTH 624 Archaeology of Hawai'i (3)
- ANTH 625 Pacific Heritage Management (3)

Applied Analytical Methods (minimum 6): [choose 2]

- ANTH 631 Oral History Research (3)
- ANTH 632 Paleobotanical Methods (3)
- ANTH 633 Material Conservation (3)
- ANTH 634 Lithic Analysis (3)
- ANTH 635 Human Osteology (3)
- ANTH 682 Archaeological Field Methods (3-5)

Year 2 Internship in Heritage Management: (minimum 6 credits to be determined by student's area of specialization, may be repeated)

- ANTH 690 Heritage Management Internship (3) (a) Internship in Archaeology; (b) Internship in Museum Studies; (c) Internship in Burials Program (d) Internship in Cultural Impact Assessments.

Year 2 Thesis: (minimum 6 credits)

- ANTH 700 Thesis Research (1-6)

Total Minimum Semester Hours Required for the M.A. in Heritage Management: 36 credits.

M.A. in Counseling Psychology

Specialization: Clinical Mental Health Counseling

Program Director: Charmaine Higa-McMillan, Ph.D.

Email: mhcp@hawaii.edu

Website: counseling.uhh.hawaii.edu

Core Faculty:

- Charmaine Higa-McMillan, Ph.D., Professor, Director
- Bryan Kim, Ph.D., Professor, Chair of the Division of Social Sciences
- Sunyoung Kim, Ph.D., Professor
- Steve Herman, Ph.D., Associate Professor
- Diane Logan, Ph.D., ABAP, CSAC, ICADC, Assistant Professor
- Han Na Suh, Ph.D., LP, Assistant Professor

Contributing Faculty:

- Errol Yudko, Ph.D., Associate Professor
- Jennifer Turner, Ph.D., Assistant Professor

Program Description

The Master of Arts in Counseling Psychology is a 60 semester hour program that is designed to provide multicultural, student-centered training in counseling psychology with a specialization in clinical mental health counseling. The program is offered through the [Department of Psychology](#).

Counseling psychology as a psychological specialty aims at facilitating personal and interpersonal functioning across the life span with a focus on emotional, social, vocational, educational, health-related, developmental, and organizational concerns. Through the integration of theory, research, and practice, and with sensitivity to multicultural issues, this specialty encompasses a broad range of practices that help people improve their well-being, alleviate distress and maladjustment, resolve crises, and increase their ability to live more highly functioning lives. Counseling psychology is unique in its attention both to normal developmental issues and to problems associated with physical, emotional, and mental disorders. Here are two websites that contain more information about the field of counseling psychology: [Society of Counseling Psychology](#) and [CounselingPsychology.org](#).

Accreditation

Our program is **nationally accredited** by the [Masters in Psychology and Counseling Accreditation Council](#) for the period of June 2021 through June 2029. MPCAC accredits academic programs in psychology and counseling, which promote training in the scientific practice of professional psychology and counseling at the master's level. Accredited programs must demonstrate a commitment to science-based training in all aspects of psychology and counseling and to enhancing services to the consumer and the public at large.

Masters in Psychology and Counseling Accreditation Council (MPCAC)
595 New Loudon Road #265
Latham, New York 12110

Mission

The mission of the Master of Arts Program in Counseling Psychology (Specialization: Clinical Mental Health Counseling) is to prepare students to help meet the mental health service needs of the diverse and multicultural populations in Hawai'i and beyond. The program is designed to train students to become knowledgeable, skillful, ethical, and reflective mental health counselors, and to serve as a foundation for students interested in pursuing advanced graduate studies. The program assigns a high priority to meeting the educational needs of its students and is based on a scientist-practitioner model, with an emphasis on empirical research and evidence-based practices.

Program Objectives

The degree objectives are designed to enable the student to:

1. Understand legal and ethical principles as they pertain to professional conduct and responsibility.
2. Display multicultural awareness and competence when working with diverse individuals, groups, and communities.
3. Develop their theoretical orientation and identity as a reflective practitioner.
4. Demonstrate effective skills in evidence-based assessment, case conceptualization, treatment planning and intervention strategies to alleviate suffering and promote health and well-being.
5. Recognize and apply research principles to real world clinical situations and settings.

Prospects for Graduates

Graduates of the program will be able to seek employment as professional counselors. Employment prospects for mental health counselors are currently good in Hawai'i and in many other areas of the United States. Employment opportunities in this field are expected to

grow at a faster than average rate over the coming years. Professional counselors may find employment in a wide variety of settings, including the following:

- Community mental health clinics
- Public and private elementary and secondary schools
- Colleges and universities
- Correctional facilities
- Vocational rehabilitation centers
- Job training and career counseling centers
- Residential care facilities
- Drug and alcohol rehabilitation programs and agencies
- Private practice settings
- Mental hospitals and psychiatric wards
- General medical hospitals and other healthcare facilities
- Employee Assistance Programs
- Child welfare and other family assistance agencies
- Military settings

Licensure

The program curriculum meets the educational requirements for licensure as a Mental Health Counselor in the state of Hawai'i. Additional information can be obtained from the [Hawai'i Department of Commerce and Consumer Affairs](#). Please note that, in addition to completing the M.A. program, the current law has other requirements, including earning a passing score on the National Counselor Examination for Licensure and Certification and accruing at least 3000 hours of post-graduate experience in the practice of mental health counseling.

The [American Counseling Association](#) maintains a web page with links to all of the [state licensing boards for mental health counselors](#).

Admission Requirements

To be eligible for admission to the Master of Arts in Counseling Psychology program, candidates must meet the following minimum requirements:

- A baccalaureate degree from a regionally-accredited institution;
- A cumulative GPA of 3.0 on a 4.0 scale during the last 60 semester credits (or equivalent);
- A minimum of 15 semester hours (or equivalent) of course work in psychology including an introductory or survey of psychology course and four other psychology courses;
- At least one 3-credit course in statistics from any discipline (If a PSY Statistics Course is taken, may be included as a part of the 15 semester hours in PSY)
- At least one 3-credit course in research methods in the social sciences (If a PSY Research Methods Course is taken, may be included as a part of the 15 semester hours in PSY)
- For International Applicants: A score of 550 (paper based) on the TOEFL (other equivalent TOEFL scores: 79 internet based and 213 computer based; the IELTS equivalent is 6.0).

Meeting the minimum requirements does not guarantee admission. Eligible applications are reviewed by the Psychology Graduate Admissions Committee, which uses multiple criteria for the assessment of applicants. Admission is selective. Priority may be given to students applying for full-time enrollment. Depending on program needs, a few outstanding applicants for part-time enrollment may be admitted.

More information on the application process and current cycle application deadlines can be found in the [Counseling Psychology](#)

[Program Application Guide](#).

Transfer of Credits

Requests for transfer of credits must be made during the first semester in which the student is enrolled in the program. Students need to obtain departmental approval for all credit transfers. Only credit hours with a grade of B or better from accredited universities are transferable. Credit hours for practicum and internship courses are not transferable. Transfer credit hours must have been completed within five years prior to admission. Students may transfer a maximum of 12 semester hours (or the equivalent). On rare circumstances, requests for an exception to the 12-credit limit could be considered by the program faculty. All requests for transfer of credits must be accompanied by a transcript and course syllabi.

Program Curriculum (60 credits)

1. Required courses (51):

- PSY 601 Applied Multivariate Statistic (4)
- PSY 602 Research Meth & Prgm Evaluatn (4)
- PSY 603 Psychological Assessment (4)
- PSY 604 Profssnl Identity, Ethics (3)
- PSY 611 Lifespan Human Development (3)
- PSY 612 Career Development (3)
- PSY 613 Psychopathology over Lifespan (3)
- PSY 620 Counseling Theories (3)
- PSY 622 Group Work & Counseling (3)
- PSY 623 Social & Cultural Foundations (3)
- PSY 624 Counseling Skills (3)
- PSY 640 Practicum Supervision (3)
- PSY 640F Practicum Fieldwork (3)
- PSY 659 Internship Supervision (3)
- PSY 659F Internship Fieldwork (6)

2. Electives (9):

- An additional **nine (9)** credits of PSY courses at the 600 or 700 level, not included in the list above.

Master of Education (M.Ed.)

Program Chair: Tobias Irish, Ph.D

Website: hilo.hawaii.edu/depts/education/

Program Description

The Master of Education degree (M.Ed.) program prepares teacher leaders to serve their schools and communities in Hawaii and throughout the Pacific Rim. The program is aligned to Teacher Leader Model Standards. It is a 30-semester-hour, cohort-based program that may be completed in four semesters and two summers. Courses are offered primarily through a distance-learning format. As teacher leaders, graduates will be prepared to bring a culturally-responsive, research-based approach to school improvement efforts.

Student Learning Outcomes

Graduates of the program will be able to:

1. Design and conduct action research by exploring instructional and professional topics relevant to school and student performance;
2. Critically examine and analyze current trends and issues in education and apply this knowledge by demonstrating teacher leader competencies within the profession.

Admission Requirements

Admission is based upon previous preparation and requires completion of a baccalaureate degree and evidence of eligibility for the initial basic license to teach as defined by the UH Hilo [School of Education](#) and guided by the Hawaii Teacher Standards Board. Applications and a detailed description of requirements are available from the School of Education or from the UH Hilo Graduate Office of Admissions. Interested potential students may contact the School of Education Advisor at (808) 932-7102 for more information.

Following are the major requirements for admission:

1. Baccalaureate degree from an accredited institution;
2. A cumulative grade point average (GPA) of 3.0 (4.0 = A scale) or the equivalent in the last four semesters or approximately 60 semester credits of the undergraduate record and in all post-baccalaureate work;
3. Evidence of eligibility for an Initial Hawai'i Basic License to teach; ¹
4. Three letters of recommendation from references who have observed or supervised the applicant's performance and are able to comment on the quality of the applicant's teaching experience, ability to pursue graduate study, and general character.

The UH Hilo School of Education M.Ed. Admissions Committee will evaluate above evidence submitted as one of the components in the M.Ed. application.

Application packets will be reviewed only when they are complete. International applicants also must provide verification of financial status. An official TOEFL score report may be required for international applicants.

The UH Hilo M.Ed. Program does not lead to licensure in the State of Hawai'i.

Course and Graduation Requirements

M. Ed. Course Requirements

- ED 600 Ed Of Ethnic Groups in Hawaii (3)
- ED 602 Technology in Education (3)
- ED 608A Action Research I (3)
- ED 608B Action Research II (3)
- ED 608C Action Research III (3)
- ED 610 Foundations Of Education (3)
- ED 616 Assess & Evaluation in Ed (3)
- ED 622 School Curriculum (3)
- ED 625 Seminar in Teaching Fld (3)
- ED 635 Adv Instructional Strategies (3)

M. Ed. Graduation Requirements

- Students must complete all program courses.
- To remain eligible for continuance in the M.Ed. and to be awarded the graduate degree, students must maintain progress toward completion of the program and may earn no grade lower than a B- in any individual class, and maintain a B average (3.0 GPA) for all courses completed in the program.
- Each student must complete a culminating experience; this is an independent project that integrates what he or she has learned during the program.

Cohort and Other Requirements

- Students enroll in the M.Ed. program as members of a cohort which is expected to complete all requirements in four semesters and two summers.
- Courses are offered during the evening and/or on Saturdays, and during the summer.
- Typically, all students in a cohort will take courses together and in sequence.
- New cohorts will be established based on student demand and available resources.
- Students must remain continuously enrolled while in the M.Ed. program.

Faculty Advising and Guidance

Each student will be assigned a faculty advisor who will meet with the individual student to provide guidance for the culminating project.

1. Applicants who do not hold a license to teach should meet with the School of Education Advisor ((808) 932-7102 for appointment) prior to submitting documentation for admission to the M.Ed. Program. Applicants must submit evidence of their eligibility by documenting the following: **a)** development of knowledge, skills, and dispositions described in the Hawai'i Teacher Standards Board's Teacher Performance Standards, **b)** teaching experience, and **c)** ability to participate in the study of education at the level required in a graduate program.

Master of Arts in Teaching (MAT)

Program Chair: Tobias Irish, Ph.D

Website: hilo.hawaii.edu/depts/education/

Program Description

The primary purpose of the MAT is to prepare teachers who demonstrate the knowledge, skills, and dispositions needed to build strong curriculum, pedagogy, assessments, and the relationships that bring about significant changes to improve schools, support learners and their development, and positively impact student achievement. After the first year of the MAT, students apply for initial teacher licensure with the Hawai'i Teacher Standards Board. During the second year of the MAT, students will be able to engage in action research, a critical and reflective analysis that enables teachers to integrate and apply a variety of research-based methods in their classrooms.

MAT Claims - Student Learning Outcomes

Those who complete the program will be able to:

- Create supportive environments based on their knowledge of learner development and learning differences.
- Demonstrate subject matter knowledge and apply this knowledge to engage students in learning content.
- Plan instruction that supports student learning through the use of multiple instructional and assessment strategies including technology.
- Demonstrate professional attributes, engage in critical reflection and

collaborate to ensure learner growth.

Admission Requirements

- Applicants must:
 - have earned a baccalaureate degree from an accredited institution or from a nationally recognized foreign institution.
 - have a GPA of 3.0 on a 4.0 scale in the last 60 semester credits.
 - receive passing scores on the PRAXIS II: Content Area Examinations. Students who have taken, but have not successfully passed the Praxis for the content area they wish to teach, may request a transcript review to determine if they meet the content knowledge requirements.
 - have a minimum of 40 hours (more preferred) of previous experience working with school-aged (P-20) youth.
 - submit three letters of recommendation from those who observed applicant working with school-aged youth.
 - submit two professional statements detailing interest in the teaching profession and beliefs about student learning.
- Additionally:
 - [School of Education](#) Interview may be required.
 - For all applicants seeking elementary licensure, these pre-requisite courses must be completed, each with a grade of C or better, and in combination passed with a GPA of 2.75 or above: ED 341 Literacy for Elem Teachers (3) , ED 343 Math for Elem Teachers II (3) , and ED 347 Intgr Sci/Soc Stud Elem School (3) .
 - For applications seeking licensure at the secondary level, the baccalaureate degree must be related to the content area of licensure.
 - For applications seeking licensure in Social Studies, there may be additional prerequisite coursework. Each of the Social Studies prerequisite courses must be completed, each with a grade of C or better, and in combination passed with a GPA of 2.75 or above.
 - Applicants for whom English is not the native language must obtain a score of 550 (paper based test), 213 (computer based) or 79 (internet based) on the TOEFL, or a 6.0 on the IELTS. Students with bachelor's degrees from English-speaking institutions do not need to submit TOEFL scores.

Some courses are specific to the elementary track and others to the secondary track. Some courses are common to both tracks.

Elementary (36 credits)

First year, for licensure:

- ED 640 Learner Development (2)
- ED 641 Learning Differences (3)
- ED 643 Learning Environments I (1)
- ED 644 Learning Environments II (1)
- ED 645 Learning Environments III (2)
- ED 650 Teaching in Hawaii's Schools (1)
- ED 651 Elem Instructional Practice (2)
- ED 652 Elem LA/SS Pedagogy (2)
- ED 653 Elem MT/SC Pedagogy (2)
- ED 654 Tech Instruction & Assessment (2)
- ED 659 Professional Practice (3)
- ED 660 Professional Responsibility I (1)
- ED 661 Professional Responsibility II (1)
- ED 662 Prof Responsibility III (1)
- ED 670 Field Experience I (1)
- ED 671 MAT Field Experience II (2)
- ED 672 Clinical Practicum (3)

Second year, to complete the MAT:

- ED 680 Teacher as Researcher I (3)
- ED 681 Teacher as Researcher II (3)

Secondary (36 credits)

First year, for licensure:

- ED 640 Learner Development (2)
- ED 641 Learning Differences (3)
- ED 643 Learning Environments I (1)
- ED 644 Learning Environments II (1)
- ED 645 Learning Environments III (2)
- ED 650 Teaching in Hawaii's Schools (1)
- ED 654 Tech Instruction & Assessment (2)
- ED 655 Sec Instructional Practice (2)
- ED 656 Sec LA/SS Pedagogy (2) **or** ED 657 Sec MT/SC Pedagogy (2)
- ED 658 Sec Content Literacy (2)
- ED 659 Professional Practice (3)
- ED 660 Professional Responsibility I (1)
- ED 661 Professional Responsibility II (1)
- ED 662 Prof Responsibility III (1)
- ED 670 Field Experience I (1)
- ED 671 MAT Field Experience II (2)
- ED 672 Clinical Practicum (3)

Second year, to complete the MAT:

- ED 680 Teacher as Researcher I (3)
- ED 681 Teacher as Researcher II (3)

The first three semesters (Summer-Fall-Spring) in the MAT program prepare the student to become licensed to teach. Continuation in the program for 2 more semesters (6 more credits) leads to the Master of Arts in Teaching degree.

Academic Status, Progression, and Readmission Policies

Participants are required to begin the program during the Summer semester and are required to be enrolled full-time during Fall and Spring semesters. There are no elective courses.

To remain eligible for continuance in the MAT and to be awarded the graduate degree, students must maintain satisfactory progress toward completion of the program and they must earn no grade lower than a "B-" in an individual class that is taken for a letter grade. Additionally, they must earn a grade of CR for Field Experience and Professional Practice Courses (ED 660 Professional Responsibility I (1) , ED 661 Professional Responsibility II (1) , ED 662 Prof Responsibility III (1) , ED 670 Field Experience I (1) , ED 671 MAT Field Experience II (2) , ED 672 Clinical Practicum (3)) which are taught as CR/NC.

Grades below "B-" or "credit" will not be accepted in courses defined to fulfill program requirements. Work for courses designated "credit/no credit," must be at least at the "B-" (2.7) level to qualify for "credit." Required MAT courses, unless designated "credit/no credit," may not be taken on a "credit/no credit" basis. A cumulative 3.0 GPA must be maintained in all MAT program course work. A candidate whose GPA in MAT courses falls below 3.0 may be dismissed from the program. In order to enroll in MAT courses, students must be admitted as teacher candidates into the program. Candidates must progress through MAT coursework and field experiences in three consecutive semesters. Fall and Spring semester enrollment is based on recommendation of the Education faculty. A candidate may be removed from a field experience

when in the judgment of the Education faculty, cooperating teacher, and/or school principal the candidate is disrupting the educational process or is not making satisfactory progress toward meeting the requirements of the program. Such removal may result in complete dismissal from the program.

Students and candidates who stop out of the University must reapply and meet all criteria in effect for the respective Admission deadline. See guidelines and policies set forth in the UH Hilo Graduate Student Handbook.

Ka Haka 'Ula O Ke'elikōlani College of Hawaiian Language

Graduate Programs

Graduate Programs Coordinator: Scott Saft, Ph.D.

Email: saft@hawaii.edu

Website: <https://www.olelo.hawaii.edu/>

Professors:

- Larry Kimura, Ph.D.
- Scott Saft, Ph.D.
- Glenn Kalena Silva, Ph.D.
- William Pila Wilson, Ph.D.

Associate Professors:

- Jason Iota Cabral, Ph.D.
- Kekoa Harman, Ph.D.
- Betty-Joann Noelani Iokepa-Guerrero, Ph.D.
- Kauanoē Kamanā, Ph.D.
- Keiki Kawai'ae'a, Ph.D.
- Kananinohea Māka'imoku, M.A.
- Yumiko Ohara, Ph.D.
- Hiapokeikikane Perreira, Ph.D.
- Leisy Wyman, Ph.D.

Assistant Professor:

- Frank "Ka'iuokalani" Damas, M.A.

Adjunct/Affiliate Faculty:

- Alencastre, Makalapua
- Kaplan, Larry
- Langlas, Charles "Kale"
- Nogelmeier, M. Puakea

For Information Contact:

Ku'ulei Kepa'a
Ka Haka 'Ula O Ke'elikōlani
University of Hawai'i at Hilo
200 W. Kāwili Street
Hilo, Hawai'i 96720-4091

Tel: (808) 932-7730

Email: kuulei.kepaa@hawaii.edu

Vision and Mission of the College

'O ka 'ōlelo ke ka'ā o ka maui.

Language is the fiber that binds us to our cultural identity.

UH Hilo's College of Hawaiian Language, Ka Haka 'Ula O Ke'elikōlani, was established in 1998 as the world's first college through the medium of Hawaiian. The College is named in honor of Ruth Ke'elikōlani Keanolani Kanāhoahoa, the 19th century high chiefess known for her strong advocacy of Hawaiian language and culture.

The mission of the College is to assure the revitalization and continued advancement and growth of the Hawaiian language and maui ola Hawai'i. A thriving Hawaiian language is the means through which the maui ola Hawai'i will once again become commonplace in both traditional and contemporary contexts in Hawai'i. The College joins with other Indigenous peoples in the revitalization of their own languages and cultures. Our collective efforts will ensure the furthering of local, national and international initiatives toward establishing language and cultural vibrancy throughout the world.

The **Graduate Program** is tied to the reestablishment of Hawaiian as the medium of education in preschools (1984) and in K-12 education (1986) and offers A Master of Arts degrees, two associated Graduate Certificates, and a Doctoral degree.

Graduate Program Learner Outcomes

1. Demonstrate advancement in spoken and written Hawaiian with fluency and consistency in all educational contexts, adhering to graduate-level writing standards.
2. Demonstrate analytical skills and comprehension of content and overall constitution of literary, cultural, and historical Hawaiian language texts.
3. Examine and articulate the Hawaiian language renormalization movement within the broader context of language revitalization.
4. Apply knowledge of and skills in the performance of Hawaiian chant, dance, and oratory.
5. Exhibit leadership in Hawaiian and Indigenous language and culture revitalization in academic and community environments.

- Indigenous Language and Culture Revitalization Graduate Certificate
- Kahuawaiola Indigenous Teacher Education Graduate Program Certificate
- M.A. in Indigenous Language and Culture Education
- Ph.D. in Hawaiian and Indigenous Language and Culture Revitalization
- Hawaiian Language (HAW) Graduate Courses
- Hawaiian Studies (HWST) Graduate Courses
- Ke'elikōlani Education (KED) Graduate Courses
- Ke'elikōlani Hawaiian Language (KHAW) Graduate Courses
- Ke'elikōlani Hawaiian Studies (KHWS) Graduate Courses
- Ke'elikōlani Indigenous Language (KLAN) Graduate Courses
- Ke'elikōlani Indigenous Studies (KIND) Graduate Courses
- Ke'elikōlani Linguistics (KLIN) Graduate Courses

Indigenous Language and Culture Revitalization Graduate Certificate

Coordinator: Scott Saft, Ph.D.

Email: saft@hawaii.edu

Website: <https://olelo.hawaii.edu/>

Professors:

- Scott Saft, Ph.D.
- William “Pila” Wilson, Ph.D.

Associate Professors:

- Jason “Iota” Cabral, Ph.D.
- Betty-Joann “Noelani” Iokepa-Guerrero, Ed.D.
- Kauanoē Kamanā, Ph.D.
- Keiki Kawai‘ae‘a, Ph.D.
- Yumiko Ohara, Ph.D.
- Hiapokeikikane “Hiapo” Perreira, Ph.D.
- Leisy Wyman, Ph.D.

For Information Contact:

Ku‘ulei Kepa‘a
Ka Haka ‘Ula O Ke‘elikōlani
University of Hawai‘i at Hilo
200 W. Kāwili Street
Hilo, Hawai‘i 96720-4091

Tel: (808) 932-7730

Email: kuulei.kepaa@hawaii.edu

The **Graduate Certificate in Indigenous Language and Culture Revitalization** was approved in 2004 by the Board of Regents on October 22, 2004 with the M.A. in Hawaiian and Indigenous Language and Culture Education and Ph.D. in Hawaiian and Indigenous Language and Culture Revitalization programs.

The **Graduate Certificate in Indigenous Language and Culture Revitalization** is a program of course work to prepare students for careers primarily as educators and administrators. In addition, the Certificate provides training for practitioners desiring further career development and those seeking preparatory work before entering an Indigenous language focused graduate program of the College.

Admission Requirements:

1. A bachelor's degree from an accredited college or university;
2. A GPA of at least 3.0 out of 4.0 over the last 60 credits in an approved field of study;
3. Three letters of recommendation, at least one of which must focus on background in a particular language and culture of an indigenous or endangered community;
4. Appropriate level fluency and academic knowledge demonstrated in a program recognized indigenous language and culture chosen as a language of focus plus additional credits in other areas when appropriate to balance the status of different endangered languages relative to community use, revitalization stage, and level of academic study available.

Graduation Requirements

At least a 3.0 (B) in each required course

- KLIN 601 General Ling in Indig Context (3)
- KLIN 603 Socioling Analysis Indig Lang (3)
- KIND 641 Advanced Language in Culture I (3)
- KIND 642 Advanced Lang in Culture II (3)
- KLAN 641 Advanced Language Structures I (3)

**Kahuawaiola Indigenous Teacher Education
Graduate Program Certificate**

Coordinator: Kananinohea Māka‘imoku, M.A.

Email: kananino@hawaii.edu

Associate Professors:

- Betty-Joann Noelani Iokepa-Guerrero, Ed.D.
- Keiki Kawai‘ae‘a, Ph.D.
- Kananinohea Māka‘imoku, M.A.

Note: This program is assisted by experts in Hawaiian language and culture from outside the college and by additional faculty drawn from Ka Haka ‘Ula O Ke‘elikōlani College of Hawaiian Language.

For Information Contact:

Ku‘ulei Kepa‘a
Ka Haka ‘Ula O Ke‘elikōlani
University of Hawai‘i at Hilo
200 W. Kāwili Street
Hilo, Hawai‘i 96720-4091

Tel: (808) 932-7730

Email: kuulei.kepaa@hawaii.edu

Website: <https://www.olelo.hawaii.edu/kwo/>

The **Graduate Certificate in Kahuawaiola Indigenous Teacher Education** (Kahuawaiola) was mandated in Act 315 HRS 304A-1302 by the Hawai‘i State legislature. Kahuawaiola was established by the University of Hawai‘i (UH) Board of Regents in 1998 and has been recognized by the UH system as an approved professional education unit since January 1999. Since 2001, Kahuawaiola has functioned as a state approved teacher education program (SATEP) and is the only fully approved and accredited unit established to specifically prepare teachers through Hawaiian for P-12 Hawaiian language education. It is the first and only teacher licensing preparation program taught entirely in the Hawaiian language and is also the first teacher education program taught through an Indigenous language in the United States.

The **Graduate Certificate in Kahuawaiola Indigenous Teacher Education** (Kahuawaiola) prepares teacher candidates for professional licensure as maui ola educators who focus on maui ola Hawaiian language medium contexts. This program also prepares students for other Hawaiian language and culture educational settings. An option is available for Indigenous languages other than Hawaiian contingent upon demand and resources.

Program Description

The Kahuawaiola Hawaiian and Indigenous Teacher Training Program is a three-semester graduate certificate program, delivered primarily through the medium of Hawaiian, specifically designed to prepare *Mauli Ola Hawai‘i* (Hawaiian identity nurturing) teachers of the highest quality to teach in Hawaiian language medium schools, Hawaiian language and culture programs in English medium schools, and schools serving students with a strong Hawaiian cultural background. Kahuawaiola is accredited through the State Approval of Teacher Education Programs (SATE) and the World Indigenous Nations Higher Education Consortium (WINHEC). Upon successful completion of the program, candidates will have satisfied one of the requirements for initial licensure from the Hawai‘i Teachers Standards Board. (See Graduation Requirements section for additional requirements for recommendation to the HTSB.)

Based on the Hawaiian concepts Ma ka hana ka 'ike (Knowledge comes from direct experience), and Ma mua ka hana, ma hope ka wala'au (direct experience comes first, discussion comes second), Kahuawaiola places a high value on on-site learning and practicum experience with high performance outcomes. Academics are integrated in a spiraling sequence and holistic indigenous approach both within and outside the classroom for a balance of theory and applied learning situations.

The four program areas of teacher preparation include, 1) Hawaiian language, culture, and values; 2) pedagogical skills; 3) knowledge of content; and 4) development of professional qualities. Kahuawaiola is delivered through a Hawaiian cultural framework of four pale, or phases.

The first pale, Wana'ao, requires that students accepted into the program have previous experience in teaching and/or curriculum development through the medium of Hawaiian. (See Entrance Requirements section for complete description of work experience requirement.)

The second pale, Kahikole, takes place during the summer. During this foundation phase of teacher training, principles of learning and teaching are integrated with state standards and general educational theory through a philosophy of education, Ke Kumu Honua Maui Ola, based on Hawaiian traditions. Students learn to integrate Hawaiian culture and pedagogy into all phases of the curriculum and content areas, including differential learning strategies, lesson planning, assessment, classroom management, and other skills necessary for practical application in the third pale. Students carry a total course load of 13 credits during the summer session. Students then invest two full semesters to gain student teaching experience at Hawaiian medium school locations around the state. They are encouraged to return to their home communities for the practicum phases and are supported by a cooperating teacher, regular site visits from clinical faculty, and professional development workshops where the students are given the opportunity to interact with practicing Hawaiian immersion professionals from throughout the state. Students are expected to commit full-time to the practicum experience, which also includes a discussion seminar via HITS (Hawai'i Interactive Television System).

The third pale, Kahikū, takes place during the fall semester and focuses on developing teaching skills but includes discussion of broader issues as appropriate. Students carry a total course load of 12 credits during the fall semester which includes both the practicum and seminar.

The fourth pale, Kaulolo, takes place during the spring semester and focuses on mastery of teaching skills and professionalism through extended teaching experiences and seminar support. The seminar focuses on hypothetical situations and long-range goals rather than practical day-to-day situations, although these are also covered when appropriate. In this pale, students acquire the higher-level planning and conceptualization skills necessary for the growth of Hawaiian medium education. During the spring semester, students carry a total course load of 12 credits including both the practicum and seminar.

Evaluation of Hawaiian language proficiency is conducted through tests that evaluate the level of fluency in six areas:

1. reading comprehension;
2. aural comprehension;
3. use of standard orthography in adapting older materials;
4. translation from English;
5. composition; and 6. oral language skills demonstrated in an interview.

Mission

The mission of the College is to assure the revitalization and continued advancement and growth of the Hawaiian language and maui ola Hawai'i. A thriving Hawaiian language is the means through which the maui ola Hawai'i will once again become commonplace in both traditional and contemporary contexts in Hawai'i. The College joins with other Indigenous peoples in the revitalization of their own languages and cultures. Our collective efforts will ensure the furthering of local, national and international initiatives toward establishing language and cultural vibrancy throughout the world.

Student Learning Outcomes

1. Demonstrate advancement in spoken and written Hawaiian with fluency and consistency in all educational contexts, adhering to graduate-level writing standards.
2. Demonstrate analytical skills and comprehension of content and overall constitution of literary, cultural, and historical Hawaiian language texts.
3. Examine and articulate the Hawaiian language renormalization movement within the broader context of language revitalization.
4. Apply knowledge of and skills in the performance of Hawaiian chant, dance, and oratory.
5. Exhibit leadership in Hawaiian and Indigenous language and culture revitalization in academic and community environments.

Admission Requirements

Applicants will be evaluated on the following criteria:

- Completion of the application packet.
- Bachelor's degree from an accredited college or university, in a major approved by the Hawaiian Studies Division requiring a minimum of 120 credits, 45 of which are at the 300 level or above.
- A minimum GPA of 3.0 in the last 60 semester credits completed (including post-baccalaureate credits).
- A minimum GPA of 2.75 in the major.
- Four years of Hawaiian language with a minimum GPA of 2.75 for the third and fourth years, or permission from the Hawaiian Studies Division based on an evaluation of fluency.
- Successful completion of one of the following: HWST 111 Hawaiian 'Ohana (3) , HWST 211 Hawaiian Ethnobotany (3) , HWST 213 Hawaiian Ethnozoology (3) ; or permission from the Hawaiian Studies Division based on an evaluation of Hawaiian cultural knowledge and skills.
- Successful completion of one of the following: HWST 205 Hawaiian Music in Action (2) , KHWS 475 Nā Mele Hula Kahiko (3) , KHWS 476 Nā Mele Hula 'Auana (3) ; or permission from the Hawaiian Studies Division based on an evaluation of Hawaiian cultural knowledge and skills.
- Successful completion of KHAW 490 Base-level Fluency Hawn Med Ed (1) Base-level Fluency Hawn Med Ed (1).
- 50 hours of (paid or volunteer) teaching experience through the medium of Hawaiian, or 30 hours of (paid or volunteer) teaching experience through the medium of Hawaiian and 30 hours of (paid or volunteer) experience in Hawaiian medium curriculum development.
- Passing scores on the Praxis I exams (reading, writing, and mathematics) or equivalent , and on Praxis II (Subject Assessments) Content Area Exercises or equivalent, relevant to elementary and secondary level licenses which the applicant will seek from the Hawai'i Teacher Standards Board. Equivalents are those stated in current Hawai'i Teacher Standards Board policy.

