



College of Pharmacy
PHPS 603
Integrated Pharmacotherapy III
Fall 2013

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Note: This is an experimental course.

Course Title: Integrated Pharmacotherapy III

Course Number: PHPS 698-001

Course Credit: 4 hours

Class Time(s) and Location: Lectures: Day, Time and location TBA

Instructors:

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Prerequisites:

Acceptance into the program.

Course Description:

In this third 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 include 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. During the semester, students will submit three SOAP notes on disease states discussed in class, and a research paper covering the current and future pharmacotherapy of a disease state selected by the student and approved by the Course Coordinator. The course will culminate with each student presenting their research paper.

A detailed description of assignments and rubrics will be distributed at beginning of semester.

Course Learning Outcomes:

For the purposes of program assessment, six broad program learning outcomes (PLO) have been developed. The PLO number refers to the overall outcomes designed for the successful completion of the MSCP program.

Summary of Program Outcomes, Course Objectives and Assessment:

For this course, the successful student will be able to:

Course Learning Objectives (see below)	Assignment/ Assessment (see below)	Program Learning Outcome	PLO #
<ul style="list-style-type: none"> • 1-7 Pharmacology 	<ul style="list-style-type: none"> • Exams I – VI and final exam 	Define, identify and recognize key concepts of terminology in all content areas	1
<ul style="list-style-type: none"> • 8-16 Pathophysiology & Therapeutics 	<ul style="list-style-type: none"> • Research paper • Presentations 	Review and explain at a high level of proficiency, both orally and in writing, the most current theories of the pathophysiology, etiology, signs and symptoms underlying mental health disorders and their psychopharmacologic treatment	2
		Analyze, interpret, integrate and evaluate pharmacologically-based clinical findings in psychological settings through literature review, class presentations and written analysis	4
		Devise, formulate and plan medication therapy management specific to psychopathology, with an emphasis on drug selection based on relative efficacy for the disorder, adverse effect profiles, food and drug interactions, and	5

		pharmacokinetics, and determine appropriate pharmacologic assessment and monitoring	
	<ul style="list-style-type: none"> • SOAP notes 	Choose the appropriate diagnosis and effectively apply psychopharmacological knowledge to resolve clinical psychopathological cases using “Subjective, Objective, Assessment and Planning” (SOAP) notes and case presentations, and differentiate mental disorders that are drug-induced or caused by somatic disease	3
	<ul style="list-style-type: none"> • Video-chat participation 	Analyze, interpret, integrate and evaluate pharmacologically-based clinical findings in psychological settings through literature review, class presentations and written analysis	4

Course Content Objectives:

At the completion of this course, the student will be able to:

PHARMACOLOGY

1. Know pharmacological agents discussed in the course and their classification; describe indications, routes of administration, dosing regimens, and therapeutic objectives.
2. Describe major distinctions in pharmacokinetic or pharmacodynamic properties between individual agents within a particular drug class; apply this knowledge in rationalizing drug choice and dose management.
3. Describe mechanisms of action at various levels of biological organization (cells, tissues, organ systems) for the drugs discussed in the course; rationalize therapeutic actions vs. side effects.
4. Explain how dose, rate of absorption, volume of distribution, clearance, and elimination half-life affect the plasma concentration of a drug.
5. Define the mechanistic basis of drug toxicity, dependence on dose and bioavailability, clinical manifestations and treatment of adverse effects.
6. Identify drug interactions; know examples of beneficial vs. non-beneficial interactions relevant to the topics discussed in the course.
7. Describe the influences of disease, age, and genetics on pharmacological responses; apply this knowledge in modifying drug therapy.

