UNIVERSITY of HAWAI'I
HILO

GRADUATE COURSE CATALOG

2026–2027

Connecting LEARNING, LIFE & ALOHA

UNIVERSITY of HAWAI'I®
HILO

This catalog contains general information about the program offerings at the University of Hawai'i at Hilo for the 2025-2026 academic year. This document summarizes applicable policies and programs of UH Hilo and is subject to change.

Although every effort is made to keep this catalog correct and current, inevitably there will be some changes in courses and program requirements. It is highly recommended that you consult your faculty and/or academic advisors for the most current information.

An online version of this catalog can be found at:
https://hilo.hawaii.edu/catalog/

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Chancellor's Message

The University of Hawai'i at Hilo prides itself on the wide diversity of ethnic and cultural origins of our students. Indeed, U.S. News & World Report has ranked us as one of the most ethnically diverse national four-year universities in the country.

Yet there is still one over-arching thing all these students have in common: the desire to better themselves and to provide a bright future for themselves and their families. And that is the magic of UH Hilo; we open the door to opportunity for individuals, families, and communities, and we connect learning, life and aloha.

We've been hard at work both on recruiting students and keeping them here. We have bold goals for student success, and I am pleased to see many new initiatives underway.

Newest Vulcans are warmly welcomed with workshops, fairs, tours, shuttles, various socials, and a beautiful convocation ceremony, introducing them to our university and our community. We have created more organized and intentional opportunities for community service and community-based research projects for all undergraduate and graduate students. We have expanded employment opportunities for students on campus, so you can hone your job skills and build your resumes while helping your peers thrive.

Not all the learning takes place in classrooms and labs. We are also focused on expanding research experiences, internships, community service, and study abroad. All of these provide valuable opportunities for students to apply what they learn class to real world situations. We are continuously providing more of these opportunities for more students, so that they are competitive for good jobs and good graduate schools. At UH Hilo, students get the one-on-one attention that really enhances learning, something larger schools cannot compete with.

Woven into all of this activity is a feeling of 'ohana: our campus is relationship driven. We create lasting bonds and friendships among our students and between our students and members of the entire campus community, including faculty and staff, relationships that take them forward into life with the full support they need to succeed. Our broader community supports us and, in turn, we give back to our island home.

I am looking forward to you joining us for the coming year.

Bonnie D. Irwin
Chancellor, UH Hilo

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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 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 English Proficiency scores.
2. International Graduate Student Supplemental Application Form (PDF)
3. Verification of financial status to cover the cost of attendance for the first year of the program using the Confidential Financial Statement Form (PDF)
4. 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 an institution accredited by one of the six nationally recognized accrediting agencies, 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 some 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 institutionally-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.

English Proficiency

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 demonstrated successful completion of one of the exams below with the minimum acceptable score. Applicants who have baccalaureate degrees from English-speaking institutions are exempt from the English Proficiency requirement.

Minimum Score Requirements:

Exam	Minimum Score
TOEFL iBT	67
IELTS	6.0
Duolingo English	100
Cambridge Test of English (CES)(C1 Advanced and C2 Proficency exams only)	161

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 admission guide and on the Graduate Division home page.

Official notification of acceptance or rejection generally is sent by the Graduate Division between January 1 and May 30 for summer and fall admission. For spring admission, notification is generally sent 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 2026-2027 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 2027

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 2026-2027 Academic Year (Per Semester)

Fee	1+ credits
Athletic Fee	$37.50
Campus Center	29.50
Media Broadcasting	24.00
Student Activities	28.50
Student Association	28.50
Student Health	30.00
Student Life Center	148.00
Student Publications	28.50
Total:	**$354.50**

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
Electronic Transcript	8.90
Hard Copy Paper Transcript	10.75 + mailing cost
Hard Copy Paper Transcript (Hold for Pickup)	7.90
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 clicking on the tab “STAR GPS Registration”.

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

Fall & Spring Classification	Description
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

Except for certain professional programs, most graduate programs utilize a graduate committee system for advising and evaluating graduate students. Please view the full policy on Graduate Committees and Primary Academic Advisors for detailed information.

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 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 form requring approval from the Primary Advisor and Graduate Program Chair, Graduate Council Chair and the Vice Chancellor for Academic Affairs.

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.

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 withdrawals 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 accredited by one of the six nationally recognized accrediting agencies 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. 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 an institution accredited by one of the six nationally recognized accrediting agencies 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.

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.

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 who may also serve as the Chair of their committee when applicable. The primary academic advisor may be the chair of the graduate program or another faculty member. All committee appointments are made in consultation with the student's graduate advisor, graduate program chair, and with approval of the Graduate Council for community members serving on the committee. Committees are formed and modified (if necessary) by mutual agreement between the student and the faculty.

Please see the full policy on Graduate Committees and Primary Academic Advisors for detailed information.

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. Students should consult with the UH Hilo Academic Dishonesty policy, their Primary Advisor and Graduate Program Chair on the use of Generative AI, if any, in thesis research.

Publication is required for all theses. 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 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 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.
8. **Student:** If student wants to participate in Commencement exercises, student submits the separate Commencement Registration 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 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 to the Graduate Division Office.
3. **Student:** Submits Form 2: Thesis/Project/Dissertation Proposal 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 the Thesis Defense Schedule Form to the Graduate Division one month prior to the defense deadline posted in the University Academic Calendar.
12. **Student:** Defends and completes thesis.
13. **Student:** Submits Form 3: Thesis/Project/Dissertation and Degree Requirements Completion.
14. **Student:** Submits thesis on ETD Administrator.
15. **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.
16. **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. All committee appointments are made in consultation with the student's primary academic advisor, graduate program chair, and with approval of the Graduate Council.

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 external examiner (should one be necessary), who is appointed by the VCAA before the final oral examination is scheduled.

Please see the full policy on Graduate Committees and Primary Academic Advisors for detailed information.

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.

