

Cover Sheet: Request 10972

PHA5XXX Clinical Applications of Personalized Medicine

Info

Process	Course New Ugrad/Pro
Status	Pending
Submitter	Beck,Diane Elizabeth beck@cop.ufl.edu
Created	4/22/2016 1:00:43 AM
Updated	4/22/2016 5:56:43 AM
Description	Personalized medicine involves the use an individual's genetic profile to guide decisions made in regard to the prevention, diagnosis, and treatment of disease. This course will help equip health professional students with the knowledge and skills to use a personalized medicine approach in their practice.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	COP - Interdisciplinary Studies	Whalen, Karen		4/22/2016
Added Clinical Applications of Personalized Medicine syllabus 4-17-16.docx					4/22/2016
Added Clin Appl Person Medicine Contact Hour Map.docx					4/22/2016
College	Approved	COP - College of Pharmacy	Beck, Diane Elizabeth		4/22/2016
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			4/22/2016
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|New for request 10972

Info

Request: PHA5XXX Clinical Applications of Personalized Medicine

Submitter: Beck,Diane Elizabeth beck@cop.ufl.edu

Created: 4/22/2016 10:12:01 AM

Form version: 3

Responses

Recommended PrefixPHA

Course Level 5

Number XXX

Lab Code None

Course TitleClinical Applications of Personalized Medicine

Transcript TitleApp Personalized Med

Effective Term Spring

Effective Year2017

Rotating Topic?No

Amount of Credit2

Repeatable Credit?No

S/U Only?Yes

Contact Type Regularly Scheduled

Degree TypeProfessional

Weekly Contact Hours 15

Category of Instruction Intermediate

Delivery Method(s)On-Campus

Off-Campus

Online

Course Description Personalized medicine involves the use an individual's genetic profile to guide decisions made in regard to the prevention, diagnosis, and treatment of disease. This course will help equip health professional students with the knowledge and skills to use a personalized medicine approach in their practice.

Prerequisites Successful completion of first year of PharmD curriculum, including milestones.

Co-requisites None

Rationale and Placement in Curriculum This is an elective course offered in year 2 - Spring Semester.

During year 1, students are required to complete the "Principles of Drug Therapy Individualization" course which includes an introduction to pharmacogenomics and personalized medicine.

Across years 2 and 3, the required Patient Care sequence courses cover personalized medicine in more depth.

Course Objectives

1. Explain potential risks and benefits of pharmacogenomic testing.
2. Interpret and apply evidence for pharmacogenomics from the medical literature to patient care.
3. Apply personal or de-identified genetic information to clinical decision making for representative cases using clinically actionable pharmacogenomic gene-drug pairs (e.g, CYP2D6-codeine, CYP2C19-clopidogrel, CYP2C19-sertraline) or somatic genomic data.
4. Demonstrate best practices for returning pharmacogenomic test results to a patient, including legal and ethical concerns and communication strategies.

5. Demonstrate the contributions and roles of other health care professionals in the clinical application of pharmacogenomic information to patient care.
6. Summarize the challenges and opportunities in integrating pharmacogenomic data into the clinical process of patient care.

Course Textbook(s) and/or Other Assigned Reading There is no required text. The instructor will provide required reading for each topic.

Weekly Schedule of Topics This is an elective course that is 2 weeks in length. It requires 30 instructor contact hours and 61 outside study contact hours

April 24 (M) Module 1: Course Orientation/Introduction to Clinical Use of Pharmacogenomic (PGx) Data
{Bioethics and informed consent; genotype-phenotype relationships; cultural implications of PGx data; role of the pharmacist in clinical pharmacogenomics} (2 instructor contact hours)

April 25 (Tu) Module 1: Course Orientation/Introduction to Clinical Use of Pharmacogenomic (PGx) Data
In-class: Clinical scenarios of bioethical or cultural dilemmas in pharmacogenomics (3.5 instructor contact hours)
Module 2: Evidence Analysis in Clinical PGx
Online/Individual Study: Evidence analysis in PGx; applying PGx evidence to patient care (1.5 instructor contact hours)

April 26 (W) Module 2: Evidence Analysis in Clinical PGx
In-class Activity: Analyze an assigned articles from the pharmacogenomics literature. (2 instructor contact hours)
Module 3: Cardiology/Informatics in Clinical PGx
Online/Individual Study: Clopidogrel-CYP2C19; Warfarin PGx; SLCO1B1-simvastatin; Use of electronic health records in PGx (2 instructor contact hours)

April 27 (Th) Module 3: Cardiology/Informatics in Clinical PGx (3 instructor contact hours)
In-class Activity: Discuss and complete representative cardiology patient cases. Graded discussion board/active learning

April 28 (F) Module 4: Oncology
Online/Individual Study: lectures (Applications of genomic data; applications of germline testing in patient care; applications of somatic testing in patient care (2 instructor contact hours)

May 1 (M) Module 4: Oncology
In-class Activity: Discuss representative oncology patient cases (2 instructor contact hours)

May 2 (Tu) Module 5: Psychiatry and Pain Management
Online/Individual Study: Lectures (CYP2D6, CYP2C19-SSRIs - venlafaxine; CYP2D6, CYP2C19-TCAs, antipsychotics; CYP2D6 codeine; Introduction to laboratory testing for PGx) (2 instructor contact hours)

May 3 (W) Module 5: Psychiatry and Pain Management
In-Class: Discuss representatives psychiatry and pain management patient cases (2 instructor contact hours)

May 4 (Th) Module 6: Infectious Diseases/Transplant and Pathology
Online/Individual study: Lectures (CYP2C19-voriconazole; IFNL3-interferon; HIV medications; organ transplant; Clinical laboratory testing in PGx) (2 instructor contact hours)

hours)

May 5 (F) Module 6: Infectious Diseases/Transplant and Pathology

In-class Activity: Discuss infectious disease patient cases and discussion board (3 instructor contact hours)

May 8 (M) - Final Exam and Discussion Board - reflection (4.5 instructor contact hours)

Grading Scheme This course is pass/fail. In order to pass the course, all of the assessment items below must be successfully completed and students must achieve a grade of 70% or higher on the final exam.

The following must be satisfactorily completed:

2 surveys/ reflections

2 Discussion board/reflection assignments

6 Class sessions (satisfactory participation)

Final Exam

Additional Links and Policies Class Attendance Policy

Policy Across All 1PD-3PD courses:

Class attendance is mandatory for active learning sessions such as problem-solving sessions, case discussions, and laboratory sessions. Student attendance may be excused by the Teaching Partnership Leader in the following situations: serious illness (documentation required if more than 48hrs), serious family emergencies, military obligation, severe weather conditions, religious holidays, and other reasons of serious nature. The Pharm.D. calendar allows for participation in special curricular requirements (e.g., professional meetings). Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) are excused. Conflict with work schedules is an unexcused absence.

Requests for excused absences MUST be made by an email to the Academic Coordinator and the course facilitator prior to the scheduled session or if it is an emergency situation, as soon as possible. The student is responsible for follow up and confirming whether the absence is excused or unexcused. The Teaching Partnership Leader, Academic Coordinator, and your campus specific director must be Cc'd in this communication. The following format is recommended:

Failing to follow this policy will render the absence not excusable. A request for an "excused absence" does not guarantee acceptance. No precedence can be drawn from any courses in the College of Pharmacy or any other college within University of Florida.