PATHOPHYSIOLOGY AND THERAPEUTICS

8. Describe the pathophysiologic processes responsible for all disease states discussed and integrate this knowledge into the therapeutic decision making process.
9. Describe the etiology, incidence, and prognosis associated with all disease states discussed.
10. Identify the major sign, symptoms, and clinical findings associated with associated with each disease state.
11. List drug(s) of choice, alternative therapies, both drug and nondrug, usual doses and dosage forms, common side effects and adverse reactions, monitoring parameters for each disease state and drugs, desirable therapeutic goals and outcome for therapy, integration of multiple disease state into therapeutic decisions.
12. Evaluate various therapeutic alternatives and disease preventions for each disease state based on the patient specific information and design a patient specific therapeutic regimen.
13. Assess the effectiveness of therapy on the basis of clinical and laboratory parameters.
14. Interpret and use patient case summaries, patient databases, and medical abbreviations and terminology.
15. Describe a process to perform drug therapy assessment, monitoring, and documenting recommendations.
16. Integrate and apply information from the basic and clinical sciences courses in the curriculum and from other experiences to develop appropriate and effective pharmaceutical care plan to solve patient therapeutic problems

Course Assessment:

Assessment Tool	Date/Time	Points*
Exam I-VI	<i>see below</i>	50 points (300 points)
Four SOAP Notes	<i>see below</i>	20 points (80 points)
Research Paper		50 points
Research Paper Presentation		30 points
SOAP Note Presentations		10 points
TOTAL		470 points (100%)

* Students may receive up to 5 extra credit points per course by submitting written exam-style questions, which they will present to the other students during video chats.

The appropriate manner to create SOAP notes will be provided via a live, on-site seminar-style visit and reinforced during subsequent video chats. A grading rubric will be provided during the first week of class. Each student will be given the opportunity to present one of their SOAP note patients at the end of a video chat. The date and topic of this SOAP presentation will be assigned to each student by the course coordinators.

The research paper will be no less than 20 pages with 30 primary references on the current and future pharmacotherapy of a disease state covered in class. The topic will be determined by the student with the approval of the Course Coordinator. Each student will present the findings of their research paper in a presentation at the end of the course via video chat. The presentation will be in Powerpoint format submitted by the student to the Course Coordinators

at least one day before the video chat presentation. Each presentation will be 20 minutes in length and will contain a patient case relevant to the paper topic at the end. The patient case will encompass approximately 5 minutes of the total presentation length and should describe a patient that details the findings of their research paper. The student may use a patient that they have had in the past, a patient that they have found on the internet or may create the details of the patient if other sources are not sufficient.

Course Grade Scale (%):

A	92-100	B-	79-81
A-	89-91	C+	76-78
B+	86-88	C	70-75
B	82-85	F	less than 70

Required Texts:

Basic and Clinical Pharmacology, 10th Ed., Katzung BG, McGraw Hill, 2007.

Pharmacotherapy: A Pathophysiologic Approach, 7th Ed., DiPiro JT, Talbert RL, Yee GC, Matzkie GR, Wells BG, Posey LM, McGraw Hill Companies Inc, New York, 2008.

Recommended Texts:

Goodman and Gilman's The Pharmacological Basis of Therapeutics, 11th edition, Brunton LL, Lazo JS, and Parker KL, McGraw Hill 2006. (12th edition if available).

Introduction to the Pharmaceutical Sciences, Pandit, NK, Lippincott Williams & Wilkins, 2007.

Applied Therapeutics: The Clinical Use of Drugs, Koda-Kimble, M.A. and Young, L.Y., 9th ed., Lippincott, Williams and Wilkins, 2008.

Professionalism Policies:

Make-up exams (due to illness or approved extenuating circumstance) will generally only be given if the instructor is notified prior to the examination. Failure to take an exam will count as a zero on that exam.

Missing Exams Documentation will be required for all missed exams.

Requests for re-grading exam questions may result in the entire exam being re-graded. Point total errors can be corrected without re-grading the entire exam.

Vacations and personal time off is not encouraged but may be allowed during the course of the semester. It shall be the student's responsibility to notify the Course Coordinator a minimum of two weeks prior to the pre-arranged time off. Furthermore, it will be the student's responsibility to complete and submit any assignments on or before the date due if such date falls during the course of pre-arranged time off.