Students should consult with the UH Hilo Academic Dishonesty policy, their Primary Advisor and Graduate Program Chair on the use of Generative AI, if any, in dissertation research.

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 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

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, 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.
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 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 the Thesis/Project/Dissertation Defense Schedule form to the Graduate Division one month prior to the defense deadline posted in the University Academic Calendar.
17. **Student:**: Defends and completes dissertation.
18. **Student:**: Obtains signatures of committee members on Form 3: Thesis/Project/Dissertation and Degree Requirements Completion.
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

Academic Dishonesty Policy

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.

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 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 UH provided fellowship, tuition scholarship, student stipends, or other source of UH provided financial support, due to issues relating to Academic Dishonesty and Student Conduct, are made to the Dean or Director of the College 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, UH Hilo Academic Grievance Complaint Policy. 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: Lynn A. Morrison, Ph.D.
Email: lmorriso@hawaii.edu

Dept. of Anthropology
Social Sciences Division Office
200 W. Kāwili Street
Hilo, HI 96720

Professors:

- Joseph H. Genz, Ph.D., Professor of Anthropology
- Lynn A. Morrison, Ph.D., Professor of Anthropology

Associate Professors:

- Kathleen L. Kawelu, Ph.D., Associate Professor of Anthropology

Assistant Professors:

- Jillian Swift, Ph.D., Assistant 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 Paleoecology (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: Bryan Kim, Ph.D.
Email: mhcp@hawaii.edu

Website: counseling.uhh.hawaii.edu

Core Faculty:

- Charmaine Higa-McMillan, Ph.D., Professor,
- Bryan Kim, Ph.D., Professor
- Sunyoung Kim, Ph.D., Professor
- Steve Herman, Ph.D., Associate Professor
- Han Na Suh, Ph.D., LP, Associate Professor

Contributing Faculty:

- Errol Yudko, Ph.D., Associate Professor
- Jennifer Turner, Ph.D., Associate Professor

Program Coordinator:

- Melissa Bartholomew, M.A., L.M.H.C.

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 an institutionally-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 (3)
   - PSY 602 Research Meth & Prgm Evaluatn (3)
   - PSY 603 Psychological Assessment (3)
   - PSY 604 Profssnl Identity, Ethics (3)
   - PSY 606 Professional Counselor Dev I (1)
   - PSY 607 Professional Counselor Dev II (1)
   - PSY 608 Professional Counselor Dev III (1)
   - 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.

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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 Keʻelikōlani 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.
- Kauanoe Kamanā, Ph.D.
- Keiki Kawaiʻaeʻa, Ph.D.
- Kananinohea Mākaʻimoku, M.A.
- Yumiko Ohara, Ph.D.
- Hiapokeikikane Perreira, Ph.D.
- Leisy Wyman, Ph.D.

Assistant Professor:

- Frank “Kaʻiuokalani” 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 Keʻelilkōlani
University of Hawaiʻi at Hilo
200 W. Kāwili Street
Hilo, Hawaiʻi 96720-4091

Tel: (808) 932-7730
Email: kuulei.kepaa@hawaii.edu

Vision and Mission of the College

> *ʻO ka ʻōlelo ke kaʻā o ka mauli.*
> Language is the fiber that binds us to our cultural identity.

UH Hilo's College of Hawaiian Language, Ka Haka ‘Ula O Keʻelikōlani, was established in 1998 as the world's first college through the medium of Hawaiian. The College is named in honor of Ruth Keʻelikōlani 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 mauli ola Hawaiʻi. A thriving Hawaiian language is the means through which the mauli ola Hawaiʻi will once again become commonplace in both traditional and contemporary contexts in Hawaiʻi. 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
- Keʻelikōlani Education (KED) Graduate Courses
- Keʻelikōlani Hawaiian Language (KHAW) Graduate Courses
- Keʻelikōlani Hawaiian Studies (KHWS) Graduate Courses
- Keʻelikōlani Indigenous Language (KLAN) Graduate Courses
- Keʻelikōlani Indigenous Studies (KIND) Graduate Courses
- Keʻelikōlani Linguistics (KLIN) Graduate Courses

Indigenous Language and Culture Revitalization Graduate Certificate

Program 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.
- Kauanoe 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'elilkōlani
University of Hawai'i at Hilo
200 W. Kāwili Street
Hilo, Hawai'i 96720-4091

Tel: (808) 932-7730
Email: kuulei.kepaa@hawaii.edu

Program Description:

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.

Certificate Curriculum: (15 Credits)

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

Program 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'elilkōlani
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 mauli ola educators who focus on mauli 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.

Certificate 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 Mauli 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 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

Upon successful completion of this certificate, students will be able to:

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 or other Indigenous 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 Division Chair based on an evaluation of Hawaiian or other Indigenous language 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) or if other Indigenous language, permission from the College Division Chair based on an evaluation of fluency in other Indigenous language.
- 50 hours of (paid or volunteer) teaching experience through the medium of Hawaiian or other Indigenous language, 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.
- 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)

[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 Hawn & 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 Hawn & Indig Medium Ed (2)
- KED 627A or KED 627E Math in Hawn & Indig Medium Ed (2)
- KED 628A or KED 628E Arts in Hawn & Indig Medium Ed (1)
- KED 641A or KED 641E Hawn & Indig Medium Fld Exp I (9)
- KED 642A or KED 642E Hawn & Indig Med Fld Exp I Sem (3)
- KED 643A or KED 643E Hawn & 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: Hiapokeikikane "Hiapo" Perreira, Ph.D.
Email: hiapokei@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.
- Kauanoe Kamanā, Ph.D.
- Keiki Kawai'ae'a, Ph.D.
- Kananinohea "Kanani" Māka'imoku, M.A.
- Yumiko Ohara, Ph.D.
- Hiapokeikikane "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 ʻUla O Keʻelikōlani 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:

Kuʻulei Kepaʻa
Ka Haka ʻUla O Keʻelilkōlani
University of Hawaiʻi at Hilo
200 W. Kāwili Street
Hilo, Hawaiʻi 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 Hawaiʻi. A thriving Hawaiian language is the means through which the mauli ola Hawaiʻi will once again become commonplace in both traditional and contemporary contexts in Hawaiʻi. 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 institutionally 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):
   - 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 Mauli 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

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 Mauli 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)

Please Note

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.
3. Successful completion of their Action/Research Paper and Presentation

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.
- Kauanoe 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'elilkōlani
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 **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'elilkōlani 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 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. 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:
   - academic objectives and research interests.
   - experience in educational service to his or her indigenous language of focus.
   - 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.
   - 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)
   - KLAN 702 Stylistics/Domains Indig Lang (1)
   - KLAN 703 Semantics-Prag of Indig Langua (3)
   - KLAN 704 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 Areas of Specialization (17-18):

   For student whose language of focus in Hawaiian.

   a. Indigenous Language and Culture Education (9):

   - KIND 733 Hawn and Indig Language Med Ed (3)
   - KIND 735 Indig Youth Multilingualism (3)
   - KHWS 741 Classical Hwn Ed: Gen Hwn Cult (3)
   - KHWS 752 Challenges in Hawn Lang Med Ed (3)
   - KED 794 Special Topics in Subject Matter (To Be Arranged)

   b. Hawaiian Language and Culture (8):

   - KHAW 751 Hoʻoikaika ʻŌlelo Hawaiʻi (2)
   - KHAW 794 Special Topics in Subject Matter (To Be Arranged)
   - KHWS 742 Ka Hoʻomamau ʻŌlelo A Moʻomeheu (3)
   - KHWS 752 Challenges in Hawn Lang Med Ed (3)
   - KHWS 794 Special Topics in Subject Matter (To Be Arranged)

   For student whose language of focus in an Indigenous language other than Hawaiian.

   a. Indigenous Language and Culture Education (9):

   - KIND 733 Hawn and Indig Language Med Ed (3)
   - KIND 735 Indig Youth Multilingualism (3)
   - KHWS 741 Classical Hwn Ed: Gen Hwn Cult (3)
   - KHWS 752 Challenges in Hawn Lang Med Ed (3)
   - KED 794 Special Topics in Subject Matter (To Be Arranged)

   b. Indigenous Language and Culture In Society (9):

   - 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)

   Note: Courses listed in two areas only count toward one.

5. KIND 800 Doctoral Dissertation Research (1–6) *minimum 6 credits; successful completion of a dissertation; and final oral examination in defense of the dissertation,

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. Up to six credits (or equivalent) at another accredited university in courses pre-approved by the program chair and transfer credits to the University of Hawai'i at Hilo in place of any of the listed program courses.

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: bkelii@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) Professional Programs

Dean: Dr. Rae Matsumoto, Ph.D.

Department of Pharmaceutical Sciences: Julie Adrian, D.V.M.

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.

Admissions

Per the DKICP Website, students must apply and submit a complete application through PharmCAS. A complete application includes a personal statement, two professional letters of recommendation submitted as electronic letters of reference (eLORs), applicable fee(s), and official transcripts from all institutionally-accredited colleges and/or universities attended. The application will ask students to indicate whether they want to be considered for the full-time traditional pathway (on-campus, 4-year program) or the distance education/online pathway (extended, online (XO), 5.5 year program).

Please contact Jayden Wagner Kailiawa for more information or visit the DKICP Website for admission and application requirements.

Curricula

- Doctor of Pharmacy (Pharm.D.)
- Doctor of Pharmacy (Pharm.D), Extended, Online pathway
- 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: Julie Adrian, D.V.M.

Department of Pharmacy Practice: Nicole Young, Pharm.D., BCCCP

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Program Description

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Admissions

Per the DKICP Website, students must apply and submit a complete application through PharmCAS. A complete application includes a personal statement, two professional letters of recommendation submitted as electronic letters of reference (eLORs), applicable fee(s),

and official transcripts from all regionally-accredited colleges and/or universities attended. The application will ask students to indicate whether they want to be considered for the full-time traditional pathway (on-campus, 4-year program) or the distance education/online pathway (extended, online (XO), 5.5 year program).

Please contact Jayden Wagner Kailiawa for more information or visit the DKICP Website for admission and application requirements.

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 554 Zoonotic Diseases (1)
- PHPP 557 Personal Finance (1)
- PHPP 558 Business Admin Overview (1)
- PHPP 567 Rural Health Science Intro (2)
- PHPP 568 Rural Health Science Advanced (2)
- PHPP 571 Story-telling in Healing (1)
- PHPP 572 Pharmacy Career Readiness (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 554 Herb Med & Hawaiian Med Plants (1)
- PHPS 555 Geographic (Tropical) Medicine (1)
- PHPS 562 Disc & Dev of Blockbuster Drug (1)
- PHPS 563 Curr Adv in Neuropharmacology (1)
- PHPS 567 Pharmacogenetics (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.

Doctor of Pharmacy (Pharm.D), Extended, Online pathway

Dean: Dr. Rae Matsumoto, Ph.D.

Associate Dean for Academic Affairs: Lara Gomez, Pharm.D.

Department of Pharmaceutical Sciences: Julie Adrian, D.V.M.

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Program Description

The University of Hawai'i at Hilo Daniel K. Inouye College of Pharmacy (DKICP) is an educational and experiential program through which students pursue the Doctor of Pharmacy (Pharm.D.) degree. The Pharm.D. program prepares students for entry into the pharmacy profession. In addition to a traditional, full-time, on-campus program that is completed over 4 years, the DKICP now offers an **extended, online pathway with immersion experiences (PharmD-XO)** that is completed over 5.5 years, with the final year comprised of Advanced Pharmacy Practice Experiences requiring full-time, in-person studies. The courses and graduation requirements for the Pharm.D. degree are the same in both tracks.