Makeup assignment(s) will be made for any excused absence(s) and will typically be submitted within one-week of the missed session(s). If the situation leads to missing multiple class sessions and makeup becomes difficult, the student and Teaching Partnership Leader will meet with the Associate Dean of Student Affairs to develop options such as a makeup/remediation plan or course withdrawal. The time period for this make up will be consistent with the UF attendance policies.

Class attendance requires full engagement of activities and discussions. The following are unacceptable during class: 1) read non-course related materials that are either in hard-copy or web-based, 2) study for other courses, 3) use a laptop for activities that are not course-related. Class participation will be reduced in such situations.

Please refer to the University Attendance Policy at

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Additional Policy Specific to This Course:

None

Quiz/Exam Policy

During the Exam:

1. Students must arrive and be seated promptly to be eligible to take the exam. To maintain exam security, students who arrive late for the exam will not be allowed to start the exam if they are more than 30 minutes late or if another student has left the room after seeing the exam. Students who have valid reasons for arriving late at the exam may request a makeup exam as outlined below.
 2. No talking or other disruptive behavior during the distribution or taking of the exam.
 - 3 Calculators must meet the following requirements: Only nonprogrammable calculators are allowed during exams for this course.
 4. If you encounter calculator problems (e.g., dead battery), contact the Proctor.
 5. Nonessential materials are NOT allowed at the student's desk during examination periods. Please leave all nonessential materials outside of or in the front of the examination room.
 6. Other exam rules may be instituted during the progression of the course.
 7. Once the exam commences, students may not leave the room without first turning in the exam. Once the exam is turned in, the examination period for the student is considered complete and the student must leave the examination room. If there is urgent need to use the restroom, the Proctor will provide guidance.
- Failure to follow exam rules may be considered as evidence of academic dishonesty.

Policies Related to iRAT/tRAT

1. Students must bring their laptop to class in order to participate in the iRAT and tRAT.
2. Students who are late for an iRAT may begin the iRAT when arriving, but will be required to close the iRAT at the end time established for the entire class by the instructor (i.e., students who are late will not have the entire time).
3. Students who miss the iRAT and not eligible to take the tRAT.
4. Students may not leave the room during the iRAT and tRAT. All students must remain quiet during the testing period.

After the Exam

Policy across All 1PD-3PD courses:

1. Students are required to upload the encrypted exam file within 24 hours of completing the exam to the SofTest website.
 - a. If the encrypted file is not uploaded within 24 hours, the student's exam score will be reduced by 10%.
2. Graded exam appeals
 - a. Following release of the exam grades, the student has 3 business days to contact the Facilitator and Teaching Partner to clarify questions and appeal any possible grading errors. For courses that accept exam question appeals, see course specific information below.

Additional Policy Specific to This Course:
None

Make-up Quiz/Exam Policy

Policy across All 1PD-3PD courses:

Makeup exams are given only under special circumstances. If the student is unable to take a scheduled examination, the Teaching Partnership Leader and Academic Coordinator must be notified before the examination or if it is an emergency situation, as soon as possible. In addition, a written letter of explanation requesting that the absence from the exam be excused, must be presented before the exam or if an emergency situation as soon as possible. An excused absence is allowable in the following situations: documented illness, serious family emergencies, military obligation, severe weather conditions, religious holidays, participation in special curricular requirements, excused absences for court-imposed legal obligations, and other reasons of serious nature. All excused absences will be considered on an individual basis by the Teaching Partnership Leader. For unusual situations (e.g., wedding that was planned before admission), the faculty member will communicate with student affairs.

The questions on the makeup exam may be in the form of essay, short answer, or multiple-choice and will be the same level of difficulty as the exam administered during the scheduled time. With the exception of highly extenuating circumstances, failure to follow the prescribed procedures or failure to attend the announced examination will result in a grade of zero for that exam. No precedence can be drawn from any courses in the College of Pharmacy or any other college within University of Florida.

The instructor will arrange an alternate deadline for the exam consistent with the University examination policies.

The student may contact the instructor to obtain details about why points were deducted. The student has two weeks following the return of the Exam to clarify any questions and appeal any possible grading errors. Any appeals on the final examination must be made in writing and submitted to your facilitator. When an appeal is made to re-grade an Exam, the entire Exam will be reevaluated and scored.

Additional Policy Specific to this Course:
None

Policy on Old Quizzes and Assignments
None

General College of Pharmacy Course Policies

The following policies apply to all courses in the College of Pharmacy and are available on the COP website:

University Grading Policies

Please visit the following URL to understand how the University uses the course grade to compute your overall GPA:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Concerns, Appeals, and Complaints

Students who have concerns about their evaluation of performance and/or student-faculty relations should review the Student-Faculty Handbook for guidance. The Student-Faculty Handbook also outlines the chain of command for any appeals and/or complaints.

Academic Integrity Policy

Students are expected to act in accordance with the University of Florida policy on academic integrity

(<http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php>). This Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the course's Teaching Partnership Leader.

Students are also expected to abide by the UF Honor Code.

The following is the UF Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code.

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Psychomotor and Learning Expectations

Psychomotor expectations relate to the ability to meet the physical demands of the pharmacy curriculum. Physically impaired students and students with learning disabilities such as hearing impairment, visual impairment, dyslexia or other specific learning disabilities such as sensory deficit or sensory-motor coordination problems should cooperate with the faculty and staff in addressing these problems in order to meet academic standards.

How to Request Learning Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered with the Disability Resource Center, students will receive an accommodation letter which must be presented to both the instructor and academic coordinator to utilize classroom accommodations. Students registered with the Disability Resource Center who are requesting clinical accommodations for rotations or clinical experiences should contact their Learning Specialist in the Disability Resource Center. Students with disabilities should follow this procedure as early as possible in the semester.

Additionally, students at all College of Pharmacy campuses are expected to provide a copy of the accommodation letter of the Office of Student Affairs by email (carswell@cop.ufl.edu), fax (352-273-6219) or in person at G235 (Student Services Suite) of the Health Professions, Nursing and Pharmacy Building since some learning activities, exams, and assessments require additional assistance. The College of Pharmacy highly encourages that this procedure be completed before each course begins. Being proactive in this process will ensure that accommodations are in place for each student's learning activities, exams, and assessments because grades cannot be retroactively changed.

Faculty and Course Evaluations

Students are expected to provide feedback on the quality of instruction in every course based on 10 criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open around mid-semester and need to be completed by the established deadline. Summary results of these assessments are available to students at <https://evaluations.ufl.edu>.

Computer and Other Technology Requirements

Students are required to meet the following computer and technology requirements:

<http://pharmacy.ufl.edu/education/student-affairs/admissions/student-computer-requirements/>

ExamSoft® is used for administration of exams and students are required to follow the procedures that are established for exam administration. Students must bring a laptop to class to complete exams and this laptop must meet the computer and technology requirements established by the College. These technology requirements require a backup battery with at least 2 hours of life. Students must also complete mock exams prior to the actual exam to assure that all computer features are supported by ExamSoft®.