- Interview with Kahuawaiola faculty.

Note: In special circumstances, provisional acceptance may be granted by the selection committee for students who meet some, but not all of the above requirements.

Applying to the Program

Applications will be evaluated on submission of the following required documentation in a timely manner.¹ **(Application deadline is December 1st)**

- University of Hawai'i Application for Admission (including processing fee)
- Kahuawaiola Admission Application
- Statement of interest
- Work Experience Verification form
- Three letters of recommendation
- Official college/university transcripts (for EACH post-high institution previously attended)
- Official Praxis I/II scores

¹ Applicants accepted into the program will be required to complete additional documentation prior to the start of the summer session, including but not limited to a criminal background check and fingerprinting as required by the state prior to classroom teaching. For more information, contact the Kahuawaiola office.

Program Requirements (37 credits)

Graduation from the program is based on the successful completion of the following requirements:

11 required courses:

- KED 620A or KED 620E Fdns Hwn & Indig Medium Ed (3)
- KED 621A or KED 621E Lng Arts Hwn & Indig Medium Ed (2)
- KED 623A or KED 623E Soc Stud Hwn & Indig Medium Ed (2)
- KED 625A or KED 625E Phys Ed Hwn & Indig Medium Ed (1)
- KED 626A or KED 626E Science Hwn & Indig Medium Ed (2)
- KED 627A or KED 627E Math in Hwn & Indig Medium Ed (2)
- KED 628A or KED 628E Arts in Hwn & Indig Medium Ed (1)
- KED 641A or KED 641E Hwn & Indig Medium Fld Exp I (9)
- KED 642A or KED 642E Hwn & Indig Med Fld Exp I Sem (3)
- KED 643A or KED 643E Hwn & Indig Medium Fld Exp II (9)
- KED 644A or KED 644E Hwn & Indig Med Fld Exp II Sem (3)

Minimum grade of 3.0 in all teacher training courses requiring grades.

Academic Status, Progression, and Readmission Policies

Kahuawaiola runs summer, fall, spring and only takes 12 months to complete. Students are expected to maintain full-time status in three consecutive semesters in order to complete the course work, field experiences, and other requirements of the program. There are no elective courses.

Unless so designated, Kahuawaiola courses may not be taken on a "credit/no credit" basis. A 3.0 GPA must be maintained in all courses. A student whose GPA falls below 3.0 may be dismissed from the program. Likewise, a student may be removed from a field experience if it is determined by Kahuawaiola faculty that the student is not making satisfactory progress toward meeting the requirements of the program.

Such removal may result in complete dismissal from the program.

Gainful Employment Disclosure

Beginning July 1, 2011, the US Department of Education began requiring colleges to disclose a variety of information for any financial aid eligible program that "prepares students for gainful employment in a recognized occupation". We hope that this information is helpful to our current students and to prospective students as they make their career and educational choices.

The data includes occupations, placement rates, on-time completion rates, average costs and program median loan debt.

[Gainful Employment Disclosure for Kahuawaiola Indigenous Teacher Education Program](#)

M.A. in Indigenous Language and Culture Education

Coordinator: Hiapoikeikane "Hiapo" Perreira, Ph.D.

Email: hiapoikei@hawaii.edu

Professors:

- Larry Kimura, Ph.D.
- Scott Saft, Ph.D.
- Glenn "Kalena" Silva, Ph.D.
- William "Pila" Wilson, Ph.D.

Associate Professors:

- Jason "Iota" Cabral, Ph.D.
- Kekoa Harman, Ph.D.
- Betty-Joann "Noelani" Iokepa-Guerrero, Ed.D.
- Kauanoë Kamanā, Ph.D.
- Keiki Kawai'ae'a, Ph.D.
- Kananinohea "Kananani" Māka'imoku, M.A.
- Yumiko Ohara, Ph.D.
- Hiapoikeikane "Hiapo" Perreira, Ph.D.

Assistant Professors:

- Frank "Ka'iuokalani" Damas, M.A.

Adjunct/Affiliate Faculty:

- Alencastre, Makalapua
- Galla, Candace Kaleimamoowahinekapu
- Hill, Salena
- Langlas, Charles "Kale"
- Leonard, Beth
- Nicholas, Sheila
- Postlethwaite, Miriama
- Shanley, Kathryn
- Topkok, Sean Asikłuk

Note

This program is also assisted by other faculty drawn from Ka Haka 'Ula O Ke'elikōlani College of Hawaiian Language and by scholars with a national and international reputation in indigenous language and culture education from outside the college.

For Information Contact:

Ku'ulei Kepa'a

Ka Haka 'Ula O Ke'elikōlani
University of Hawai'i at Hilo
200 W. Kāwili Street
Hilo, Hawai'i 96720-4091

Tel: (808) 932-7730

Email: kuulei.kepaa@hawaii.edu

Website: <https://olelo.hawaii.edu/khuok/mokuna-kalaiike.php>

Program Description

The **Master of Arts in Indigenous Language and Culture Education** further prepares mauli ola educators as applied researchers who advance the development of Hawaiian and Indigenous culture-based education through three distinct emphasis: Indigenous Medium Education, Hawaiian Language and Literature, and Indigenous and Minority Languages Revitalization; offering a Plan A thesis track and a Plan B applied research track. Students will automatically be admitted into the Plan B applied research track. If interested in the Plan A thesis track, please meet with the College Graduate Program Coordinator.

The **Indigenous Medium Education Emphasis** includes preservice preparation for initial teacher certification through Kahuawaiola, as well as applied academic research knowledge and skills enabling the advancement of Hawaiian language medium education. Conducted primarily in Hawaiian.

The **Hawaiian Language and Literature Emphasis** contributes to the revitalization of the language and further scholarship through the expanse of historical and contemporary Hawaiian literary resources for continued praxis in society. Conducted primarily in Hawaiian.

The **Indigenous and Minority Languages Revitalization Emphasis** develops the abilities of students to analyze the role of minority and indigenous languages in their local, national, and international contexts. This stream prepares students to contribute to the maintenance, promotion, and revitalization of languages and cultures facing endangerment in various situations throughout the world. Conducted primarily in English.

Mission

The mission of the College is to assure the revitalization and continued advancement and growth of the Hawaiian language and mauli ola Hawai'i. A thriving Hawaiian language is the means through which the mauli ola Hawai'i will once again become commonplace in both traditional and contemporary contexts in Hawai'i. The College joins with other Indigenous peoples in the revitalization of their own languages and cultures. Our collective efforts will ensure the furthering of local, national and international initiatives toward establishing language and cultural vibrancy throughout the world.

Student Learning Outcomes

1. Demonstrate advancement in spoken and written Hawaiian with fluency and consistency in all educational contexts, adhering to graduate-level writing standards.
2. Demonstrate analytical skills and comprehension of content and overall constitution of literary, cultural, and historical Hawaiian language texts.
3. Examine and articulate the Hawaiian language renormalization movement within the broader context of language revitalization.

4. Apply knowledge of and skills in the performance of Hawaiian chant, dance, and oratory.
5. Exhibit leadership in Hawaiian and Indigenous language and culture revitalization in academic and community environments.

Admission Requirements

1. B.A. or B.S. degree from a regionally accredited institution or from a nationally recognized foreign institution;
2. 30 credits in Hawaiian Language, Hawaiian Studies, and/or Linguistics at the 300- or 400-level with no grade lower than a 3.0 (B);
3. GPA of 3.0 (4.0 = A scale) or the equivalent in the last four semesters of approximately 60 semester credits of undergraduate and/or in all post- baccalaureate work;
4. Statement of purpose;
5. Sample undergraduate academic paper (by preference written in Hawaiian);
6. Three letters of recommendation which should address the applicant's background and potential in their field of interest including any service to the Hawaiian or indigenous language/culture community;
7. Interview;
8. Teaching Experience Verification form (only for Indigenous Medium Education Emphasis applicants);
9. Successful completion of KHAW 490 Base-level Fluency Hawn Med Ed (1) (not required for Indigenous and Minority Languages Revitalization Emphasis); and
10. In the case of second language speakers of English, passing scores on the TOEFL as determined by the College or other evidence of English fluency.

Further information on the details of fulfilling admission requirements are available from the program. The College may, under some circumstances, provisionally accept students to the program.

Graduation Requirements

Plan B Applied Research Track (33-37 credits)

Indigenous Medium Education Emphasis (37 credits)

1. Indigenous Language Medium Education (13):
 - o KED 620 Fdns Hawn & Indig Medium Ed (3)
 - o KED 621 Lng Arts Hwn & Indig Medium Ed (2)
 - o KED 623 Soc Stud Hwn & Indig Medium Ed (2)
 - o KED 625 Phys Ed Hwn & Indig Medium Ed (1)
 - o KED 626 Science Hawn & Indig Medium Ed (2)
 - o KED 627 Math in Hawn & Indig Medium Ed (2)
 - o KED 628 Arts in Hawn & Indig Medium Ed (1)
2. Field study (6):
 - o KED 642 Hawn & Indig Med Fld Exp I Sem (3)
 - o KED 644 Hwn & Indig Med Fld Exp II Sem (3)
3. KED 630 Res Meth in Indigenous Lang (3)
4. KED 693 Applied Rsrch in Indigenous Ed (3)
5. Electives (12): Choose 12 credits from:
 - o KHAW 603 Grad Level Hawn Lang (3)
 - o KHAW 632 Hawaiian As Second Language (3)
 - o KHWS 662 Applied Hawaiian Chant (3)
 - o KHWS 663 Traditional Hawn Literature (3)
 - o KED 660 Indigenous Culture-based Educ (3)
 - o KED 661 Curr Dev Mauli Ola-based Sch (3)
 - o KED 662 Indigenous Well-being Thru Edu (3)
6. Completion of the Kahuawaiola Indigenous Teacher Education

Program

- KED 641 Hawn & Indig Medium Fld Exp I (9) and KED 643 Hawn & Indig Medium Fld Exp II (9)
- OR both waived upon approved equivalent

Hawaiian Language and Literature Emphasis (33 credits)

1. Required Courses (33):

- KHAW 603 Grad Level Hawn Lang (3)
- KHAW 631 History of Hawaiian Lang & Lit (3)
- KHAW 654 Advanced Hawn Grammar (3)
- KHAW 693 Thesis and Proposal Writing (3)
- KHWS 662 Applied Hawaiian Chant (3)
- KHWS 663 Traditional Hawn Literature (3)
- KHWS 664 European Influenced Hawn Lit (3)
- KHWS 665 Ethnological & Hist Narratives (3)
- KED 630 Res Meth in Indigenous Lang (3)
- KED 662 Indigenous Well-being Thru Edu (3)
- KED 693 Applied Rsrch in Indigenous Ed (3)

Indigenous and Minority Languages Revitalization Emphasis (33 credits)

1. Core Courses (27):

- KED 630 Res Meth in Indigenous Lang (3)
 - KED 662 Indigenous Well-being Thru Edu (3)
 - KED 693 Applied Rsrch in Indigenous Ed (3)
 - KIND 641 Advanced Language in Culture I (3)
 - KIND 642 Advanced Lang in Culture II (3)
 - KLIN 601 General Ling in Indig Context (3)
 - KLIN 603 Socioling Analysis Indig Lang (3)
 - KLIN 604 Field Study in Applied Ling I (3)
 - KLIN 605 Field Study in Applied Ling II (3)
2. Electives (6): Choose 6 Credits from:
- KIND 601 Language Maintenance and Shift (3)
 - KIND 602 Meth Res Indig Lang Comm Bldg (3)
 - KIND 694 Special Topics in Subject Matter (To Be Arranged)
 - KLIN 694 Special Topics in Subject Matter (To Be Arranged)

Plan A Thesis Track (37-43 credits)

Indigenous Medium Education Emphasis (43 credits)

1. Indigenous Language Medium Education (13):

- KED 620 Fdns Hawn & Indig Medium Ed (3)
- KED 621 Lng Arts Hwn & Indig Medium Ed (2)
- KED 623 Soc Stud Hwn & Indig Medium Ed (2)
- KED 625 Phys Ed Hwn & Indig Medium Ed (1)
- KED 626 Science Hawn & Indig Medium Ed (2)
- KED 627 Math in Hawn & Indig Medium Ed (2)
- KED 628 Arts in Hawn & Indig Medium Ed (1)

2. Field study (6):

- KED 642 Hawn & Indig Med Fld Exp I Sem (3)
- KED 644 Hwn & Indig Med Fld Exp II Sem (3)

3. KED 630 Res Meth in Indigenous Lang (3)

4. KED 693 Applied Rsrch in Indigenous Ed (3)

5. Electives (12): Choose 12 credits from:

- KHAW 603 Grad Level Hawn Lang (3)
- KHAW 632 Hawaiian As Second Language (3)
- KHWS 662 Applied Hawaiian Chant (3)
- KHWS 663 Traditional Hawn Literature (3)
- KED 660 Indigenous Culture-based Educ (3)
- KED 661 Curr Dev Maui Ola-based Sch (3)
- KED 662 Indigenous Well-being Thru Edu (3)

6. Completion of the Kahuawaiola Indigenous Teacher Education

Program

- KED 641 Hawn & Indig Medium Fld Exp I (9) and KED 643 Hawn & Indig Medium Fld Exp II (9)
 - OR both waived upon approved equivalent
7. Minimum 6 credits: KHAW 700 Thesis Research (1-6)

Hawaiian Language and Literature Emphasis (39 credits)

1. Required Courses (33):

- KHAW 603 Grad Level Hawn Lang (3)
- KHAW 631 History of Hawaiian Lang & Lit (3)
- KHAW 654 Advanced Hawn Grammar (3)
- KHAW 693 Thesis and Proposal Writing (3)
- KHWS 662 Applied Hawaiian Chant (3)
- KHWS 663 Traditional Hawn Literature (3)
- KHWS 664 European Influenced Hawn Lit (3)
- KHWS 665 Ethnological & Hist Narratives (3)
- KED 630 Res Meth in Indigenous Lang (3)
- KED 662 Indigenous Well-being Thru Edu (3)
- KED 693 Applied Rsrch in Indigenous Ed (3)

2. Minimum 6 credits: KHAW 700 Thesis Research (1-6)

Indigenous and Minority Languages Revitalization Emphasis (39 credits)

1. Core Courses (27):

- KED 630 Res Meth in Indigenous Lang (3)
- KED 662 Indigenous Well-being Thru Edu (3)
- KED 693 Applied Rsrch in Indigenous Ed (3)
- KIND 641 Advanced Language in Culture I (3)
- KIND 642 Advanced Lang in Culture II (3)
- KLIN 601 General Ling in Indig Context (3)
- KLIN 603 Socioling Analysis Indig Lang (3)
- KLIN 604 Field Study in Applied Ling I (3)
- KLIN 605 Field Study in Applied Ling II (3)

2. Electives (6): Choose 6 Credits From:

- KIND 601 Language Maintenance and Shift (3)
- KIND 602 Meth Res Indig Lang Comm Bldg (3)
- KIND 694 Special Topics in Subject Matter (To Be Arranged)
- KLIN 694 Special Topics in Subject Matter (To Be Arranged)

3. Minimum 6 credits: KLIN 700 Thesis Research (1-6)

Notes

1. At least a 3.0 (B) in each course.
2. No more than 6 credits of 400-level courses may count towards the Master's degree with the prior approval of the primary advisor, College graduate program chair, and the Graduate Division.

**Ph.D. in Hawaiian and Indigenous
Language and Culture Revitalization**

Coordinator: Scott Saft, Ph.D.

Email: saft@hawaii.edu

Website: <https://olelo.hawaii.edu/khuok/mhhphd.php>

Professors:

- Larry Kimura, Ph.D.
- Scott Saft, Ph.D.
- Glenn Kalena Silva, Ph.D.
- William Wilson, Ph.D.

Associate Professors:

- Jason Iota Cabral, Ph.D.
- Betty-Joann Noelani Iokepa-Guerrero, Ed.D.
- Kauanoē Kamanā, Ph.D.
- Keiki Kawai‘ae‘a, Ph.D.
- Yumiko Ohara, Ph.D.
- Hiapokeikikane “Hiapo” Perreira, Ph.D.
- Leisy Wyman, Ph.D.

For Information Contact:

Ku‘ulei Kepa‘a
Ka Haka ‘Ula O Ke‘elikōlani
University of Hawai‘i at Hilo
200 W. Kāwili Street
Hilo, Hawai‘i 96720-4091

Tel: (808) 932-7730
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The **Ph.D. in Hawaiian and Indigenous Language and Culture Revitalization** has a unique status within the University of Hawai‘i system - it is the first doctorate in a Hawaiian Studies field and the first doctorate in the world specific to the growing field of Indigenous language and culture revitalization. The program began with provisional status in 2006 with Hawaiian and other Indigenous candidates and was approved as an established program in 2015.

The **Ph.D. in Hawaiian and Indigenous Language and Culture Revitalization** engages candidates in rigorous research in linguistics, language planning, culture, and education that enhances leadership capacity to strengthen language and cultural vibrancy within their communities.

Program Description

Ka Haka ‘Ula O Ke‘elikōlani is widely recognized as the leader in indigenous language revitalization in the United States, and indeed the North Pacific Basin. Concentrated in Hilo is a preschool through graduate school Hawaiian medium educational system and key support offices providing administrative, curricular, language planning, and technological support to programs throughout the Hawaiian islands. In addition, Ka Haka ‘Ula O Ke‘elikōlani provides government sponsored outreach services to support indigenous languages throughout Polynesia and the United States.

The Ph.D. in Hawaiian and Indigenous Language and Culture Revitalization engages candidates in rigorous research in linguistics, language planning, culture, and education that enhances leadership capacity to strengthen language and cultural vibrancy within their communities.

All students in the doctoral program are required to speak an indigenous language - their “language of focus” - and further develop their knowledge of that language in courses that explore the similarities and differences among such languages. In addition, students choose two specializations from among the four systematic fields offered in the program, a) Indigenous Language and Culture Education, b) Indigenous Language and Culture in Society, c) Language Planning, and d) Hawaiian Language and Culture. Thus, students who focus on a non-Hawaiian indigenous language will choose two specializations from areas a), b), and c); students who focus on Hawaiian language may choose among all four areas. A number of possible paths from other universities lead into the doctoral program, including the master’s in Indigenous Studies, Anthropology, Languages (including English), and Linguistics.

Mission

The mission of the College is to assure the revitalization and continued advancement and growth of the Hawaiian language and maui ola Hawai‘i. A thriving Hawaiian language is the means through which the maui ola Hawai‘i will once again become commonplace in both traditional and contemporary contexts in Hawai‘i. The College joins with other Indigenous peoples in the revitalization of their own languages and cultures. Our collective efforts will ensure the furthering of local, national and international initiatives toward establishing language and cultural vibrancy throughout the world.

Student Learning Outcomes

1. Demonstrate advancement in spoken and written Hawaiian with fluency and consistency in all educational contexts, adhering to graduate-level writing standards.
2. Demonstrate analytical skills and comprehension of content and overall constitution of literary, cultural, and historical Hawaiian language texts.
3. Examine and articulate the Hawaiian language renormalization movement within the broader context of language revitalization.
4. Apply knowledge of and skills in the performance of Hawaiian chant, dance, and oratory.
5. Exhibit leadership in Hawaiian and Indigenous language and culture revitalization in academic and community environments.

Admission Requirements

1. Master’s degree from an accredited college or university with a minimum 3.0 grade point average in an approved field of study (e.g., Hawaiian Language and Literature, Indigenous Studies, Anthropology, Languages, etc).
2. Proficiency in and academic knowledge of the applicant’s indigenous language of focus, as demonstrated by a taped speech and written essay, with English translation. (The level of proficiency and academic knowledge required will depend on the status of the indigenous language, in terms of how endangered it is and how much linguistic description has been done.)
3. A letter requesting admission to the program which describes the applicant’s:
 - o academic objectives and research interests.
 - o experience in educational service to his or her indigenous language of focus.
 - o diverse experience with the contemporary status of an indigenous or threatened language and culture besides the student’s own indigenous language of focus. The social and political environment of this additional language should be different from that of the student’s language of focus.
 - o future plans regarding work to revitalize his or her indigenous language and culture.
4. A sample of written work (usually the master’s thesis).
5. Course work of at least 6 credits in general linguistics, linguistic analysis, and sociolinguistics
6. Complete taped interview either in person or by telephone.
7. Three letters of recommendation, at least one of which must focus on the applicant’s background in the language and culture of an indigenous people and service to that indigenous community.
8. For second language speakers of English, passing scores on the TOEFL or other evidence of English fluency.

Further information on the details of fulfilling admissions requirements are available from the Director of Ka Haka ‘Ula O Ke‘elikōlani College of Hawaiian Language.

Graduation Requirements

1. KIND 730 Rsch Meth Hwn Ind Lang Culture (3)

2. Advanced Study of Language of Focus (8):

- KLAN 701 Semantic/Pragmatic Indig Lang (1) Semantic/Pragmatic Indig Lang (1)
- KLAN 702 Stylistics/Domains Indig Lang (1) Stylistics/Domains Indig Lang (1)
- KLAN 703 Semantics-Prag of Indig Langua (3) Semantics-Prag of Indig Langua (3)
- KLAN 704 Stylistics-Domain of Indig Lan (3) Stylistics-Domain of Indig Lan (3)

3. Additional Language Requirement:

- Language of focus is Hawaiian: Approved second language equivalent to the 101 level as taught at UH-Hilo.
- Language of focus is other than Hawaiian: Hawaiian equivalent to the 101 level as taught at UH-Hilo.

4. Two of Four Areas of Specialization (12-14):

- **a. Indigenous Language and Culture Education (6-8):**
 - KED 794 Special Topics in Subject Matter (To Be Arranged)
- **b. Indigenous Language and Culture In Society (6-8):**
 - KIND 731 Indig/Minor Autochthonous Lang (3)
 - KIND 732 Lang Plcy/Pract Endanger/Indig (3)
 - KIND 733 Hawn and Indig Language Med Ed (3)
 - KIND 794 Special Topics in Subject Matter (To Be Arranged)
- **c. Language Planning (6-8):**
 - KLIN 794 Special Topics in Subject Matter (To Be Arranged)
- **d. Hawaiian Language and Culture (6-8):**
 - KHAW 751 Ho'oiikaika 'Ōlelo Hawai'i (2)
 - KHAW 794 Special Topics in Subject Matter (To Be Arranged)
 - KHWS 741 Classical Hwn Ed: Gen Hwn Cult (3)
 - KHWS 794 Special Topics in Subject Matter (To Be Arranged)

The amount of course work in the two areas of specialization will be determined upon admission to the program.

5. Up to six semester credits (or equivalent) at another accredited university in courses pre-approved by the program chair and transfer the credits to the University of Hawai'i at Hilo in place of any of the listed program courses.
6. Completion of all graduate courses with a grade no lower than "B."
7. Successful completion of a comprehensive examination consisting of oral and/or written questions.
8. Submission and approval of a portfolio which documents the student's work to improve public opinion and/or government policy

concerning the revitalization of the student's language and culture of focus. The portfolio may include newspaper or periodical articles or oral presentations aimed at the student's indigenous community or the larger public; it may include written material or oral testimony given at government forums concerned with indigenous language and culture revitalization.

9. KIND 800 Doctoral Dissertation Research (1-6) *minimum 6 credits; successful completion of a dissertation; and final oral examination in defense of the dissertation.

Doctor of Nursing Practice (D.N.P.)

Program Co-Coordinator: Catherine Marin, MSN, Ed.D.
Email: crmarin@hawaii.edu

Program Co-Coordinator: Bobbie Elisala
Email: bkeli@hawaii.edu

University of Hawai'i at Hilo, [School of Nursing](#) (UH Hilo SON)
School of Nursing Office
200 W. Kāwili Street
Hilo, HI 96720

Program Description

The Doctor of Nursing Practice (DNP) is the practice-focused doctoral degree developed in response to the endorsement of the American Association of Colleges of Nursing (AACN) position paper recognizing the DNP as the credential for advanced nursing practice. The DNP is equivalent to entry level professional degrees offered by other health care disciplines including Doctor of Medicine (MD), Doctor of Dental Surgery (DDS) and the Doctor of Pharmacy (PharmD) opportunities culminating in a practice inquiry project. The curriculum is based on the AACN essentials of Doctoral education for Advanced Practice Nurses. Students will participate in lectures, seminars, laboratory simulations, and site visits to rural communities. Research methods and evidence based practice provide opportunities for data analysis, research critique, evidence-based presentations, formulation and evaluation of a practice inquiry research project. At the conclusion of the program, all students will demonstrate competence in the eight essentials of doctoral education, be prepared for their specialty role as an individual health care provider, and be trained for leadership roles within the larger health care system.

Mission

The Doctorate of Nursing practice (DNP) is a program designed to prepare the nurse at an advanced level of nursing science. The program emphasizes the development of the student's capacity to impact the clinical setting as leaders and educators and to utilize clinical research to improve and transform health care. Our program is based on the understanding that nursing provides services which includes the direct care of individual clients, transcultural nursing, management of care for rural populations, administration of nursing systems, and development and implementation of health policy. In addition, the program will encompass health policy, health economics, cultural diversity, chronic care management, health promotion, and disease prevention in rural communities and will create a cadre of new nursing faculty who can immediately address the nursing faculty shortage. Advanced practice nurses with practice doctorates will address significant practice issues in a scholarly way, adopt broad system perspectives for health promotion

and risk reduction, and act as agents of change that transform client/community care, participate in the on-going evaluation of health care outcomes, and assist in the translation of research that leads to positive nursing practice changes.

Program Learning Outcomes

The UH Hilo SON ascribes to the curricular elements and competencies of the DNP degree proposed by the [American Association of Colleges of Nursing \(AACN\)](#). The DNP essentials describe the necessary foundational outcomes required for the DNP graduate.

1. Scientific Underpinnings for Practice
2. Organizational and Systems Leadership for Quality Improvement and Systems Thinking
3. Clinical Scholarship and Analytical Methods for Evidence-Based Practice
4. Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care
5. Health Care Policy for Advocacy in Health Care
6. Interprofessional Collaboration for Improving Patient and Population Health Outcomes
7. Clinical Prevention and Population Health for Improving the Nation's Health
8. Advanced Nursing Practice

Student Learning Outcomes

Graduates from the DNP program will achieve the following program learning outcomes as a result of an integrated approach to learning, problem solving, evidence-based knowledge utilization, and skill acquisition:

1. Synthesize theoretical knowledge and research evidence in designing primary care delivery for diverse populations across the lifespan in rural contexts.
2. Collaborate with multidisciplinary professions, multisectoral agencies and lay communities to influence social and health policies impacting rural population health.
3. Assume leadership role in organizational systems to improve rural population health in local and regional communities.
4. Promote adherence to professional and ethical-legal standards of practice by individual professionals and organizations.
5. Integrate cultural competence and social justice in addressing health disparities in rural populations.
6. Examine research evidence in design and implementation and evaluation of policies and programs for population health in rural communities.
7. Use best practices and technology to improve care delivery for diverse individuals, families and communities within the continuum of primary, secondary and tertiary care.
8. Create educational programs to develop culturally competent practice and education of the nursing workforce.
9. Design educational programs and evaluation programs to enhance rural community empowerment for health.

Admission Requirements

Acceptance is granted at the discretion of the Doctor of Nursing Practice Admissions Committee based on the criteria below:

- UH Graduate Application
- Application fee
- SON Supplemental Application

- Transcripts from all accredited colleges
- Min GPA of 3.0
- Current Hawai'i RN License, in addition to current RN license where you intend to practice
- 3 recommendations (two from faculty, one from employer/professional)
- Professional Goal essay
- Interview with graduate faculty
- Current CV/Resume
- Background check (at the time of acceptance into the program)
- Health Clearance: Tuberculosis clearance documentation, documentation for tetanus/diphtheria vaccination received within the last ten years; documentation for hepatitis-B vaccination series or serological evidence of immunity; serological evidence of immunity to mumps, rubella, rubeola, and varicella (at the time of acceptance into the program)

Foreign applicants must also submit:

1. International Graduate Student Supplemental Information Form
2. Official TOEFL score report
3. Completion of the CGFNS Qualifying exam

Program Entry Points

Students have two program entry points to earn the Doctor of Nursing Practice degree:

- The Post Baccalaureate DNP entry point is intended to allow entry into the DNP program for nurses who are not already advanced practice registered nurses (APRNs). The program will educate registered nurses to be Family Nurse Practitioners (FNP) with foci in Gerontological Nursing, Transcultural Nursing, and Rural Health Care.
- The Post Masters DNP entry point offers nurses with advanced degrees in nursing specialty areas (e.g. education, administration, practice, information systems management, leadership, etc.) a doctoral program, which expands their level of practice expertise.

Further information on the details of fulfilling admissions requirements are available from the DNP Program Admissions office (808) 932-7067, [School of Nursing website](#), or [Graduate Division](#).

Graduation Requirements

1. Completion of all graduate courses for the specific entry point enrolled (BSN-DNP or MSN-DNP)
2. Minimum accepted GPA of 3.0 in all graduate courses
3. Successful completion of 1000 practice hours or portion thereof based on previous practice experience
4. Successful completion of Family Nurse Practitioner (FNP) competencies (BSN-DNP entry point only)
5. Successful completion of a Practice Inquiry Project
6. Successful presentation of the Practice Inquiry Project at an oral defense
7. Compliance with UH Hilo rules and regulations for graduation

Post-BSN to DNP Required Courses (71-73 credits)

- NURS 618 EPI/Environmental Health (3)
- NURS 601 Social Aspects of Health (3)
- NURS 602 Information Systems/Technology (3)
- NURS 603 Adv Clinical Pharmacology (3)
- NURS 604 Advanced Clin Pathophysiology (3)

- NURS 605 Advanced Health Assessment (4)
- NURS 606-606L Rural Health Promotion (3), Rural Health Promotion Lab (3)
- NURS 607-607L Primary Care of Adults (3), Primary Care of Adults Lab (3)
- NURS 608-608L Primary Care of Older Adults (3), Prim. Care of Older Adults Lab (3)
- NURS 609-609L Primary Care of Women (2), Primary Care of Women Lab (2)
- NURS 610-610L Primary Care of Children (2), Primary Care of Children Lab (2)
- NURS 611 Advanced Research Methods (3)
- NURS 612 Evidence Based Practice (3)
- NURS 613 Program Develop/Evaluation (3)
- NURS 614 System-Based Leadership (3)
- NURS 615 Health Policy: Local to Global (4)
- NURS 616 Health Economics (3)
- NURS 617 Practice Inquiry/Project (6)
- Elective (1-3) (A graduate elective is required.)

MSN to DNP Required Courses (38-40 credits)

- NURS 618 EPI/Environmental Health (3)
- NURS 601 Social Aspects of Health (3)
- NURS 602 Information Systems/Technology (3)
- NURS 606 Rural Health Promotion (3)
- NURS 611 Advanced Research Methods (3)
- NURS 612 Evidence Based Practice (3)
- NURS 613 Program Develop/Evaluation (3)
- NURS 614 System-Based Leadership (3)
- NURS 615 Health Policy: Local to Global (4)
- NURS 616 Health Economics (3)
- NURS 617 Practice Inquiry/Project (6)
- Elective (1-3) (A graduate elective is required.)

Daniel K. Inouye College of Pharmacy (DKICP) Graduate Programs

Dean: Dr. Rae Matsumoto, Ph.D.
University of Hawai'i at Hilo
200 W. Kawili St.
Hilo, HI 96720

Email: pharmacy@hawaii.edu

Website: <https://pharmacy.uhh.hawaii.edu/>

Associate Dean for Academic Affairs: Lara Gomez, Pharm.D.

Chair, Department of Pharmaceutical Sciences: Dianqing Sun, Ph.D.

Chair, Department of Pharmacy Practice: Nicole Young, Pharm.D.

Professors:

- Julie A. L. Adrian, D.V.M.
- Shugeng Cao, Ph.D.
- Leng Chee Chang, Ph.D.
- Susan Jarvi, Ph.D.
- Dianqing Sun, Ph.D.
- Deborah Taira, Sc.D.
- Ghee Tan, Ph.D.
- Supakit Wongwiwatthananukit, PharmD, Ph.D.

Associate Professors:

- Bryce Fukunaga, Pharm.D.
- Chad Kawakami, Pharm.D., BCPS, CDE
- Aryn Meguro, Pharm.D.
- Cherie Mehrabian-Sani, Pharm.D., BCPS
- Jarred Prudencio, Pharm.D.
- Wesley Sumida, Pharm.D.
- Sheri Tokumaru, Pharm.D., BCPS
- Nicole Young, Pharm.D.