Admissions

Per the DKICP Website, students must apply and submit a complete application through PharmCAS. A complete application includes a personal statement, two professional letters of recommendation submitted as electronic letters of reference (eLORs), applicable fee(s), and official transcripts from all institutionally-accredited colleges and/or universities attended. The application will ask students to indicate whether they want to be considered for the full-time traditional pathway (on-campus, 4-year program) or the distance education/online pathway (extended, online (XO), 5.5 year program).

Please contact Jayden Wagner Kailiawa for more information or visit the DKICP Website for admission and application requirements.

Curricula

The course sequence and credit load for the PharmD-XO pathway is summarized below for the 5.5 years of the program.
* indicates courses requiring an on-campus presence (2-4 weeks).
** indicates the final year of full-time enrollment in Advanced Pharmacy Practice Experiences. Credit units are indicated in parentheses.

Spring 1 (9)

- 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 515 Drug Information (2)

Summer 1 (7)

- PHAR 514 Pharmacology/Medicinal Chem I (3)
- PHAR 524 Pharmacology/Medicinal Chem II (3)
- PHAR 517 Foundational Calculations (1)

Fall 1 (7)

- PHAR 513 Pharmaceutical Formulations I (2)
- PHAR 523 Pharmaceutical Formulations II (2)
- PHAR 527 Foun Indiv Pharmacotherapy (1)
- PHAR 519 Therapeutic Prob Solving I (2)

Spring 2 (9)

- PHAR 520 Princ of Pharm Readiness II (1)
- PHAR 522 Essential Pharm Skills I (2) *
- PHAR 526 Topics in Healthcare I (1)
- PHAR 528 Therapeutic Prob Solving II (2)
- PHAR 529 Therapeutic Prob Solving III (2)
- PHAR 501 Intro Pharm Prac Exp I (1) *

Summer 2 (6)

- PHAR 521 Comprehensive Clin Care I (1)
- PHAR 525 Evidence-Based Sci & Prac I (2)
- PHAR 535 Evidence-Based Sci & Prac II (2)
- Elective 1 (1)

Fall 2 (7)

- PHAR 502 Intro Pharm Prac Exp II Comm (1)
- PHAR 537 Therapeutic Prob Solving IV (2)
- PHAR 538 Therapeutic Prob Solving V (2)
- PHAR 530 Princ of Pharm Readiness III (1)
- Elective 2 (1)

Spring 3 (9)

- PHAR 539 Therapeutic Prob Solving VI (2)
- PHAR 531 Comprehensive Clin Care II (2)
- PHAR 532 Essential Pharm Skills II (2) *
- PHAR 542 Essential Pharm Skills III (2) *
- PHAR 503 Intro Pharm Prac Exp III (1) *

Summer 3 (6)

- PHAR 546 Topics in Healthcare II (3)
- PHAR 547 Therapeutic Prob Solving VII (2)
- Elective 3 (1)

Fall 3 (8)

- PHAR 548 Therapeutic Prob Solving VIII (2)

- PHAR 549 Therapeutic Prob Solving IX (2)
- PHAR 540 Princ of Pharm Readiness IV (1)
- PHAR 541 Comprehensive Clin Care III (2)
- Elective 4 (1)

Spring 4 (10)

- PHAR 557 Therapeutic Prob Solving X (2)
- PHAR 558 Therapeutic Prob Solving XI (2)
- PHAR 555 Pharmacy Informatics and Tech (2)
- PHAR 504 Intro Pharm Prac Exp IV Hosp (1) *
- PHAR 552 Essential Pharm Skills IV (2) *
- Elective 5 (1)

Summer 4 (6)

- PHAR 559 Therapeutic Prob Solving XII (2)
- PHAR 566 Topics in Healthcare III (3)
- Elective 6 (1)

Fall 4 (8)

- PHAR 551 Comprehensive Clin Care IV (2)
- PHAR 550 Princ of Pharm Readiness V (1)
- PHAR 567 Therapeutic Prob Solving XIII (2)
- PHAR 568 Therapeutic Prob Solving XIV (2)
- Elective 7 (1)

Spring 5 (9)

- PHAR 569 Therapeutic Prob Solving XV (2)
- PHAR 561 Comprehensive Clin Care V (2)
- PHAR 560 Princ of Pharm Readiness VI (1)
- PHAR 562 Essential Pharm Skills V (2) *
- PHAR 505 Intro Pharm Prac Exp V (1) *
- Elective 8 (1)

Summer 5, Fall 5, Spring 6: Final APPE 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 requires completion of eight (8) didactic electives. 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 554 Zoonotic Diseases (1)
- PHPP 557 Personal Finance (1)
- PHPP 558 Business Admin Overview (1)
- PHPP 567 Rural Health Science Intro (2)
- PHPP 568 Rural Health Science Advanced (2)
- PHPP 571 Story-telling in Healing (1)
- PHPP 572 Pharmacy Career Readiness (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 554 Herb Med & Hawaiian Med Plants (1)
- PHPS 555 Geographic (Tropical) Medicine (1)
- PHPS 562 Disc & Dev of Blockbuster Drug (1)
- PHPS 563 Curr Adv in Neuropharmacology (1)
- PHPS 567 Pharmacogenetics (1)
- PHPS 569 Cancer Prevention (1)
- PHPS 570 Drugs from the Ocean (1)
- PHPP/PHPS 594 Special Topics in Subject Matter (1-3)
- PHPP/PHPS 597/598 Experimental
- PHPP/PHPS 599 Directed Studies (1-3)

Minimum semester hours required for the Doctor of Pharmacy degree

144 credits.

Health Science Research Certificate

Program Coordinator Deborah Taira, ScD, Associate Professor
Email dtjuarez@hawaii.edu

Program Description:

The Health Science Research Certificate is designed to give DKICP PharmD 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.

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 Effec 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

Program Coordinator: Karen L. Pellegrin, PhD, MBA
Email: karen3@hawaii.edu

Certificate 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.