Expectations In Class and Other Learning Activities

Students are expected to:

- ? Be diligent and timely in studying the course material.
- ? Be on time for class sessions, quizzes, and exams.
- ? Be prepared for group discussions and conference calls.
- ? Do your own work.
- ? Actively collaborate with peers when assigned to groups.
- ? Inform the course coordinator about an absence from an exam or other assigned class activity at least 24 hours prior to the event.
- ? Dress appropriately for class sessions or clinically related activities.
- ? Turn off cell phones and other electronic communication devices during a class session or phone conference.
- ? Be quiet during class sessions including peer presentations.
- ? Be focused and avoid distractive behaviors in class.
- ? Appropriately use the computer in class, i.e., do not be looking at unrelated information on the web site during class.
- ? Participate in class or group discussions.
- ? Raise one's hand to be recognized before making a comment during a class session.
- ? Be respectful to the teacher.
- ? Be respectful to fellow students in discussions.
- ? Be courteous, respectful, and civil when using discussion boards.
- ? Focus on the course learning activities; it is not respectful to study for other coursework during the class session.
- ? Address faculty with the appropriate title and name, i.e., Dr. (last name) or Professor (last name).
- ? Address concerns about performance or course material directly with the course coordinator, facilitator, or teaching assistant.
- ? Seek assistance with academic or personal difficulties as soon as possible.

Communications

Course-related Communications

Students with questions about course content should post questions on the discussion board. Questions that are personal in nature (illness, emergencies, excused absence request, request for accommodations) should email the course teaching partnership leader and copy the Academic Coordinator and Distant Campus Dean. The student may email the course leader for any other needs that are personal in nature.

Faculty member Response Time:

1. The Course Coordinators/instructors will work to respond to postings within 24 hours of the posting between Monday and Friday 12N. Responses on weekends and holidays will be sporadic. (On weekends when assignments are due, students are advised to post questions before 12 Noon on Friday.)

Email Communications:

1. When communicating with faculty via email, the subject line needs to include the course number & title.
2. At the end of the email, in addition to listing your name, list your academic year and campus/site.

Discussion Board Policy

The purpose of the discussion board is to provide a venue for you to enhance your learning. This is accomplished by having a thread for each module where you can post questions to the course coordinators. (A thread is a single link that is devoted to a topic.) The discussion board is also a place where your instructors may post virtual cases for you to work up.

Such interaction on the discussion boards with the instructors will allow you to clarify your questions and apply what you are learning in other parts of the course. The goal of these discussions is to help you learn.

Students Netiquette on the Discussion Board:

1. Post your comment on the correct discussion thread. If you have a question about A1 (Unit A - Module 1), post it in the discussion thread for A1 and not the B1 thread.
 2. The discussion board is not a place to complain. Complaints should instead be directed directly to the instructor via email. This allows the primary course coordinator to quickly address your concern without causing distraction to other students who have limited time and want to focus on learning.
 3. Use "netiquette." If you have never learned "netiquette" - please visit the following URL: <http://www.albion.com/netiquette/corerules.html> If you follow the rules of netiquette described in this URL, you will avoid posting an embarrassing or inappropriate comment.
 4. The discussion board has been designed to allow you a place to ask further questions on the material to clarify any confusion, gain a deeper understanding of the material, or ask general course questions. A question you might see on a discussion board is "What do I need to study for the exam?" Please reflect on how this question can be perceived by your lecturing faculty as well as your fellow classmates. Rewording the question to address a specific topic would be more appropriate. For example, "Dr. XX, you listed numerous side effects for drug XX on slide XX. Of those, what are the most relevant that we could expect to occur and monitor for in clinical practice." The type of material that is covered in these classes is material that is important for patient care. All of this material is important. There are variations in courses, but please make use of your syllabus since there might be guidance on how to prepare for various exams in your classes.
 5. In most situations, lectures are released as planned by the course coordinators. Clarifying at the beginning of a semester on the planned release date/time, if not posted in the syllabus, is appropriate. Continual posts on the discussion board on weekly basis can become overwhelming for the course coordinator as well as your fellow students.
- Question/Answer sessions in live class sessions:
Time is usually reserved at the end of the class for questions regarding the material to clear up any confusion or expand on material covered in the particular section. This is a valuable time for all students and since time is limited, the questions should focus on the topics at hand. Questions such as, "What material will be covered on an upcoming exam?" or, "Do we need to know dosing for the exam?" are inappropriate during this time period. In our profession, all material is important. However, if this question does need to be asked, please consider using the discussion board to clarify any specific exam questions.

Student Complaint Process

Concerns about the course (e.g., course requirements, quizzes, exams) should first be discussed with the appropriate course instructor and the Teaching Partnership Leader. If a satisfactory resolution is not achieved, the student may appeal to the Associate Dean for Curricular Affairs and Accreditation who will also engage other individuals depending

on the request (e.g., campus dean, department chair, Associate Dean for Student Affairs). If the student finds the decision unsatisfactory, the student may appeal to the Dean of the College of Pharmacy. If this decision is unsatisfactory, the student may appeal to the Ombuds office (https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf).

Religious Holidays

Please see the University policy on attendance and religious holidays: <http://www.registrar.ufl.edu/catalog/policies/regulationattendance.html#religious>.

Counseling and Wellness Center

Students who are experiencing issues and events that could adversely affect academic performance and personal health should be encouraged to meet with the course coordinator or facilitator or appropriate administrator for guidance. Students in the Gainesville area may contact the UF Counseling and Wellness Center for Gainesville students (352-392-1575; <http://www.counseling.ufl.edu>). Students outside the Gainesville area may obtain similar contact information from the campus/program administrator.

Emergencies

Call the University Police Department for emergencies: 392-1111 or 9-1-1

Student Crisis

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Students who are experiencing issues and events are also encouraged to contact their local

crisis center. For Alachua County the Crisis Center number is 352-264-6789; for Jacksonville and

Duval County 904-632-0600 and toll free for Northeast Florida at 1-800-346-6185; and for Orlando 407-425-2624.

The following national call numbers are also available for students who reside outside of the main COP campuses: a) 1-800-273-8255, and b) 1-800-784-2433.

How to Access Services for Student Success

Students who need guidance for course success or who are having academic difficulty should contact their advisor/facilitator or Campus Director/Senior Associate Dean for assistance.

Faculty Lectures/Presentations Download Policy

Photography, Audio-visual recording, and transmission/distribution of classroom lectures and discussions is prohibited unless there is expressed written permission. Recorded lectures and class sessions are authorized solely for the purpose of individual or group study with other UF College of Pharmacy students enrolled in the same class. Such recordings may not be reproduced, shared, or uploaded to publicly accessible web environments. Students who do not adhere to this policy will be considered to be breaching COP copyrights and/or FERPA law.

Instructor(s) Kristin Weitzel, PharmD, FAPhA
Caitrin R. McDonough, PhD

PHA5XXX Clinical Applications of Personalized Medicine
Spring Semester 2017 Block 12
2 Credit Hours

Course Purpose:

Personalized medicine involves the use of an individual's genetic profile to guide decisions made in regard to the prevention, diagnosis, and treatment of disease. This course will focus on how pharmacogenomic and genomic medicine data can be used in patient care. Students will have the opportunity to have their personal DNA genotyped on a custom chip and use this information for class assignments. Alternatively, students may work with a de-identified genotype dataset. This course will help equip health professional students with the knowledge and skills to use a personalized medicine approach in their practice.