Instructor:

- Faith Hicks

Associate Specialists:

- Lara Gomez, Pharm.D.
- Michelle Kim, Pharm.D.
- Camlyn Masuda, Pharm.D., BCACP, CDE

Director of Continuing Education/Distance Education and Strategic Planning: Karen L. Pellegrin, Ph.D., M.B.A.

Director of Student Services: Daryl Masanda

Director of PhD Program in Pharmaceutical Sciences: Ghee Tan, Ph.D.

Programs

- Doctor of Pharmacy (Pharm.D.)
- Pharmacy (PHAR) Post-Baccalaureate Courses
- Pharmacy Practice (PHPP) Post-Baccalaureate Courses
- Pharmaceutical Science (PHPS) Post-Baccalaureate Courses

Doctor of Pharmacy (Pharm.D.)

Dean: Dr. Rae Matsumoto, Ph.D.

Associate Dean for Academic Affairs: Lara Gomez, Pharm.D.

Department of Pharmaceutical Sciences: Dianqing Sun, Ph.D.

Department of Pharmacy Practice: Nicole Young, Pharm.D., BCCCP

The Daniel K. Inouye College of Pharmacy (DKICP)

University of Hawai'i at Hilo
200 W. Kawili St.
Hilo, HI 96720

Email: pharmacy@hawaii.edu

Tel: (808) 932-8120

Website: pharmacy.uhh.hawaii.edu

Program Description

The University of Hawai'i at Hilo's Daniel K. Inouye College of Pharmacy (DKICP) is a four-year educational and experiential program through which students pursue the Doctor of Pharmacy (Pharm.D.) degree. The Pharm.D. program prepares the student for entry into the pharmacy profession.

Mission

The mission of the University of Hawai'i at Hilo DKICP is the traditional mission of academic healthcare—education, research, and service with

emphasis on patient care. More specifically, our mission is:

- To educate pharmacy practitioners and leaders.
- To serve as a catalyst for innovations and discoveries in pharmaceutical science and practice for the promotion of health and wellbeing.
- To provide community service, including quality patient care.

Vision

The Vision of the Daniel K. Inouye College of Pharmacy (DKICP) at the University of Hawai'i at Hilo is to drive Improvement of Healthcare in Hawai'i and throughout the Pacific.

Student Learning Outcomes (SLOs):

- Pono (Hawai'ian word meaning excellence, moral qualities, correct): Live and practice professional conduct in the proper way
 - 1.1 Ensure optimal health outcomes for people of all cultures, races/ethnicity, genders, lifestyle habits and socioeconomic levels
 - 1.2 Demonstrate personal and professional attributes of an ethical, reflective, and responsible pharmacist
- Demonstrate and apply the foundational knowledge and skills of contemporary pharmacy practice
 - 2.1 Demonstrate expertise in medication use and delivery, population health, and practice
 - 2.2 Access, evaluate, and apply relevant scientific and patient centered knowledge and information to support evidence-based healthcare
 - 2.3. Utilize electronic and other technology-based systems and evaluate its impact on patient safety, efficiency, privacy, and patient and health care services
 - 2.4. Think critically, prioritize effectively, identify and implement solutions
 - 2.5. Demonstrate strong decision-making skills and the ability to justify those decisions
 - 2.6 Deliver quality health care through health promotion and disease prevention
 - 2.7 Utilize an integrative health approach to treating the whole patient with a wide range of preventive and treatment modalities
- Collaborate with other healthcare professionals to provide optimal patient care
 - 3.1 Demonstrate mutual respect, understanding and the value of working as a team in the delivery of patient-centered care
 - 3.2 Learn with and from other healthcare professionals
 - 3.3 Educate others on the role of the pharmacist in improving health outcomes
- Communicate and educate effectively with individuals and groups
 - 4.1 Educate, advocate, and collaborate utilizing effective and professional communication
 - 4.2 Read/interpret and listen using effective communication to identify and manage problems and foster collaborative care
- Lead, innovate and create through professional development
 - 5.1 Drive and manage discovery, innovation, and entrepreneurship to improve patient care and advance the pharmacy profession

Admissions

Please refer to admission and application requirements on the [DKICP Website](#)

Curricula

First Professional Year: Fall (17)

- PHAR 500 Cornerstone Pharmacy and Sci (2)
- PHAR 510 Princ of Pharm Readiness I (1)
- PHAR 511 Foundational Pharm Biochem (2)
- PHAR 512 Foundational Pharm Immunology (2)
- PHAR 513 Pharmaceutical Formulations I (2)
- PHAR 514 Pharmacology/Medicinal Chem I (3)
- PHAR 515 Drug Information (2)
- PHAR 517 Foundational Calculations (1)
- PHAR 519 Therapeutic Prob Solving I (2)
- PHAR 501 Intro Pharm Prac Exp I (1) (1 credit awarded in Spring)

First Professional Year: Spring (18)

- PHAR 520 Princ of Pharm Readiness II (1)
- PHAR 521 Comprehensive Clin Care I (1)
- PHAR 522 Essential Pharm Skills I (2)
- PHAR 523 Pharmaceutical Formulations II (2)
- PHAR 524 Pharmacology/Medicinal Chem II (3)
- PHAR 525 Evidence-Based Sci & Prac I (2)
- PHAR 526 Topics in Healthcare I (1)
- PHAR 527 Foun Indiv Pharmacotherapy (1)
- PHAR 528 Therapeutic Prob Solving II (2)
- PHAR 529 Therapeutic Prob Solving III (2)
- PHAR 501 Intro Pharm Prac Exp I (1) (1 credit awarded in Spring)

Second Professional Year: Fall (16)

- PHAR 530 Princ of Pharm Readiness III (1)
- PHAR 531 Comprehensive Clin Care II (2)
- PHAR 532 Essential Pharm Skills II (2)
- PHAR 535 Evidence-Based Sci & Prac II (2)
- PHAR 537 Therapeutic Prob Solving IV (2)
- PHAR 538 Therapeutic Prob Solving V (2)
- PHAR 539 Therapeutic Prob Solving VI (2)
- PHAR 503 Intro Pharm Prac Exp III (1) (1 credit awarded in Spring)
- PHAR 502 Intro Pharm Prac Exp II Comm (1) (1 credit occurs in first professional year Summer)
- Electives (2)

Second Professional Year: Spring (17)

- PHAR 540 Princ of Pharm Readiness IV (1)
- PHAR 541 Comprehensive Clin Care III (2)
- PHAR 542 Essential Pharm Skills III (2)
- PHAR 546 Topics in Healthcare II (3)
- PHAR 547 Therapeutic Prob Solving VII (2)
- PHAR 548 Therapeutic Prob Solving VIII (2)
- PHAR 549 Therapeutic Prob Solving IX (2)
- PHAR 503 Intro Pharm Prac Exp III (1) (1 credit awarded in Spring)
- Electives (2)

Third Professional Year: Fall (16)

- PHAR 550 Princ of Pharm Readiness V (1)
- PHAR 551 Comprehensive Clin Care IV (2)
- PHAR 552 Essential Pharm Skills IV (2)
- PHAR 555 Pharmacy Informatics and Tech (2)
- PHAR 557 Therapeutic Prob Solving X (2)
- PHAR 558 Therapeutic Prob Solving XI (2)
- PHAR 559 Therapeutic Prob Solving XII (2)
- PHAR 505 Intro Pharm Prac Exp V (1) (1 credit awarded in Spring)

- PHAR 504 Intro Pharm Prac Exp IV Hosp (1) (1 credit occurs in second professional year Summer)
- Electives (2)

Third Professional Year: Spring (17)

- PHAR 560 Princ of Pharm Readiness VI (1)
- PHAR 561 Comprehensive Clin Care V (2)
- PHAR 562 Essential Pharm Skills V (2)
- PHAR 566 Topics in Healthcare III (3)
- PHAR 567 Therapeutic Prob Solving XIII (2)
- PHAR 568 Therapeutic Prob Solving XIV (2)
- PHAR 569 Therapeutic Prob Solving XV (2)
- PHAR 505 Intro Pharm Prac Exp V (1) (1 credit awarded in Spring)
- Electives (2)

Fourth Professional Year (43)

- PHAR 580 Adv Pharm Prac Exp Community (6)
- PHAR 581 Adv Pharm Prac Exp Hospital (6)
- PHAR 582 Adv Pharm Prac Exp Ambulatory (6)
- PHAR 583 Adv Pharm Prac Exp Acute Med (6)
- PHAR 584 Adv Pharm Prac Exp Elec I Clin (6)
- PHAR 585 Adv Pharm Prac Exp Elec II (6)
- PHAR 586 Adv Pharm Prac Exp Elec III (6)
- PHAR 587 Board Exam Review (1)

The PharmD curriculum includes 8 electives during the second and third professional years. Students may choose from the following electives:

- PHPP 530 Basic Research Methods (1)
- PHPP 531 Survey, Epidem, Qual Methods (1)
- PHPP 532 Pharmacy Research (1)
- PHPP 535 Healthcare Leadership (1)
- PHPP 536 Strategic Management (1)
- PHPP 550 History of Pharmacy (2)
- PHPP 553 Current Topics in Healthcare (1)
- PHPP 554 Zoonotic Diseases (1)
- PHPP 555 Intro to Veterinary Medicine (1-2)
- PHPP 556 Adv Topics in Hypertension (1)
- PHPP 557 Personal Finance (1)
- PHPP 558 Business Admin Overview (1)
- PHPP 559 Spanish for Healthcare Profess (1)
- PHPP 560 Pharmacy Leadership (1)
- PHPP 561 Pharmacy and Therapeutics Comp (1)
- PHPP 564 Advanced Managed Health Care (1)
- PHPP 567 Rural Health Science Intro (2)
- PHPP 568 Rural Health Science Advanced (2)
- PHPP 571 Story-telling in Healing (1)
- PHPP 572 Intro to Residency Application (1)
- PHPP 573 Pediatric Pharmacotherapy (2)
- PHPP 575 Drug Info Veterinary Medicine (1)
- PHPS 545 Intro Pharm Chemistry Research (2)
- PHPS 546 Intro Pharm Biology Research (2)
- PHPS 547 Veterinary Toxicology (1)
- PHPS 548 Intro to Vet Pharmacy Sciences (1)
- PHPS 549 Common Animal Disease Pharm II (1)
- PHPS 550 Genetics in Medicine (2)
- PHPS 551 Substances of Abuse/Addiction (2)
- PHPS 552 Dietary Supplements (1)
- PHPS 553 Radioactivity in Pharmacy (1)
- PHPS 554 Herb Med & Hawaiian Med Plants (1)
- PHPS 555 Geographic (Tropical) Medicine (1)
- PHPS 556 Drugs from Natural Sources (1)

- PHPS 558 Drug Development & Regulation (1)
- PHPS 559 Environmental Toxicology (1)
- PHPS 561 Emerging Trends Drug Discovery (1)
- PHPS 562 Disc & Dev of Blockbuster Drug (1)
- PHPS 563 Curr Adv in Neuropharmacology (1)
- PHPS 565 Genetics & Pharm of Malaria (1)
- PHPS 566 Emerging Trends Drug Discovery (1)
- PHPS 567 Pharmacogenetics (1)
- PHPS 568 Antibiotic Mechanisms & Applic (1)
- PHPS 569 Cancer Prevention (1)
- PHPS 570 Drugs from the Ocean (1)
- PHPP/PHPS 594 Special Topics in Subject Matter (To Be Arranged) Special Topics
- PHPP/PHPS 597/598 Experimental
- PHPP/PHPS 599 Directed Studies (To Be Arranged) (1-3 cr)

Minimum semester hours required for the Doctor of Pharmacy degree

144 credits.

Health Science Research Certificate

Coordinator Deborah Taira, ScD, Associate Professor
Email dtjuarez@hawaii.edu

Program Description

This certificate is designed to give the DKICP Doctor of Pharmacy students an introduction to research methods as well as experience completing a research project. Students will develop an understanding of research methodologies, data management, statistical analysis, data visualization, and ethical considerations in Human Subjects Research. This certificate will equip students with the skills and knowledge required to excel in research endeavors. By blending theoretical foundations with practical applications, students will develop a diverse toolkit to engage effectively in research initiatives in the domain of practicing pharmacists. Topics for research projects will vary based on student interest, mentors, and available data.

Program Mission

The goal is to make PharmD students more competitive for post-graduate residency programs, which are increasingly required for jobs in clinical and academic settings. This program benefits the current curriculum by aligning student coursework to support research activities in both academic departments.

Student Learning Objectives

Upon completion of this certificate, students will be able to:

1. Demonstrate and understanding of various research methodologies
2. Apply principles of data management
3. Utilize spreadsheets and artificial tools for organizing, analyzing, and interpreting research data effectively
4. Apply statistical analysis to research data, interpret results, and draw conclusions
5. Create clear and informative data visualizations to represent research findings
6. Demonstrate knowledge of ethical and privacy issues in research
7. Demonstrate competence in conducting pharmacy-related research, understanding its implications for clinical practice, and integrating

- research findings into the field
8. Apply effective techniques for scholarly writing, including proper citation practices, structuring research papers, and community research findings clearly and concisely
 9. Identify the main theoretical and procedural aspects of qualitative research
 10. Conduct qualitative research
 11. Apply research methodologies and skills to complete an independent research project
 12. Communicate research findings effectively through written abstracts and oral presentations
 13. Collaborate effectively with peers and mentors.

Certificate Curriculum (15 Credits)

Students must complete the following courses during the P2-P3 Year:

- PHPP 530 Basic Research Methods (1)
- PHPP 531 Survey, Epidem, Qual Methods (1)
- PHPP 532 Pharmacy Research (1)
- PHPP 534 Using SS/AI for Data Analy/Vis (1)
- PHPP 537 Using EHR for Research (1)
- PHPP 538 Systematic/Scoping Rev of Lit (1)
- PHPP 539 Effic Technique Scholarly Writ (1)
- PHAR 570 Certificate Project Pres (1)

Students must complete one (1) elective from the following list during the P2-P3 Year:

- PHPP 571 Story-telling in Healing (1)
- PHPP 574 Social Media for Pharmacists (1)

Students must complete one (1) of the following experiential electives during the P4 Year:

- PHAR 585 Adv Pharm Prac Exp Elec II (6)
- PHAR 586 Adv Pharm Prac Exp Elec III (6)

Healthcare Leadership Certificate

Coordinator: Karen L. Pellegrin, PhD, MBA
Director of Continuing Education and Strategic Planning
Email: karen3@hawaii.edu

Program Description

The Healthcare Leadership Graduate Certificate provides PharmD students a basic foundation in business administration, with a concentration in healthcare leadership. Students who complete this program will gain an understanding of the business-side of the healthcare industry, with an emphasis on pharmacy practice and the pharmaceutical industry. This certificate program prepares PharmD graduates to be more competitive for a variety of positions in the job market, particularly those involving pharmacy management, leadership, and innovation.

Mission

This mission of this certificate program is to produce PharmD graduates who are more competitive for a variety of positions in the job market, particularly those involving pharmacy management, leadership, and innovation.

Student Learning Objectives

1. Describe basic concepts of accounting, financial statements, human resources functions, compensation and incentives, performance management, production and operations, project management, marketing, strategy, organizational culture, corporate social responsibility, and related federal regulations;
2. Design and track variance from a budget
3. Analyze a variety of industries and competitive situations within the context of a global market environment.
4. Demonstrate knowledge of healthcare systems, legal and ethical issues in pharmacy, pharmacoeconomics, strategic management, and leadership.
5. Integrate the knowledge from previous courses in the certificate program and demonstrate the appropriate use of this knowledge within an unstructured case.
6. Apply knowledge from previous courses to address a real-world pharmacy leadership issue in an advanced experiential setting.

Requirements:

1. Student must have completed P1 (first year) in the PharmD program with a cumulative GPA of 3.0 or better
2. Student must maintain a cumulative GPA of 3.0 or better to remain in the certificate program
3. Student must not be on probation

Certificate Curriculum (23 Credits)

Elective Courses (10 credits)

- PHPP 558 Business Admin Overview (1)
- PHPP 557 Personal Finance (1)
- PHPP 535 Healthcare Leadership (1)
- PHPP 536 Strategic Management (1)
- PHAR 585 Adv Pharm Prac Exp Elec II (6) **OR** PHAR 586 Adv Pharm Prac Exp Elec III (6)

Core PharmD Courses (13 credits)

- PHAR 555 Pharmacy Informatics and Tech (2)
- PHAR 526 Topics in Healthcare I (1)
- PHAR 546 Topics in Healthcare II (3)
- PHAR 566 Topics in Healthcare III (3)
- PHAR 530 Princ of Pharm Readiness III (1)
- PHAR 540 Princ of Pharm Readiness IV (1)
- PHAR 550 Princ of Pharm Readiness V (1)
- PHAR 560 Princ of Pharm Readiness VI (1)

Pharmaceutical Science Innovation Certificate

Coordinator: Leng Chee Chang, M.S., Ph.D., Professor
Email: lengchee@hawaii.edu

Program Description

Pharmaceutical Sciences is an area that could offer a variety of job opportunities related to the drug discovery, development, and production of novel treatments. Currently, pharmacist professionals are rapidly growing in the pharmaceutical sciences and biopharmaceutical research and development arena. This certificate program is designed to give Pharm.D. students a basic foundation in pharmaceutical sciences

research methods, with a focus on Hawaii's unique ecosystem, including locally grown natural products, natural products, and other infectious diseases. Students who complete this program will understand the principle of drug discovery and development techniques and challenges, including pre-clinical research to support FDA- approval drugs. This proposed program is offered by faculty in the Pharmaceutical Sciences (educator experts in drug discovery of natural products, medicinal chemists, pharmaceuticals, and pharmacologists).

Program Mission

This certificate program aims to produce Pharm.D. graduates who are more competitive for career positions in the job market, particularly those involving biomedical sciences, biopharmaceutical, and biotechnology research companies. In addition, organizations like the Bio-Pharm industry, Non-profit research institutions, clinical pharmacies, Medical Science Liaisons, and Regulatory agencies.

Student Learning Objectives

Upon completion of this certificate, students will be able to:

1. Define the roles and importance of natural products in drug discovery and development;
2. Describe the general approaches and challenges related to drug discovery and the development process;
3. Identify the application of drug development concepts to Hawaii's natural environment and health issues;
4. Describe basic laboratory research methods used in the pharmaceutical sciences;
5. Implement laboratory techniques to test research hypotheses;
6. Understand and comply with laboratory safety procedures;
7. Demonstrate knowledge of the pharmaceutical research industry, including FDA approval of a new drug;
8. Apply knowledge of pharmaceutical sciences research in an advanced experiential setting, and improve their clinical skills.
9. Apply statistical analysis to research data, interpret results, and draw conclusions
10. Participate in a faculty-mentored research project, develop problem-solving skills, and sharpen critical thinking skills.
11. Develop oral and written skills and effectively communicate research and clinical data to a broad audience. Conduct one research project and submit the project for presentation at a conference.
12. Describe research innovation, technology transfer, and entrepreneurship.

Other objectives pertaining to Biomedical Sciences and Global Health will be based on selected elective courses of focus:

1. Synthesize fundamental knowledge in biomedicine and translational sciences.
2. Develop critical thinking skills for applying scientific knowledge in evaluating scientific literature.
3. Acquire skills for developing hypotheses, analyzing data, and interpreting and communicating results in the biomedical sciences.
4. Describe the major causes of morbidity and mortality worldwide, and how the risk for disease varies with regions.
5. Evaluate the challenges of health disparities in the community and globally.
6. Describe the major public health efforts to reduce disparities in global health.
7. Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities and expertise represented by other

professionals and groups in global health.

Certificate Curriculum (15 Credits)

Students must complete the following courses during the P2-P3 Year:

- PHP5 554 Herb Med & Hawaiian Med Plants (1)
- PPHP 555 Geographic (Tropical) Medicine (1)
- PPHP 562 Disc & Dev of Blockbuster Drug (1)
- PPHP 570 Drugs from the Ocean (1)
- PHAR 570 Certificate Project Pres (1)

Students must complete one (1) elective from the following list during the P2-P3 Year:

- PPHP 544 Advanced Laboratory Research (2)
- PPHP 545 Intro Pharm Chemistry Research (2)
- PPHP 546 Intro Pharm Biology Research (2)

Students must complete two (2) electives from the following list during the P2-P3 Year:

- PPHP 558 Business Admin Overview (1)
- PPHP 560 Advances in New Drug Approvals (1)
- PPHP 563 Curr Adv in Neuropharmacology (1)
- PPHP 567 Pharmacogenetics (1)
- PPHP 569 Cancer Prevention (1)
- PPHP 572 Intro to Residency Application (1)

Students must complete two (1) of the following experiential electives during the P4 Year:

- PHAR 585 Adv Pharm Prac Exp Elec II (6)
- PHAR 586 Adv Pharm Prac Exp Elec III (6)

Rural Health Graduate Certificate (PharmD)

Mission

This certificate program is designed to give PharmD graduates the knowledge and experience needed to thrive as a pharmacist working in rural settings.

Student learning objectives:

- Describe basic concepts in rural health science, including measurement, methods, and testing solutions to rural health problems.
- Analyze rural health issues and make evidence-based recommendations for improvement.
- Demonstrate knowledge of rural health issues in rural pharmacy practice settings.
- Apply the knowledge of rural health science to real-world healthcare and community settings.
- Integrate the knowledge from courses in the certificate program and apply this knowledge to enhance patient care in advanced experiential rotations.
- Identify and demonstrate ability to implement solutions to rural health problems.

Program Prerequisite Requirements

- Must have completed P1 (first year) in the PharmD program with a

- GPA of 3.0 or better
- Must maintain a GPA of 3.0 or better to remain in the certificate program
- Must not be on probation

Certificate Curriculum (24 Credits)

Core Courses for Certificate: (22 Credits)

- PHPP 567 Rural Health Science Intro (2)
- PHPP 568 Rural Health Science Advanced (2)
- Minimum of 18 credits of any of the following APPE rotations. Rotations must be completed in a rural setting, selected from experiential office approved sites:
 - PHAR 580 Adv Pharm Prac Exp Community (6)
 - PHAR 581 Adv Pharm Prac Exp Hospital (6)
 - PHAR 582 Adv Pharm Prac Exp Ambulatory (6)
 - PHAR 583 Adv Pharm Prac Exp Acute Med (6)
 - PHAR 584 Adv Pharm Prac Exp Elec I Clin (6)
 - PHAR 585 Adv Pharm Prac Exp Elec II (6)
 - PHAR 586 Adv Pharm Prac Exp Elec III (6)

Courses Taken by all PharmD Students: (2 Credits)

- PHAR 555 Pharmacy Informatics and Tech (2)

Veterinary Pharmacy Sciences Certificate

Coordinator: Julie Adrian, D.V.M., Professor

Email: jluiz@hawaii.edu

Program Description

This certificate is designed to offer the DKICP Pharm.D. student a concentrated introduction to veterinary medicine, veterinary pharmacy sciences, veterinary prescribing and compounding focusing on pharmacy jurisprudence, ethics and regulations, and veterinary communication and collaboration. Students will possess knowledge and skill base related to veterinary drug calculations, preparation, common animal diseases, pathophysiology and pharmacotherapy, as well as veterinary toxicology, veterinary endocrinology, veterinary anesthesiology and controlled substances, and gain pharmacy practice experiences through animal health-related tasks. The certificate is meant to prepare students for successful placement in veterinary pharmacy residencies and/or for students to be competitive in the pharmacy job market. Students who complete these curricula will have a better ability to serve veterinary pharmacies, veterinarians, their patients and their clients.

Program Mission

The goal of this certificate is to produce Pharm.D. graduates who are equipped with the knowledge, experience, skills and ability needed to succeed as a pharmacist working with veterinarians in veterinary pharmacies and patient care settings.

Student Learning Objectives

Upon completion of this certificate, students will be able to:

1. Implement the knowledge, skills and ability of veterinary pharmacy sciences in practice settings.
2. Organize the knowledge and skills from courses in the certificate curricula and apply this knowledge to enhance veterinary patient care and veterinary communication.

3. Use veterinary drug resources commonly used by veterinarians.
4. Describe the role(s) of a pharmacist on a veterinary patient care team.
5. Describe basic concepts in veterinary medicine, including veterinary prescription calculation and formulation.
6. Recognize veterinary diversion outlets as it relates to opioids and other controlled substances relating to dispensing and the One Health Campaign.
7. Describe the ability to explain solutions to common veterinary questions in the pharmacy setting.
8. Discuss the common toxins that are harmful to companion animals while describing the toxic principle, formulation and/or source, susceptible species, reported lethal dose, reported LD50, ADME, mechanism of action, clinical signs and treatment.
9. Determine appropriate drug therapy based on species-specific pharmacokinetic and pharmacodynamic parameters in canines, felines and other companion and food animals.

Certificate Curriculum (15 Credits)

Students must complete the following courses during the P2-P3 Year:

- PHPS 548 Intro to Vet Pharmacy Sciences (1)
- PHPS 539 Common Animal Disease Pharm I (1)
- PHPS 549 Common Animal Disease Pharm II (1)
- PHPS 547 Veterinary Toxicology (1)
- PHAR 570 Certificate Project Pres (1)

Student must choose four (4) elective credits from the following list based on their focus during the P2-P3 Year

- PHPP 572 Intro to Residency Application (1)
- PHPP 554 Zoonotic Diseases (1)
- PHPS 571 Veterinary Endocrinology (1)
- PHPS 573 Vet Anesthesia and Contr Subst (1)
- PHAR 509 Intro Pharm Prac Exp Elective (1)
- PHPP 599 (3) (Directed Studies- PCCA Institute Veterinary Compounding Course)

Students must complete one (1) of the following experiential electives during the P4 Year:

- PHAR 585 Adv Pharm Prac Exp Elec II (6)
- PHAR 586 Adv Pharm Prac Exp Elec III (6)

M.S. in Tropical Conservation Biology and Environmental Science

Program Chair: Jonathan Price, Ph.D.,

Email: jprice@hawaii.edu

Associate Program Chair: Ryan Perroy, Ph.D.,

Email: rperroy@hawaii.edu

Professional Internship Track Coordinator: Lisa Canale, MSci

Email: canale@hawaii.edu

Program Website: [TCBES Program Website](#)

On this page:

- [Program Description](#)
- [Mission](#)

- [Program Learning Outcomes](#)
- [Admission Requirements](#)
- [Transfer of Credits](#)
- [International Credentials](#)
- [M.S. TCBES Checklist](#)
- [Frequently Asked Questions](#)
- [Program Curriculum](#)
- [Faculty](#)

Program Description

The primary purpose of the Master of Science in Tropical Conservation Biology and Environmental Science is to provide graduate training in conservation biology and environmental science to those with baccalaureate degrees and those currently working in the field. The program utilizes the extraordinary biological, physical, and cultural complexity of the island of Hawai'i as a focus of investigation and study. The program prepares students for natural resource management positions and for entry into Ph.D. programs in related fields.

Mission

- Foster knowledge of theory and techniques in conservation biology and environmental sciences including basic, applied, and socio-ecological research.
- Promote scholarly activities in marine and terrestrial environments that will enable participants to pursue careers in research and natural resource management.

Program Learning Outcomes

Graduates of the program will be able to:

- Perform, interpret, and communicate scientific research in the interdisciplinary field of conservation biology and environmental science;
- Use advanced technological equipment, perform qualitative and quantitative analysis of complex data.
- Develop skills appropriate for their chosen field of specialization and demonstrate an understanding of the research or natural resource management applications of said specialization.

Admission Requirements

1. A baccalaureate degree from a regionally-accredited U.S. institution or from a nationally-recognized foreign institution.
2. A personal statement that states whether student is interested in Thesis Track or Internship Track. If Thesis Track, the applicant must list advisor(s) from the TCBES faculty who agrees to sponsor the application and serve as primary advisor upon acceptance to the program. Internship Track students are not required to get sponsorship from an advisor.
3. Three letters of recommendation submitted by references who have observed or supervised the applicant's performance and are able to comment on the quality of the applicant's academic achievement, ability to pursue graduate study, and general character.
4. Grade point average of 3.0 (on a scale where A = 4.0) or the equivalent in the last four semesters of approximately 60 semester credits of undergraduate work and/or in all post-baccalaureate work.
5. A score of 550 TOEFL (paper based), 213 (computer based) or 79 (internet based), or 6.0 IELTS (for students who have not attended an English language university, or for whom English is not the primary language).

Note: In special circumstances acceptance may be granted at the discretion of the selection committee for those students who meet some, but not all, the above requirements.

Transfer of Credits

Requests for transfer of graduate credits must be made during the first semester in which the student is enrolled in the program. Only credit hours with a grade of B or better from accredited universities are transferable. Transfer credit hours must have been completed within five years preceding the date upon which the advanced degree is to be conferred by UH Hilo. The TCBES program will decide which credits will be transferred.

International Credentials

A statement describing minimum academic qualifications expected of international applicants may be obtained from the [Graduate Division](#). These qualifications must be completed prior to enrollment.

M.S. TCBES Checklist

(Reminder: Priority application deadline is December 1) Please see the [TCBES Admissions Guide](#) for more information.

- Completed UH Hilo Graduate application form
- Personal statement of objectives
- Application fee
- Official transcripts from all colleges or universities (must be received directly from the institution, or in a sealed envelope if submitted with your application)
- Three Letters of Recommendation received in the online application system by December 1
- Official TOEFL score report, if required
- Verification of financial status (for international applicants) (see [International Graduate Students](#))

Frequently Asked Questions

1. **Do I need to find a faculty sponsor?** If you are interested in the **Thesis Track** then you are required to contact individual faculty members whose research interests are similar to your own and who agree to sponsor your application to the program. It is recommended that you begin faculty contact well before the application deadline. If you are interested in the **Professional Internship Track** then you are not required to have a sponsor.
2. **How do I find a faculty sponsor?** TCBES Faculty information can be found within this page and on the [TCBES Website](#)
3. **How long does it take to complete the program?** The course work is designed to be completed in 3-4 semesters, with additional time needed for writing the thesis or completing the internship.
4. **What are the entrance requirements?** See Checklist and Admission Requirements sections.
5. **Do I have to take the GRE?** No. The GRE Test Requirement is no longer required.
6. **Can I transfer credits?** Yes, up to 6 credits, subject to program approval.
7. **When will the program start?** Classes for new students begin in the fall of each year.
8. **How much will it cost to live in Hilo?** You should budget approximately \$30,000.00 per year (residents of Hawai'i) and \$39,000.00 (non-residents) for tuition, books, housing, food, and personal expenses.
9. **Is financial aid available?** Graduate assistantship positions may

be available (Contact program chair, Dr. Wiegner: wiegner@hawaii.edu). You may also contact faculty and participating agencies for financial assistance. Students interested in any type of financial aid must have submitted the FAFSA; students who are may qualify for the Graduate Opportunity Grant. Contact the UH Hilo [Financial Aid Office \(FAO\)](#) for more information.

10. **Do I need to write a Master's Thesis?** The Thesis Track requires course work and a thesis of original research. The Internship Track requires course work, an internship, and research papers.

Program Curriculum

Total Credits Required:

- Thesis Track = 30 credits (21 Core + 9 Elective)
- Internship Track = 36 credits (24 Core + 12 Elective)

Thesis Track (30 Credits)

Core Courses (21 Credits)

- CBES 600 Conservatn Biol & Environ Sci (3)
- CBES 601 CBES Field & Laboratory Method (4)
- CBES 602 Research Seminar in TCBES (1)
- CBES 603 Natural Resource Mgt Seminar (1)
- CBES 645 Soc Sci Rsch Mthds Envir Cons (3)
- CBES 677 Quantitative Ecology (3)
- CBES 700 Thesis Research (1-6) (6 Credits Required)

Elective Requirement (9 Credits)

- 9 Elective Credits of 600-level CBES courses.

Professional Internship Track (36 Credits)

Core Courses (24 Credits)

- CBES 600 Conservatn Biol & Environ Sci (3)
- CBES 601 CBES Field & Laboratory Method (4)
- CBES 602 Research Seminar in TCBES (1)
- CBES 603 Natural Resource Mgt Seminar (1)
- CBES 645 Soc Sci Rsch Mthds Envir Cons (3)
- CBES 677 Quantitative Ecology (3)
- CBES 690 Professional Internship (1)
- CBES 691 Becoming Environmental Leader (2)
- CBES 692 Proposal Writing (2)
- CBES 695 Becoming Envrnmntl Communicatr (2)
- CBES 696 Emerging Envrnmntl Professionl (2)

Elective Requirement (12 Credits)

- 12 Elective credits of 600-level CBES courses.