Late or Incomplete Assignments: Points may be deducted at the Coordinator's discretion for late or incomplete assignments.

Cell Phones, Pagers & Other Communication Devices:

All cell phones, pagers etc. are to be on **silent mode** during class or **turned off!** Cell phones and pagers are **NOT** to be answered during video chats.

Dress Code:

Students are expected to dress in an appropriate professional manner.

Attendance Policy:

University of Hawai'i Hilo encourages 100% attendance by students at all course-related sessions, lectures, laboratories, and clinical assignments. Each college or department has the prerogative to establish its own attendance requirements and policies. Unless a department's policy differs, **class attendance is mandatory for all students for the first session of each course in each quarter as well as on the first day of class after scheduled vacations and University holidays.** If illness, a personal emergency, personal incapacitation, or other exceptional problem of a serious nature causes a student to be absent from a session requiring mandatory attendance, the student must immediately notify the course coordinator and follow stated course policies and procedures. Unexcused absences during these or other mandatory attendance sessions may result in course failure.

Examination Decorum:

- Students are expected to maintain a demeanor that is consistent with academic and professional standards during examinations.
- Upon entry into the examination site, students must place all books, notes, study aids, hats, coats and personal possessions on the floor (back or front of the room).
- Students are to be seated and ready to take an examination at the posted starting time for the exam.
- Acts of academic dishonesty will be dealt with as defined in the UHH-CoP Graduate Handbook.

Academic Honesty:

Academic honesty and integrity are expected of all students throughout their course of study at UHH-CoP. Any violation of this code is considered to be a serious academic violation and may result in a reprimand, monetary fine, written warning, academic and/or disciplinary probation, suspension, or dismissal. Academic dishonesty constitutes a breach of academic integrity that violates the academic foundation of an institution and compromises the integrity and well-being of the educational program. The policies on students' academic and professional responsibilities are included in Graduate Handbook UHH-CoP.

Students with Disabilities:

Any student with a documented disability who would like to request for accommodations should contact the University Disability Services Office (933-0816 (Voice), or 933-3334 (TTY), shirachi@hawaii.edu, (Hale Kauano'e A Wing Lounge), as early in the semester as possible.

Online Course Provisions:

Course material will be provided using a variety of tools. Pre-recorded lectures, slides, course syllabus, course calendar, assignments, announcements and multiple choice exams will be posted to the Lulima website, which students will be able to access on a 24/7 basis. Pre-recorded lectures will be in either a .mov format or as a url to an Archived recording. Video chats will be held using an online meeting service and students will be provided training at the beginning of the semester. For more information pertaining to UHH online course tools, see <http://www.uhh.hawaii.edu/academics/dl/index.php>.

Students are expected to attend live online video chats. It is recognized that students may occasionally have professional duties that interfere with participation in live online or on-site course offerings. In those instances, as well as for purposes of review, recordings of these offerings will be provided to students. Students are expected to notify the course coordinator if they will not be able to attend a video chat.

Tentative Schedule of Lecture Topics: KEY: Video chat **Tripler live** **SOAP**
Exams **Research paper, Presentations**