Course Faculty and Office Hours

(See **Appendix A** for Who to Contact)

Teaching Partnership Leader:

Name: Kristin Weitzel, PharmD, FAPhA

Email: kweitzel@cop.ufl.edu

Office: HPNP 3308

Phone: 352-273-5114

Office Hours: By appointment

Teaching Partners:

Name: Caitrin R. McDonough, PhD

Email: cmcdonough@cop.ufl.edu

Academic Coordinator

Name - TBD Email:

Office: Phone:

Office Hours: by email and appointment

This Course Will Prepare You to Perform the Following Activities Which the Public Entrusts a Pharmacist to Perform:

1. **EPA A6** Present and defend in an evidence-based manner a succinct oral patient summary and plan to a health care provider.
2. **EPA B1.** Form clinical/practice-related questions and retrieve evidence to advance patient care.
3. **EPA C2.** Recommend solutions to needs in the medication use system and the healthcare system.
4. **EPA D1.** Demonstrate soft-skills in daily practice including interprofessional team collaboration (e.g., interpersonal communication, professionalism, cultural sensitivity, innovative mindset).

Course-Level Objectives

Upon completion of this course, the student will be able to develop knowledge related to principles of professional communications and the provision of patient-centered care. Specifically:

Upon completion of this course, the student will:

1. Explain potential risks and benefits of pharmacogenomic testing.
2. Interpret and apply evidence for pharmacogenomics from the medical literature to patient care.
3. Apply personal or de-identified genetic information to clinical decision making for representative cases using clinically actionable pharmacogenomic gene-drug pairs (e.g, CYP2D6-codeine, CYP2C19-clopidogrel, CYP2C19-sertraline) or somatic genomic data.
4. Demonstrate best practices for returning pharmacogenomic test results to a patient, including legal and ethical concerns and communication strategies.
5. Demonstrate the contributions and roles of other health care professionals in the clinical application of pharmacogenomic information to patient care.
6. Summarize the challenges and opportunities in integrating pharmacogenomic data into the clinical process of patient care.

Course Outline

Date	Instructor	Related Learning Objective	Topic/Learning Activities	Instructor Contact Hours
April 24 (M)	Cooper-Dehoff McDonough McDonough Weitzel	1,4,5,6	Module 1: Course Orientation/Introduction to Clinical Use of Pharmacogenomic (PGx) Data Online/Individual Study: Video-lectures <ol style="list-style-type: none"> 1. Bioethics and informed consent 2. Genotype–phenotype relationships 3. Cultural implications of PGx data 4. Role of the pharmacist in clinical pharmacogenomics 	0.5 0.5 0.5 0.5
April 25 (Tu)	Weitzel/ McDonough	1,4,5,6	Module 1: Course Orientation/Introduction to Clinical Use of Pharmacogenomic (PGx) Data In-class Activity: Small group active learning activities – Reflect on clinical scenarios of bioethical or cultural dilemmas in pharmacogenomics and/or genomic medicine. A group(s) will be asked to present their work. Remainder of time to be used to prepare for group presentation.	2
	McDonough Weitzel	2,5,6	Discussion Board/Active Learning: Survey or Reflection 1 Module 2: Evidence Analysis in Clinical PGx	1.5

			Online/Individual Study: Video-lectures <ol style="list-style-type: none"> Evidence analysis in PGx Applying PGx evidence to patient care 	0.5 1.0
April 26 (W)	Weitzel/ McDonough	2,5,6	Module 2: Evidence Analysis in Clinical PGx In-class Activity: Small group active learning activities – Analyze an assigned article from the pharmacogenomics literature. A group(s) will be asked to present their work in a journal club discussion. Remainder of time to be used to prepare for group presentation.	2
	TBD Cavallari TBD Weitzel	1,2,3,4,6	Module 3: Cardiology/Informatics in Clinical PGx Online/Individual Study: Video-lectures <ol style="list-style-type: none"> Clopidogrel-CYP2C19 Warfarin PGx SLCO1B1-simvastatin Use of electronic health records in PGx 	0.5 0.5 0.5 0.5
April 27 (Th)	Weitzel/ McDonough	1,2,3,4,6	Module 3: Cardiology/Informatics in Clinical PGx In-Class Activity: Small group active learning activities – Discuss and complete representative cardiology patient cases. Group(s) will be asked to discuss drug therapy recommendations. Remainder of time to be used to prepare for patient cases.	2
			Discussion Board/Active Learning: Electronic health record reflection/discussion topic	1
April 28 (F)	TBD TBD TBD	1,2,3,4,6	Module 4: Oncology Online/Individual Study: Video-lectures <ol style="list-style-type: none"> Applications of genomic data (e.g., germline, somatic, cancer risk assessment) in oncology Applications of germline testing (e.g., TPMT-thiopurines) in patient care Applications of somatic testing (e.g., KRAS) in patient care 	0.5 0.75 0.75
		1,2,3,4,6	Module 4: Oncology	

May 1 (M)	Weitzel/ McDonough		In-Class Activity: Small group active learning activities – Discuss and complete representative oncology patient cases. Group(s) will be asked to discuss drug therapy recommendations. Remainder of time to be used to prepare for patient cases.	2
May 2 (Tu)	Weitzel Markowitz Weitzel McDonough	1,2,3,4,5,6	Module 5: Psychiatry and Pain Management Online/Individual Study: Video-lectures 1. CYP2D6, CYP2C19-SSRIs, venlafaxine 2. CYP2D6, CYP2C19-TCAs, antipsychotics 3. CYP2D6-codeine 4. Introduction to laboratory testing for PGx	0.5 0.5 0.5 0.5
May 3 (W)	Weitzel/ McDonough		Module 5: Psychiatry and Pain Management In-Class Activity: Small group active learning activities – Discuss and complete representative psychiatry and pain management patient cases. Group(s) will be asked to discuss drug therapy recommendations. Remainder of time to be used to prepare for patient cases.	2
May 4 (Th)	TBD TBD Weitzel	1,2,3,4,5,6	Module 6: Infectious Diseases/Transplant and Pathology Individual/Online Study: Video-lectures 1. CYP2C19-voriconazole, IFNL3-interferon, HIV medications 2. Organ transplant (CYP3A5-tacrolimus) 3. Clinical laboratory testing in PGx	0.5 0.5 0.5
May 5 (F)	Weitzel/ McDonough	1,2,3,4,5,6	Module 6: Infectious Diseases/Transplant and Pathology In-Class Activity: Small group active learning activities – Discuss and complete representative infectious diseases patient cases. Group(s) will be asked to discuss drug therapy recommendations. Remainder of time to be used to prepare for patient cases. Discussion Board/Active Learning: Clinical laboratory testing reflection/discussion topic	2 1

Monday (2 hrs)	-	-	Final Exam	2
			Discussion Board/Active Learning: Survey or reflection 2	1.5
			Total Instructor Contact Hours	30

Pre-Requisite

Successful completion of first year of PharmD curriculum, including milestones.