Notes

1. A maximum of 6 credits of 400-level courses may count towards these elective credits

Faculty

- [Julie Adrian](#), Ph.D, Pharmacy Practice
- [Norman Arancon](#), Ph.D., Agriculture
- [Jonathan Awaya](#), Ph.D., Biology
- [Celia T. Bardwell-Jones](#), Ph.D, Philosophy

- [Kathryn Besio](#), Ph.D., Anthropology
- [John H. R. Burns](#), Ph.D., Marine Science
- [Lisa Canale](#), M.S., TCBES
- [Leng Chee Chang](#), Ph.D., Pharmacy
- [Steven Colbert](#), Ph.D., Marine Science
- [Chester Dabalos](#), Ph.D., Chemistry
- [Steve Doo](#), Ph.D., Marine Science
- [Francis Dumanig](#), Ph.D., English
- [Angela Faanunu](#), Ph.D., Sustainable Tourism
- [Armando García-Ortega](#), Fisheries and Aquaculture
- [Joseph Genz](#), Ph.D., Anthropology
- [Timothy B. Grabowski](#), Ph.D, Unit Leader, Hawaii Cooperative Fishery Research Unit and Marine Science
- [Natalie Graham](#), Ph.D., Biology
- [Jenni Guillen](#), Ph.D., Biology
- [Mazen Hamad](#), Ph.D., Chemistry
- [Patrick Hart](#), Ph.D., Biology
- [Maria Haws](#), Ph.D., Aquaculture
- [Sukhwa Hong](#), Ph.D., Data Science and Business Administration
- [Kerri Inglis](#), Ph.D., History
- [Susan Jarvi](#), Ph.D., Pharmaceutical Sciences
- [Heather Kaluna](#), Ph.D., Physics and Astronomy
- [Matthew Knope](#), Ph.D., Biology
- [Christopher Knudson](#), Ph.D., Geography
- [Nicholas Krueger](#), Ph.D., Agriculture
- [Yiqing Li](#), Ph.D., Forestry
- [Steven Lundblad](#), Ph.D., Geology
- [Travis Mandel](#), Ph.D., Computer Science
- [Margary Martin](#), Ph.D., Education
- [Sarah Marusek](#), Ph.D., Political Science
- [Bruce Mathews](#), Ph.D., Soil Science & Agronomy
- [Karla McDermid Smith](#), Ph.D., Marine Science
- [Colby McNaughton](#), M.S., Education
- [Jené Michaud](#), Ph.D., Geology
- [Peter Mills](#), Ph.D., Anthropology
- [Julie Mowrer](#), Ed.D., Acting Director, Center for Community Engagement; Director, English Language Institute
- [Stan Nakanishi](#), Ph.D., Biology
- [Rebecca Ostertag](#), Ph.D., Biology
- [Adam Pack](#), Ph.D., Psychology & Biology
- [Ryan Perroy](#), Ph.D., Geography
- [Michael "Mike" Peterson](#), Ph.D., Computer Science
- [Matthew Platz](#), Ph.D., Organic Chemistry, Photochemistry
- [Jonathan Price](#), Ph.D., Geography
- [Shawon Rahman](#), Ph.D., Computer Science
- [Michelle Shuey](#), Ph.D., Geography
- [Shihwu Sung](#), Ph.D., Applied Engineering
- [Marianne Takamiya](#), Ph.D., Physics and Astronomy
- [Li Tao](#), Ph.D., Biology
- [Jason Turner](#), Ph.D., Marine Science
- [Lillian Tuttle Raz](#), Ph.D., Marine Science
- [Grady Weyenberg](#), Ph.D., Mathematics
- [Tracy Wiegner](#), Ph.D., Marine Science

Affiliate and Adjunct Faculty

These faculty serve on graduate committees, occasionally teach graduate courses, seminars or workshops, and can co-chair graduate committees with a UH Hilo faculty members. For an updated list, see the [TCBES website](#).

Graduate Courses

- Education and Teaching:
 - Education (ED) Post-Baccalaureate Courses
- Heritage Management:
 - Anthropology (ANTH) Post-Baccalaureate Courses
- Ka Haka 'Ula O Ke'elikōlani:
 - Hawaiian Language (HAW) Post-Baccalaureate Courses
 - Hawaiian Studies (HWST) Post-Baccalaureate Courses
 - Ke'elikōlani Education (KED) Post-Baccalaureate Courses
 - Ke'elikōlani Hawaiian Language (KHAW) Post-Baccalaureate Courses
 - Ke'elikōlani Hawaiian Studies (KHWS) Post-Baccalaureate Courses
 - Ke'elikōlani Indigenous Language (KLAN) Post-Baccalaureate Courses
 - Ke'elikōlani Indigenous Studies (KIND) Post-Baccalaureate Courses
 - Ke'elikōlani Linguistics (KLIN) Post-Baccalaureate Courses
- Nursing:
 - Nursing (NURS) Post-Baccalaureate Courses
- Pharmacy:
 - Pharmacy (PHAR) Post-Baccalaureate Courses
 - Pharmacy Practice (PHPP) Post-Baccalaureate Courses
 - Pharmaceutical Science (PHPS) Post-Baccalaureate Courses
- Psychology:
 - Psychology (PSY) Post-Baccalaureate Courses
- Tropical Conservation Biology & Environmental Science:
 - Tropical Conservation Biology & Environmental Science (CBES) Post-Baccalaureate Courses

How to read the course descriptions

Courses are described using the following format:

①CRS ②NUM③Title④(cr.)⑤(contact hrs) ⑥Full course description.
⑦Pre: pre-requisites. ⑧(Same as X-List) ⑨(Attributes: ATTR)

1. Course subject
2. Course number
3. Course title
4. Number of semester hours (credits)
5. Contact hours type(s) if non-lecture
6. Full description of the course.
7. (if applicable) Prerequisites, co-requisites, recommended preparation or other requirements
8. (if applicable) Cross-listed courses (equivalent courses offered through another subject heading)
9. (if applicable) [General Education](#) Attributes

Special notations used for credits are as follows:

- (1-3), for example = the number of semester hours, in this example, may be 1, 2, or 3, as determined by the instructor at the time of offering.
- (Arr.) = the number of semester hours is arranged by the instructor.

Certain number endings are reserved for particular types of courses:

- "94" courses are Special Topics Courses.

- "95" courses are Seminars.
- "96" courses are Internship Courses.
- "97" and "98" courses are Experimental Courses offered only for one year on that basis ("97" is usually offered in the Fall and "98" in the Spring).
- "99" courses are Research and Directed Studies Courses.

Additional Courses

Also see the list of [undergraduate courses](#).

Anthropology (ANTH) Graduate Courses

College of Arts and Sciences (CAS)

ANTH 500 Masters Plan Studies (1) Used for continuous enrollment purposes. Does not count toward fulfillment of degree requirements. Pre: Master's or Doctoral candidacy and instructor's consent.

ANTH 600 Thesis Design, Method, Theory (3) Seminar on the mechanics of completing a thesis. Theoretical and applied frameworks of heritage management, essential components of a theoretically founded and searchable research questions, community goals, standards for writing a thesis.

ANTH 601 Ethics of Heritage Management (3) Ethical issues raised by archaeological research, data curation and preservation, and public visibility. Global review of laws and ethical codes related to the practice of heritage management as an academic discipline, colonialism and nationalism, looting and the art market, material culture, public engagement and community based research, identity and the world system, and issues of group representation in popular media.

ANTH 602 Historic Preservation Laws (3) Paired with ANTH 389 (Cultural Resource Management). Major issues of Heritage Management legislation and the structure of federal and state programs. We'll review some of recent court cases in the U.S. and Pacific Nations. Civil suits over historic preservation. Graduate students will work with ANTH 389 students in the design and implementation of their community based-research.

ANTH 603 Qualitative & Quant. Methods (3) Overview of methods used to interpret anthropological fieldwork. Discussion of research design, sampling, scales of analysis, differences between qualitative analysis and quantitative analysis.

ANTH 611 Cultural Impact Assessments (3) Introduction to applied ethnographic studies in Hawai'i, including cultural impact assessments, ethnohistoric studies, regulations, ethics and politics of community-based consultation and research; research in historic-era documents, ethnographies, maps, previous archaeological studies, and texts written in the Hawaiian language.

ANTH 612 Indigenous Museum Studies (3) Paired with the undergraduate course ANTH 470 (Museology). Community museum development with a focus on indigenous perspectives of heritage and stewardship. Grant-writing, collections documentation and management, exhibit planning, and public engagement. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 613 Human Paleoecology (3) Methods and theories pertaining to understanding ancient human interactions with ecosystems, including effects of human colonization on island environments, species introductions and extinctions, geomorphological change and studies of

other anthropogenic processes. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 614 Submerged Cultural Resources (3) Overview of conservation and management issues related to submerged cultural resources with specific attention given to the Abandoned Shipwrecks Act, Admiralty Law, and other regulatory factors pertaining to the management of submerged resources in the Hawaiian Archipelago and the Pacific in general. An overview of methodological issues and ongoing submerged resource issues are discussed. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 623 Archaeology of Oceania (3) Archaeological overview of cultures of the Pacific both before and after Western contact with an emphasis on research being conducted as a result of regional heritage management programs. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 624 Archaeology of Hawai'i (3) History, theory, and practice of archaeology in the Hawaiian Islands. Development of the discipline, including ethics and politics, and contemporary Kānaka Maoli concerns. Theoretical topics include the emergence of social complexity, political economy, monumentality, craft production, agriculture and gender relations, and archaeoastronomy. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 625 Pacific Heritage Management (3) Overview to indigenous heritage management in the Pacific. International conventions and world heritage sites, national historic preservation law, community-based cultural revival projects, and collaborative research and preservation. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 631 Oral History Research (3) Ethics of applied ethnographic and participatory research, interview protocols, methods of listening, observing and recording, and approaches to interpretive analysis. Methods of interviewing and recording, including the analysis of recorded transcripts while addressing the broader issues that surround oral history and applied ethnographic research, including the epistemological underpinnings of qualitative methods. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 632 Paleobotanical Methods (3) The identification and analysis of plant remains, particularly in relationship to paleoethnobotany in the Pacific Islands. Palynology, phytolith analysis, starch grain identification, wood charcoal identification. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 633 Material Conservation (3) Conservation issues that affect the long-term curation of cultural material. Preservation methods related to paper, textiles, bark cloth, waterlogged objects, ferrous metals, and an assortment of other materials. Special emphasis is placed on working with, and providing stewardship for indigenous cultural materials. Pre: ANTH 600, ANTH 601, ANTH 602, ANTH 612.

ANTH 634 Lithic Analysis (3) Analytical methods applied to stone artifacts (lithics) from cultural sites and museum collections. History of lithic analyses in archaeology; current analytical techniques; tool production technologies; use-wear. Course content is intended to be applied to thesis projects; students work with undergraduates in ANTH 484 (stone tools analysis). Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 635 Human Osteology (3) Analytical methods used in physical and biological anthropology. Practical skills related to physical anthropology in the context of heritage management. Emphasis on ethically grounded research in the context of indigenous heritage. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH 682 Archaeological Field Methods (3-5) (lecture/lab)

Archaeological methods including research design mapping and excavation, and laboratory methods. Normally taught as a summer session course. Credit varies depending on length of field projects (4-6 weeks, 8hrs./day). Pre: ANTH 110; ANTH 600, ANTH 601, ANTH 602.

ANTH 690 Heritage Management Internship (3) (a) Archaeology; (b) Museum Studies; (c) Burials Program; (d) Cultural Impact Assessments. Placement and experience in public, private, and/or government agencies involved in heritage management plus completion of related research projects. Pre: ANTH 600, ANTH 601, ANTH 602. May be repeated for credit.

ANTH 700 Thesis Research (1-6) Supervised research, data analyses, literature review, and writing up of an original empirical study designed to develop and demonstrate the ability to do research and competence in scholarly exposition. Students are expected to work on their thesis under the supervision of their faculty and have their work reviewed by their thesis committee. Pre: ANTH 600, ANTH 601, ANTH 602.

ANTH x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ANTH x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [ANTH undergraduate-level courses](#).

Psychology (PSY) Graduate Courses for the Master of Arts in Counseling Psychology

[College of Arts and Sciences \(CAS\)](#)

PSY 500 Master's Plan Studies (1) Used for continuous enrollment purposes. Does not count toward fulfillment of degree requirements. Pre: Master's or Doctoral candidacy and instructor's consent.

PSY 601 Applied Multivariate Statistic (4) (other) Advanced statistical techniques used in psychological research and assessment. Strategies of multivariate data screening, transformation, analysis, and interpretation. Computerized statistical packages designed for multivariate analyses.

PSY 602 Research Meth & Prgm Evaluatn (4) (lecture/lab) Basic research methodology including quantitative, qualitative, action research, and context-based research. Theoretical knowledge and practical experience in program design and evaluation. Strong emphasis will be given to the importance of research and program evaluation and the opportunities and difficulties encountered when conducting these in the counseling profession. Pre: PSY 601.

PSY 603 Psychological Assessment (4) Principles of psychological assessment. Historical perspective on psychological assessment. Assessment methods. Scales used in psychological assessment: assessment of personality, abilities, achievement, interests, and values. Assessment of environment. Quality of assessment. Assessment design and implementation. Interpretation of the assessment results. Cross-

cultural aspects of assessment. Legal and ethical issues. Hands-on training to effectively utilize various assessment tools and write comprehensive assessment reports. Pre: PSY 601.

PSY 604 Profssnl Identity, Ethics (3) Ethical issues in counseling and psychological research. Ethical decision making, confidentiality, and ethical obligations. Research ethics and psychologists in the legal system. Ethical standards and guidelines.

PSY 605 Intro to the Master's Thesis (1) This course is intended to introduce students in the MA in Counseling Psychology program to the Master's Thesis. Students will learn the steps of the thesis process, and determine if the thesis is an appropriate fit for their own career and learning goals.

PSY 611 Lifespan Human Development (3) Psychological, social, and physical development over the life span. Interaction among genetic make-up, human activity, and context in the process of development. Stages and mechanisms of development. Normative development and deviations from the norm. Theories of development. Research on developmental processes in various domains. Cross-cultural perspectives on human development. Current research issues.

PSY 612 Career Development (3) Work and work-related behavior over the life span. Relationships between life style and career development. Theories of vocational development. Career development of women and minorities. Occupational information and decision making. Impact of changing technology and job market. Application to career counseling with diverse populations.

PSY 613 Psychopathology over Lifespan (3) Abnormal development across the lifespan. DSM classification of disorders and methods of appraisal. Etiology, diagnosis and treatment of child, adult, and geriatric disorders.

PSY 620 Counseling Theories (3) A pre-practicum course designed to help students gain an in-depth understanding of various counseling theories. Through readings, discussions, in-class exercises and homework assignments, students will learn the theories.

PSY 622 Group Work & Counseling (3) Group purpose, type, development, dynamics; leadership and diversity; group work and counseling theories, methods and skills; evaluation of group work and counseling; application of group work and counseling in a family, school and workplace settings. Students participate in an experiential learning group over the course of the semester.

PSY 623 Social & Cultural Foundations (3) Interaction between society and the individual. Socio-economic status, ethnicity and culture as determinants of behavior. Characteristics of multicultural and diverse societies and their effects on individual and group behavior.

PSY 624 Counseling Skills (3) A pre-practicum course designed to help students develop effective counseling skills. Through readings, discussions, in-class exercises and homework assignments, students will learn therapeutic skills.

PSY 640 Practicum Supervision (3) (other) Supervision course for a mental health counseling practicum experience in a clinical setting, including 100 hours of supervised client contact. To be taken concurrently with PSY 640F. Repeatable if different field placement. Pre: PSY 602, 603 and consent of instructor.

PSY 640F Practicum Fieldwork (3) (other) Fieldwork course for a mental health counseling practicum experience in a clinical setting,

including a minimum of 100 supervised client contact hours and 100 indirect hours. To be taken concurrently with PSY 640. Pre: PSY 602, 603 and consent of instructor. Must be taken Credit/No-Credit.

PSY 651 Family Therapy (3) Introduction to theoretical approaches used by family therapists to improve family functioning and communication. Students will learn about family structure and process, and will develop skills to engage, assess, and intervene with families and couples in multicultural contexts.

PSY 656 Child Maltreatment (3) An overview of child maltreatment, including abuse and neglect. Topics include the incidence and prevalence of child maltreatment; scientific theories and findings about the causes and consequences of maltreatment; forensic and clinical assessment; mandated reporting requirements; other legal issues; and psychosocial interventions for maltreated children and their families. This course is dual listed with PSY 471.

PSY 657 Psychopharmacology (3) This course will offer a discussion of psychopathology from a biological perspective including the neurochemical, neuroanatomical, and genetic causes of psychological disease. Emphasis will be placed on the pharmacotherapeutic treatment of psychopathology. Indications, contraindications, effects, and side effects of commonly prescribed psychopharmacological medications will be discussed.

PSY 659 Internship Supervision (3) (other) Supervision course for a mental health counseling internship experience in a clinical setting, including 200 hours of supervised client contact. To be taken concurrently with PSY 659F. Repeatable if different field placement. Pre: PSY 640, PSY 640F, and instructor's consent. (Attributes: ALEX)

PSY 659F Internship Fieldwork (6) (other) Fieldwork course for a mental health counseling internship experience in a clinical setting including a minimum of 200 supervised client contact hours and 200 indirect hours. To be taken concurrently with PSY 659. Pre: PSY 640, PSY 640F, and consent of instructor. To be taken as Credit/No Credit.

PSY 661 Substance Use Disorders (3) The course will cover the epidemiology and etiology for substance use disorders.

PSY 662 Substance Abuse Treatment (3) This course provides theoretical and experiential training in prevention, intervention, treatment, and aftercare approaches applicable to a diverse substance use disorder population.

PSY 693 Cog Behavior Therapy Adult (3) No prerequisites, corerequisites, crosslisting, special grading options. Not repeatable for credit. History, theory, research, and practice of Cognitive Behavior Therapy applied to adults mental disorders and symptoms. Theory and Treatment applications of Cognitive Behavior Therapy for anxiety and mood disorders, stress disorders, couples issues, substance abuse, and personality disorders. Discussions and Practice of the third wave behavior therapy including Acceptance and Commitment Therapy and Mindfulness Based Stress Reduction.

PSY 695 Youth Evidence-Based Practices (3) Advanced skills course on evidence-based practices (EBPs) for children, adolescents, and emerging adults. Covers empirical foundation for EBPs, measurement of treatment outcomes, clinical decision-making models, and application of specific EBPs. Pre-requisite: PSY 624 or instructor permission.

PSY 700 Thesis Research (1-6) Supervised research, data analyses, literature review, and writing up of an original empirical study designed to develop and demonstrate the ability to do research and competence

in scholarly exposition. Students are expected to work on their thesis under the supervision of their faculty and have their work reviewed by their thesis committee.

PSY x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PSY x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [PSY undergraduate-level courses](#).

Education (ED) Graduate Courses

College of Arts and Sciences (CAS)

ED 500 Master's Plan Studies (1) (other) Used for continuous enrollment purposes. Must be taken as CR/NC. Does not count toward fulfillment of degree requirements. Pre: Master's or Doctoral candidacy and instructor's consent.

ED 600 Ed Of Ethnic Groups in Hawaii (3) psychological learning characteristics, heritage, identity Teacher leader focused course. Survey of social- problems of Hawai'i ethnic groups, study of prejudice and inter-ethnic hostilities as related to education and teaching. Includes improving outreach and collaboration with families and community.

ED 602 Technology in Education (3) utilization of instructional materials for systematic Teacher leader focused course. Selection, evaluation and achievement of curriculum goals; investigation of innovative and students. Pre: acceptance into the M.Ed. program or Promoting/facilitating improvements in learning for teachers technological advances for use in teaching and training. consent of instructor.

ED 608A Action Research I (3) Systematic study of the purposes of educational research, evaluation and use of research, and introduction of research design principles with emphasis on classroom applications. Pre: acceptance into the M.Ed. program or consent of instructor.

ED 608B Action Research II (3) Advanced academic study and writing processes for analyzing and evaluating current educational research articles. A synthesis and application of research skills which culminates in an original research proposal. Pre: ED 608A or instructor's consent.

ED 608C Action Research III (3) Principles of research methodology and analysis as applied to field research. Pre: ED 608A and B or consent of instructor.

ED 610 Foundations Of Education (3) history of education. Historical and contemporary Teacher leader focused course. Social and intellectual relationships between schools and society. Foundations of the major philosophies of education. Contemporary educational theory and practice as related to major historical, philosophical and social factors in American profession. Pre: acceptance into the M.ED. program or culture. Includes advocating for student learning and the instructor's consent.

ED 611 Adv Educ Psychology (3) Foundations of educational psychology through the vehicle of an exploratory study. Inquiry approach stresses learning theory, measurement techniques, and research skills in education. Pre: acceptance into the M.Ed. program or instructor's consent.

ED 612 Literature Review in Education (3) Advanced academic study and writing processes for analyzing and evaluating current educational research articles, literature reviews and graduate student publications. Development of scholarly educational research skills with a focus in content area discipline. Investigation of theoretical and methodological issues of research. Pre: acceptance into the M.Ed. program or instructor's consent.

ED 616 Assess & Evaluation in Ed (3) Teacher leader focused course. systematic study of the theory of measurement, assessment and evaluation in educational settings. Promotes the use of assessments for classroom and school improvements. Pre: acceptance into the M.Ed. program or consent of instructor

ED 620 Indiv Differences: Learner (3) conceptual framework of inclusive education which consists Teacher leader focused course. Systematic study of the of special education, gifted and talented education and compensatory programs. Emphasis will be placed upon individual student characteristics and strategies for Pre: acceptance into the M.Ed. program or consent of development and building strong home/school connections. effective instruction. Focuses on continuous professional instructor

ED 622 School Curriculum (3) of curriculum. Explanation of contemporary curricular issues Teacher leader focused course. Development and improvement which impact teaching and learning in the classroom. Emphasis on school reform and renewal. Pre: acceptance into the M.Ed. program or instructor's consent

ED 625 Seminar in Teaching Fld (3) (other) research, and problems of implementation in Teacher leader focused course. Culminating study in trends, Leadership program. Pre: acceptance into the M.Ed. Program interdisciplinary teaching. Capstone course for Teacher or instructor's consent

ED 635 Adv Instructional Strategies (3) Teacher leader focused course. A critical examination of newest trends in instruction. Bridges the gap between academic research and classroom implementation. Pre: acceptance into the M.Ed. program or instructor's consent.

ED 640 Learner Development (2) Introduction to theories of learner development, including cognitive, linguistic, emotional, personality, and moral/ prosocial development of students (grades K-12). Exploration of developmentally appropriate and challenging learning experiences. Pre: Admission to MAT program.

ED 641 Learning Differences (3) Introduction to legislation for students with disabilities. An overview of areas of exceptionality, the basic principles and practices of inclusive instruction, and how to address the special needs of diverse learners. Pre: Admission to the MAT program and ED 640.

ED 642 Learning Differences II (2) Application of inclusive instruction that acknowledges the influence of individual experiences, talents and prior learning, as well as language, culture, family and community values on student learning. Pre: Admission to the MAT program.

ED 643 Learning Environments I (1) Introduction to theory and practice of classroom management at the elementary and secondary

school level. Exploration of student motivation and communication techniques as related to the establishment of a positive learning environment. Pre: Admission to the Master of Arts in Teaching program. Co-req: ED 640, 650, 660, and 670.

ED 644 Learning Environments II (1) Introduction to theory and practice of classroom management at the elementary and secondary school levels. Exploration of student motivation and effective communication techniques as related to the establishment of a positive and caring learning environment. Pre: Admission to the MAT program and ED 643.

ED 645 Learning Environments III (2) Exploration of student behavior and related interventions to promote caring and effective classroom environments. Application of responsible management of student learning. Pre: Admission to the MAT program and ED 644.

ED 650 Teaching in Hawaii's Schools (1) Introduction to culture-based instructional practice, including overview of Na Hopena A'o, to integrate Hawaiian history, language, and culture in effective planning, content knowledge, and assessment of student learning experiences. Pre: Admission to the Masters of Teaching program. Co-req: ED 640, 643, 660, and 670

ED 651 Elem Instructional Practice (2) Introduction to a variety of instructional strategies to support and expand student learning outcomes. Exploration of instructional planning based on knowledge of content areas, cross-disciplinary skills, learners, the community and pedagogy toward elementary student attainment of rigorous learning goals. Required for elementary candidates. Pre: Admission to the MAT program.

ED 652 Elem LA/SS Pedagogy (2) Exploration of the central concepts, tools of inquiry, and multicultural perspectives related to the study of Language Arts and Social Studies. Development of learning experiences that promote learner access and understanding in these disciplines in the elementary classroom. Required for elementary candidates. Pre: Admission to the MAT program.

ED 653 Elem MT/SC Pedagogy (2) Exploration of the central concepts, tools of inquiry, and differing perspectives related to the study of Math and Science. Development of learning experiences that promote learner access and understanding of these disciplines in the elementary classroom. Required for elementary candidates. Pre: Admission to the MAT program.

ED 654 Tech Instruction & Assessment (2) Introduction to the application of educational multimedia technology in 21st century teaching and learning. Development of relevant learning experiences and authentic assessments incorporating contemporary tools and resources to maximize content learning in varied contexts. Required for both elementary and secondary candidates. Pre: Admission to the MAT program.

ED 655 Sec Instructional Practice (2) Introduction to a variety of instructional strategies to support and expand student learning outcomes. Exploration of instructional planning based on knowledge of content areas, cross-disciplinary skills, learners, the community and pedagogy toward secondary student attainment of rigorous learning goals. Required for secondary candidates. Pre: Admission to the MAT program.

ED 656 Sec LA/SS Pedagogy (2) Exploration of the central concepts, tools of inquiry, and multicultural perspectives related to the study of Language Arts and Social Studies. Development of learning experiences

that promote learner access and understanding of these disciplines in the secondary classroom. Open to secondary candidates. Pre: Admission to the MAT program.

ED 657 Sec MT/SC Pedagogy (2) Exploration of the central concepts, tools of inquiry, and differing perspectives related to the study of Math and Science. Development of learning experiences that promote learner access and understanding of these disciplines in the secondary classroom. Open to secondary candidates. Pre: Admission to the MAT program.

ED 658 Sec Content Literacy (2) Exploration of the study of literacy processes and strategies for use with 7-12 students within multiple content areas. Required for secondary candidates. Pre: Admission to the MAT program.

ED 659 Professional Practice (3) Demonstration of ongoing use of evidence for continual evaluation of practice particularly as related to impact on student learning. Documentation of acquired dispositions and skills of critical reflection that support life-long professional meaning. Required for elementary and secondary candidates. Pre: Admission to the MAT program.

ED 660 Professional Responsibility I (1) Overview of professional licensure standards and professional attributes. Professional development through field experiences in local schools. Pre: Admission to the MAT program.

ED 661 Professional Responsibility II (1) Professional development through field experiences in local schools. Critical reflection on classroom instruction and student engagement. Pre: Admission to the MAT program and ED 660.

ED 662 Prof Responsibility III (1) Professional development through field experiences in local schools. Preparation to meet licensure and employment requirements. Pre: Admission to the MAT program and ED 661.

ED 670 Field Experience I (1) Practical application of theories of learner development, learning environments, and instructional planning in local schools. Introduction to schools as learning communities. Pre: Admission to the Master of Arts in Teaching program. Co-req: ED 640, 643, 650, 660.

ED 671 MAT Field Experience II (2) Practical application of theories and teaching methods and strategies in local schools. Supervised observation and teaching with emphasis on lessons and unit planning and instruction. Pre: Admission to the MAT program and ED 670.

ED 672 Clinical Practicum (3) Supervised student teaching and professional development experiences in local schools. Supervised observation and teaching with an emphasis on advanced unit and lesson planning and instruction. Pre: Admission to the MAT program and ED 671.

ED 680 Teacher as Researcher I (3) Introduction to teacher research as a basis for demonstrating impact on student learning. Exploration of effective instructional practices and assessments, IRB approval, and research study elements, including critical analysis of relevant literature and methodology. Pre: Completion of Phase I of the MAT program.

ED 681 Teacher as Researcher II (3) Further exploration of teacher research, resulting in an original classroom-based action research project and presentation of findings. Critical reflection on instructional practice based on research findings. Pre: Completion of Phase I of the MAT

program and ED 680.

ED x94 Special Topics in Subject Matter (Arr.) (IO) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

ED x99 Directed Studies (Arr.) (IO) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [ED undergraduate-level courses](#).

Hawaiian Language (HAW) Graduate Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

HAW 500 Master's Plan Studies (1) (other) Used for continuous enrollment purposes. Does not count toward fulfillment of degree requirements. Pre: Master's or Doctoral candidacy and instructor's consent.

HAW 630 Research Methods in Hawn Lang (3) Seminar in which students explore and choose thesis topics.

HAW 690 Study in Hawn Spking Community (3) Off-campus field work experience. Pre: HAW 453, 454, and 631.

HAW 700 Thesis Research (1-6) (other) Research and writing of thesis. Pre: HAW 630

HAW x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

HAW x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [HAW undergraduate-level courses](#).

Hawaiian Studies (HWST) Graduate

Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

HWST 661 Advanced Hawn Music (3) Examination of indigenous and foreign forms found in acculturated Hawaiian music. Pre: Admission to MA program in Hawaiian Language and Literature. Recommended: KHWS 462, 463.

HWST 690 Study in Overseas Ind Lg Comm (3) Individual off-campus field work experience in an overseas endangered indigenous language community. Participant-observation and interviewing to learn about endangered status of the language and ongoing revitalization work. Comparison to Hawaiian as an endangered language.

HWST x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

HWST x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [HWST undergraduate-level courses](#).

Ke'elikōlani Education (KED) Graduate Courses

[Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language \(KHUOK\)](#)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KED 550 Coop Tchg Sem Maui Ola (2) (other) Indigenous teacher education issues for providing effective professional leadership for new teachers. Content focuses on teacher development and support strategies, assessment of performance, and conducting effective conferences for the student teacher. Must be taken CR/NC. Conducted in Hawaiian. Pre: teaching license with a minimum of one year Hawaiian language immersion, Hawaiian Studies, or Hawaiian language teaching experience; minimum of three years college-level Hawaiian language course work; and permission from the College.

KED 554 Maui Ola: Learning & Teaching (4) A systematic approach

to develop, implement and assess culture-based learning and teaching for the maui ola environment. Content includes understanding of the natural learning cycle; lesson design and delivery; application, alignment, infusion, and assessment of standards; and curriculum cohesiveness. Conducted in Hawaiian.

KED 620 Fdns Hawn & Indig Medium Ed (3) Goals of Hawaiian and Indigenous medium education and their cultural, philosophical, historical and legal bases. Basic tools for planning, developing, delivering and evaluating instruction of Hawaiian and Indigenous-speaking children, including techniques for management and age-appropriate development from a Hawaiian and Indigenous cultural base. (A) Hawaiian, (E) Other Language Pre: Permission from the College.

KED 621 Lng Arts Hwn & Indig Medium Ed (2) Literacy in Hawaiian and Indigenous language and associated comprehension and speaking skills. Teaching other languages, including English, to Hawaiian and Indigenous language-literate students. Use and teaching of oral and written literature in dramatized presentations. (A) Hawaiian (E) Other Language Pre: Permission from the College.

KED 623 Soc Stud Hwn & Indig Medium Ed (2) Major global and local social processes that affect the lives of Hawaiian & Indigenous language-speaking children and their families. Integration of social studies and practical arts with a Hawaiian & Indigenous historical and cultural perspective. (A) Hawaiian, (E) Other Languages Pre: Permission from the College.

KED 625 Phys Ed Hwn & Indig Medium Ed (1) Group and individual expression to convey thoughts and emotions through various media including music, fine arts, dance, fitness and computer technology. Understanding and appreciation of such expressions and their integrations into Hawaiian & Indigenous tradition. (A) Hawaiian, (E) Other Languages. Pre: Permission from the College.

KED 626 Science Hawn & Indig Medium Ed (2) Scientific concepts within a Hawaiian & Indigenous cultural and environmental framework. Techniques for teaching content, problem-solving, and critical thinking to Hawaiian & Indigenous language speaking children. (A) Hawaiian (E) Other Languages Pre: Permission from the College.

KED 627 Math in Hawn & Indig Medium Ed (2) Mathematical concepts within a Hawaiian and Indigenous cultural and environmental framework. Techniques for teaching content, problem-solving and critical thinking to Hawaiian and Indigenous-speaking children. (A) Hawaiian, (E) Other Language. Pre: Permission from the College

KED 628 Arts in Hawn & Indig Medium Ed (1) Group and individual expression to convey thoughts and emotions through various media including music, fine arts and dance. Understanding and appreciation of such expressions and their integration in Hawaiian and Indigenous tradition. (A) Hawaiian, (E) Other Language. Pre: Permission from the College.

KED 630 Res Meth in Indigenous Lang (3) (other) Seminar in which students explore and choose a thesis topic or applied project topic.