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 real-world cases.
6. Apply knowledge from previous courses to address real-world pharmacy leadership issues 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

This certificate program aims to produce Pharm.D. graduates better prepared for career positions in the job market, particularly in pharmaceutical, biomedical sciences, biopharmaceutical, and biotechnology research companies. In addition, organizations like the Bio-Pharm industry, Non-profit research institutions, and medical science liaisons roles.

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, pharmaceutics, and pharmacologists).

Students will gain knowledge and practical lab skills for roles such as pharmaceutical researchers, laboratory technicians, and scientists in the pharmaceutical, biotechnology, and healthcare sectors. Skills include laboratory techniques and analytical skills (e.g., operating HPLC, NMR),

data analysis and interpretation, research (testing hypotheses and conducting scientific research), writing scientific reports, and professional and soft skills (communication, teamwork, and critical and problem-solving skills).

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:

- PHPS 554 Herb Med & Hawaiian Med Plants (1)
- PHPS 555 Geographic (Tropical) Medicine (1)
- PHPS 562 Disc & Dev of Blockbuster Drug (1)
- PHPS 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:

- PHPS 544 Advanced Laboratory Research (2)
- PHPS 545 Intro Pharm Chemistry Research (2)
- PHPS 546 Intro Pharm Biology Research (2)

Students must complete two (2) electives from the following list during the P2-P3 Year:

- PHPP 558 Business Admin Overview (1)
- PHPS 560 Advances in New Drug Approvals (1)
- PHPS 563 Curr Adv in Neuropharmacology (1)
- PHPS 567 Pharmacogenetics (1)
- PHPS 569 Cancer Prevention (1)
- PHPP 572 Pharmacy Career Readiness (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)

Program Coordinator: Karen Pellegrin, Ph.D.
Email: karen3@hawaii.edu

Certificate Description:

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 Outcomes:

Upon successful completion of this certificate, students will be able to:

- 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.

Students will begin to learn the skills of veterinary compounding and the uniqueness of this patient population. Career-readiness for veterinary pharmacy and a veterinary pharmacy residency.

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 Pharmacy Career Readiness (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: Ryan Perroy, Ph.D.,
Email: rperroy@hawaii.edu

Associate Program Chair: Jonathan Price, Ph.D.,
Email: jpprice@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 an institutionally 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 institutionally 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, please see TCBES Funding Opportunities. 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 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 Environ. Stewardship Seminar (1)
- CBES 645 Human Dimensions & Environ Sci (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 Environ. Stewardship Seminar (1)
- CBES 645 Human Dimensions & Environ Sci (3)
- CBES 677 Quantitative Ecology (3)
- CBES 690 Professional Internship (1)
- CBES 691 Becoming Environmental Leader (2)
- CBES 692 Proposal Writing & Grant Manag (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
- 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
- Karla McDermid Smith, Ph.D., Marine Science
- Colby McNaughton, M.S., Education
- Jené Michaud, Ph.D., Geology
- 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
- 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 Keʻelikōlani:
  - Hawaiian Language (HAW) Post-Baccalaureate Courses
  - Keʻelikōlani Education (KED) Post-Baccalaureate Courses
  - Keʻelikōlani Hawaiian Language (KHAW) Post-Baccalaureate Courses
  - Keʻelikōlani Hawaiian Studies (KHWS) Post-Baccalaureate Courses
  - Keʻelikōlani Indigenous Language (KLAN) Post-Baccalaureate Courses
  - Keʻelikōlani Indigenous Studies (KIND) Post-Baccalaureate Courses
  - Keʻelikōlani 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.
- “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 an 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) Pared 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 anthropologyin 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 686 Zooarchaeology (3) The identification and analysis of animal remains (fauna) recovered from archaeological sites. Topics include evolution and comparative anatomy, identification, quantification, taphonomy, biomolecular methods, paleoenvironments, foodways, and social zooarchaeology. This course is dual listed with ANTH 486. Pre: 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 (3) 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 (3) 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 (3) 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 606 Professional Counselor Dev I (1) Introduction to the field of mental health counseling. Covers professional practice aspects, explores MA concentrations in Counseling Psychology, and prepares students for field experiences in local community mental health treatment facilities. Must be taken as CR/NC.

PSY 607 Professional Counselor Dev II (1) Supports field site placement applications and introduces professional development topics, including public policy, risk management, self-care, and telehealth. Builds on PSY 606 to enhance readiness for fieldwork in mental health

counseling. Must be taken as CR/NC.

PSY 608 Professional Counselor Dev III (1) Prepares students for post-graduation by covering licensing requirements, job application skills, and other professional issues such as private practice considerations and continuing education. Supports the transition from student to professional mental health counselor. Must be taken as CR/NC.

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. Pre: PSY 604 and PSY 613 or Instructor's Consent.

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. Pre: PSY 603, PSY 604, PSY 606, PSY 607, PSY 613, PSY 620, PSY 622, PSY 624 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 603, PSY 604, PSY 606, PSY 607, PSY 613, PSY 620, PSY 622, PSY 624 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 Intro to Addiction Counseling (3) Overview of the epidemiology, etiology, psychological and physiological effects, and clinical courses of substance use and other addictive behaviors. Considers prevailing psychological, medical, social, and political views of addiction, especially health disparities and addiction in diverse populations.

PSY 662 Advanced Addiction Counseling (3) Overview of evidence-based and culturally informed assessment and intervention of addictive behaviors, 12 Core Functions of Addiction Counseling diversity influences, and related ethical considerations. Practical application of skills and bidirectional peer feedback, case studies, role plays, and experiential interactive activities Pre: PSY 613 and PSY 661 or Instructor's Consent.

PSY 676 Trauma and PTSD (3) This course will explore various aspects of psychological trauma and its treatment. Theories concerning the nature of psychological trauma, etiology of post-traumatic stress disorders, psychological assessment of the disorders, rationale of various treatment techniques will be covered in this course. Students will apply a treatment method for psychological trauma to themselves in order to observe and report their own changes. The bio-psycho-social model and cross-cultural approaches will be emphasized throughout the course. This course is dual listed with PSY 476.