Co-Requisite

None

Textbooks

There is no required text. The instructor will provide required reading for each topic.

Materials and Supplies Fees:

N/A

Student Evaluation & Grading

This course is pass/fail. *In order to pass the course, all of the assessment items below must be successfully completed and students must achieve a grade of 70% or higher on the final exam.*

Assessment Item	Assessment Criteria
Surveys/Reflections (2) <ul style="list-style-type: none"> Survey/Reflection 1 Survey/Reflection 2 	Completion of survey or reflection assignments is mandatory. Grades will be pass or fail.
Discussion Board/Reflection Assignments (2) <ul style="list-style-type: none"> Electronic Health Record Discussion Board Assignment Clinical Laboratory Discussion Board Assignment 	<p>See Rubric in Appendix B – Must Achieve “Satisfactory”</p> <p>Completion of all discussion board assignments is mandatory. Reflections are expected to contain student recollections and thoughts about the topic and not phrases copied verbatim from the speaker’s slides, handouts, or other materials.</p> <p>Grades will be pass or fail. Assignments will be graded individually for each student. A passing score will be awarded for reflections that include the required components and provide insightful reflection.</p>
In-Class Discussions – Bioethics, Journal Evaluation, and Patient Cases (6)	<p>See Rubric in Appendix C – Must Achieve “Satisfactory”</p> <p>Participation in all in-class discussions is mandatory. Student groups will be randomly called on to present and discuss their answer(s) to case questions and their reasoning/rationale for their answer. Participation grades will be assigned for the group, with each member of the</p>

	<p>group receiving the same grade. Students' answers are expected to reflect evidence-based information and employ patient-centered, sound clinical reasoning.</p> <p>Grades will be pass or fail. A passing score will be awarded for active participation in the discussion that includes the required components (i.e., all case questions are answered), contains evidence-based information, and provides insightful reflection.</p>
Final Exam (1)	<p>The final exam will be case-based and multiple choice, with questions based on lectures, reading, and in-class discussions/active learning assignments. The final exam will be available for 24 hours, is an open-book assessment, and must be completed individually by each student. A grade of 70% or higher is required to pass the final exam and the course.</p>

Educational Technology Use

The following technology below will be used during the course and the student must have the appropriate technology and software. **Appendix A** outlines who to contact if you have questions about technology.

1. Canvas Learning Management System

Class Attendance Policy

Policy Across All 1PD-3PD courses:

Class attendance is mandatory for active learning sessions such as problem-solving sessions, case discussions, and laboratory sessions. Student attendance may be excused by the Teaching Partnership Leader in the following situations: serious illness (documentation required if more than 48hrs), serious family emergencies, military obligation, severe weather conditions, religious holidays, and other reasons of serious nature. The Pharm.D. calendar allows for participation in special curricular requirements (e.g., professional meetings). Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) are excused. Conflict with work schedules is an unexcused absence.

Requests for excused absences **MUST** be made by an email to the Academic Coordinator and the course facilitator prior to the scheduled session or if it is an emergency situation, as soon as possible. The student is responsible for follow up and confirming whether the absence is excused or unexcused. The Teaching Partnership Leader, Academic Coordinator, and your campus specific director must be CCD in this communication. The following format is recommended:

To: Academic Coordinator and Campus Course Facilitator
CC: Teaching Partnership Leader and your specific campus director
Subject: PHA XXXX – Excused Absence request

Dear Prof. _____,

Professionally and politely request an excused absence.

Explain the nature of conflict and rationale for receiving an excused absence.

Thank the faculty member for their consideration of your special request.

Salutation,

Type in your full name and last 4 digits of UF-ID #, and Campus Name

Failing to follow this policy will render the absence not excusable. A request for an "excused absence" does not guarantee acceptance. No precedence can be drawn from any courses in the College of Pharmacy or any other college within University of Florida.

Makeup assignment(s) will be made for any excused absence(s) and will typically be submitted **within one-week of the missed session(s)**. If the situation leads to missing multiple class sessions and makeup becomes difficult, the student and Teaching Partnership Leader will meet with the Associate Dean of Student Affairs to develop options such as a makeup/remediation plan or course withdrawal. The time period for this make up will be consistent with the UF attendance policies.

Class attendance requires full engagement of activities and discussions. The following are unacceptable during class: 1) read non-course related materials that are either in hard-copy or web-based, 2) study for other courses, 3) use a laptop for activities that are not course-related. Class participation will be reduced in such situations.

Please refer to the University Attendance Policy at

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Additional Policy Specific to This Course:

None

Quiz/Exam Policy

During the Exam:

1. Students must arrive and be seated promptly to be eligible to take the exam. To maintain exam security, students who arrive late for the exam will not be allowed to start the exam if they are more than 30 minutes late or if another student has left the room after seeing the exam. Students who have valid reasons for arriving late at the exam may request a makeup exam as outlined below.
2. No talking or other disruptive behavior during the distribution or taking of the exam.
3. Calculators must meet the following requirements: Only nonprogrammable calculators are allowed during exams for this course.
4. If you encounter calculator problems (e.g., dead battery), contact the Proctor.
5. Nonessential materials are NOT allowed at the student's desk during examination periods. Please leave all nonessential materials outside of or in the front of the examination room.
6. Other exam rules may be instituted during the progression of the course.
7. Once the exam commences, students may not leave the room without first turning in the exam. Once the exam is turned in, the examination period for the student is considered complete and the student must leave the examination room. If there is urgent need to use the restroom, the Proctor will provide guidance.

Failure to follow exam rules may be considered as evidence of academic dishonesty.

Policies Related to iRAT/tRAT

1. Students must bring their laptop to class in order to participate in the iRAT and tRAT.
2. Students who are late for an iRAT may begin the iRAT when arriving, but will be required to close the iRAT at the end time established for the entire class by the instructor (i.e., students who are late will not have the entire time).
3. Students who miss the iRAT and not eligible to take the tRAT.
4. Students may not leave the room during the iRAT and tRAT. All students must remain quiet during the testing period.

After the Exam

Policy across All 1PD-3PD courses:

1. Students are required to upload the encrypted exam file within 24 hours of completing the exam to the SofTest website.
 - a. If the encrypted file is not uploaded within 24 hours, the student's exam score will be reduced by 10%.
2. Graded exam appeals

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- a. Following release of the exam grades, the student has 3 business days to contact the Facilitator and Teaching Partner to clarify questions and appeal any possible grading errors. For courses that accept exam question appeals, see course specific information below.

Additional Policy Specific to This Course:

None

Make-up Quiz/Exam Policy

Policy across All 1PD-3PD courses:

Makeup exams are given only under special circumstances. If the student is unable to take a scheduled examination, the Teaching Partnership Leader and Academic Coordinator must be notified before the examination or if it is an emergency situation, as soon as possible. In addition, a written letter of explanation requesting that the absence from the exam be excused, must be presented before the exam or if an emergency situation as soon as possible. An excused absence is allowable in the following situations: documented illness, serious family emergencies, military obligation, severe weather conditions, religious holidays, participation in special curricular requirements, excused absences for court-imposed legal obligations, and other reasons of serious nature. All excused absences will be considered on an individual basis by the Teaching Partnership Leader. For unusual situations (e.g., wedding that was planned before admission), the faculty member will communicate with student affairs.