KED 641 Hawn & Indig Medium Fld Exp I (9) (other) Practical experience and application of teaching methods and strategies in content areas in Hawaiian & Indigenous medium schools. Must be taken CR/NC. (A) Hawaiian (E) Other Languages Pre: KED 620, 621, 623, 625, 626, 627, 628; concurrent enrollment in KED 642A/E and permission from the College.

KED 642 Hawn & Indig Med Fld Exp I Sem (3) (other) Problems in

application of theory in the delivery of instruction in Hawaiian and Indigenous medium classrooms. The interface between Hawaiian and Indigenous medium and English medium classrooms of an individual school. Must be taken CR/NC. (A) Hawaiian (E) Other Languages. Pre: KED 620, 621, 623, 625, 626, 627, 628; concurrent registration in KED 641 and permission from the College.

KED 643 Hawn & Indig Medium Fld Exp II (9) (other) Supervised teaching in Hawaiian and Indigenous language medium schools. Must be taken CR/NC. (A)Hawaiian, (E) Other Languages. Pre: KED 620, 621, 623, 625, 626, 627, 628; concurrent registration in KED 644A/E and permission from the College.

KED 644 Hwn & Indig Med Fld Exp II Sem (3) (other) Issues in the delivery, administration, and support of Hawaiian and Indigenous medium education. Must be taken CR/NC. (A) Hawaiian, (E) Other Languages. Pre: KED 620, 621, 623, 625, 626, 627, 628; concurrent registration in KED 643 and permission from the College.

KED 651 Coop Tch Sem Haw and Indig Ed (2) Development of professional leadership knowledge, skills, and dispositions within PK-12 Hawaiian Language/Indigenous Medium-Immersion settings. Focus on characteristics of successful maui ola teacher skills including performance-based assessments and conducting effective conferencing to guide professional development. (A) Hawaiian, (E) Other Language. Conducted in Hawaiian or Other Language. Pre: Teacher license and teaching experience in a PK-12 Hawaiian/Indigenous immersion/medium, Hawaiian Language, or Hawaiian Studies learning environment; or approval from the Graduate Program Chair.

KED 660 Indigenous Culture-based Educ (3) (other) Understanding appropriate education of indigenous peoples, through a review of practices that have been described and theories that have emerged from a variety sources.

KED 661 Curr Dev Maui Ola-based Sch (3) (other) Seminar in the development of an integrated curriculum from the earliest to the highest levels of Hawaiian language medium schooling, using international research and standards of excellence within a Hawaiian language and culture context and world view.

KED 662 Indigenous Well-being Thru Edu (3) (other) Psychological and cultural perspectives of human development and well-being of indigenous peoples. Designed to promote, nurture, explore and understand the influence of culture on the indigenous person. Of special interest to educators in schools serving indigenous students regarding cultural understandings and change in a historical and contemporary context.

KED 674 Enrich Holistic Lrng & Tching (3) Advanced level in the development, implementation, and assessment of culturally appropriate and cohesive units of instruction as a systematic approach for the Hawaiian/Indigenous medium-immersion environment. (A) Hawaiian, (E) Other Language. Conducted in Hawaiian/Indigenous language. Pre: KITE certificate; or KED 481I or KED 481H and KHAW 304 or equivalent; or approval of the Division Chair.

KED 693 Applied Rsrch in Indigenous Ed (3) (other) Seminar in which students develop projects providing direct application to an aspect of indigenous language and culture education.

KED x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for

credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KED x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KED undergraduate-level courses](#).

Ke'elikōlani Hawaiian Language (KHAW) Graduate Courses

Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KHAW 603 Grad Level Hawn Lang (3) Further development of Hawaiian language ability from the B.A. level to a level appropriate for graduate work. B.A. base reviewed with correction of any problem areas. Introduction of additional patterns, vocabulary, and styles in both oral and written form. Use of resources from late monarchy and early territorial periods. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HAW 603)

KHAW 631 History of Hawaiian Lang & Lit (3) Hawaiian language and literature since contact with Europeans. Styles of language and types of literature. Relationships between Hawaiian and other languages, especially Hawai'i Creole English. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HAW 631)

KHAW 632 Hawaiian As Second Language (3) Teaching Hawaiian to speakers of other languages, particularly Hawaiian Creole English. This includes problems faced by students in acquiring native-like Hawaiian and history of Hawaiian language teaching. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HAW 632)

KHAW 654 Advanced Hawn Grammar (3) Advanced aspects of Hawaiian grammar. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HAW 654)

KHAW 693 Thesis and Proposal Writing (3) Seminar for writing and presentation of master's thesis proposal or a section of the master's thesis. Must be taken CR/NC. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HAW 693)

KHAW 751 Ho'oikaika 'Ōlelo Hawai'i (2) Comparative analysis of the Hawaiian language spoken by native speakers to that of second language speakers of the doctoral level students. Examine areas to strengthen proficiency of second language speakers including Hawaiian language spoken by native speakers not prevalent among second language speakers and begin to normalize. Pre: Approved PhD Candidate

of the Hawaiian and Indigenous Language and Culture Revitalization Program or approval from the Graduate Program Chair.

KHAW x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KHAW x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KHAW undergraduate-level courses](#).

Ke'elikōlani Hawaiian Studies (KHWS) Graduate Courses

Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KHWS 662 Applied Hawaiian Chant (3) Applied study of the performance of various Hawaiian chant styles. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HWST 662)

KHWS 663 Traditional Hawn Literature (3) Focuses on indigenous oral and written literature forms and their relationship to folk tales. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HWST 663)

KHWS 664 European Influenced Hawn Lit (3) Hawaiian literature developed on European models such as biographies, late nineteenth-century histories and journals. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HWST 664)

KHWS 665 Ethnological & Hist Narratives (3) Descriptions written in Hawaiian regarding traditional Hawaiian culture and history. Cultural topics range from religion and court life to farming and fishing. Conducted in Hawaiian. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair. (Previously offered as HWST 665)

KHWS 741 Classical Hwn Ed: Gen Hwn Cult (3) Further develops one's knowledge-base of classical Hawaiian literature through the study of aspects of traditional Hawaiian educational customs and practices. Pre: Approved PhD Candidate of the Hawaiian and Indigenous Language and Culture Revitalization Program or approval from the Graduate Program Chair.

KHWS 742 Ka Ho'omamau 'Ōlelo A Mo'omeheu (3) Study of the

relationships between society, history, politics, culture, and the economy to further the language and culture revitalization efforts in establishing it as the primary language and culture of the community while overcoming various barriers. Pre: Approved PhD Candidate of the Hawaiian and Indigenous Language and Culture Revitalization Program or approval from the Graduate Program Chair.

KHAW x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KHAW x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KHWS undergraduate-level courses](#).

Ke'elikōlani Indigenous Language (KLAN) Graduate Courses

Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KLAN 641 Advanced Language Structures I (3) First semester advanced level study of an indigenous or lesser studied language focusing on structure. Pre: KIND 641 or concurrent enrollment, or approval from the Graduate Program Chair.

KLAN 642 Advanced Lang Structures II (3) Second semester advanced level study of an indigenous or lesser studied language focusing on structure. Pre: KIND 641 and KLAN 641, and KIND 642, which may be taken concurrently; or approval from the Graduate Program Chair.

KLAN 701 Semantic/Pragmatic Indig Lang (1) Seminar study of meaning and connotations as conveyed by the morphemes and vocabulary of a language, by its idioms and set metaphors and by other features. Focus on the indigenous languages being studied by the enrolled students.

KLAN 702 Stylistics/Domains Indig Lang (1) Seminar study of identity, levels of formality, and art as conveyed in languages. Informal peer group language to highly formal language. Highly traditional usages to the most contemporary of usages. Focus on the indigenous languages being studied by enrolled students.

KLAN 703 Semantics-Prag of Indig Langua (3) Meaning and connotations as conveyed in a specific indigenous language through morphemes and vocabulary, idioms and set metaphors, and through other features. Alpha varies according to the language, e.g. Hawaiian, Blackfoot, Rapanui. May be repeated if content is different. Pre: KLAN

701.

KLAN 704 Stylistics-Domain of Indig Lan (3) Identity, levels of formality and art as conveyed in a specific indigenous language from the informal peer group language to highly formal artistic usages and from very traditional rooted situations to the most contemporary of usages. Alpha varies according to the language, e.g., Hawaiian, Blackfoot, Rapanui. May be repeated if the content is different. Pre: KLAN 702.

KLAN x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KLAN x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KLAN undergraduate-level courses](#).

Ke'elikōlani Indigenous Studies (KIND) Graduate Courses

Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KIND 500 Doctoral Plan Studies (1) Used for continuous enrollment purposes. Does not count toward fulfillment of degree requirements. Pre: Master's or Doctoral candidacy and instructor's consent.

KIND 601 Language Maintenance and Shift (3) Introduction to the study of social, historical, political, cultural and economic factors leading to language shift. Pre: Approved Candidate of the MA in Indigenous Language and Culture Education Program; or the Graduate Certificate in Indigenous Language and Culture Revitalization program; or approval from the Graduate Program Chair.

KIND 602 Meth Res Indig Lang Comm Bldg (3) Detailed overview of the various challenges to language and culture revitalization and approaches to solving those challenges, including issues of leadership, goal setting prioritizing and resourcing. Pre: Approved Candidate of the MA in Indigenous Language and Culture Education Program; or the Graduate Certificate in Indigenous Language and Culture Revitalization program; or approval from the Graduate Program Chair.

KIND 641 Advanced Language in Culture I (3) First semester advanced level study of an indigenous language focusing on the use of the language in its cultural context. Pre: KLAN 641 or concurrent enrollment; or approval from the Graduate Program Chair.

KIND 642 Advanced Lang in Culture II (3) Second semester advanced level study of an indigenous language focusing on the use of the language in its cultural context. Pre: KIND 641 and KLAN 641, and

KLAN 642, which may be taken concurrently; or approval from the Graduate Program Chair.

KIND 690 Fld Stdy Indigenous Community (3) Off-campus field work experience in an indigenous language other than Hawaiian. Pre: Graduate status in Ka Haka 'Ula O Ke'elikōlani and permission of the instructor. See graduate program chair for overseas minority language study option as substitute for this course.

KIND 700 Master's Thesis Research (1-6) (other) Research and writing of thesis. Pre: Permission of college and instructor.

KIND 730 Rsch Meth Hwn Ind Lang Culture (3) (other) Seminar in which students explore and choose a dissertation topic.

KIND 731 Indig/Minor Autochthonous Lang (3) Cultural, social, political, economic, and educational uses of indigenous and minority autochthonous languages in society. Historical approach from period of relative isolation and autonomy to contemporary times where minority status is highly evident. Perspectives include those internal to the language community, surrounding dominant community, and supporters of indigenous and minority rights. Pre: Approved PhD Candidate of the Hawaiian and Indigenous Language and Culture Revitalization Program or approval from the Graduate Program Chair.

KIND 732 Lang Plcy/Pract Endanger/Indig (3) Study, understand, and consider critical areas of linguistics such as language policy and documentary linguistics that purport to aid in the work of language revitalization. Pre: Approved PhD Candidate of the Hawaiian and Indigenous Language and Culture Revitalization Program or approval from the Graduate Program Chair.

KIND 733 Hawn and Indig Language Med Ed (3) Observe full range of programming of the Hawaiian language medium education operations of the P-20 Ku'ikahi 'Ōlelo Hawai'i consortium including its administration and support through Hawaiian. Research and analyze the strengths, weaknesses, history, future directions of the overall structure of the Ku'ikahi 'Ōlelo Hawai'i and Hawaiian language revitalization. Pre: Approved PhD Candidate of the Hawaiian and Indigenous Language and Culture Revitalization Program or approval from the Graduate Program Chair.

KIND 800 Doctoral Dissertation Research (1-6) (other) Research and writing of dissertation. Pre: Permission of college and instructor.

KIND x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KIND x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [KIND undergraduate-level courses](#).

Ke'elikōlani Linguistics (KLIN) Graduate Courses

Ka Haka 'Ula O Ke'elikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka 'Ula O Ke'elikōlani provides courses that also address the broader world of indigenous peoples and the use of Hawaiian as an official medium of education for the State of Hawai'i. Courses are marked with an initial K (for Ke'elikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

KLIN 601 General Ling in Indig Context (3) A broad overview of contemporary linguistics with a focus on indigenous languages. Pre: Approved Candidate of the MA in Indigenous Language and Culture Education Program; or the Graduate Certificate in Indigenous Language and Culture Revitalization program; or approval from the Graduate Program Chair.

KLIN 603 Socioling Analysis Indig Lang (3) Expansion from KLIN 601 in the study of the relationship between language and society. Topics covered include varieties of languages (e.g., standard languages, varieties/dialects/pidgins/creoles/registers/styles) and types of speech communities (e.g., bi/multilingual, diglossia) and functions of language. Focus on application to indigenous language contexts. Pre: KLIN 601 and Approved Candidate of the MA in Indigenous Language and Culture Education Program or the Graduate Certificate in Indigenous Language and Culture Revitalization program; or approval from the Graduate Program Chair.

KLIN 604 Field Study in Applied Ling I (3) Students engage in observational research in sites of language teaching and/or language revitalization efforts with a focus on minority and/or indigenous languages. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair.

KLIN 605 Field Study in Applied Ling II (3) Students participate actively in sites of language teaching and/or language revitalization efforts with a focus on minority and/or indigenous languages. Pre: Approved MA Candidate of the Indigenous Language and Culture Education Program or approval from the Graduate Program Chair.

KLIN x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

KLIN x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Nursing (NURS) Graduate Courses

College of Natural and Health Sciences (CNHS), School of Nursing

NURS 500 Masters Plan Studies (1) Used for continuous enrollment purposes. Does not count toward fulfillment of degree requirements. Pre: Master's or Doctoral candidacy and instructor's consent.

NURS 601 Social Aspects of Health (3) Complex interactions among the physical and social environment; health status; education; culture; and human capital in urban and rural communities are examined. Issues related to quality of life as the outcome of micro and macro-determinants of health, consequences of health that operate at the

individual, family, neighborhood, community, national and global levels, and the influence of sociopolitical agendas and community organizations are addressed through a multidisciplinary framework.

NURS 602 Information Systems/Technology (3) Examines emerging health information resources including: 1) the theory and conceptual base for healthcare information systems and technology; 2) design, selection, and use of current and developing health information technology applications; and 3) approaches to evaluating the effectiveness of health information systems used in health care systems, for patient care and in education.

NURS 603 Adv Clinical Pharmacology (3) Focus on the pharmacotherapeutic principles of drugs most commonly used by advanced practice nurses. Emphasis on the process of selecting appropriate agents for therapy, and monitoring adverse drug reactions or interactions with prescription, over-the-counter and alternative therapies. Emphasis on integration of pharmacy, physiology and physical assessment in developing evidence-based primary clinical management skills for patients across the lifespan with regard to their medication use. Foundations of prescriptive authority will be addressed.

NURS 604 Advanced Clin Pathophysiology (3) Advanced pathophysiological concepts and clinical manifestations of diseases necessary to support clinical decision-making of advanced practice nurses in the management of common acute and chronic diseases of adults, older adults and children are presented. Internal and external causative factors for disease expression including genetic, autoimmune, environmental, and biochemical will be addressed and rational therapies to prevent or control illness will be offered. Analysis of the interrelated effects of genes, environment, and lifestyle on patterns of disease in populations will be an integral part of developing evidence-based care. Relevant screening and diagnostic laboratory evaluation methods will be presented.

NURS 605 Advanced Health Assessment (4) (Lecture/lab) Focus of this course is on the integration and synthesis of knowledge from natural and behavioral sciences, humanities and nursing in order to conduct a comprehensive history and physical examination. Diagnostic reasoning for the purpose of clinical decision-making and problem solving will be stressed. Interview techniques will address developmental, psychosocial, cultural and occupational concerns as well as symptoms. Advanced examination skills and analysis of pertinent diagnostic data will support critical thinking and selection of accurate differential diagnoses. Faculty and preceptors facilitate laboratory and clinical experiences in a variety of settings (90 clock hours).

NURS 606 Rural Health Promotion (3) Focus is on the responsiveness of organizational health services to health needs of populations, individuals, and families in rural communities. The impact of political, ecological, economic and cultural factors on community health in rural areas will be analyzed. Utilization of evidence-based processes and collaborative leadership in designing and structuring health promotion services to address rural community needs are emphasized.

NURS 606L Rural Health Promotion Lab (3) (lab) This is a supervised advanced practice practicum focusing on health promotion and clinical management of the health concerns of adult clients as commonly encountered in diverse and rural primary care settings. Emphasis will be placed on culturally appropriate evidence-based practice, consultation, research and evaluation. Three (3) semester hours of supervised practicum hours (135 clock hours) are required.

NURS 607 Primary Care of Adults (3) Course focus is on primary care of adults addressing the evidence-based strategies for health promotion

and disease prevention. Integration and application of advanced pathophysiology and pharmacology will aid in addressing the management of common acute, episodic and chronic health problems. Transcultural and biobehavioral assessments are used in the diagnosis and evidence-based management of health problems and are integrated into patient education and evaluation of care.

NURS 607L Primary Care of Adults Lab (3) (lab) This supervised advanced practice practicum focuses on health promotion and clinical management of the health concerns of adult clients as commonly encountered in diverse and rural primary care settings. Emphasis will be placed on culturally appropriate evidence-based practice, consultation research and evaluation. Three (3) semester hours of supervised practicum hours (135 clock hours) are required.

NURS 608 Primary Care of Older Adults (3) Building on the management of acute and chronic illness of the adult, this course emphasizes special needs of the older adult. The focus on quality of life will be supported utilizing theories of aging, management of complex chronic health problems, polypharmacy, dementia and frailty. Evidence-based management plans incorporating transcultural and functional assessments are used to address issues of self-care, family care giving, surrogate decision-making and end of life care.

NURS 608L Prim. Care of Older Adults Lab (3) (lab) This supervised advanced practice practicum focuses on promotion and clinical management of the health concerns of older adult clients as commonly encountered in diverse and rural primary care settings. Emphasis will be placed on culturally appropriate evidence-based practice, consultation, research and evaluation. Three (3) semesters of supervised practicum hours (135 clock hours) are required.

NURS 609 Primary Care of Women (2) The provision of comprehensive and culturally competent primary care to women including the maturation process from menarche, through pregnancy, childbearing period and menopause is presented. Emphasis is on evidence-based health assessment, diagnosis, health education, health promotion, disease prevention, perinatal care, clinical management and evaluation of common gynecologic and obstetric health care needs of women commonly encountered in diverse and rural settings.

NURS 609L Primary Care of Women Lab (2) (lab) This supervised advanced practice practicum focuses on health promotion and clinical management of the health concerns of female clients as commonly encountered in diverse and rural primary care settings. The health and wellness, perinatal care, gynecologic aspects of care and occupational health concerns of women will be specifically addressed. Emphasis will be placed on culturally appropriate evidence-based practice, consultation, research and evaluation. Two (2) semester hours of supervised practicum hours (90 clock hours) are required.

NURS 610 Primary Care of Children (2) Using normal development and physiology as the foundation of care, evidence-based management of the health and social needs of children will be addressed. Management of acute and episodic illnesses in children commonly encountered in diverse primary care settings is emphasized. Health education, health promotion and disease prevention of children are addressed.

NURS 610L Primary Care of Children Lab (2) (lab) This supervised advanced practice practicum focuses on health promotion and wellness for infants, children and adolescents. Students will focus on clinical management of common acute and chronic health conditions encountered in diverse and rural primary care settings related to infants, children and adolescents. Emphasis will be placed on culturally

appropriate evidence-based practice, consultation, research and evaluation. Two (2) semesters hours of supervised practicum hours (90 clock hours) are required.

NURS 611 Advanced Research Methods (3) This course focuses on the systematic examination and application of the qualitative, quantitative, and outcome processes used in nursing research. The interrelationships among research theory, research ethics and evidence-based nursing practice are explored. Uses of culturally appropriate research database tools consistent with specific patients or populations are included.

NURS 612 Evidence Based Practice (3) Focus is on culturally appropriate evidence-based practice (EBP) used to produce best outcomes for diverse populations. Steps of the EBP process, implementation and evaluation of EBP, practical strategies and information systems approaches are explored. Proposal development for the practice inquiry project will be a primary objective of the course and will address issues and practices relevant to culturally diverse and rural populations.

NURS 613 Program Develop/Evaluation (3) This course builds on the synthesis of evidence-based knowledge for a specific culturally diverse clinical target population/practice. Students will identify and propose appropriate strategies for organizational/practice program development and evaluation. An innovative policy action plan for a population of interest based on an understanding of the cultural, financial, legal, and human resource needs of the health care environment is developed.

NURS 614 System-Based Leadership (3) Leadership and management concepts used to address complex microsystem and macrosystem issues within selected health organizations are explored. The role of the DNP within complex health organizations will be addressed using the interrelationships of special theoretical frameworks and models of care. Emphasis is on the application of advanced communication skills necessary to serve on collaborative and interdisciplinary teams within health care organizations.

NURS 615 Health Policy: Local to Global (4) Emphasis will be on exploration and analysis of health policy from the perspective of evidence development, analysis, and socio-economic context. The leadership role of the DNP in developing and implementing health policy is examined. Social justice, access equity, and delivery of health care services will be discussed. Opportunities are provided to participate in the political processes impacting nursing and health care policy. Includes two semester hours of a specialty focused practicum (90 clock hours).

NURS 616 Health Economics (3) Basic economic theory, market drivers and restraints, cost/ benefit analysis, and reimbursement are analyzed. Theory and application are integrated with a focus on the role of the DNP in complex healthcare organizations, the delivery of healthcare in rural settings, and the DNP as entrepreneur. Issues of equity, fairness, ethics, and efficacy in health care resource allocation and management are explored.

NURS 617 Practice Inquiry/Project (6) (lecture/other) Emphasis is on the synthesis, critique and application of evidence to support quality clinical or organizational practices in complex health care organizations. Students will implement an evidence-based clinical study or project on a topic of practice interest targeting a culturally diverse and vulnerable population, present an oral presentation of the study or project, and submit a scholarly paper from the study or project. Includes six semester hours of cognate residency.

NURS 618 EPI/Environmental Health (3) Epidemiological concepts

and quantitative research techniques used in modern epidemiology will be examined as well as the health effects on the general population associated with selected environmental exposures. The course emphasizes analytical studies, quantitative measures of association, and critical readings of current literature. Epidemiology approaches estimating the burden of disease and evaluation of primary, secondary and tertiary prevention strategies are presented.

NURS 619 Mentorship in Nursing Educ (3) Supervised practicum in instructional planning and teaching in nursing education. Students may choose between two pathways: mentorship and teaching in a didactic course or clinical practicum.

NURS 620 Contemp Health Care Ethics (3) Contemporary Health Care Ethics provides a thorough grounding in ethical principles and theories as evidenced in current healthcare issues and policies. Introduction of various frameworks for ethical decision-making and policy analysis, as well as current trends in the political, economic and legal spheres of the contemporary health care arena.

NURS 621 Practice Residency Elective (3-5) (lab) This clinical residency elective is designed for DNP students to add clinical hours after finishing required clinical coursework. The clinical residency, under the supervision of a preceptor and UHH SON faculty, emphasizes culturally appropriate evidence-based practice, consultation, research and evaluation consistent with the APRN role. Three to five (3-5) semester hours of supervised practicum hours (135-225 clock hours) will be approved. This course is repeatable up to 10 credit hours.

NURS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

NURS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [NURS undergraduate-level courses](#).

Pharmacy (PHAR) Post-Baccalaureate Courses

The Daniel K. Inouye College of Pharmacy (DKICP)

PHAR 500 Cornerstone Pharmacy and Sci (2) Fundamentals of basic sciences pertinent to the profession of pharmacy including but not limited to, review of organic chemistry functional groups, application of biochemistry and biological sciences, human anatomy/physiology, and mathematical principles and pharmacy calculations. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHAR 501 Intro Pharm Prac Exp I (1) First Introductory Pharmacy Practice Experience (IPPE) course that will introduce students to some of the common healthcare settings, increasing their exposure to career pathways, and gaining an introductory understanding of pharmacists' roles and responsibilities in practice. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 502 Intro Pharm Prac Exp II Comm (1) (other) This 4-week community pharmacy IPPE rotation occurs in the summer after completion of the first year. Students will have a Hawai'i intern pharmacist license and will complete the rotation in the State of Hawai'i, resulting in 160 IPPE hours. Pre: Enrolled in the Daniel K Inouye College of Pharmacy (Attributes: GCC, HPP)

PHAR 503 Intro Pharm Prac Exp III (1) (other) This second year-long IPPE course provides students with experiences in a clinical pharmacy setting, reinforcing various topics (i.e. therapeutics, communication, drug information) via real-life experiences with patients, healthcare professional interactions, and electronic medical records. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 504 Intro Pharm Prac Exp IV Hosp (1) (other) A 3-week hospital pharmacy IPPE rotation occurs in the summer after completion of the second year. Students will complete the rotation in the State of Hawai'i resulting in 120 IPPE hours. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 505 Intro Pharm Prac Exp V (1) (other) This third year-long IPPE course continues to provide students with direct patient care activities with increased responsibilities prior to their fourth year and will reinforce knowledge and skills learned in the didactic coursework. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 509 Intro Pharm Prac Exp Elective (1) (other) Elective rotation intended for student pharmacists who have an interest in furthering their exposure to a specific healthcare setting, increasing their exposure to career pathways, and gaining further understanding of the pharmacists' roles and responsibilities in the practice setting. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 510 Princ of Pharm Readiness I (1) (other) First in a series of six that introduces and emphasizes the skills, attitudes, and values that are essential for achieving high performance in healthcare practice and in achieving personal career success as a pharmacist. Course serves as an anchor for the co-curriculum and interprofessional education activities. Pre: Enrolled in the Daniel K Inouye College of Pharmacy (Attributes: GCC, HPP)

PHAR 511 Foundational Pharm Biochem (2) This course will present principles critical for understanding the biochemical basis for disease states and drug action. Clinical correlates and metabolic diseases will be highlighted. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 512 Foundational Pharm Immunology (2) Basic concepts of immunology will lay the groundwork for understanding immunity in a clinical context including how the immune system can be pharmacologically manipulated to improve or prevent diseases. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 513 Pharmaceutical Formulations I (2) This course introduces principles, practices and technologies applied in the preparation of pharmaceutical dosage forms and drug delivery systems. Students will integrate these principles to understand issues in the rational and selection of dosage forms and drug delivery systems. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 514 Pharmacology/Medicinal Chem I (3) Pharmacology and medicinal chemistry of medications including the pharmacy practice-relevance specific to each drug class and how these medications work in the body, with particular emphasis on mechanisms of drug action. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 515 Drug Information (2) Introduction to different types of drug literature, drug information and evidence-based medicine resources and tools, and adverse drug reactions and medication error databases which is vital to keep pharmacists knowledgeable of current advancements. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 517 Foundational Calculations (1) Fundamentals of and how to accurately perform calculations used in different types of pharmacy practice settings to assure medications are safe and effective. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 519 Therapeutic Prob Solving I (2) First course in Therapeutic Problem Solving series; Integration and application of patient-centered care that focuses on general health, wellness, and disease prevention, and appropriate self-care therapy for commonly encountered conditions in the community setting. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 520 Princ of Pharm Readiness II (1) Second course in series; Emphasis on the skills, attitudes, and values that are essential for achieving high performance in healthcare practice and in achieving personal career success as a pharmacist. Course serves as an anchor for the co-curriculum and interprofessional education activities. Pre: Enrolled in the Daniel K Inouye College of Pharmacy (Attributes: GCC, HPP)

PHAR 521 Comprehensive Clin Care I (1) (other) First course in series utilizing a case based approach to focus on application of foundational, clinical, drug information and evidence based medicine skills. Students will analyze information to determine the effects of medication therapy, identify medication-related problems, and prioritize health-related needs. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 522 Essential Pharm Skills I (2) (other) This course provides opportunities for students to apply and reinforce skills necessary in pharmacy practice and is an anchor for the Top 300 Drugs most commonly prescribed. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 523 Pharmaceutical Formulations II (2) This course continues to provide an introduction to and discussion of other pharmaceutical dosage forms and drug delivery systems such as liquid, sterile and non-sterile drug delivery systems, and emerging delivery systems. Concepts of extemporaneous aseptic and non-sterile compounding of dosage forms will be introduced. Pre: Enrolled in the Daniel K Inouye College of Pharmacy and PHAR 513.

PHAR 524 Pharmacology/Medicinal Chem II (3) Second course in a 2-course series, teaching pharmacy practice-relevant specific pharmacology and medicinal chemistry of each drug class and how these medications work in the body, with particular emphasis on mechanisms of drug action. Pre: Enrolled in the Daniel K Inouye College of Pharmacy and PHAR 514.

PHAR 525 Evidence-Based Sci & Prac I (2) Introduction to research designs/methods, pharmacoepidemiology, statistical concepts and reasoning, and their relevance and importance to the practice of pharmacy. Coursework will provide students with foundational knowledge to justify and select the proper research methods and interpret statistical results in clinical research and medical literature. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 526 Topics in Healthcare I (1) First course in series; An overview of the US healthcare delivery system, including social, organizational, and economic aspects, from the perspective of the

pharmacy profession, healthcare system, laws governing medications/devices and the cost effectiveness of drugs/devices. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 527 Foun Indiv Pharmacotherapy (1) Introduction to pharmacokinetics (PK), pharmacodynamics (PD) and pharmacogenomics (PGx) that will provide students with the tools and principles to individualize a patient's treatment by selecting an optimal dose and dosing regimen. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 528 Therapeutic Prob Solving II (2) Second course in Therapeutic Problem Solving series and a continuation of PHAR 519; Integration and application of patient-centered care that focuses on general health, wellness, and disease prevention, and appropriate self-care therapy for commonly encountered conditions in the community setting. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 529 Therapeutic Prob Solving III (2) Third course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 530 Princ of Pharm Readiness III (1) Third course in series; Emphasis on the skills, attitudes, and values that are essential for achieving high performance in healthcare practice and in achieving personal career success as a pharmacist. Course serves as an anchor for the co-curriculum and interprofessional education activities. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 531 Comprehensive Clin Care II (2) (other) Second course in the Comprehensive Clinical Care series utilizing a case-based approach to focus on application of foundational, clinical, drug information and evidence based medicine skills. Clinical patient cases increase in difficulty/complexity/variety as the student progresses through the course series. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 532 Essential Pharm Skills II (2) (other) This course is a continuation of Essential Pharmacist Skills I. Students will reinforce and apply their knowledge in drug information, calculations, law, communication and physical skills. This course is an anchor for the Top 300 Drugs most commonly prescribed. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 535 Evidence-Based Sci & Prac II (2) Introduction and application of concepts of evidence-based medicine and practice, measures of risk and benefit, and provides tools to evaluate medical literature from a variety of clinical study designs for shared decision-making in practice. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 537 Therapeutic Prob Solving IV (2) Fourth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 538 Therapeutic Prob Solving V (2) Fifth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a

comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 539 Therapeutic Prob Solving VI (2) Sixth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 540 Princ of Pharm Readiness IV (1) Fourth course in series; Emphasis on the skills, attitudes, and values that are essential for achieving high performance in healthcare practice and in achieving personal career success as a pharmacist. Course serves as an anchor for the co-curriculum and interprofessional education activities. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 541 Comprehensive Clin Care III (2) (other) Third course in the Comprehensive Clinical Care series utilizing a case-based approach to focus on application of foundational, clinical, drug information and evidence based medicine skills. Clinical patient cases increase in difficulty/complexity/variety as the student progresses through the course series. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 542 Essential Pharm Skills III (2) (other) This course is a continuation of Essential Pharmacist Skills II. Students will reinforce and apply their knowledge in drug information, calculations, law, communication and physical skills. This course is an anchor for the Top 300 Drugs most commonly prescribed. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 546 Topics in Healthcare II (3) Second course in series; Continuation of discussions related to US healthcare delivery systems, including social, organizational, and economic aspects, from the perspective of the pharmacy profession, healthcare system, laws governing medications/devices and the cost effectiveness of drugs/devices. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 547 Therapeutic Prob Solving VII (2) Seventh course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 548 Therapeutic Prob Solving VIII (2) Eighth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 549 Therapeutic Prob Solving IX (2) Ninth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 550 Princ of Pharm Readiness V (1) Fifth course in series; Emphasis on the skills, attitudes, and values that are essential for

achieving high performance in healthcare practice and in achieving personal career success as a pharmacist. Course serves as an anchor for the co-curriculum and interprofessional education activities. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 551 Comprehensive Clin Care IV (2) (other) Fourth course in series utilizing a case-based approach to focus on application of foundational, clinical, drug information and evidence based medicine skills. Clinical patient cases increase in difficulty/complexity/variety as the student progresses through the course series. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 552 Essential Pharm Skills IV (2) Please contact the department or division office for more information about this course.