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 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 Hawaiʻi 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 critial 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 637 SLA for K-12 Teachers (3) Provides pre and in-service teachers with the latest theory and research on second language acquisition of school age children. The course will examine the relationship between first and second language learning, the role of affective factors, order of acquisition, the concept of interlanguage, comprehending vs. producing the second language, and the role of error correction, providing students the foundations to develop a strong theoretical foundation with regard to second language acquisition and the acute analytical skills required to consider critically such theory in instructional decisions. This course is dual listed with ED 437.

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 667 Emerging Bilingual Students (3) Exploration of emerging multilingualism in culturally and linguistically diverse settings. Extends awareness of and skills for trans-languaging and scaffolding multilingualism integration across the curriculum. Includes sheltered instruction and cultural/social influences. This course is dual listed with ED 467.

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 ʻUla O Keʻelikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka ʻUla O Keʻelikōlani 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 Hawaiʻi. Courses are marked with an initial K (for Keʻelikōlani) 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 candidacy and instructor's consent.

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 ʻUla O Keʻelikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka ʻUla O Keʻelikōlani 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 Hawaiʻi. Courses are marked with an initial K (for Keʻelikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

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.

Keʻelikōlani Education (KED) Graduate Courses

Ka Haka ʻUla O Keʻelikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka ʻUla O Keʻelikōlani 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 Hawaiʻi. Courses are marked with an initial K (for Keʻelikōlani) 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 Mauli 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 Mauli Ola: Learning & Teaching (4) A systematic approach to develop, implement and assess culture-based learning and teaching

for the mauli 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 mauli 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 Mauli 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 700 Thesis Research (1–3) (other) Research and writing of thesis.

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 Hoʻomamau ʻŌlelo A Moʻomeheu (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.

KHWS 752 Challenges in Hawn Lang Med Ed (3) Study of education provided through the medium of Hawaiian language from early childhood through to the graduate level. Study of advantages and challenges, position in society and educational systems, outcomes and resource needs, cultural and legal contexts and historical factors. Students will focus on implementation in particular contexts, e.g., grade levels, administration, curriculum development, teacher training. 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.

Keʻelikōlani Indigenous Language (KLAN) Graduate Courses

Ka Haka ʻUla O Keʻelikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka ʻUla O Keʻelikōlani 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 Hawaiʻi. Courses are marked with an initial K (for Keʻelikōlani) 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 graduate level study of an indigenous or lesser studied language focusing on structure. Pre: Instructor's consent.

KLAN 642 Advanced Lang Structures II (3) Second semester advanced graduate level study of an indigenous or lesser studied language focusing on structure. Pre: Instructor's consent.

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. Pre: Instructor's consent.

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. Pre: Instructor's consent.

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.

Keʻelikōlani Indigenous Studies (KIND) Graduate Courses

Ka Haka ʻUla O Keʻelikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka ʻUla O Keʻelikōlani 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 Hawaiʻi. Courses are marked with an initial K (for Keʻelikōlani) followed by an appropriate alpha, e.g. HAW (Hawaiian), HWS (Hawaiian Studies), IND (Indigenous Studies), ANT (Anthropology), ED (Education), etc.

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 graduate level study of an indigenous language focusing on the use of the language in its cultural context. Pre: Instructor's consent.

KIND 642 Advanced Lang in Culture II (3) Second semester advanced graduate level study of an indigenous language focusing on

the use of the language in its cultural context. Pre: Instructor's consent.

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 ʻUla O Keʻelikolani 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 Kuʻikahi ʻŌlelo Hawaiʻi consortium including its administration and support through Hawaiian. Research and analyze the strengths, weaknesses, history, future directions of the overall structure of the Kuʻikahi ʻŌlelo Hawaiʻi 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 734 Writing in/for Indigenous Lang (3) Supports research writing of doctoral students who are in the process of identifying and finalizing dissertation research topics and writing related dissertation proposals for Indigenous language work. Also learn about finding, designing, and writing grant proposals to support the work of Indigenous language documentation and revitalization. Pre: Approved PhD Candidate of the Hawaiian and Indigenous Language and Culture Revitalization Program or approval from the Graduate Program Chair.

KIND 735 Indig Youth Multilingualism (3) Learn about Indigenous youth multilingualism in a diverse global context. Considers how young people's linguistic repertoires are being mobilized in efforts to reclaim and support Indigenous knowledge systems and Indigenous languages. 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.

Keʻelikōlani Linguistics (KLIN) Graduate Courses

Ka Haka ʻUla O Keʻelikōlani/College of Hawaiian Language (KHUOK)

Built upon a core commitment to Hawaiian language and culture education, Ka Haka ʻUla O Keʻelikōlani 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 Hawaiʻi. Courses are marked with an initial K (for Keʻelikōlani) 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 700 Thesis Research (1–6) (other) Research and writing of thesis.

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 effective-ness 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 manage- ment 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 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. Pre: B or higher grade in NURS 603, NURS 604, and NURS 605.

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. Must be taken as CR/NC. Pre: B or higher grade in NURS 603, NURS 604, and NURS 605.

NURS 608 Primary Care of Older Adults (3) Building on the management of acute and chronic illness of the adult, this courses 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) semester hours of supervised practicum hours (135 clock hours) are required. Must be taken as CR/NC. Pre: B or higher grade in NURS 603, NURS 604, and NURS 605.

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 addresses. 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. Must be taken as CR/NC. Pre: B or higher grade in NURS 603, NURS 604, and NURS 605.

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. Must be taken as CR/NC. Pre: B (80%) or higher grade in NURS 603, NURS 604, and NURS 605.

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. Pre: B or higher grade in NURS 612, or instructor consent.

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 know- ledge 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.

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.