The questions on the makeup exam may be in the form of essay, short answer, or multiple-choice and will be the same level of difficulty as the exam administered during the scheduled time. With the exception of highly extenuating circumstances, failure to follow the prescribed procedures or failure to attend the announced examination will result in a grade of zero for that exam. No precedence can be drawn from any courses in the College of Pharmacy or any other college within University of Florida.

The instructor will arrange an alternate deadline for the exam consistent with the University examination policies.

The student may contact the instructor to obtain details about why points were deducted. The student has two weeks following the return of the Exam to clarify any questions and appeal any possible grading errors. Any appeals on the final examination must be made in writing and submitted to your facilitator. When an appeal is made to re-grade an Exam, the entire Exam will be reevaluated and scored.

Additional Policy Specific to this Course:

None

Policy on Old Quizzes and Assignments

None

General College of Pharmacy Course Policies

The following policies apply to all courses in the College of Pharmacy and are available on the COP website:

University Grading Policies

Please visit the following URL to understand how the University uses the course grade to compute your overall GPA: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Concerns, Appeals, and Complaints

Students who have concerns about their evaluation of performance and/or student-faculty relations should review the Student-Faculty Handbook for guidance. The Student-Faculty Handbook also outlines the chain of command for any appeals and/or complaints.

Academic Integrity Policy

Students are expected to act in accordance with the University of Florida policy on academic integrity (<http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php>). This Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the course's Teaching Partnership Leader.

Students are also expected to abide by the UF Honor Code.

The following is the UF Honor Pledge: *We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code.*

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

Psychomotor and Learning Expectations

Psychomotor expectations relate to the ability to meet the physical demands of the pharmacy curriculum. Physically impaired students and students with learning disabilities such as hearing impairment, visual impairment, dyslexia or other specific learning disabilities such as sensory deficit or sensory-motor coordination problems should cooperate with the faculty and staff in addressing these problems in order to meet academic standards.

How to Request Learning Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered

with the Disability Resource Center, students will receive an accommodation letter which must be presented to both the instructor and academic coordinator to utilize classroom accommodations. Students registered with the Disability Resource Center who are requesting clinical accommodations for rotations or clinical experiences should contact their Learning Specialist in the Disability Resource Center. Students with disabilities should follow this procedure as early as possible in the semester.

Additionally, students at all College of Pharmacy campuses are expected to provide a copy of the accommodation letter of the Office of Student Affairs by email (carswell@cop.ufl.edu), fax (352-273-6219) or in person at G235 (Student Services Suite) of the Health Professions, Nursing and Pharmacy Building since some learning activities, exams, and assessments require additional assistance. The College of Pharmacy highly encourages that this procedure be completed before each course begins. Being proactive in this process will ensure that accommodations are in place for each student's learning activities, exams, and assessments because grades cannot be retroactively changed.

Faculty and Course Evaluations

Students are expected to provide feedback on the quality of instruction in every course based on 10 criteria. These evaluations are conducted online at <https://evaluations.ufl.edu> . Evaluations are typically open around mid-semester and need to be completed by the established deadline. Summary results of these assessments are available to students at <https://evaluations.ufl.edu> .

Computer and Other Technology Requirements

Students are required to meet the following computer and technology requirements:

<http://pharmacy.ufl.edu/education/student-affairs/admissions/student-computer-requirements/>

ExamSoft® is used for administration of exams and students are required to follow the procedures that are established for exam administration. Students must bring a laptop to class to complete exams and this laptop must meet the computer and technology requirements established by the College. These technology requirements require a backup battery with at least 2 hours of life. Students must also complete mock exams prior to the actual exam to assure that all computer features are supported by ExamSoft®.

Expectations In Class and Other Learning Activities

Students are expected to:

- Be diligent and timely in studying the course material.
- Be on time for class sessions, quizzes, and exams.
- Be prepared for group discussions and conference calls.
- Do your own work.
- Actively collaborate with peers when assigned to groups.
- Inform the course coordinator about an absence from an exam or other assigned class activity at least 24 hours prior to the event.
- Dress appropriately for class sessions or clinically related activities.
- Turn off cell phones and other electronic communication devices during a class session or phone conference.
- Be quiet during class sessions including peer presentations.

-
- Be focused and avoid distractive behaviors in class.
 - Appropriately use the computer in class, i.e., do not be looking at unrelated information on the web site during class.
 - Participate in class or group discussions.
 - Raise one's hand to be recognized before making a comment during a class session.
 - Be respectful to the teacher.
 - Be respectful to fellow students in discussions.
 - Be courteous, respectful, and civil when using discussion boards.
 - Focus on the course learning activities; it is not respectful to study for other coursework during the class session.
 - Address faculty with the appropriate title and name, i.e., Dr. (last name) or Professor (last name).
 - Address concerns about performance or course material directly with the course coordinator, facilitator, or teaching assistant.
 - Seek assistance with academic or personal difficulties as soon as possible.

Communications

Course-related Communications

Students with questions about course content should post questions on the discussion board. Questions that are personal in nature (illness, emergencies, excused absence request, request for accommodations) should email the course teaching partnership leader and copy the Academic Coordinator and Distant Campus Dean. The student may email the course leader for any other needs that are personal in nature.

Faculty member Response Time:

1. The Course Coordinators/instructors will work to respond to postings within 24 hours of the posting between Monday and Friday 12N. Responses on weekends and holidays will be sporadic. (On weekends when assignments are due, students are advised to post questions before 12 Noon on Friday.)

Email Communications:

1. When communicating with faculty via email, the subject line needs to include the course number & title.
2. At the end of the email, in addition to listing your name, list your academic year and campus/site.

Discussion Board Policy

The purpose of the discussion board is to provide a venue for you to enhance your learning. This is accomplished by having a thread for each module where you can post questions to the course coordinators. (A thread is a single link that is devoted to a topic.) The discussion board is also a place where your instructors may post virtual cases for you to work up.

Such interaction on the discussion boards with the instructors will allow you to clarify your questions and apply what you are learning in other parts of the course. The goal of these discussions is to help you learn.

Students Netiquette on the Discussion Board:

1. Post your comment on the correct discussion thread. If you have a question about A1 (Unit A -

-
- Module 1), post it in the discussion thread for A1 and not the B1 thread.
2. The discussion board is not a place to complain. Complaints should instead be directed directly to the instructor via email. This allows the primary course coordinator to quickly address your concern without causing distraction to other students who have limited time and want to focus on learning.
 3. Use "netiquette." If you have never learned "netiquette" - please visit the following URL: <http://www.albion.com/netiquette/corerules.html> If you follow the rules of netiquette described in this URL, you will avoid posting an embarrassing or inappropriate comment.
 4. The discussion board has been designed to allow you a place to ask further questions on the material to clarify any confusion, gain a deeper understanding of the material, or ask general course questions. A question you might see on a discussion board is "What do I need to study for the exam?" Please reflect on how this question can be perceived by your lecturing faculty as well as your fellow classmates. Rewording the question to address a specific topic would be more appropriate. For example, "Dr. XX, you listed numerous side effects for drug XX on slide XX. Of those, what are the most relevant that we could expect to occur and monitor for in clinical practice." The type of material that is covered in these classes is material that is important for patient care. All of this material is important. There are variations in courses, but please make use of your syllabus since there might be guidance on how to prepare for various exams in your classes.
 5. In most situations, lectures are released as planned by the course coordinators. Clarifying at the beginning of a semester on the planned release date/time, if not posted in the syllabus, is appropriate. Continual posts on the discussion board on weekly basis can become overwhelming for the course coordinator as well as your fellow students.