PHAR 555 Pharmacy Informatics and Tech (2) Information systems and technologies that are used in healthcare, focusing on those used to prescribe, dispense, and manage medications across the continuum of care settings to deliver optimal medication- related patient care and health outcomes. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 557 Therapeutic Prob Solving X (2) Tenth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 558 Therapeutic Prob Solving XI (2) Eleventh course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 559 Therapeutic Prob Solving XII (2) Twelfth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 560 Princ of Pharm Readiness VI (1) Last course in series; Emphasis on the skills, attitudes, and values that are essential for achieving high performance in healthcare practice and in achieving personal career success as a pharmacist. Course serves as an anchor for the co-curriculum and interprofessional education activities. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 561 Comprehensive Clin Care V (2) (other) Last course in the Comprehensive Clinical Care series, utilizing a case-based approach to focus on application of foundational, clinical, drug information and evidence based medicine skills. Clinical patient cases increase in difficulty/complexity/variety as the student progresses through the course series. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 562 Essential Pharm Skills V (2) (other) Last course in the Essential Pharmacist Skills course series that allows students to reinforce and apply knowledge in drug information, calculations, law, communication and physical skills. Course is an anchor for the Top 300 Drugs most commonly prescribed. Pre: Enrolled in the Daniel K Inouye

College of Pharmacy

PHAR 566 Topics in Healthcare III (3) Last course in series; Builds upon knowledge from Topics in Healthcare I and II and has students apply related skills needed in the Advanced Pharmacy Practice Experiential (APPE) rotations. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 567 Therapeutic Prob Solving XIII (2) Thirteenth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 568 Therapeutic Prob Solving XIV (2) Fourteenth course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 569 Therapeutic Prob Solving XV (2) Last course in Therapeutic Problem Solving series focusing on pharmacotherapy related to different disease states, applying pathophysiology, pharmacology, and medicinal chemistry concepts. This holistic approach fosters the development of a comprehensive clinical understanding to prevent and manage associated disease states. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHAR 570 Certificate Project Pres (1) (other) Students will prepare, evaluate and synthesize data, and formally present their selected scholarly project based on the culmination of skills and knowledge acquired throughout the certificate program. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHAR 580 Adv Pharm Prac Exp Community (6) (other) This 6-week, advanced pharmacy practice rotation focuses on pharmacy practice in the retail/community setting and provides 240 hours of experiential learning. Pre: PHAR 505, PHAR 569, Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses and successful completion of all didactic components of the DKICP PharmD program.

PHAR 581 Adv Pharm Prac Exp Hospital (6) (other) This 6-week, advanced pharmacy practice rotation focuses on pharmacy practice in the hospital setting and provides 240 hours of experiential learning. Pre: PHAR 505, PHAR 569, Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses and successful completion of all didactic components of the DKICP PharmD program.

PHAR 582 Adv Pharm Prac Exp Ambulatory (6) (other) This 6-week, advanced pharmacy practice rotation focuses on pharmacy practice in the ambulatory care setting and provides 240 hours of experiential learning. Pre: PHAR 505, PHAR 569, Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses and successful completion of all didactic components of the DKICP PharmD program.

PHAR 583 Adv Pharm Prac Exp Acute Med (6) (other) This 6-week advanced rotation focuses on pharmacy practice in the acute medicine setting and provides 240 hours of experiential learning. Pre: PHAR 505, PHAR 569, Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses and successful completion of all didactic

components of the DKICP PharmD program.

PHAR 584 Adv Pharm Prac Exp Elec I Clin (6) (other) First 6-week, advanced elective rotation focusing on pharmacy practice in the clinical pharmacy setting and provides 240 hours of experiential learning. Pre: PHAR 505, PHAR 569, Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses and successful completion of all didactic components of the DKICP PharmD program.

PHAR 585 Adv Pharm Prac Exp Elec II (6) (other) Second 6-week, advanced pharmacy practice elective rotation focusing on pharmacy practice in any healthcare related setting and provides 240 hours of experiential learning. Pre: PHAR 505, PHAR 569, Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses and successful completion of all didactic components of the DKICP PharmD program.

PHAR 586 Adv Pharm Prac Exp Elec III (6) (other) Third 6-week advanced pharmacy practice elective rotation focusing on pharmacy practice in any healthcare related setting and provides 240 hours of experiential learning. Pre: PHAR 505, PHAR 569, Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses and successful completion of all didactic components of the DKICP PharmD program.

PHAR 587 Board Exam Review (1) (other) This course prepares pharmacy students for the North American Pharmacist Licensure Examination (NAPLEX) and the Multistate Pharmacy Jurisprudence Examination (MPJE) used by the National Association of Boards of Pharmacy (NABP) as part of the assessment of a pharmacy graduate's competence to practice as a pharmacist. Pre: PHAR 505, PHAR 569, Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses and successful completion of all didactic components of the DKICP PharmD program.

PHAR x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PHAR x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Pharmacy Practice (PHPP) Post-Baccalaureate Courses

The Daniel K. Inouye College of Pharmacy (DKICP)

PHPP 501 Intr Pharm Prac Experiential I (1) (other) First year pharmacy students will spend a semester in either the retail pharmacy setting or hospital pharmacy setting to observe pharmacy practice. Graded: P/NP. (Attributes: ALEX, GCC)

PHPP 502 Int Pharm Prac Experiential II (1) (other) The second course in the IPPE sequence will build on the skills and the knowledge of PHPP 501 to develop pharmaceutical care practice. Graded: P/NP. (Attributes: ALEX)

PHPP 503 Intr Pharm Prac Experien III (1) (other) Second year students will begin to develop their patient interview, chart gathering and case development and presentation skills. Students will spend one

semester in community health care clinics and one semester in a long term care facility. Students will present actual patient care cases in a seminar format throughout the semester. Graded: P/NP. (Attributes: ALEX, GCC)

PHPP 504 Intr Pharm Prac Experien IV (1) (other) Second year pharmacy students will begin to develop patient interview, chart gathering and case development and presentation skills. Students will spend the semester either in a community health care clinic or in a long term care facility. Student will present actual patient care cases in a seminar format throughout the semester. Graded P/NP. (Attributes: ALEX)

PHPP 505 Intr Pharm Prac Experiential V (1) This course is the fifth course in a sequential series. Content encompasses exposure to institutional hospital pharmacy. Pre: Acceptance in the UH Hilo CoP (Attributes: GCC)

PHPP 506 Int Pharm Prac Exp - Retail (1) (other) This course is third in a sequential series. Content encompasses an introduction to pharmacy practice in a community setting through observational and direct delivery of care to patients. Types of patients encountered-adolescents, adult and geriatric patients in retail/community setting. All students must begin the application process for a valid Hawai'i intern license. (Attributes: ALEX, GCC)

PHPP 507 Int Pharm Practice Exp - VII (1) (other) This six week rotation focuses on pharmaceutical care in the ambulatory care environment where students will interface with their pharmacist preceptor, physicians, nurses and other health professional to provide services to ambulatory care patients. Some examples of ambulatory care practices will include hypertension clinics, medication therapy management (MTM) services and disease state management.

PHPP 508 Intro to Biostatistics (2) This course introduces the pharmacy students to statistical concepts and research methods important to the practice of pharmacy and medicine. Students will learn the various research designs and methods, evaluate their strengths their weaknesses, and when each is appropriate and inappropriate to use. Statistical concepts include descriptive and inferential statistics, measurement, sampling, probability, normal distribution, sampling distributions, parameter estimation including point and confidence interval estimation, hypothesis testing, sample size, statistical power, common inferential statistical tests including parametric and nonparametric tests being used in research. Students will be developed familiarity with reading excerpts from articles published in the medical literature and will be well versed in the interpretation of statistical principles and methods being used as well as results of analyses. The goal of this course is to give the student an appreciation for the role of statistics in health care (medical) research.

PHPP 509 Intr Pharm Prac Exp - VIII (1) (other) This course is the eighth in a sequential series designed to support active participation in pharmacy practice activities for pharmacy students and provide opportunity to observe and demonstrate entrustable professional activity (EPA) in actual practice.

PHPP 510 Pharmacy Self Care I (2) This course serves as an introduction to patient-focused pharmacy practice through the topic of self-care, including identification and use of appropriate drug information resources and in-depth study of nonprescription medications for a variety of self-treatable conditions. This course also demonstrates the importance of professionalism in the communicative consultation process. In addition, this course introduces the Top 100 prescription medications. Content from this course will continue into the Self-Care II

course.

PHPP 511 Pharmacy Self Care II (2) This course continues the in-depth examination of self-care and over-the-counter (OTC) medications, and development of Top 200 prescription drug knowledge, begun in PHPP 510. Additionally, this course provides a foundation for organizing patient-specific information necessary in the management of medical conditions, as well as identifying and interpreting laboratory test values commonly used in the management of medical conditions, in preparation for the Integrated Therapeutics course series. Pre: Admissions to the PharmD program.

PHPP 514 Evidence-Based Medicine (3) This course will allow students to apply their knowledge of clinical research study designs, epidemiology, evidence-based medicine, and biostatistical principles to interpret and evaluate the findings published in the medical literature, and translate evidence to support patient-care decisions. Students are expected to read, interpret, evaluate, and synthesize information published in medical literature. Objective and rational conclusions are drawn from the analysis of information and applied to patient care. Examinations and literature evaluation project assignment are based on materials from didactic lectures and published articles. Evaluation of medical literature is a cornerstone of clinical pharmacy practice and is an important component of integrated therapeutics courses and experiential rotations. Pre: PHPP 508.

PHPP 515 Integrated Therapeutics I (7) This is the first in a sequence of four courses. Pathophysiology, medicinal chemistry, pharmacology and therapeutics will be integrated into the teaching of pharmacotherapy based on organ systems and disease states. Students will learn to apply knowledge of the basic sciences to drug treatment of specific disorders. Topics covered in this course include autonomic, renal and cardiovascular systems.

PHPP 516 Integrated Therapeutics II (7) (lecture/other) This is the second course in the four-part integrated therapeutics series. It will cover the integrated pathophysiology, pharmacology, medicinal chemistry, and therapeutics of disease states including endocrine and metabolic disorders, pulmonary diseases, and infectious diseases. Pre: PHPP 515

PHPP 517 Integrated Therapeutics III (7) This is the third course in the four-part integrated therapeutics series. An integrated approach to the following topics will be covered: disease states associated with the genitourinary, gastrointestinal, reproductive, and hematologic systems, pain management, and oncology. Pre: PHPP 516

PHPP 518 Integrated Therapeutics IV (7) This is the fourth and final course in the integrated therapeutics series. An integrated-discipline approach to the following topics will be covered: the central nervous system, pediatrics and geriatrics, neurological disorders, anesthetics, and critical care medicine. Pre: PHPP 517

PHPP 519 Health Care Systems (2) This course is designed to give students a history and overview of the American health care system. Roles of the major drivers in health care including government, employer groups, HMO's, hospitals, providers, and payors will be examined. Market components of prescription drug utilization will be discussed in detail. Additionally, the European health care model will be compared to the American system.

PHPP 520 Pharmacy Law and Ethics (3) This course provides the student with a working knowledge of the legal and ethical responsibilities of pharmacists. Content includes: Federal and State Statutes; the legislative and regulatory process that produce statutes, rules and regulations; and discussion of the nature and influence of moral and

ethical dimensions on decisions and actions taken in the delivery of patient-centered health care.

PHPP 521 Applied Pharmaceutical Care (3) This course will be the capstone course for the Pharmacy Practice curriculum before the Advanced Pharmacy Practice Experiential rotations and will emphasize critical thinking and evaluation for multi-disease state patient cases as well as patient education. This course will consist of workshops and case presentations to incorporate previously taught material in order to prepare students for experiences across all patient-care settings, including acute care, ambulatory care, and community pharmacy. Students will work individually and in various sized groups to review patient cases and present in the structured SOAP format.

PHPP 522 Pharm Practice Mgmt & Mktng (2) The first part of the course, marketing of pharmacy services, programs or products, is intended to use the marketing skills learned, to effectively collaborate in groups to develop a two market plan for innovative pharmacy services, programs or products. In developing these market plans, topics covered in lecture including consideration of economic, environmental, marketing and financial factors are stressed along with the use of appropriate outcome measures to determine success of the plans. Group interaction and activities will further help build upon principles learned in the course and ultimately culminate in the completion of a formal business proposal which will be presented to an executive committee. The second part of this course deals with practice management and is designed to introduce concepts and encourage further development of essential managerial skills, specific areas of focus includes personnel management, dealing with conflict in the work place, and continuous quality improvement. Communicating, understanding, and collaborating with fellow employees or colleagues are vital to any practice and are demonstrated through activities over the duration of the course. This section also includes certain standard practice that is carried out as managerial responsibilities in the health care setting. Pre: Admission to PharmD.

PHPP 523 Wellness & Disease Prevention (2) This course provides students with an overview of what constitutes a healthy lifestyle and how it contributes to the prevention of chronic disease. Pharmacists are key providers in helping to educate patients about wellness and disease prevention. Disease State Management (DSM) is an organized, coordinated process to manage specific disease states over the entire course of the disease to improve clinical and economic outcomes for the patient. Students will be exposed to important DSM models such as the Asheville Project in North Carolina and utilize this information in creating a disease management program.

PHPP 524 Pharmacoeconomics (2) This course introduces pharmacy students to the basic concepts, terminology, and applications of pharmacoeconomics and its usefulness in making informed decisions in health care.

PHPP 525 Complementary Medicine (3) This course is designed as an overview of complementary medicine. Students will be presented a balanced unbiased view of the theory and practice of some of the more popular complementary therapies such as acupuncture, traditional Chinese medicine, homeopathy, herbal medicine, and other dietary supplements. (Attributes: HPP)

PHPP 527 Drug Information (2) This course will introduce the students to different types of drug literature and drug information resources; primary, secondary and tertiary resources; evidence-based medicine resources; adverse drug reactions and medication error reporting systems; formulary management; investigational drugs; and tools to keep pharmacists knowledgeable of current advancements. In

addition, student pharmacists will gain skills to evaluate drug information resources, systematically approach drug information requests, communicate health information and create a drug monograph.

PHPP 528 Pharmacy Comm & Culture (3) This course serves as an introduction to pharmacy practice. The multi-cultural State of Hawai'i will serve as a practical laboratory for students to begin practicing the skills necessary to provide and communicate pharmaceutical care. This course is designed to introduce student pharmacists to the skills needed to communicate effectively with patients and the interprofessional skills needed to communicate with other healthcare providers and professionals. The course is also designed to enhance student confidence in public speaking. The culture component of the course is designed to introduce student pharmacists to the skills needed to communicate effectively with patients and other healthcare providers, and understanding the impact of cultural diversity. In-class exercises will facilitate cultural self-awareness, disparities in healthcare, exploration of cultural diversity, and methods to apply communication skills in practice.

PHPP 530 Basic Research Methods (1) This course is designed to give students an introduction to basic research methods, including measurement and designs as well as research ethics and writing skills for research. This course is required for pharmacy students in the Certificate Program in Health Science Research.

PHPP 531 Survey, Epidem, Qual Methods (1) This course is designed to give students an introduction to survey, epidemiology, and qualitative research methods. This course is required for students enrolled in the Health Science Research certificate program.

PHPP 532 Pharmacy Research (1) This course is designed to give students an introduction to research methodology in pharmacy practice, including program evaluation and big data designs. This course is required for students enrolled in the Health Sciences Research certificate program.

PHPP 533 Pharmacogenomics (2) Pharmacogenomics is the study of genetics variations that may influence an individual's response to drug therapy. Knowing whether a patient carries any of these genetic variations can help prescribers and pharmacists individualize drug therapy, decrease the chance for adverse drug events, and increase therapy effectiveness.

PHPP 534 Using SS/AI for Data Analy/Vis (1) Use of spreadsheets and artificial intelligence websites as effective tools for statistical analysis and data visualization in pharmacy research or practice. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHPP 535 Healthcare Leadership (1) This course will provide a focused review of the research on effective leadership and application of this research to healthcare settings, anchoring students in the science of leadership with an opportunity to assess their own strengths and weaknesses. Based on this foundation, students will lead and participate in discussions of actual leadership cases. Pre: PHPP 557 and PHPP 558

PHPP 536 Strategic Management (1) This course will provide a focused review and application of evidence-based approaches to strategic management, including strategy formulation and implementation. Starting with an evaluation of the research and current theories on strategic management, this course will anchor students in the science of organizational effectiveness. Based on this foundation, students will then apply this knowledge to real- world strategic issues, taking on the role of Chief Strategy Officer or strategic consultant. Pre: PHPP 557 and PHPP 558

PHPP 537 Using EHR for Research (1) How electronic health record systems can support evidence-based pharmacy practice, taking into account data extraction, analysis methods, and ethical issues around patient data access and use. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHPP 538 Systematic/Scoping Rev of Lit (1) Comprehensive understanding and application of systematic and scoping reviews in the field of pharmacy research. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHPP 539 Effec Technique Scholarly Writ (1) Fundamentals of writing a research paper, along with efficient writing techniques and scientific writing skills. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHPP 540 Adv Pharm Prac Exp: Ambulatory (6) This six week rotation focuses on pharmaceutical care in the ambulatory care environment where students will interface with their pharmacist preceptor, physicians, nurses and other health professional to provide services to ambulatory care patients. Some examples of ambulatory care practices will include hypertension clinics, anticoagulation clinics, hyperlipidemia clinic, medication therapy management (MTM) services and disease state management. (R) Rural Placement. Pre: Successful completion of all introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program. (Attributes: ALEX)

PHPP 540R Adv Pharm Prac Exp: Ambulatory (6) This six week rotation focuses on pharmaceutical care in the ambulatory care environment where students will interface with their pharmacist preceptor, physicians, nurses and other health professional to provide services to ambulatory care patients. Some examples of ambulatory care practices will include hypertension clinics, anticoagulation clinics, hyperlipidemia clinic, medication therapy management (MTM) services and disease state management. (R) Rural Placement. Pre: Successful completion of all introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program.

PHPP 541 Adv Pharm Prac Exp: Community (6) This six week rotation focuses on pharmaceutical care in the community pharmacy setting where students will work with pharmacy preceptors to learn about dispensing techniques, pharmacy databases, community pharmacy management, patient counseling, over the counter (OTC) medications, medication therapy management (MTM), and disease state management. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD program. (Attributes: ALEX)

PHPP 541R Adv Pharm Prac Exp: Community (6) This six week rotation focuses on pharmaceutical care in the community pharmacy setting where students will work with pharmacy preceptors to learn about dispensing techniques, pharmacy databases, community pharmacy management, patient counseling, over the counter (OTC) medications, medication therapy management (MTM), and disease state management. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program.

PHPP 542 Adv Pharm Prac Exp: Medicine (6) This six week rotation will place students in a hospital or other acute care facility to learn about pharmaceutical care in an inpatient environment. Students will work

closely with physicians and clinical pharmacists to provide services to acutely ill patients and provide clinical pharmacy services. Students may round with medical teams or be partnered with other physicians to learn more about the interface between medicine and pharmacy. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) Courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program. (Attributes: ALEX)

PHPP 542R Adv Pharm Prac Exp: Medicine (6) This six week rotation will place students in a hospital or other acute care facility to learn about pharmaceutical care in an inpatient environment. Students will work closely with physicians and clinical pharmacists to provide services to acutely ill patients and provide clinical pharmacy services. Students may round with medical teams or be partnered with other physicians to learn more about the interface between medicine and pharmacy. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) Courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program.

PHPP 543 Adv Pharm Pract Exp: Hospital (6) (other) Six week rotation will place students in a hospital pharmacy where they will learn about unit dose systems, automated dispensing units, parenteral drugs, intravenous mixture systems, sterile produce preparation, hospital pharmacy computer systems, physician order entry, crash cart systems and DRG/ICD-9 systems used in tracking patient diagnoses and reimbursement for services. (R) Rural Placement. Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program. (Attributes: ALEX)

PHPP 543R Adv Pharm Pract Exp: Hospital (6) (other) Six week rotation will place students in a hospital pharmacy where they will learn about unit dose systems, automated dispensing units, parenteral drugs, intravenous mixture systems, sterile produce preparation, hospital pharmacy computer systems, physician order entry, crash cart systems and DRG/ICD-9 systems used in tracking patient diagnoses and reimbursement for services. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program.

PHPP 544 Adv Pharm Pract Exp: Elect I (6) (other) Six-week rotation will place students in the many different areas of pharmacy practice including: adult medicine, pediatrics, geriatrics, infectious disease, critical care, oncology, cardiology, psychiatry, ambulatory care, community practice, drug information, pharmacy compounding, home health care, clinical or basic sciences, research and pharmacy administration. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program. (Attributes: ALEX)

PHPP 544R Adv Pharm Pract Exp: Elect I (6) (other) Six-week rotation will place students in the many different areas of pharmacy practice including: adult medicine, pediatrics, geriatrics, infectious disease, critical care, oncology, cardiology, psychiatry, ambulatory care, community practice, drug information, pharmacy compounding, home health care, clinical or basic sciences, research and pharmacy administration. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program.

PHPP 545 Adv Pharm Prac Exp: Elect II (6) This six week rotation will

place students where they may spend time in the many different areas of pharmacy practice including: adult medicine, pediatrics, geriatrics, infectious disease, critical care, oncology, psychiatry, ambulatory care, community practice, drug information, pharmacy compounding, home health care, clinical or basic sciences research, and pharmacy administration. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program. (Attributes: ALEX)

PHPP 545R Adv Pharm Prac Exp: Elect II (6) This six week rotation will place students where they may spend time in the many different areas of pharmacy practice including: adult medicine, pediatrics, geriatrics, infectious disease, critical care, oncology, psychiatry, ambulatory care, community practice, drug information, pharmacy compounding, home health care, clinical or basic sciences research, and pharmacy administration. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) courses PHPP 501-509 and successful completion of all didactic components of the DKICP PharmD Program.

PHPP 546 Adv Pharm Practice Experience (6) (other) This course is an advanced pharmacy practice experiential elective that directly involves patient care activities. Types of patients encountered-patients of all ages in the acute, ambulatory and community setting. Level of student responsibility - all students must have a current Hawai'i Pharmacy Intern License, successfully completed the APhA immunization delivery course and accept all accountability for patient care. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) Courses PHPP 501-509 AND successful completion of all didactic components of the DKICP PharmD Program.

PHPP 546R Adv Pharm Practice Experience (6) (other) This course is an advanced pharmacy practice experiential elective that directly involves patient care activities. Types of patients encountered-patients of all ages in the acute, ambulatory and community setting. Level of student responsibility - all students must have a current Hawai'i Pharmacy Intern License, successfully completed the APhA immunization delivery course and accept all accountability for patient care. (R) Rural Placement. Pre: Successful completion of all Introductory Pharmacy Practice Experience (IPPE) Courses PHPP 501-509 AND successful completion of all didactic components of the DKICP PharmD Program.

PHPP 547 APPE - NAPLEX/MPJE Preparation (1) This course will introduce students to the North American Pharmacist Licensure Examination (NAPLEX) and the Multistate Pharmacy Jurisprudence Examination (MPJE) used by the National Association of Boards of Pharmacy (NABP) as part of the assessment of a pharmacy graduate's competence to practice as a pharmacist. In order to prepare students for their licensure examinations, this course reviews content taught in the didactic curriculum and offers guidance on creating a study plan to cover content assessed in the NAPLEX. The MPJE will also be addressed through supplemental material pertaining to both federal and Hawai'i state pharmacy laws. Pre: Acceptance and fourth year standing in the Daniel K. Inouye College of Pharmacy

PHPP 550 History of Pharmacy (2) This elective is of value to appreciate the origin of pharmacy and the manner in which ancestors of the field practiced their art. These historical aspects will be discussed as well as techniques, tools, symbols, and art in pharmacy.

PHPP 553 Current Topics in Healthcare (1) Healthcare is no longer defined as a patient seeking the service of a provider. Healthcare inflation is exacerbated by the cost of government programs such as Medicare, unemployment, fraud, defensive medicine and changing

technology in healthcare. Pending healthcare reform promises to change some of the healthcare delivery system as we know it today. This course will focus on the healthcare issues facing providers of healthcare with a focus on pharmacy, payers of healthcare, and users of the healthcare delivery system. Current events will be the basis of topics for discussion. Pre: PHPP 519.

PHPP 554 Zoonotic Diseases (1) This course is designed to introduce students to the definition, history, origin and transmission of zoonoses; commonly encountered zoonotic diseases as well as those commonly encountered in Hawai'i. Covered are bacterial, tick-borne bacterial, fungal, parasitic, viral and prion zoonoses. Emphasis will be made on those that are life-threatening to humans, for example, leptospirosis, rabies, transmissible spongiform encephalopathies, etc. Pre: acceptance and second year standing in the College of Pharmacy.

PHPP 555 Intro to Veterinary Medicine (1-2) This course is designed to introduce students to the profession of veterinary medicine and how it is dependent on pharmacology. Lectures include veterinary medical education; and practicing small animal medicine, large animal medicine (equine and food animal), and exotic animal medicine, inclusive of the daily challenges encountered in practicing medicine. Introductions to diseases, whether infectious or non-infectious, of various etiologies will be made. The realms of veterinary medicine, for example, diagnostic tools (physical examination, imaging, clinical pathology, etc.), treatment options (medicinal, surgical, physical therapy, conservative, etc.) and career opportunities will be emphasized. Pre: Acceptance and second year standing in College of Pharmacy.

PHPP 556 Adv Topics in Hypertension (1) High blood pressure affects over 70 million people in the United States today. This disease carries significant morbidity and mortality which will only increase with our aging population. The treatment of hypertension is highly complex and frequently changes based on new clinical evidence. Students will discuss in depth the diagnosis and various treatments (both pharmacologic and non-pharmacologic) of hypertension. Pre: PHPP 515.

PHPP 557 Personal Finance (1) This course will provide an introduction to the basic principles and skills of personal financial management, including saving, borrowing, insurance, investment, and budgeting. Special emphasis will be given to the issues most relevant to new pharmacists, such as student loan repayment, financial implications of career mobility, and retirement options based on type of healthcare employer.

PHPP 558 Business Admin Overview (1) This course will provide an overview of the basic concepts and functions involved in managing a business, including accounting, human resource management, production and operations management, organizational behavior and culture, and project management.

PHPP 559 Spanish for Healthcare Profess (1) This course provides a unique opportunity in developing culturally aware clinical language skills for the Spanish speaking patient population, optimizing all aspects of medication therapy management for this patient population. Pre: Second year standing in College of Pharmacy

PHPP 560 Pharmacy Leadership (1) Leadership skills is one of the determining factors in the success of many new pharmacy graduates. This course will incorporate current literature, management theory and viewpoints of academic and practice community leaders to understand leadership at different levels in pharmacy practice environment. This course will focus on raising awareness of leadership and exercising core leadership skills in pharmacy students. Pre: admission to PharmD.

PHPP 561 Pharmacy and Therapeutics Comp (1) This course is designed to inform pharmacy students about the importance and functions of Pharmacy and Therapeutics Committees. All hospitals and managed care organizations use P and T committees to make therapeutically appropriate pharmacoeconomic decisions about their formularies. This course will serve to navigate the mechanics of a P and T. All students will present a drug to the committee with a rationale for its inclusion or exclusion from a formulary. A competition will be held at the end of the course. Pre: Admission to the Pharm D.

PHPP 564 Advanced Managed Health Care (1) This course will provide an introduction to the basic principles and alphabet soup of managed healthcare, to include MCO's, PBM's, PPO's, HMO's, CDH, VA, and DoD. We will present and discuss topics of particular interest to the future of Pharmacy management including Pay-for Performance, Medicare, and Medicaid along with a discussion on the Obama Health Care Reform. Special emphasis will be given to providing students a better understanding of the financial drivers of healthcare management within each segment. A discussion of taxonomy and functional differences between managed health care segments provide the framework for the operational differences. Pre: Acceptance in the College of Pharmacy and second or third year standing.

PHPP 567 Rural Health Science Intro (2) Introduction to basic concepts in rural health science, including measurement, methods, and testing solutions to rural health problems.

PHPP 568 Rural Health Science Advanced (2) (lab) In-depth consideration and analysis of special topics in rural health science to advance student thinking and application of the topics covered in the introductory course.

PHPP 571 Story-telling in Healing (1) Examine the role of narrative medicine and story-telling in health and health systems. The goal is to increase empathy and to better understand how story-telling can be incorporated into healing, through discussion, active learning, and sharing the student's own stories.

PHPP 572 Intro to Residency Application (1) Introduction to post-graduate residency training and the process of preparing for the application process for post-graduate residency training programs during the P4 year or upon graduation. Pre: Third year standing in PharmD program at DKICP

PHPP 573 Pediatric Pharmacotherapy (2) Elective course on the pathophysiology and therapeutics of various disease states in pediatric population in the inpatient and outpatient setting and will also address challenges to providing pharmaceutical care to children. Pre: Third year standing at DKICP

PHPP 574 Social Media for Pharmacists (1) Exploration of ways that healthcare and social media intersect. An overview of current social media platforms, digital citizenship, and ways that pharmacists and other healthcare providers may use social media in their professional careers. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHPP 575 Drug Info Veterinary Medicine (1) Improve safety and efficacy of pharmacotherapeutics in veterinary patients by enabling pharmacists to be an integral part of the veterinary healthcare team. Drug information resources to answer drug information questions pertaining to veterinary pharmacy. Pre: Enrollment in PharmD program at DKICP

PHPP x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PHPP x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Pharmaceutical Science (PHPS) Post-Baccalaureate Courses

The Daniel K. Inouye College of Pharmacy (DKICP)

PHPS 450 Biochem I - Biomolecules (3) This course is designed to provide a basic foundation for the understanding of the structure and function of various biomolecules. Topics will include a review of organic chemistry, discussion of water as a solvent, the acid/base properties of functional groups, structural and physical properties of amino acids and proteins, properties and mechanisms of enzymes, the role of coenzymes and vitamins in biochemical processes, structure and function of carbohydrates, lipids, and lipid membranes. The course will conclude with an introduction to metabolism and discussion of carbohydrate metabolic pathways. These principles will provide a foundation for understanding the biochemical basis for disease states and drug action that are central to therapeutics. Pre: Enrollment in the Program

PHPS 451 Biochem II - Metabolism (3) This course will delve into metabolism and the interrelationships of metabolic processes. The biochemistry of metabolism focuses on glycolysis, the tricarboxylic acid cycle, gluconeogenesis, and the synthesis and breakdown of biomolecules (carbohydrates, lipids, and amino acids). Metabolic control and regulation of pathways will be emphasized. Clinical correlates and metabolic diseases will be discussed. Pre: Enrollment in the Program

PHPS 501 Biochemistry - Biomolecules (2) This course lays the biochemical foundation for the understanding of medicinal chemistry, pharmaceuticals, pharmacology and pathophysiology. Topics include physical and chemical properties of amino acids, structure and physical properties of proteins, structure and function of hemoglobin, enzyme kinetics, types of inhibitors, and the catalytic triad of chymotrypsin. This course also covers DNA and RNA function, nucleotide biosynthesis and its regulation in disease, DNA replication, damage, mutation and repair, and transcriptional control of gene expression. Roles of cytochromes P450 as phase I enzymes in the biotransformation of xenobiotics drug and their regulation will also be addressed.

PHPS 502 Biochemistry - Metabolism (2) This course will delve into metabolism and the interrelationships of metabolic processes. The biochemistry of metabolism focuses on glycolysis, the tricarboxylic acid cycle, gluconeogenesis, and the synthesis and breakdown of biomolecules (carbohydrates, lipids, and amino acids). Metabolic control and regulation of pathways will be examined. Clinical correlates and metabolic diseases will be discussed.

PHPS 503 Pharmaceutical Calculations (2) In this course, students will learn the fundamentals of pharmaceutical calculations, including use of the SI system of units, methods of measurement and expressions of concentration. In addition they will learn what constitutes an accurate, understandable and legal prescription or medication order. Through a series of lectures and exercises based on intensive problem solving, students will learn to perform the calculations required for the preparation of a range of pharmaceutical dosage forms as well as for

their proper administration to the patient. Emphasis will be placed on accuracy and prevention of medication errors.

PHPS 504 Pharmaceutical Immunology (3) Basic concepts of immunology, including innate immunity, antigen recognition, lymphocyte development and adaptive immunity will lay the groundwork for understanding immunity in a clinical context. Students will learn the role of the immune system in allergy, auto-immune disease, graft rejection and tumor immunogenicity. Methods of manipulating the immune system pharmacologically will be discussed as well as biotechnology applications.