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 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 geriatic 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 Hawaiʻi 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 Pramacy 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 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 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 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 adance 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 Pharmacy Career Readiness (1) This course is designed to provide students an introduction to the process of preparing for post-graduate residency, fellowship and employment applications. Pre: Enrolled in 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 576 Cardiology Cases (1) (other) Case based course that builds upon cardiology pharmacotherapy topics previously covered simulates what pharmacists frequently encounter in clinical practice when managing patients with various cardiovascular diseases. Pre: Enrolled in the Daniel K. Inouye College of Pharmacy.

PHPP 577 Infectious Disease Cases (1) Case-based course that builds upon infectious disease pharmacotherapy topics previously covered in the curriculum. Pre: DKICP student in the third-year of the Pharm.D. curriculum.

PHPP 578 Rx to Wellness and Resilience (1) Introductory course promoting the holistic (physical, mental, social, spiritual, and emotional) well-being of pharmacy students by addressing intellectual (self-awareness, mindfulness), emotional (self-care, stress management), and occupational (resiliency, burnout prevention) wellness. Pre: Enrolled in the Daniel K Inouye College of Pharmacy

PHPP 579 Advanced Diabetes Management (1) Case based course building upon the diabetes pharmacotherapy content and covering specialized topics within the realm of diabetes management. Pre: DKICP student in the second or third-year of the Pharm.D. curriculum.

PHPP 580 Lifestyle Changes Chronic Dis (1) Focusing on various diet, physical activity and lifestyle changes aiding in existing chronic disease treatment and chronic disease prevention for chronic diseases that pharmacists will commonly encounter. Pre: DKICP student in the second or third-year of the Pharm.D. curriculum.

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 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.

PHPS 501 Biochemistry - Biomolecules (2) This course lays the biochemical foundation for the understanding of medicinal chemistry, pharmaceutics, 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 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 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 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 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 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 Psychoparm 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; fluorous 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/genito-urinary, 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-invective 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 antihelmintic 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 that 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 TCBES

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 TCBES (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 Environ. Stewardship Seminar (1) (other) Seminars given by TCBES faculty, visiting scientists from other universities, federal, state and non-profit agency personnel working in fields related to TCBES. The seminars will be focused on environmental stewardship issues. Following the seminar there will be an open question and answer discussion session with the seminar speaker and the students. Students 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 & Analysi (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 of Env. (3) Digital image processing of remotely sensed data for environmental analysis and applications. Specific techniques include image classification, post classification analysis, and multi-temporal analysis for land cover change detection. Additional assigned readings from contemporary remote sensing literature. (This course is dual listed with GEOG 470).

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 TCBES 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 Human Dimensions & Environ Sci (3) This course introduces students to key social science methods used in place-based research applicable to conservation management and environmental science. Students develop knowledge of ethical research practices rooted in place and community reciprocity. From this ethical grounding, students learn about a range of social science research methods, for example Indigenous Local Knowledge (ILK), in-depth interviewing, "talk story," survey methods, textual and visual analysis, and ethnography, drawing from western and Indigenous research practices to encourage a diverse knowledge base for conservation practitioners. Pre: Enrollment in TCBES program or Instructor's Consent.

CBES 648 Hawaiʻi Island to 1850 (3) Hawaiʻi Island to 1850 Place-based learning and research, through moʻolelo & kaʻao; developing connections to place; community outreach and leadership to youth; service-learning and more; all in the context of Hawaiʻi Island history pre-1850. Dual listed with HIST 448.

CBES 649 Hawaiʻi Island since 1850 (3) A combination of place-based learning and research, through moʻolelo, 19th and 20th century histories; developing connections to place; community outreach and leadership to youth; service learning and more; all in the context of Hawaiʻi 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 Hawaiʻi. 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 Hawaiʻi, and the roles insects play as threats and beneficial organisms across all ecosystems. Applied management of insect issues will be emphasized. This course is dual listed with BIOL 458.

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 conflicts. The course will emphasize issues pertaining 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 & Grant Manag (2) (lecture/lab) Explore proposal formats. Develop and complete a well-written, well-conceived, proposal for the TCBES Professional Master's Internship or for a TCBES thesis on original research. The student will also obtain a working understanding of best practices in the grant management process. Taught as a combination lecture/lab with a weekly topic lecture followed by a writing lab.

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.