Question/Answer sessions in live class sessions:

Time is usually reserved at the end of the class for questions regarding the material to clear up any confusion or expand on material covered in the particular section. This is a valuable time for all students and since time is limited, the questions should focus on the topics at hand. Questions such as, "What material will be covered on an upcoming exam?" or, "Do we need to know dosing for the exam?" are inappropriate during this time period. In our profession, all material is important. However, if this question does need to be asked, please consider using the discussion board to clarify any specific exam questions.

Student Complaint Process

Concerns about the course (e.g., course requirements, quizzes, exams) should first be discussed with the appropriate course instructor and the Teaching Partnership Leader. If a satisfactory resolution is not achieved, the student may appeal to the Associate Dean for Curricular Affairs and Accreditation who will also engage other individuals depending on the request (e.g., campus dean, department chair, Associate Dean for Student Affairs). If the student finds the decision unsatisfactory, the student may appeal to the Dean of the College of Pharmacy. If this decision is unsatisfactory, the student may appeal to the Ombuds office (https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf).

Religious Holidays

Please see the University policy on attendance and religious holidays:

<http://www.registrar.ufl.edu/catalog/policies/regulationattendance.html#religious>.

Counseling and Wellness Center

Students who are experiencing issues and events that could adversely affect academic performance and personal health should be encouraged to meet with the course coordinator or facilitator or appropriate administrator for guidance. Students in the Gainesville area may contact the UF Counseling and Wellness Center for Gainesville students (352-392-1575; <http://www.counseling.ufl.edu>). Students outside the Gainesville area may obtain similar contact information from the campus/program administrator.

Emergencies

Call the University Police Department for emergencies: 392-1111 or 9-1-1

Student Crisis

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Students who are experiencing issues and events are also encouraged to contact their local crisis center. For Alachua County the Crisis Center number is 352-264-6789; for Jacksonville and Duval County 904-632-0600 and toll free for Northeast Florida at 1-800-346-6185; and for Orlando 407-425-2624.

The following national call numbers are also available for students who reside outside of the main COP campuses: a) 1-800-273-8255, and b) 1-800-784-2433.

How to Access Services for Student Success

Students who need guidance for course success or who are having academic difficulty should contact their advisor/facilitator or Campus Director/Senior Associate Dean for assistance.

Faculty Lectures/Presentations Download Policy

Photography, Audio-visual recording, and transmission/distribution of classroom lectures and discussions is prohibited unless there is expressed written permission. Recorded lectures and class sessions are authorized solely for the purpose of individual or group study with other UF College of Pharmacy students enrolled in the same class. Such recordings may not be reproduced, shared, or uploaded to publicly accessible web environments. Students who do not adhere to this policy will be considered to be breaching COP copyrights and/or FERPA law.

Faculty and Staff: Who to Contact

Academic Coordinator:

1. Issues related to course policies (absences, make up exams, missed attendance)

2. Questions about dates, deadlines, meeting place
3. Availability of handouts and other course materials
4. Assignment directions
5. Questions about grade entries gradebook (missing grades, wrong grade)
6. Assistance with ExamSoft®

Teaching Partnership Leaders

1. Questions about grades
2. Concerns about performance
3. Guidance when there are performance problems (failing grades)
4. General questions about content

Other Teaching Partnership Faculty Members

1. Questions about specific content

Technical Support:

Contact the College of Pharmacy MediaHelp Desk for assistance with course-related technical issues (e.g., Canvas access, video access, printing of documents). The MediaHelp Desk may be reached via the following:

Phone: 352-273-6281 (9am-4PM ET)

Email: mediahelp@cop.ufl.edu (response is delayed outside of M-F 9AM-4PM ET)

Contact the University of Florida Computing Help Desk for addresses issues related to:

1. Gatorlink accounts,
2. Gatorlink email,
3. myUFL, and
4. ISIS.

Phone: (352)-392-4357

Appendix B. Rubric for Assessing Student Participation in Reflections/Discussion Board Assignments

Grade Determination:

Satisfactory = 3 Points with a score of “Meets Expectations” in 2 of the 3 areas.

Unsatisfactory = 2 or less points

Proficiency Level	Deficits Exist (0 Points)	Meets Expectations (1 Point)	Accomplished (2 Points)
Quality of Information	<p>Reflections are descriptive: a reiteration of what was presented by instructor or read.</p> <p>Serious misinterpretations or not interpretation of the information is evident.</p> <p>Reflection is shallow and egocentric.</p>	<p>Information is summarized and not a reiteration of information provided by the instructor or in readings.</p> <p>References are sometimes made to other readings or experiences.</p> <p>Interpretations of information are precise and clear.</p>	Interprets information in accurate and highly insightful ways. Cites readings and prior experiences and explains how these references extend and refine insights.
Organization	Information is disorganized.	Information is logically organized and most paragraphs are well organized. One or two paragraphs could be better organized.	Information is very well organized with well-organized paragraphs and sub-headings where appropriate.
Mechanics	Three or more grammatical, spelling or punctual errors.	1-2 grammatical, spelling or punctual errors.	No grammatical, spelling or punctual errors.

Appendix C: Rubric for Assessing Student Participation in In-Class Discussions

Grade Determination:

Satisfactory = 6 Points with a score of “Proficient” in 2 of the 3 areas.

Unsatisfactory = 5 or less points

	Exemplary (Score = 3)	Proficient (Score = 2)	Developing (Score = 1)	Unacceptable (Score = 0)
Preparation for In-Class Discussion	Student is always prepared to provide thoughtful, evidence-based answers when called on by instructors. Student can always support their answers with sound clinical reasoning.	Student is mostly prepared to provide thoughtful, evidence-based answers when called on by instructors. Student can support their answers somewhat with sound clinical reasoning.	Student is somewhat prepared to provide thoughtful, evidence-based answers when called on by instructors. Student does not consistently provide sound clinical reasoning for their answers.	Student is unprepared to discuss reasoning and/or rationale for answers during in-class discussion (i.e., is “guessing”) or has not completed the assigned work.
Quality of comments	Comments always insightful & constructive; uses appropriate terminology. Comments balanced between general impressions, opinions & specific, thoughtful criticisms or contributions.	Comments mostly insightful & constructive; mostly uses appropriate terminology. Occasionally comments are too general or not relevant to the discussion.	Comments are sometimes constructive, with occasional signs of insight. Student does not use appropriate terminology; comments not always relevant to the discussion.	Comments are uninformative, lacking in appropriate terminology. Heavy reliance on opinion & personal taste, e.g., “I love it”, “I hate it”, “It’s bad” etc.
Listening Skills	Student listens attentively when others present materials, perspectives, as indicated by comments that build on others’ remarks, i.e., student hears what others say and contributes to the dialogue.	Student is mostly attentive when others present ideas, materials, as indicated by comments that reflect & build on others’ remarks. Occasionally needs encouragement or reminder from instructor of focus of comment.	Student is often inattentive and needs reminder of focus of class. Occasionally makes disruptive comments while others are speaking.	Student is consistently inattentive or disruptive to class discussion.