PHPS 505 Pharmaceutics I (3) (lecture/lab) This course will introduce principles applied in the preparation of different dosage forms and drug delivery systems, theory and practice involved in the rational choice of drugs, and the legal and professional issues in drug compounding. Discussion of Good Manufacturing Practices and Good Compounding Practices will carry over into the lab portion of the class. Hands-on experience will involve preparation, mixing, assembling, and labeling drugs for dispensing. Students will become comfortable with equipment, procedures, and records used in the compounding of various dosage forms with a focus on capsules and ointments. Students will also practice clinical dispensing skills.

PHPS 506 Pharmaceutics II (3) (lecture/lab) This course is a continuation of the concepts and practical applications introduced in Pharmaceutics I (PHPS 505). In lectures, students will learn about solutions, dispersion systems, and parenteral dosage forms. Pharmaceutical analysis will include electronic and vibrational spectroscopy, HPLC, and radiopharmaceuticals. Compounding lab will involve solutions, suppositories, suspensions, and emulsions. Students will be trained in sterile compounding, including parenteral solutions, ophthalmics, and the common supplies and devices used in their preparation.

PHPS 509 Applied Pathophysiology (3) (lecture/lab) This course will review the pathophysiology of the major disease states giving students the background knowledge necessary to understand subsequent therapeutics classes. Pre: Enrollment in the DKICP PharmD Program.

PHPS 511 Pharmacokinetics (3) Students will learn about the time course a drug occupies in the human body. Topics to be covered include drug bioavailability, drug absorption, distribution, metabolism and elimination, pharmacokinetics of various dosage forms, routes of administration and drug effects over time. The effects of patient weight, gender and age on drug pharmacokinetics will be discussed along with the therapeutic variation that occurs with these patient parameters. Students will use pharmacokinetic calculations to be able to solve problems in clinical pharmacokinetics. Emphasis will be placed on using pharmacokinetic principles to decrease the risk of toxicity and improve therapeutic outcomes using a variety of commonly used medications.

PHPS 512 Intro to the Pharm Sciences (3) This course is designed to introduce first year pharmacy students to the areas included in Pharmaceutical Sciences. Areas that will be presented are Introduction to Pharmacology, Medicinal Chemistry and Pharmacognosy. This course will allow students to successfully transition into the integrated Therapeutics sequences of courses taught in years 2 and 3.

PHPS 539 Common Animal Disease Pharm I (1) First in two course series introducing common animal diseases, the pathophysiology and pharmacotherapy used for such disease. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHPS 540 Drug Action - Part I (2) This course will introduce the student to the pharmaceutical sciences, including basic principles of medicinal chemistry and pharmacology. Topics include: the physicochemical properties of drugs, organic functional group chemistry, basic pharmacokinetics and pharmacodynamics, as well as the chemistry of drug-target interactions.

PHPS 541 Drug Action - Part II (2) This course will draw on the basic principles of drug design, development and drug action (medicinal chemistry and pharmacology) to provide an introduction to the basics of the pharmaceutical sciences. Topics covered include: drug discovery, pharmacogenetics, architecture of drugs, ADME, structural changes during drug metabolism, chemical mutagenesis, carcinogenesis, teratogenesis, drug-drug interaction, drug allergy, drug resistance, tolerance and dependence. Pre: First year standing in DKICP

PHPS 544 Advanced Laboratory Research (2) (lab) Application of analytical techniques, including spectroscopy, chromatography, and samples biological analysis (drugs or natural products). Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHPS 545 Intro Pharm Chemistry Research (2) (lecture/lab) Introduction to key concepts and laboratory techniques in pharmaceutical chemistry research, including drug delivery, absorption, and metabolism. Special emphasis on research laboratory methods related to pharmaceutical analysis, quality control, and medicinal chemistry. Pre: Enrollment in PharmD program at DKICP

PHPS 546 Intro Pharm Biology Research (2) (lecture/lab) Introduction to key concepts and laboratory techniques in pharmaceutical biology research, including preparing plant extracts and identifying major components and biological activity. Special emphasis on research laboratory methods related to antioxidant, anti-inflammatory, and antimicrobial activity. Pre: Enrollment in PharmD program at DKICP

PHPS 547 Veterinary Toxicology (1) Introduction to veterinary toxicology emphasizing the toxic principle, formulation and/or source, susceptible species, reported lethal dose, reported LD50, ADME, mechanism of action, clinical signs and treatment (detoxification/elimination) of each of the toxins discussed. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHPS 548 Intro to Vet Pharmacy Sciences (1) Introduction to concepts related to veterinary pharmacotherapy and veterinary pharmacy practice. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHPS 549 Common Animal Disease Pharm II (1) Second in two course series introducing common animal diseases, pathophysiology and pharmacotherapy used for such diseases. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHPS 550 Genetics in Medicine (2) This elective course will introduce the student to the basics of genetics and molecular mechanisms of inheritance as they apply to the treatment of disease and to the response of patients to drug therapy. Students will learn how genetics may lead to new strategies in drug development and treatment, how genetics may be used to predict patient response to specific treatments, and how responses are mediated. Emphasis will be placed on clinical and research applications.

PHPS 551 Substances of Abuse/Addiction (2) This elective course will provide an in-depth review of the neuropharmacology of substances of abuse including stimulants, depressants, hallucinogens and anabolic

steroids. Other types of addiction will be discussed including gambling addiction. Special emphasis will be given to basic pharmacokinetic and pharmacodynamic mechanisms as they relate to the effects of the individual substances of abuse. Current theories of addiction and tolerance will be discussed.

PHPS 552 Dietary Supplements (1) A wide range of products are used in the United States and other parts of the world as aids for better health rather than as therapeutics for the treatment of disease. These products range from vitamins and minerals to herbal supplements used for a variety of purposes. In this course, the rationale for the use of these products will be examined as well as their safety and efficacy.

PHPS 553 Radioactivity in Pharmacy (1) Radiopharmaceuticals are playing a more and more important role worldwide. Particularly, the development of radiolabeled compounds for in vivo biochemical imaging tools like PET (positron emission tomography) and SPECT (single photon emission computed tomography) increased considerably.

PHPS 554 Herb Med & Hawaiian Med Plants (1) This elective course will cover the most popular herbal medicines, their chemistry (natural products), information resources, part(s) of plant origin, use, efficacy, safety, and potential drug interactions. A small student-centered research project is assigned with approval by the chair of the department.

PHPS 555 Geographic (Tropical) Medicine (1) This elective course will cover: policy makers and public health experts who have emphasized the growing need for global health literacy and global health capacity among U. S. healthcare professionals. The Institute of Medicine defines global health as health problems, issues, and concerns that transcend national boundaries, may be influenced by circumstances or experiences in other countries, and are best addressed by cooperative actions and solutions.

PHPS 556 Drugs from Natural Sources (1) This elective course will discuss original drugs used by man for the treatment of himself and his animals were all of natural origin and in some parts of the world the natural of medications used on a day to day basis for the environment still provides the majority, if not all, treatment of common and not so common ailments. Today the natural world is still the source of over 50% of pharmaceuticals either as direct products, derivatives thereof, or as lead structures.

PHPS 558 Drug Development & Regulation (1) The mechanism by which drug products are developed and approved for use in a global market is an evolving process. Concepts of quality by design employed in other industries such as aerospace are being adapted for pharmaceuticals with the intense encouragement of major regulatory agencies.

PHPS 559 Environmental Toxicology (1) This elective is designed to introduce students to the field of environmental toxicology. This course will focus more on ecotoxicology, rather than classical toxicology, and include topics such as xenobiotics, toxic and radioactive metal, toxicity of solvents and pesticides, halogenated aromatic compounds, environmental endocrine disruptors, and pharmaceuticals and personal care products in the environment. Pre: Acceptance and second or third year standing in the College of Pharmacy.

PHPS 560 Advances in New Drug Approvals (1) Overview of recent advances of new FDA drug approvals and their drug profile. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHPS 561 Emerging Trends Drug Discovery (1) This one credit

elective course is designed to enhance the student's knowledge of emerging drug targets and related efforts in the drug discovery and development process. The emphasis of the course is on unique and emerging drug targets and is intended to reveal: how novel drugs will complement existing treatment options for various disease states. Pre: Admission to PharmD.

PHPS 562 Disc & Dev of Blockbuster Drug (1) There is a critical point and an interesting story behind each pioneering breakthrough in medicine, when decisions were made as to whether to continue or terminate the development of a promising new drug. Throughout the lectures, the historical discovery and development of representative blockbuster drugs, which changed the world and saved millions of lives, will be discussed. Pre: Acceptance and second year standing in the College of Pharmacy.

PHPS 563 Curr Adv in Neuropharmacology (1) This elective is designed to cover the current literature and latest discoveries in neuropharmacology. Course topics are from a variety of areas and can have a clinical or basic science emphasis but must cover the most recent findings in that field. The effect of a drug on the brain is a paramount concern for pharmacists. The action of drugs on the nervous is the science of neuropharmacology. It comprises several areas of investigation of critical importance to science and medicine. Neuropharmacology involves studies aimed at understanding the mechanism by which drugs alter brain function. These include medications used to treat a wide range of neurologic and psychiatric disorders as well as drugs of abuse. Neuropharmacology uses this information to develop new medications with ever-improving efficacy and safety for diseases of the nervous system. Neuropharmacologic agents are valuable tools with which to probe the molecular and cellular basis of nervous system functioning. Pre: Acceptance and third year standing in the College of Pharmacy.

PHPS 565 Genetics & Pharm of Malaria (1) This course will provide students with a better understanding of the role that genetic variation plays in disease susceptibility at both the individual and population levels. Genetic variation of human hosts and parasites will be covered with an emphasis on co-evolution. Drug action and mechanisms of drug resistance will be explored. The contemporary role of molecular genetic techniques in the detection of genetic variation, with applications toward vaccine development, will also be covered. Pre: Second year standing in the College of Pharmacy.

PHPS 566 Emerging Trends Drug Discovery (1) This 1 credit elective course is designed to enhance the student's knowledge of emerging drug targets and related efforts in the drug discovery and development process. The emphasis of the course is on the drug development process, focusing on the phases of target identification and validation. This elective is intended to reveal: a) how novel drug modalities will complement existing treatment options for various disease states; b) scientific basis for the selection of a particular target; c) the validation of target choice through experimental methods; and, d) methods to integrate a novel target into the drug development pipeline. Pre: Acceptance into the College of Pharmacy and concurrent registration in PHPP 518.

PHPS 567 Pharmacogenetics (1) This elective is designed to introduce students to the field of pharmacogenetics, the study of the genetic basis for variation in drug response. This course will discuss the development of pharmacogenetics, genetics and epigenetics within pharmacogenetics, age-related and ethnic factors in pharmacogenetics, some genomic tools used in pharmacogenetic research, cancer and HIV treatment and pharmacogenetics, and the future of pharmacogenetics

research and discoveries. Pre: Acceptance and third year in the College of Pharmacy.

PHPS 568 Antibiotic Mechanisms & Applic (1) This course will provide an exposition of the fundamental mechanisms of antibiotic action. The basic differences between prokaryotes and eukaryotes that provide for specific antibiotic targets will be emphasized. Mechanisms of antibiotics will include those that affect cell wall biosynthesis and metabolism, membrane structure and function, nucleotide biosynthesis, DNA replication and other nucleic acid transactions, transcription, and protein synthesis, as well as novel mechanisms. For each biological mechanism, the biological process, for example protein synthesis, will be reviewed to provide a framework for understanding the role of the antibiotic. Classes of antibiotics will include, but are not limited to, β -lactams, β -lactamase inhibitors, glycopeptides, isoniazid, aminoglycosides, tetracyclines, macrolides, lincomycin, streptogramins, oxazolidinones, fluoroquinolones, nitroimidazoles, rifamycins, sulfonamides, DHFR inhibitors, and polymyxins. Antibiotics from natural sources as well as synthetic antibiotics will be addressed. In addition, mechanisms by which microbes develop antibiotic resistance will be discussed. Pre: Second or third year standing in the College of Pharmacy.

PHPS 569 Cancer Prevention (1) This course will discuss the 1) genetic risk profiles and early detection (biomarkers) and 2) the prevention of cancer by reducing risk behavior (sun exposure, alcohol consumption, cigarette smoking, heavy metals in environment, physical exercise) as well as chemoprevention and vaccination against cancer-inducing viruses (HPV, HBV). Completion of this course will provide the Pharm D student with a comprehensive understanding of the current status in preventative cancer medicine. Pre: Second or third year standing in the College of Pharmacy.

PHPS 570 Drugs from the Ocean (1) This course will focus on the chemical aspects of natural products from marine, microorganisms, and other sources. Natural products are normally classified according to their chemical properties, or their origins, or core structural skeletons that are related to their biosynthetic origins.

PHPS 571 Veterinary Endocrinology (1) Emphasis and focus on the common endocrine disorders in various animal species including endocrine pharmacotherapy. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHPS 573 Vet Anesthesia and Contr Subst (1) Introduction to veterinary anesthetic and controlled substance pharmacotherapy. Pre: Enrolled in the Daniel K Inouye College of Pharmacy.

PHPS 591 Basic & Applied Toxicology (2) This course will provide a general foundation in the understanding of basic toxicological principles. The mechanisms of toxicity and contemporary treatment plans for the most common chemical, environmental and pharmaceutical agents will be presented. Additionally this course will provide an in-depth review of the neuropharmacology of substances abuse including stimulants, depressants, hallucinogens and anabolic steroids. This course will provide a general foundation in the understanding of basic toxicological principles. The mechanisms of toxicity and contemporary treatment plans for the most common chemical, environmental, household toxins and pharmaceutical agents will be presented.

PHPS 601 Integrated Pharmacotherapy I (7) In this first of a series of three courses, pathophysiology, pharmacology, toxicology, and therapeutics will be integrated into one discipline that will examine pharmacotherapy based on organ systems of the body. The course will begin with a discussion of SOAP notes and an introduction to pharmaceutical principles. Students will learn to blend their factual

knowledge of the basic sciences and apply this knowledge to drug treatment of specific disorders in disparate patients. Synchronous video chats will tie in the pharmacotherapy discussed in lecture with the treatment of CNS disorders. On-site workshops will occur at various times during the semester. Pre: Acceptance into the program.

PHPS 602 Integrated Pharmacotherapy II (5) This course focuses on the pathophysiology, pharmacology, toxicology, and therapeutics of CNS disorders. Students will apply didactic learning to drug treatment in this patient population. Assessments include exams, SOAP notes, a research paper and presentation on a CNS disorder. Pre: Acceptance into the Program.

PHPS 603 Integrated Pharmacotherapy III (4) The course will begin with an overview of Toxicology, then proceed to conclude the discussion of the pharmacotherapy based on organ systems of the body by integrating the pathophysiology, pharmacology, toxicology, and therapeutics. Students will learn to blend their factual knowledge of the basic sciences and apply this knowledge to drug treatment of specific disorders in disparate patients. Additional topics discussed will be professional, legal, ethical, and interprofessional issues that relate to ethics, standards of care, laws, and regulations relevant to the practice of psychology involving psychopharmacology. During the semester students will submit three SOAP notes covering patients with both somatic and CNS related disorders. The course will culminate with each student presenting their research paper. Pre: Acceptance in the Program.

PHPS 604 Adv Psychopharmacology I (2) This course serves as the first of two capstone courses that will provide an in-depth coverage of psychopharmacology associated with the treatment of mental disorders. Students will present patient cases in weekly seminars that are based on patients seen in clinical settings from the Psychopharmacology Practicum course taught concurrently. This course will require students to demonstrate competence in medication therapy management specific to psychopathology. In addition, recent literature will be discussed that covers synergistic interactions between psychotherapy and pharmacotherapy and will examine the single practitioner vs. the split-treatment model. Pre: Acceptance into the MSCP or Clinical Psychopharmacology Certificate programs. Co-req: PHPS 607 or PHPS 609.

PHPS 605 Adv Psychopharmacology II (2) Students will present patient cases in weekly seminars that are based on patients seen in clinical settings from the Psychopharmacology Practicum courses taught concurrently. This course will require students to demonstrate competence in medication therapy management specific to psychopathology. In addition, current and future pharmacotherapy of CNS disorders will be discussed: including methodology, standards and conduct of research of psychoactive substances. Drugs classes to be covered include: antipsychotics, antidepressants, mood stabilizers, anti-anxiety agents, sedative/hypnotic agents, narcotic analgesics, drugs used to treat the cognitive and behavioral effects of Alzheimer's disease, and drugs used to treat ADHD. Pre: Acceptance into the MSCP or Clinical Psychopharmacology Certificate programs. Co-req: PHPS 607 or PHPS 609.

PHPS 606 Human Physiology (3) This course is designed to provide an in-depth overview of topics in human physiology that provide a basis for understanding of pharmacology. The course will begin with a review of basic physiological topics including the autonomic nervous, central nervous, and the cardiovascular systems. Following this will be an introduction to the discipline of pathology with an emphasis on diseases of the nervous system. This course will be composed of recorded lectures, live workshops, and synchronous video chat sessions. There is

also a requirement of a research paper on a topic of physiology chosen by the student with approval of the Course Coordinator. Pre: Acceptance into the program.

PHPS 607 Psychopharmacology Practicum (2) (lecture/other) Students will participate in a psychopharmacology practicum for eight hours per week for at least one-year. The total amount of hours per year is at least 400 hours. They will be supervised by a qualified clinical practitioner with demonstrated skills and experience in clinical psychopharmacology in accordance with the prevailing jurisdictional law. Clinical supervision will be for one hour per week or one hour per eight hours of patient contact. Students will be actively involved in consultation with physicians and/or appropriately credentialed psychologists regarding prescribing of psychoactive medications. The Clinical Psychopharmacology Practicum components will be consistent with APA Recommendations. The Psychopharmacology Practicum courses will require students to demonstrate competence in medication therapy management specific to psychopathology. Students will present cases from this practicum in the Advanced Psychopharmacology I and II courses taught concurrently. At the end of the training program, a capstone competency evaluation will be completed. Students will need to arrange their own practicum according to the guidelines listed in the course syllabus. Pre: Acceptance into the program. Co-req: PHPS 604, 605.

PHPS 608 Law and Pharmacotherapy (2) This course will focus on the pathophysiology, pharmacology, toxicology and therapeutics of infections and respiratory processes. Students will learn the issues that relate to ethics, standards of care, laws and regulations relevant to the practice of psychology involving psychopharmacology.

PHPS 609 Clinical Psychopharm Practicum (1) Preceptor is a practitioner with demonstrated experience in clinical psychopharmacology in accordance with the prevailing jurisdictional law. Advanced Psychopharmacology I and II courses taught concurrently. Pre: Enrollment in the Program. Co-Req: PHPS 604 and 605.

PHPS 701 Apoptosis & Angiogenesis (1) The course will cover mechanisms of apoptosis, or programmed cell death, and angiogenesis, or new vessel growth, and mechanisms of their regulation in different cell types. Students will learn how unbalanced angiogenic and apoptotic responses contribute to a wide variety of disease conditions, including cancer, neurodegenerative, cardiac, inflammatory and autoimmune diseases. The course will discuss experimental techniques that are used in the studies of these processes. Part of the course is devoted to approaches to development of drugs that will modulate apoptotic and angiogenic processes, and discussions of critical signaling molecules in these pathways as potential targets for drug development efforts. Pre: Approval of Major Professor.

PHPS 702 Bio Dev:Prin&Prac in Drug Disc (1) This course will explore the biological activities of secondary metabolites that are central to the process of drug discovery and development from nature. This course will emphasize the chemically-driven approach that seeks biological activities for purified compounds. Pre: Approval of Major Professor

PHPS 703 Cancer Biology (2) An introduction to cancer biology covering the processes involved in tumorigenesis (oncogenes, mutagenesis, proliferation, apoptosis, angiogenesis, invasion and metastasis). There will be discussion of active areas of interest such as cancer stem cells and the role of inflammation in cancer. Lectures will include descriptions of current therapeutics, describe efforts to design new drugs and recent clinical trials. Pre: Approval of Major Professor.

PHPS 704 Com Chem & High Throughput Tec (2) This course is designed to teach students the essential elements of combinatorial chemistry and evolving high throughput technologies in drug discovery. Combinatorial chemistry and high throughput chemistries are dynamic, rapidly evolving fields that have an important role in drug discovery. Most pharmaceutical companies have now incorporated combinatorial and high throughput platforms into their drug discovery research program. Combinatorial chemistry is a relatively new approach to the synthesis of compound libraries in a highly efficient and automated fashion. The topics of this course will include, but not limited to, combinatorial chemistry and parallel synthesis; solid-phase organic synthesis; solution-phase synthesis with solid supported reagents and scavenger resin technology; diversity-oriented synthesis; dynamic combinatorial chemistry; high throughput screening of combinatorial libraries; microwave-assisted organic synthesis; fluoros technology, fragment-based drug discovery; and automation and instrumentation. Pre: Approval of Major Professor.

PHPS 705 Designing Clinical Research (3) The course introduces the science and methodological principles of undertaking clinical research. Emphasis is placed upon clinical trials of complementary and alternative medicine therapies. Topics include research question/problem/objective, research hypothesis, research processes, types of clinical research design, strengths and weaknesses of each design, measurements, concepts of reliability and validity, sampling designs, recruitment, sample size determinations, chance and bias, threats to the internal and external validity, monitoring safety and efficacy data, statistical tests and data management, ethical and regulatory considerations, translational research and funding agency. Students will be given the opportunity to identify a researchable idea/ question and design his/her own clinical or translational research project by preparing a written mini-proposal and then its presentation. Pre: Approval of Major Professor.

PHPS 706 Environmental Toxicology (2) This course is designed to introduce students to the field of environmental toxicology. The emphasis will focus more on ecotoxicology, rather than classical toxicology. Topics that will be covered include toxic and radioactive metal, toxicity of solvents and pesticides, halogenated aromatic compounds, environmental endocrine disruptors, and pharmaceuticals and personal care products in the environment. The environmental impact of global warming will also be addressed. Course format will include student lead discussions and presentations, lectures, and general discussion. Pre: Approval of Major Professor.

PHPS 707 Genetics in Medicine (2) This course will provide an exposition of the fundamental principles of human and medical genetics with emphasis on the genes and molecular mechanisms operating in human diseases. The contributions made by genetic variation to disease susceptibility and treatment outcomes will be discussed. Clinical cases will be used to demonstrate and reinforce the general principles of disease inheritance, pathogenesis, diagnosis, management, and genetic counseling. Students will learn how understanding genetics can lead to new strategies in drug development and treatment. A combined laboratory and seminar experience will provide students with hands-on experience and keep students abreast of recent developments in the field by presenting current literature. Pre: Approval of Major Professor.

PHPS 708 Isolation Meth for Nat Pro Dsc (2) This course will examine the theory and practice of the various types of chromatographic and non-chromatographic methods that are commonly used for the isolation of biologically active natural products from plants, microorganisms and marine organisms on scales ranging from microgram to kilograms of pure compound. Starting with simple extraction methods, the course will progress through liquid-liquid

interactions to liquid-solid interactions and then to gas-solid interactions. Completion of this course will provide the student an understanding of the application of each of the techniques discussed, as well as their relative advantages and disadvantages. Pre: Approval of Major Professor.

PHPS 709 Inst Meth & Struct Elucidation (2) This course will introduce many of the pieces of spectroscopic equipment relevant to solving the three dimensional structure of organic molecules. Hands on use of the equipment to obtain spectroscopic data will be an emphasis of this course. The other emphasis of this course will be how to interpret the recorded information to enable a viable chemical structure to be proposed. During each session it is anticipated that prepared examples and examples arising from current research will be used to enhance participants' knowledge. Pre: Approval of Major Professor.

PHPS 710 Lab Animal Care, Mgt & Med I (2) This course is part one of a two part lecture series and is designed to introduce students to the care and use of laboratory animals in accordance with the National Research Council and the Institutional Animal Care and Use Committee (IACUC). Included in this course are alternatives to traditional use of live animal species and the laws, regulations and guidelines important to laboratory animal research. Emphasis will be placed on the use of rats and mice, rodent anesthesia and analgesia and rodent surgery. Pre: Approval of Major Professor.

PHPS 711 Lab Animal Care, Mgt & Med II (2) This course is part two of a two part lecture series and is designed to introduce students to the care and use of laboratory animals in accordance with the National Research Council and the Institutional Animal Care and Use Committee (IACUC). Included in this course is a review of Laboratory Animal Care, Management and Medicine I. Emphasis will be placed on rabbits, Mongolian gerbils, guinea pigs, Syrian hamsters, dogs and cats, and primates. Pre: Approval of Major Professor.

PHPS 712 Medical Cell Biology (2) This course focuses on the scientific aspects of cell biology important to graduate students with primary focus on eukaryotic cell biology. The course will provide a basis to general cell biology principles in the context of organ systems and human and animal disease. Clinical cases will be used to build a framework for the basic concepts of medical cell biology and help reinforce conceptual understanding. Pre: Approval of Major Professor.

PHPS 713 Organic Medicinal Chemistry I (2) Organic Medicinal Chemistry I provides the chemical and structural basis for the interdisciplinary field of therapeutics related to diuretics, autonomic nervous system and cardiovascular systems. The topics will include the drug discovery and development process of these important medicines, the chemical and structural basis for the pharmacological and therapeutic action drugs, structural classifications, molecular mechanism of actions, structure activity relationship and how the physicochemical properties of drug molecules affect their route of administration stability, and absorption, distribution, metabolism and excretion. Synthesis of important molecules from each drug class will also be presented. Pre: Approval of Major Professor.

PHPS 714 Organic Medicinal Chemistry II (2) Organic Medicinal Chemistry II provides the chemical and structural basis for interdisciplinary field of therapeutics related to diabetes, thyroid/pituitary disorders, hormones/ osteoporosis/adrenal, asthmas/COPD, and infectious diseases. The topics will include the drug discovery and development process of these important medicines, the chemical and structural basis for the pharmacological and therapeutic action of drugs, structural classifications, molecular mechanism of actions, structure activity relationship, and how physicochemical properties of drug molecules affect their route of administration, stability, and absorption,

distribution, metabolism and excretion. Synthesis of important drug molecules from each drug class will also be presented. Pre: PHPS 713.

PHPS 715 Organic Medicinal Chem III (2) Organic Medicinal Chemistry III provides the chemical and structural basis for interdisciplinary field of therapeutics related to antiviral agents, OA/RA/Gout, migraine, CNS agents including Parkinson/Alzheimer/Seizure. The topics will include the drug discovery development process of these important medicines, the chemical and structural basis for pharmacological and therapeutic action of drugs, structural classifications, molecular mechanisms of actions, structure activity relationship, and how the physicochemical properties of drug molecules affect their route of administration, stability, and absorption, distribution, metabolism and excretion. Synthesis of important drug molecules from each drug class will also be presented. Pre: PHPS 714.

PHPS 716 Organic Medicinal Chemistry IV (2) Organic Medicinal Chemistry I provides the chemical and structural basis for the interdisciplinary field of therapeutics related to gastro-intestinal/genitourinary, chemotherapy, pain management, radiopharmaceuticals. The topics will include the drug discovery and development process of these important medicines, the chemical and structural basis for the pharmacological and therapeutic action of drugs, structural classifications, molecular mechanism of action structure activity relationship, and how the physicochemical properties of drug molecules affect their route of administration, stability, and absorption, distribution, metabolism and excretion. Synthesis of important drug molecules from each drug class will also be presented. Pre: PHPS 715.

PHPS 717 Med Chem CNS Drugs & Develop (2) The course will focus on modern aspects of the design and development of compounds for the treatment of central nervous system disorders, and in addition on the development of PET (positron emission tomography) and SPECT (single photon emission computed tomography) tracers to monitor functional processes in vivo in the human body. Important properties and steps for profiling a drug to enhance the access to the brain will be discussed. The course will start with an overview about CNS targets and pharmacophore models for diverse compound families and will provide synthetic aspects of important drug templates. The production of relevant radionuclides, precursor and radiochemical synthesis, quality control and radiopharmacological aspects (in vitro, ex vivo, in vivo experiments) will be discussed. Pre: Approval of Major Professor.

PHPS 718 Lab Visits & Supervisor Select (1) (lab) This one credit course is designed to enable all PhD candidates time to become familiar with the research being undertaken by possible dissertation supervisors. Each candidate will visit with and interview at least six possible dissertation supervisors and discuss with them dissertation research projects they will be offering. As required, individual candidates may want to spend a longer period in the laboratory of potential dissertation supervisors to actual gain some hands on experience as to what is going on in given laboratory to assist them in making their decision about whose group they would like to join. At the end of the interview process each candidate will submit a three page paper detailing the overall process they went through to eventually select a dissertation supervisor and dissertation topic. Pre: admission into the PhD program in Pharmaceutical Science.

PHPS 719 Mol Biol Tech & Appl-Hlth Care (2) This course will provide students with basic and advanced information regarding DNA, RNA, and proteins, and describe current available techniques used in detecting genetic variation. Potential applications of these techniques to disease screening, drug resistance, and drug discovery and development will be reviewed. Isolation and purification of DNA samples from different

cell types and tissues, DNA concentration techniques, restriction digestion and analysis, ligation of DNA to create recombinant molecules and designer genes will be discussed. Students will be provided with access to reference texts and selected online peer-reviewed articles in .pdf format by the instructor. The instructor will conduct lectures for sessions 1 and 15 and provide background materials. Each student will select a topic from the remaining sessions (2-14) and will lead the discussion for that selected topic on the assigned day. Students may work in pairs (or more if necessary), depending on student enrollment. Students will learn to retrieve information from a variety of sources, comprehend and critically evaluate it, and subsequently lead a discussion on the selected topic. There will be no laboratory component. Pre: Approval of Major Professor.

PHPS 720 Nat Prod & Cancer Chemoprevent (2) The course will concentrate on the molecular aspects of chemoprevention as a viable strategy in the fight against cancer. The treatment of many diseases is dependent on natural products. Over half of the currently approved anti-cancer and anti-infective drugs are of natural origin. Active leads from different structural classes such as alkaloids, flavonoids, coumarins, and phenazines will be described. Since carcinogenesis is a multistage process, different approaches to monitor inhibition of cancer initiation, promotion and progression will be characterized. The course will provide the student with an understanding of detailed aspects of research processes leading to the discovery of promising natural as well as synthetic and semi-synthetic chemopreventive compounds. Special attention will be given to ensure students are aware that the science of chemoprevention research is well established and offers great research opportunities. Pre: Approval of Major Professor.

PHPS 721 Neuropsychopharmacology (2) This course is designed as an intense, doctoral level class that amalgamates the disciplines of neuroscience, animal behavior, neurochemistry, and pharmacology. The course will cover the major topics of neuropharmacology such as cellular and molecular foundations of neuropsychopharmacology, behavioral pharmacology, receptor biology, major neurotransmitter systems and antidepressants, anxiolytics, antipsychotics, drugs of abuse, and cognitive and movement disorders. Further, this course will integrate some of the principle topics in behavioral neuroscience, including aggression, fear, stress, memory, internal state, and evolution of sex and mating systems, communication, feeding behavior, anti-predator behavior, and the evolution of behavior. Course format will consist of lectures and exams, student presentations, and require a capstone research review paper. Pre: Approval of Major Professor.

PHPS 722 Pharmaceutical Marketing (2) This course has two major areas of emphasis in pharmaceutical marketing. The first part of the course will introduce the basic theory of pharmaceutical marketing and creative thinking behind product development. Students will learn the basic principles of consumer behavior and evaluation, environmental framework, social, and various other marketing theories to provide an understanding of how these concepts can influence product development in laboratories or drug industries. This section will also integrate these principles and concepts to understand issues related to the distribution and design of an innovative drug product development. The second part of the course is intended to use the principles and concepts learned in the first part to effectively develop a market plan for an innovative product. Pre: Approval of Major Professor.

PHPS 723 Pharmacognosy (2) Pharmacognosy is a highly interdisciplinary field which is one of five major areas of pharmaceutical education. Its scope includes the study of the physical, chemical, biochemical and biological properties of drugs, drug substances, or potential drugs or drug substances of natural origin as well as the search

for new drugs from natural sources. This course will focus on chemical aspects of Pharmacognosy. Natural products are normally classified according to their biosynthetic origins and chemical properties. Thus, the objective of the course is to familiarize students with an introduction to and classification of natural products (terpenoids, alkaloids, phenylpropanoids and allied phenolic compounds). The basic metabolic pathways and the origin of secondary metabolites such as the shikimic acid pathways, the acetate-malonate pathway, the mevalonate pathways will be discussed. It is a core course of Pharmacognosy and enable students to use this knowledge in the future to explore Advanced Pharmacognosy. A special emphasis will be placed on how chemical structure affects physiological function of various natural products. Pre: Approval of Major Professor.