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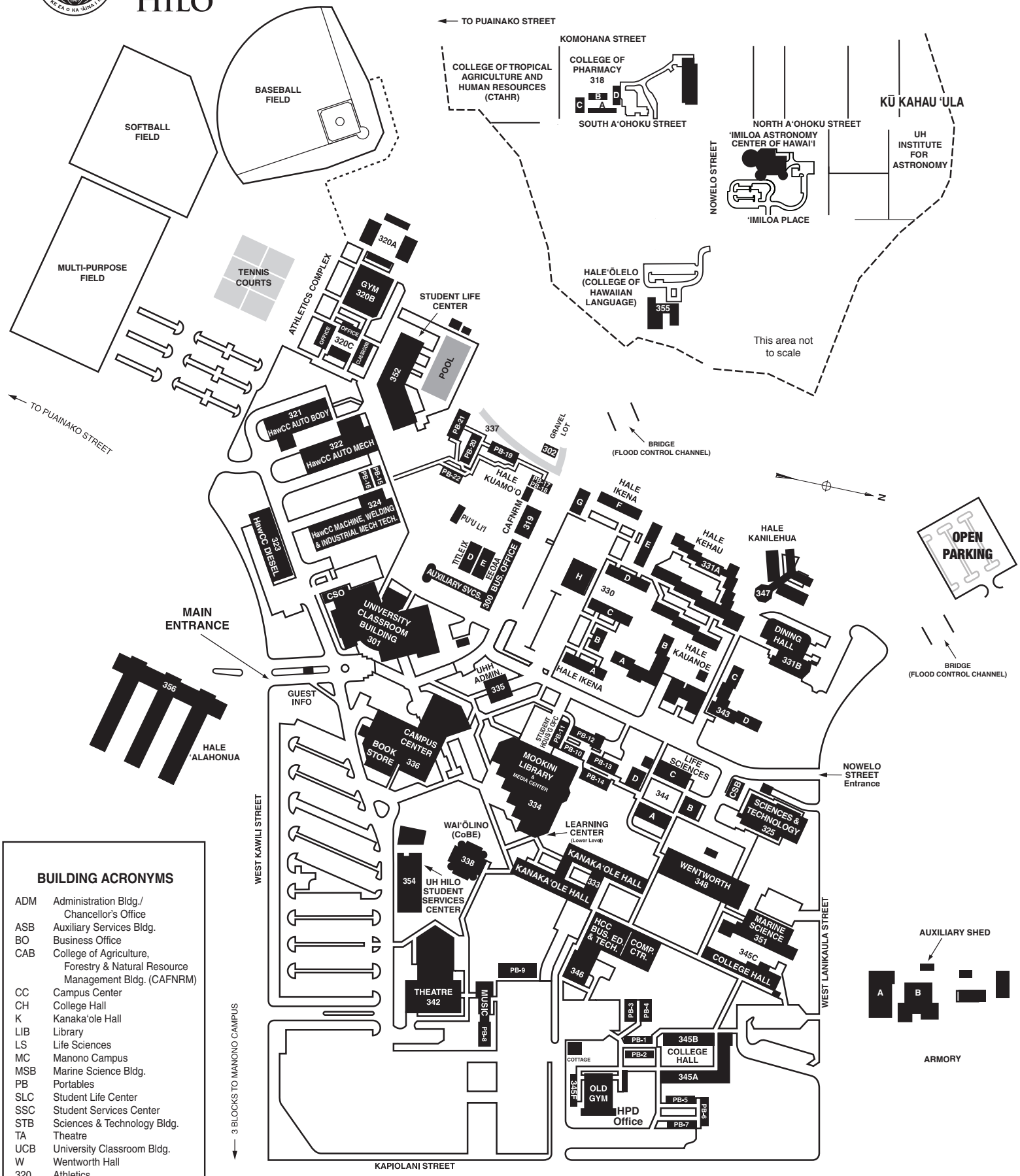
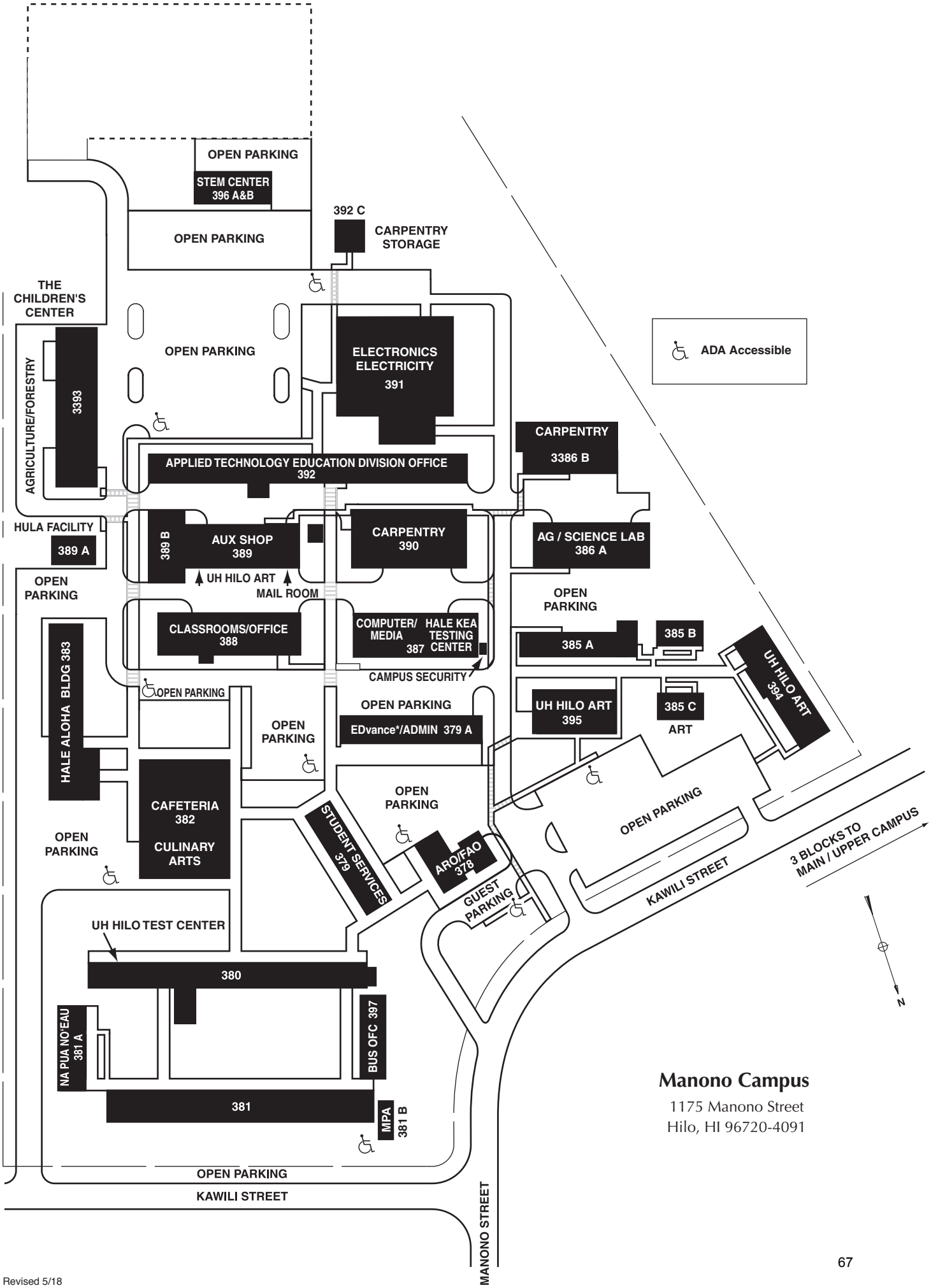


BUILDING ACRONYMS

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.



Manono Campus

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