Integrated Pharmacotherapy III

1	8/26/13	1	Genito-urinary PC	Jacobs
		2	Osteoporosis PP/PC	Jacobs
		3	Osteoporosis TP	Ciarleglio
2	9/02/13		Holiday – Labor Day	
		4	Endocrine Review	Jacobs
		5	Endocrine Review	Jacobs
3	9/9/13	6	Video Chat 1 (contacts 1-5)	Steinman/Narciso
		7	Thyroid disorders PC	Jacobs
		8	Thyroid disorders PC	Jacobs
		9	Thyroid disorders TP	Ciarleglio
	10	Thyroid disorders TP	Ciarleglio	
	9/15/13		SOAP – Thyroid due	Narciso
4	9/16/13	11	Video chat 2 (Contacts 7-10)	Steinman/Narciso
			Exam 1 (contacts 1-11)	Narciso
	9/17/13	12	Pituitary disorders PC	Jacobs
		13	Pituitary disorders TP	Ciarleglio
5	9/23/13	14	Video chat 3 (Contacts 12-13)	Steinman/Narciso
		15	Adrenal PC	Jacobs
		16	Adrenal PC	Jacobs
		17	Cushing's/Addison's disease PP/TP	Barbato
6	9/30/13	18	Video chat 4 (Contacts 15-17)	Steinman/Narciso
			Exam 2 (Contacts 12-18)	Narciso
	10/1/13	19	Thromboembolic disorders PP	Ciarleglio
		20	Thromboembolic disorders PP	Ciarleglio
		21	Thromboembolic disorders PC	Konorev
		22	Thromboembolic disorders PC	Konorev
7	10/7/13	23	Video chat 5 (contacts 19-22)	Steinman/Narciso
		24	Thromboembolic disorders TP	Ciarleglio
		25	Thromboembolic disorders TP	Ciarleglio
		26	Thromboembolic disorders TP	Ciarleglio
		27	Thromboembolic disorders TP	Ciarleglio

8	10/14/13	28	Video chat 6 (Contacts 24-27)	Steinman/Narciso
		29	Peripheral vascular disease PP-TP	Ciarleglio
		30	Cerebrovascular accidents PP-TP	Ciarleglio
		31	Cerebrovascular accidents TP	Ciarleglio
	10/20/13		SOAP – Thromboembolic due	Narciso
9	10/21/13	32	Video chat 7 (Contacts 29-31)	Steinman/Narciso
	10/22/13		Exam 3 (Contacts 19-32)	Narciso
		33	Migraine PP	Chavez
		34	Migraine PC	Jacobs
10	10/28/13	35	Migraine TP	Chavez
		36	Migraine TP	Chavez
11	11/4/13	37	Video chat 8 (Contacts 33-36)	Steinman/Narciso
	11/5/13		Exam 4 (Contacts 33-37)	Narciso
		38	Special populations – Peds	Robinson
		39	Special populations – Peds	Robinson
		40	Special Populations – Autism	Chavez
		11/10/13		SOAP – Migraine due
	11/10/13		Topic for research paper due	Steinman/Narciso
12	11/11/13		Holiday – Veteran’s Day	
		41	EPI – Neurodegenerative disorders	Steinman
		42	EPI –Nutrition, obesity, & neurotransmitters	Steinman
13	11/18/13	43	Video chat 9 (Contacts 38-42)	Steinman/Narciso
		44	Special populations – Geriatric	Barbato
		45	Special populations – Geriatric	Barbato
		46	Special populations – Geriatric	Barbato
14	11/25/13	47	Video chat 10 (Contacts 44-46)	Steinman/Narciso
	11/26/13		Exam 5 (Contacts 38-47)	Narciso
		48	Diabetes PC	Jacobs
		49	Diabetes PC	Jacobs
				Holiday – Thanksgiving
15	12/2/13	50	Video chat 11 (contacts 48-49)	Steinman/Narciso
		51	Diabetes PP	Owusu
		52	Diabetes PP	Owusu
		53	Diabetes TP	Owusu
		12/8/13		Research paper due by midnight

16	12/9/13	54	Video chat 12 (Contacts 51-53)	Steinman/Narciso
		55	Diabetes TP	Owusu
		56	Diabetes TP	Owusu
		57	Diabetes TP	Owusu
	12/13/13	58	Diabetes Workshop	Tan
	12/15/13		SOAP – Diabetes due	Narciso
17	12/16/13	59	Presentations	Faculty
	12/17/13	60	Video chat 13 (contacts 55-58)	Steinman/Narciso
	12/18/13		Exam 6 (contacts 48-60)	Narciso

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