PHPS 724 Pharmacology I (3) In this 3 credit, 45 hour lecture course, students will learn pharmacology of specific drug groups. The course uses organ system approach. This course will begin with a discussion of diuretics followed by autonomic nervous system pharmacology and conclude with a discussion of drug groups used for the treatment of cardiovascular disorders. In the autonomic pharmacology unit, students will learn about adrenergic and cholinergic drugs that possess agonist and/or antagonist activities at different types and subtypes of receptors that are present in autonomic nervous system and other tissues in the body. Cardiovascular pharmacology will include drug groups that are used in the management of hypertension, hyperlipidemia, heart failure, disorders of coagulation, cardiac arrhythmias and ischemic heart disease. Pre: Approval of Major Professor.

PHPS 725 Pharmacology II (3) In this 3 credit, 45 hour lecture course, students will learn pharmacology of specific drug groups. The course uses organ system approach. This course will begin with a discussion of endocrine disorders pharmacology followed by pharmacology of asthma and chronic obstructive pulmonary disease (COPD), and conclude with a discussion of drug groups used for the treatment of infectious diseases. In the endocrine pharmacology unit, students will learn about drug groups that are used in the treatment of diabetes, thyroid and pituitary disorders, osteoporosis, as well as corticosteroid drugs. Respiratory pharmacology unit will include pathophysiology and pharmacology of drug groups that are used in the treatment of asthma and COPD. Infectious disease pharmacology unit will include discussions of antibacterial, antifungal, antiviral, antiprotozoal and antihelminthic drugs. Pre: Approval of Major Professor.

PHPS 726 Pharmacology III (3) This graduate-level course introduces the student to the basis of disease and pharmacology of drugs used to treat viral infections, osteoarthritis, rheumatoid arthritis, gout, and CNS disorders. Course material covers principles of drug action including drug-receptor interactions and mechanism of action, adverse effects, absorption, distribution, metabolism, elimination and pharmacogenomics. The focus of CNS lectures include therapeutics used to treat migraine, schizophrenia, depression, bipolar disorder, attention deficit hyperactivity disorder, sleep disorders, anesthesia, and neurodegenerative diseases. Students will be assigned a scientific article to read in advance of "Special Topics" lectures. For five of these assignments, the student will also be required to write a one-page summary of the article and its main findings. Pre: PHPS 725.

PHPS 727 Pharmacology IV (3) This graduate-level course introduces the student to the basis of disease and pharmacology of drugs used to treat gastrointestinal and genitourinary disorders, fertility and contraception, as well as cancer and pain management. Course material covers principles of drug action including drug-receptor interactions and mechanism of action, adverse effects, absorption, distribution, metabolism, elimination and pharmacogenomics. Students will be

assigned a scientific article to read in advance of "Special Topics" lectures. For five of these assignments, the student will also be required to write a one-page summary of the article and its main findings. Pre: PHPS 726.

PHPS 728 Phytochem - Terrestrial Plants (2) This course will survey the chemical structures, spectroscopic properties, biosynthesis/biogenesis and biological activities of a wide range of major and minor chemical classes occurring in terrestrial plants. These compound classes will include alkaloids, terpenoids, steroids, coumarins, flavonoids, tannins and other polyphenols, pyrones, quinones, phenylpropanoids, lignins, depsides, depsidones, fats, waxes and lipids among others. Completion of this course will provide the student with a basic familiarity with the kinds of chemical structures found in plants enabling her/him to embark on a career in phytochemical research. Pre: Approval of Major Professor.

PHPS 729 Receptor Theory & Signal Trans (2) This course is designed to provide the student with knowledge of the historical and practical aspects of receptor theory as it applies to drug action, and to introduce how drug actions are mediated through signal transduction cascades, based on specific examples. Lecture topics include: models for receptor-drug interactions; methods for receptor identification; structure-function analysis of GTP-binding proteins and ligand-operated ion channels; receptor tyrosine kinases; nuclear receptors; and receptor-induced signal transduction cascades. Laboratory component of the course is designed to complement lecture topics. Pre: Approval of Major Professor.

PHPS 730 Sample Coll, Documnt & Presrv (1) Participants in this course will learn strategies for sample collection from both the terrestrial and marine environments and for both macro- and micro-organisms. The course will cover permit application, sample collection, and the various ways in which different sample types are preserved for long term storage and how taxonomic voucher specimens are prepared. Pre: Approval of Major Professor.

PHPS 731 Toxicants and Toxicity (3) This course will provide a general foundation in the understanding of basic toxicological principles. The mechanisms of toxicity and contemporary treatment plans for the most common chemical, environmental and pharmaceutical agents will be presented. Additionally, this course will provide an in-depth review of the neuropharmacology of substances of abuse including stimulants, depressants, hallucinogens and anabolic steroids. Other types of addiction will be discussed. Special emphasis will be given to basic pharmacokinetic and pharmacodynamic mechanisms as they relate to the effects of the individual substances of abuse. Current theories of addiction and tolerance development will be discussed. Pre: Approval of Major Professor.

PHPS 732 Tox Plant Nat Prod-Therap Pot (2) This course will draw on the basic principles of organic chemistry and biology to provide an understanding of the biosynthesis of toxic natural products in plants, their bioassay-directed fractionation and isolation, structural identification, and mode of action in mammalian systems. Toxins discussed will be those responsible for hepatotoxicity, teratogenicity, cardiotoxicity, lysosomal storage diseases, and reproductive defects. Students will integrate these principles to understand the importance of dose in discriminating between toxicity and therapeutic action, as well as the role of natural products as lead compounds in drug development. The major classes of toxic compounds occurring in plants will be discussed, with particular reference to those occurring in Hawai'i. Discussions of proper experimental design, plant sampling and identification, and structural classification will carry over into the

laboratory portion of the class. Students will become familiar with procedures for plant collection, extraction and isolation of pure compounds, and structural identification. Pre: Approval of Major Professor.

PHPS 733 Aerosol Physics in Medicine (1) The course is structured in two equal halves. Part 1 focuses on fundamentals concerned with aerosol behavior and assessment of orally and nasally inhaled products (OINDP). Part 2 applies the knowledge gained in the first part to develop an understanding of the current regulatory science and newer methods of assessment to provide more meaningful data to prescribing clinicians and the patients themselves.

PHPS 734 Biotechnology Laboratory (2) (lab) Biotechnology continues to play a greater and greater role in pharmacy. Health conditions can be treated with DNA vaccines, RNAi, monoclonal antibodies, recombinant proteins including peptide hormones, etc. This course will provide hands-on experience with biotechnology techniques. Techniques will be covered from DNA manipulations to expression of recombinant proteins.

PHPS 735 Cell Cycle Progression (2) (lab) Lecture and mammalian cell culture lab with modern methodological approaches for studying apoptosis (programmed cell death) and the cell cycle. Relationships between the cell cycle and apoptosis in understanding pathological conditions and identifying new therapeutic strategies. Pre: Enrollment in DKICP PhD program.

PHPS 736 Pharmaceutical Immunology (3) Basic concepts of immunology including innate immunity, antigen recognition, lymphocyte development and adaptive immunity will lay the groundwork for understanding immunity in a clinical context. Pre: Enrollment in DKICP PhD Program.

PHPS 737 Cell Physiol in Drug Discovery (2) The course is geared towards gaining an in-depth understanding of applications and approach using state-of-the-art biotechnology for drug discovery. Pre: Enrollment in DKICP PhD Program.

PHPS 738 Microbial & Marine Nat Probs (2) This course will focus on the chemical aspects (including sample collection, isolation, structure determination, biosynthesis, synthesis, medical application and mechanism of actions etc.) of natural products from marine, microorganisms, and other sources. Pre: Enrollment in DKICP PhD Program.

PHPS 749 Overview of Pharm Sciences I (2) Drug discovery, basic principles of drug design, development and action to provide an introduction to the pharmaceutical sciences. Among topics are an introduction to medicinal chemistry, drug targets and interactions, and the architecture of drugs. Pre: Enrollment in DKICP PhD program.

PHPS 750 Overview of Pharm Sciences II (2) Drug design, development and action to provide an introduction to the pharmaceutical sciences. Among the topics are ADMC, structural changes during metabolism (chemistry), chemical mutagenesis, carcinogenesis, and teratogenesis, drug-drug interactions, drug allergy, drug resistance, tolerance and dependence, pharmacogenomics, and drug discovery. Pre: Enrollment in DKICP PhD program.

PHPS 751 Biochemistry I - Biomolecules (3) Basic foundation for medicinal biochemistry, pharmacology, including the structure and function of amino acids, proteins, nucleic acids, and lipids. Biological processes including signal transduction, DNA, RNA, and protein synthesis for an understanding of disease states and drug action. Pre: Enrollment

in DKICP PhD Program.

PHPS 752 Biochemistry II - Metabolism (3) Metabolism and the interrelationships, integration of metabolic processes, including glycolysis, the tricarboxylic acid cycle, gluconeogenesis, and the synthesis and breakdown of biomolecules. Metabolic control and regulation of pathways will be emphasized. Clinical correlations and metabolic diseases will be examined. Pre: Enrollment in DKICP PhD program.

PHPS 755 Advanced Pharmaceutics I (3) This course will draw on the basic principles of chemistry, biology and physics to provide an understanding of how drug physico-chemical properties at the molecular and macroscopic assembly level are manifest in dosage form properties and performance. Students will integrate these principles to understand issues in the rational selection of dosage forms and drug delivery systems as well as their role in drug product development. Discussions of Good Manufacturing Practices and Good Compounding Practices will carry over into the lab portion of the class. Students will become comfortable with equipment; procedures and records used in the compounding of various dosage forms, and will practice clinical dispensing skills vital to shaping a truly professional pharmacist. Pre: Approval of Major Professor.

PHPS 756 Advanced Pharmaceutics II (3) This course will draw on the basic principles and developmental aspects of drug formulation to deliver the active pharmaceutical ingredient through biological membranes to exert the therapeutic effect at site of action. Understanding of physicochemical properties of active pharmaceutical ingredient and additives or excipients, pharmacological properties and processability of drug delivery systems can be utilized for optimal performance of the drug delivery systems. Understanding of active pharmaceutical ingredient and additive or excipients physico-chemical properties at the molecular and macroscopic assembly level are manifest in dosage form properties and performance. Students will integrate these principles to understand issues in the rational choice of dosage forms and drug delivery systems as well as their role in drug product development. Discussions of Good Manufacturing Practices and Good Compounding Practices will carry over into the lab portion of the class. Students will become familiar with procedures and records used in the compounding of various dosage forms, and will practice clinical dispensing skills vital to shaping a truly professional pharmacy professional scientist. Pre: Enrollment in the College of Pharmacy Pharmaceutical Sciences PhD program.

PHPS 780 Research Seminar (1) The transfer of information in the pharmaceutical sciences is often achieved through the presentation of seminars. Students will prepare and present the annual research seminar required for partial fulfillment of the PhD degree. Pre: Enrollment in the College of Pharmacy PhD program. Course may be repeated for credit.

PHPS 800 Resrch Dissertation-Phrm Sci (1-15) This course outlines the conduct of the dissertation project and preparation of the actual dissertation document for the Doctoral level student. The dissertation is a major undertaking that is a demonstration of mastery of a field of research in the Pharmaceutical Sciences and should represent an original and significant contribution to the field. The dissertation document will usually be no less than 150 pages in length and be based on a research project defined by the candidate's Primary Advisor. The project may take a variety of forms, for example, be quantitative, qualitative, or theoretical, the main criteria being that at the completion of the research the candidate can demonstrate mastery of and excellence in their chosen area of research. Pre: Successful completion of the first, qualifying year of the PhD program progressing to Candidacy, and

selection of a Primary Advisor, a Dissertation research topic and a Dissertation Committee.

PHPS x94 Special Topics in Subject Matter (Arr.) Special topics chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

PHPS x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Additional Courses

Also see the [PHPS undergraduate-level courses](#).

Tropical Conservation and Environmental Science (CBES) Graduate Courses for the Master of Science in TCBS

College of Natural and Health Sciences (CNHS)

CBES 500 Master's Plan Studies (1) (other) Used for continuous enrollment purposes. Does not count toward fulfillment of degree requirements. Pre: Master's or Doctoral candidacy and instructor's consent.

CBES 600 Conservatn Biol & Environ Sci (3) Fundamental principles of ecology, evolution, and environmental sciences, with an emphasis on the conservation, management and restoration of organisms and ecosystems. Discussion will include the physical and biological factors that affect and shape tropical organisms and ecosystems: biodiversity, biogeography, climate, genetics, nutrient cycling, population viability, reproductive systems and topography. Tropical organisms and ecosystems world-wide will be compared with an emphasis on Hawai'i.

CBES 601 CBES Field & Laboratory Method (4) A practical course in laboratory and field methods and techniques in conservation biology and environmental sciences. Students will be introduced to methods used for studying, monitoring and experimenting upon animals and plants in a diversity of habitats. Emphasis is placed on the choice of techniques for data collection, followed by rigorous analysis of results with the application of appropriate statistical analyses. Students will also become familiar with the biological and environmental diversity of the Island of Hawai'i.

CBES 602 Research Seminar in TCBS (1) (other) A research seminar in tropical conservation biology and environmental science. Presentations will focus on research related to conservation biology and environmental science. Following the seminar there will be a question and answer discussion session with the seminar speaker and students. These seminars will be critiqued by the instructor and the students for both the content of the project and presentation style.

CBES 603 Natural Resource Mgt Seminar (1) (other) Seminars given by TCBS faculty, visiting scientists from other universities, federal, state and non-profit agency personnel working in fields related to TCBS. The seminars will be focused on natural resource management issues. Following the seminar there will be an open question and answer discussion session with the seminar speaker and the students. Student will also give short presentations of their research or internship projects.

These seminars will be critiqued by the instructor and the students for both the content of the project and presentation style.

CBES 604 Tropical Plant Pathology (3) Principles of plant pathology including major plant diseases in the tropics caused by fungi, bacteria, nematodes, and viruses; their nature, diagnosis and control. This course is dual listed with PPTH 404.

CBES 609 Theory/Apps Landscape Ecology (3) (lecture/other) This course explores the theory and application of landscape ecology as a framework for landscape research, analysis and management. Students will become well-versed in concepts, methods and applications of landscape ecology through reading classic and contemporary literature and performing independent research. Topics will include: characterizing landscape patterns and dynamics, application of landscape management, and emerging areas of research. This course is dual listed with GEOG 409.

CBES 610 Environmental Chem Analysis (3) Basic concepts of chemical measurements in environmental media. Analysis in environmental matrices with emphasis on water, soil, air and tissue. Topics include basics of calibration and measurement, sample collection, sample lability, chemical interferences, matrix effects and reporting analyses of chemicals in the environment. Pre: CHEM 161, 161L, 162, 162L, 241, 330, 330L. Recommended: CHEM 331.

CBES 615 Global Environmental Change (3) Discusses the natural and anthropogenic processes regulating the function of the Earth system. The history and mechanisms of global change processes and the means by which human activities alter Earth system function at local to global scales will be examined, along with potential consequences of and solutions to global change. Focuses on interrelationships of the atmosphere, hydrosphere, geosphere and biosphere. Provides students with an understanding of the role that multidisciplinary science and technology have on research of the Earth system.

CBES 620 Rrsch Techniq Molecular C Biol (3) (lab) Major advances in molecular biology important to conservation studies are examined. Molecular techniques that are applied to conservation studies are performed, including PCR, RFLP, AFLP, DNA sequencing, and microsatellite analysis. Data analysis is examined, including a number of popular genetics software packages that enable pairwise comparisons of large data sets and the construction of genetic distance matrices and networks. Pre: BIOL 357L and 481L or equivalent, or instructor's consent.

CBES 623 Marine Policy (3) Introduction to marine policy, law, and environmental regulations. Topics include protected species, fisheries, clean water, clean air, coastal wetlands, pollution, marine protected areas, climate change. Pre: Instructor's consent. This course is dual listed with MARE 423.

CBES 627 Environmental History--Pacific (3) Environmental history of the Pacific, including history of Oceania, environmental change effects on the daily lives of Pacific peoples, and how the actions of people affected environmental change. Dual listed with HIST 427

CBES 630 Nearshore Monitoring & Analyis (3) (lecture/lab) Theoretical and practical planning and implementation of data collection and analysis of the intertidal and shallow subtidal marine environments. Techniques include measuring geological, chemical, and physical environments and estimating the abundance and diversity of organisms. Pre: MARE 350 & 350L, CBES 610; or instructor's consent.

CBES 631 Pono Science (1) Seminar will support student dialogue on the foundations of pono science. Through discussions and structured

guidance, students will explore Hawaiian ethics, implications of research, and decolonizing methodology.

CBES 633 Biodiversity (3) (lecture/other) This lecture and discussion course will examine the primary theories and evidence for the origin and maintenance of species richness in hyper-diverse communities, using tropical rainforests and/or coral reefs as model systems. Topics will include historical biogeography, speciation, coevolution, neutral vs. non-neutral models for the maintenance of species richness, and biodiversity conservation. Methodological approaches will also be discussed.

CBES 634 Extinction (3) This graduate seminar course is designed to examine the patterns and drivers of extinction in the modern and in the fossil record. The readings will serve as the foundation for short presentations and as discussion starters on the weekly topics.

CBES 635 Physical Environment of Ecosys (3) Examination of the influences of climate, hydrology, geology and soils on terrestrial and aquatic ecosystems. Emphasis on mechanisms of change, anthropogenic impacts and monitoring networks. Pre: GEOL 100 or 111 or GEOG 101; BIOL 281 or GEOG 309 or equivalent; or instructor's consent.

CBES 640 Adv Remote Sensing/Digital Ima (3) (lecture/lab) Digital image processing of satellite-derived remotely sensed data for earth resource analysis and applications. Specific applications include image enhancement, classification, post classification analysis, special transformations, and multi-temporal analysis for land cover change detection. Pre: GEOG 470 or equivalent; or instructor's consent.

CBES 642 Comm Sci in HI Island Schools (3) For graduate students interested in improving their ability to communicate their scientific knowledge and research by designing activities and teaching in local schools or community events. The course combines inquiry-based science teaching methods with teaching experience in a local school classroom or community event. Pre: Acceptance in TCBS Program. This course is dual listed with ED 442.

CBES 644 Law, Property, and Nature (3) Examines the relationship between nature, property, and legal regulation. Topics will include takings jurisprudence, land use management and ownership, riparian rights, air rights, public spaces, and the evolving relationship between culture, law, and the environment. This course is dual listed with POLS 444.

CBES 645 Soc Sci Rsch Mthds Envir Cons (3) This course introduces students to social science research strategies that can be applied to explore interactions between society and environment. Methods training includes data collection such as ethnography, in-depth qualitative interviewing, and/or survey methods and the development of analytical skills in grounded theory, content analysis, and/or case studies. Students may also be introduced to methodological perspectives such as action-oriented research, indigenous methodologies, feminism, and/or sustainability. Pre: Enrollment in TCBS program or Instructor's Consent.

CBES 648 Hawai'i Island to 1850 (3) Hawai'i Island to 1850 Place-based learning and research, through mo'olelo & ka'ao; developing connections to place; community outreach and leadership to youth; service-learning and more; all in the context of Hawai'i Island history pre-1850. Dual listed with HIST 448.

CBES 649 Hawai'i Island since 1850 (3) A combination of place-based learning and research, through mo'olelo, 19th and 20th century histories; developing connections to place; community outreach and leadership to youth; service learning and more; all in the context of Hawai'i Island history. This course is dual listed with HIST 449.

CBES 650 Oceanographic Monitoring & Ana (3) (lecture/lab) Theoretical and practical planning and implementation of data collection and analysis of neritic and pelagic marine environment from an oceanographic vessel platform. Techniques include measuring geological, chemical and physical nearshore properties; estimating the abundance and diversity of plankton, nekton, and benthos; and use of modern data recording and analyzing systems. Pre: MARE 350, 350L, and CBES 610 or instructor's consent.

CBES 655 Ecological Physiology (3) Physiological adaptations to environmental variation including physiological and biochemical mechanisms for food acquisition and digestion, thermal energetics, respiratory gas exchange, activity metabolism and osmoregulation. This course is dual listed with BIOL 443.

CBES 657 Vegetation of the Hawaiian Isl (3) Develops a methodology for understanding processes shaping major types of vegetation in Hawai'i. Intensive plant taxonomy and identification, field methods in surveying and monitoring vegetation, and application of these to overall research design. This course is dual listed with BIOL/ENVS 457.

CBES 658 Insect Systematics and Ecology (3) Gain an appreciation and understanding of insect diversity, taxonomy, evolution, and ecology of major endemic Hawaiian lineages of insects and introduced insects. Identify insect orders and families present in Hawai'i, and the roles insects play as threats and beneficial organisms across all ecosystems. Applied management of insect issues will be emphasized.

CBES 660 Molecular Ecology (3) (lecture/other) This lecture and discussion course will examine the molecular genetic applications in current ecological research. Topics will include the fundamentals of molecular biology as they pertain to ecological systems. Theoretical background of modern molecular genetic techniques will also be discussed. The format of the course will include student-led seminar discussions of recent primary literature in molecular ecology. Some genetics background necessary.

CBES 663 Fisheries Ecology (3) Case studies, lectures, and class discussions provide an interactive exploration of the ecology of fishes related to management and conservation. Topics include: predator-prey theory, reproduction and early life- history, habitat selection, fish biodiversity, and response to anthropogenic climate change. Pre: MARE 265, BIOL 281, or instructor's consent. This course is dual listed with MARE 463.

CBES 664 Environmental Microbiology (3) Role of microorganisms in environmental science. Topics include microbial diversity, environmental applications, bioremediation, antibiotic resistance, and biogeochemical cycling. The course will be discussion based with readings from textbooks and primary literature.

CBES 665 Environmental Toxicology (3) Biochemical basis for toxicity. Chemical distribution and fate in the body; molecular mechanisms and effects of toxic action. Emphasis on environmental toxicants. Pre: Upper division courses in biochemistry and physiology, or instructor's consent.

CBES 670 Geog Info Sys & Visualization (3) (lecture/other) Key principles and concepts of Geographic Information Systems (GIS) that includes: a theoretical foundation, software training, real-world applications and techniques in visualization of spatial information relevant to conservation biology and environmental science research. This course is dual listed with GEOG 480.

CBES 674 Applied Informatics (3) Examines the theory and application of several informatics and analytics tools used in the natural sciences. Covers fundamentals of data management, data analytics, ecoinformatics, bioinformatics, and data visualization. This course is dual listed with MARE 474 and DATA 474.

CBES 675 Conservation Genetics (3) Basic concepts of population genetics and molecular evolution as it applies to conservation biology. Specific topics include population dynamics and inbreeding depression, and population genetic structure related to ecological parameters and requirements of an organism.

CBES 676 Applied Wildlife Pop Ecol (3) (lecture/lab) Principles of wildlife population ecology, population dynamics, habitat use, including applications to conservation. This course is dual listed with ANSC 476.

CBES 677 Quantitative Ecology (3) This course will consist of weekly lectures and computer-based in-class exercises. It will explore multiple regression, General Linear Models including Logistic and Poisson regression, Mixed effects models, and various other analysis of variance approaches, including repeated measures designs. Diagnostics and model selection procedures such as Akaike's Information Criteria (AIC) will be strongly emphasized. By the end of the course, students should have a good general understanding of the ways to design, analyze, and model many types of biological datasets.

CBES 680 Adv Stats Analysis & Rsrch Des (3) An advanced examination of statistics and research design in conservation biology and environmental science. Emphasis on specific applications and underlying assumptions, design of experiments, and observational schemes for research project. Extensive computer analysis is employed, including the use of R statistical software. Pre: CBES 677 or instructor's consent.

CBES 681 Advance Geo-Spatial Techniques (3) (lecture/other) CBES 681 is an advanced course in spatial analysis and modeling specific to Geospatial Information Science. This course will emphasize the correct application of Geospatial software tools along with the underlying theories and opportunities for applied learning in terrain modeling, suitability modeling, predictive ecosystems mapping and data visualization. Further knowledge and skills will be developed by customization of GIS applications through interface design and automation of geospatial analysis procedures. This course is dual listed with GEOG 481.

CBES 682 Natural Resource Env Econ (3) An analytical framework for examining the relationships among environmental quality, natural resource use, and economic and political systems; analysis of circumstances that give rise to environmental problems, resource use conflicts, and possible policy solutions to these problems and conflicts. The course will emphasize issues pertaining to climate change. This course is dual listed with ECON 482.

CBES 684 ConservEthics & EnvironJustice (3) A study of a range of environmental ethical theories, conservation ethics and environmental justice paradigms. An examination of the historical, political, and social context in conservation management: the problem of wilderness, biocultural frameworks, and the ethics of invasive species. This course is dual listed with PHIL 484.

CBES 685 Behavioral Ecol & Evol Analyse (3) Principles of behavioral ecology and evolution with a focus on conservation biology. Research techniques in behavioral ecology related to analyzing populations in geographically and age-structured populations. The importance of reproductive strategies, habitat selection, foraging

behavior, parental care, social organizations, and the importance of migration and movement patterns on the regulation of population sizes and evolution. Population, quantitative and species genetics as it relates to evolution, speciation, and biodiversity. Pre: CBES 610 or consent of instructor.

CBES 687 Speciation (3) This graduate seminar course is designed to examine the processes of speciation and adaptive radiation. Emphasis on the historical context of Darwin's work and what has (and has not) changed in the ~160 years since his seminal work. We will also place emphasis on where the field is currently going and what are likely to be hot areas of research in coming years in speciation and adaptive radiation research. Students will be active learners and participants in all activities and will present to the class on selected topics. This course is designed as an advanced course for students interested in speciation. Recommended preparation: general courses in ecology and evolution.

CBES 689 Organiz Mgmt & Logistics (3) This course covers topics related to working within a natural resource management field, whether as an individual consultant, a researcher, or a manager working within a government agency, a non-government organization (NGO), or other entity. Focus will be on business acumen in terms of budgeting, marketing, and human resources; on project and organizational management in terms of scheduling, seeking funding, inter-agency communication; on legality in terms of permitting, and understanding state and federal laws regarding environmental conservation; and on communication in terms of public outreach. Pre: Enrollment in TCBES Program or Instructor's Consent.

CBES 690 Professional Internship (1) (other) Graduate-level conservation or environmental science internship with a federal, state, or non-government agency. Pre-approved proposal serves as a guideline for specific activities. Check-ins, site visits, other meetings, and writing assignments. Pre: Instructor's Consent

CBES 691 Becoming Environmental Leader (2) Explores fundamentals of effective conservation leadership and development of personal and professional skills needed by natural resource scientists and managers to contribute to the greater good as authentic agents of positive change.

CBES 692 Proposal Writing (2) (lecture/lab) Explore proposal formats. Develop and complete a well-written, well-conceived, proposal for the Professional Internship or Thesis. Taught as a combination lecture/lab. The lab portion is loosely designed as a writing group.

CBES 695 Becoming Envrnmntl Communicatr (2) (lecture/lab) Communicating science through conceptualizing, planning, scripting or modeling, and presenting well-conceived informal science exhibit, podcast, blog, professional brand, curated online identity, and other trends in popular and emerging science communication media. Taught as a combination lecture/lab.

CBES 696 Emerging Envrnmntl Professionl (2) (lecture/lab) The most effective scientists and managers are those who can successfully relay their knowledge and discoveries to any audience. Course provides training in report writing, synthesizing scientific outcomes, evaluation, presentation skills, and professional documents.

CBES 700 Thesis Research (1-6) (other) Research in conservation biology and environmental sciences for students in the Thesis Track.

CBES x94 Special Topics in Subject Matter (Arr.) Special topics

chosen by the instructor. Course content will vary. May be repeated for credit, provided that a different topic is studied. Additional requirements may apply depending on subject and topic.

CBES x99 Directed Studies (Arr.) Statement of planned reading or research required. Pre: instructor's consent.

Board of Regents and Administration

University of Hawai'i Board of Regents

Updated August 2024

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- Mike Miyahira, Hawai'i County
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More information on the Board of Regents can be found on the [Board of Regents and Leadership](#) website.

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Emeriti Faculty

Key:

- **CAFNRM:** College of Agriculture, Forestry and Natural Resource Management
- **CAS:** College of Arts and Sciences
- **CNHS:** College of Natural and Health Sciences
- **CoBE:** College of Business and Economics
- **CHL:** College of Hawaiian Language
- **DKICP:** College of Pharmacy
- **DSA:** Division of Student Affairs
- **Lib:** Library

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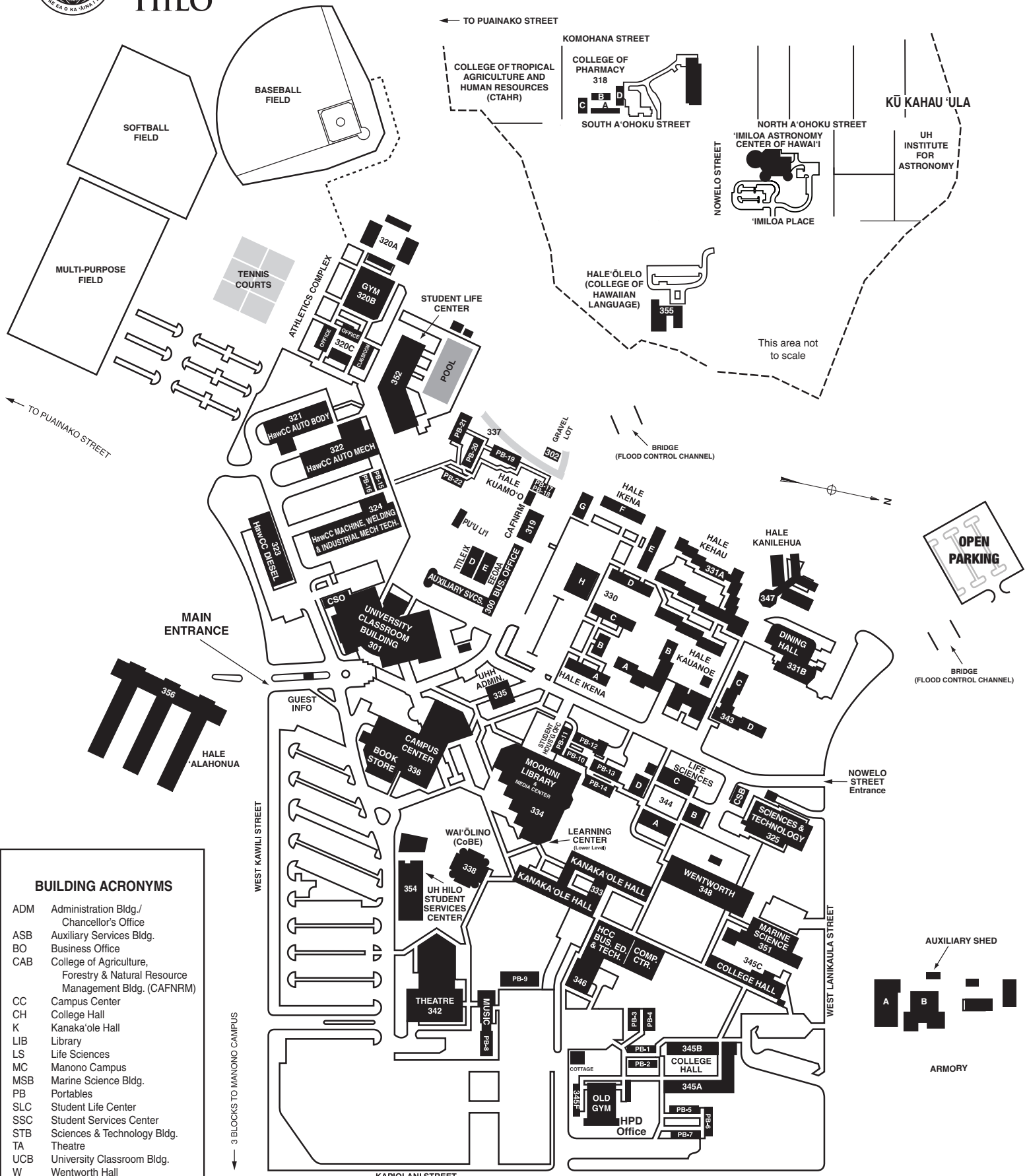
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BUILDING ACRONYMS

ADM	Administration Bldg./ Chancellor's Office
ASB	Auxiliary Services Bldg.
BO	Business Office
CAB	College of Agriculture, Forestry & Natural Resource Management Bldg. (CAFNRM)
CC	Campus Center
CH	College Hall
K	Kanaka'ole Hall
LIB	Library
LS	Life Sciences
MC	Manono Campus
MSB	Marine Science Bldg.
PB	Portables
SLC	Student Life Center
SSC	Student Services Center
STB	Sciences & Technology Bldg.
TA	Theatre
UCB	University Classroom Bldg.
W	Wentworth Hall
320	Athletics
346	Business Education Bldg.