Contact Hour Map

Course: PHA 5XXX Clinical Applications of Personalized Medicine

Date	Instructor	Related Learning Objective	Topic/Learning Activities	Instructor Contact Hours	Outside Study	Relationship to Course Grading
April 24 (M)	Cooper-Dehoff McDonough McDonough Weitzel	1,4,5,6	<p>Module 1: Course Orientation/Introduction to Clinical Use of Pharmacogenomic (PGx) Data</p> <p>Online/Individual Study: Video-lectures</p> <ol style="list-style-type: none"> 1. Bioethics and informed consent 2. Genotype–phenotype relationships 3. Cultural implications of PGx data 4. Role of the pharmacist in clinical pharmacogenomics <p>Outside Study: Journal Article Readings (Content aligns with Video-lectures)</p>	0.5 0.5 0.5 0.5 N/A	<p>4 Hours (Re-watch videos and study for in class activity)</p> <p>5 Hours (Read Journal Articles)</p>	<p>Knowledge assessed via class participation, discussion board postings, and final exam.</p>
April 25 (Tu)	Weitzel/ McDonough	1,4,5,6	<p>Module 1: Course Orientation/Introduction to Clinical Use of Pharmacogenomic (PGx) Data</p> <p>In-class Activity:</p> <p>Small group active learning activities – Reflect on clinical scenarios of bioethical or cultural dilemmas in pharmacogenomics</p>	2		<p>Graded Participation: See Rubric in Appendix C – Must Achieve “Satisfactory”</p>

	McDonough Weitzel	2,5,6	<p>and/or genomic medicine. A group(s) will be asked to present their work. Remainder of time to be used to prepare for group presentation.</p> <p>Discussion Board/Active Learning: Survey or Reflection 1</p> <p>Module 2: Evidence Analysis in Clinical PGx</p> <p>Online/Individual Study: Video-lectures</p> <ol style="list-style-type: none"> 1. Evidence analysis in PGx 2. Applying PGx evidence to patient care <p>Outside Study: Journal Article Readings (Content aligns with Video-lectures)</p>	1.5 0.5 1.0 N/A	3 Hours (Re-watch videos and study for in class activity) 6 Hours (Read Journal Articles)	<p>Must receive a passing score on the Survey/ reflection to pass the course.</p> <p>Knowledge assessed via class participation, discussion board postings, and final exam.</p>
April 26 (W)	Weitzel/ McDonough	2,5,6	<p>Module 2: Evidence Analysis in Clinical PGx</p> <p>In-class Activity:</p> <p>Small group active learning activities – Analyze an assigned article from the</p>	2		<p>Graded Participation: See Rubric in Appendix C –</p>

	TBD Cavallari TBD Weitzel	1,2,3,4,6	<p>pharmacogenomics literature. A group(s) will be asked to present their work in a journal club discussion. Remainder of time to be used to prepare for group presentation.</p> <p>Module 3: Cardiology/Informatics in Clinical PGx</p> <p>Online/Individual Study: Video-lectures</p> <ol style="list-style-type: none"> 1. Clopidogrel-CYP2C19 2. Warfarin PGx 3. SLCO1B1-simvastatin 4. Use of electronic health records in PGx <p>Outside Study: Journal Article Readings (Content aligns with Video-lectures)</p>	<p>0.5 0.5 0.5 0.5</p> <p>N/A</p>	<p>4 Hours (Re-watch videos and study for in class activity)</p> <p>6 Hours (Read Journal Articles)</p>	<p>Must Achieve “Satisfactory”</p> <p>Knowledge assessed via class participation, discussion board postings, and final exam.</p>
April 27 (Th)	Weitzel/ McDonough	1,2,3,4,6	<p>Module 3: Cardiology/Informatics in Clinical PGx</p> <p>In-Class Activity:</p> <p>Small group active learning activities – Discuss and complete representative cardiology patient cases. Group(s) will be asked to discuss drug therapy recommendations. Remainder of time to be used to prepare for patient cases.</p>	2		<p>Graded Participation: See Rubric in Appendix C – Must Achieve “Satisfactory”</p>

			<p>Discussion Board/Active Learning:</p> <p>Electronic health record reflection/discussion topic</p>	1		<p>Graded Discussion Board:</p> <p>See Rubric in Appendix B – Must Achieve “Satisfactory”</p>
April 28 (F)	TBD TBD TBD	1,2,3,4,6	<p>Module 4: Oncology</p> <p>Online/Individual Study:</p> <p>Video-lectures</p> <ol style="list-style-type: none"> 1. Applications of genomic data (e.g., germline, somatic, cancer risk assessment) in oncology 2. Applications of germline testing (e.g., TPMT-thiopurines) in patient care 3. Applications of somatic testing (e.g., KRAS) in patient care <p>Outside Study:</p> <p>Journal Article Readings (Content aligns with Video-lectures)</p>	0.5 0.75 0.75 N/A	<p>4 Hours (Re-watch videos and study for in class activity)</p> <p>6 Hours (Read Journal Articles)</p>	<p>Knowledge assessed via class participation, discussion board postings, and final exam.</p>
May 1 (M)	Weitzel/ McDonough	1,2,3,4,6	<p>Module 4: Oncology</p> <p>In-Class Activity:</p> <p>Small group active learning activities – Discuss and complete representative oncology patient cases. Group(s) will be asked to discuss drug therapy</p>	2		<p>Graded Participation:</p> <p>See Rubric in Appendix C –</p>

			recommendations. Remainder of time to be used to prepare for patient cases.			Must Achieve “Satisfactory”
May 2 (Tu)	Weitzel Markowitz Weitzel McDonough	1,2,3,4,5,6	<p>Module 5: Psychiatry and Pain Management</p> <p>Online/Individual Study: Video-lectures</p> <ol style="list-style-type: none"> 1. CYP2D6, CYP2C19-SSRIs, venlafaxine 2. CYP2D6, CYP2C19-TCAs, antipsychotics 3. CYP2D6-codeine 4. Introduction to laboratory testing for PGx <p>Outside Study: Journal Article Readings (Content aligns with Video-lectures)</p>	0.5 0.5 0.5 0.5 N/A	<p>4 Hours (Re-watch videos and study for in class activity)</p> <p>6 Hours (Read Journal Articles)</p>	<p>Knowledge assessed via class participation, discussion board postings, and final exam.</p>
May 3 (W)	Weitzel/ McDonough	1,2,3,4,5,6	<p>Module 5: Psychiatry and Pain Management</p> <p>In-Class Activity:</p> <p>Small group active learning activities – Discuss and complete representative psychiatry and pain management patient cases. Group(s) will be asked to discuss drug therapy recommendations. Remainder of time to be used to prepare for patient cases.</p>	2		<p>Graded Participation: See Rubric in Appendix C – Must Achieve “Satisfactory”</p>
May 4 (Th)	TBD TBD Weitzel	1,2,3,4,5,6	<p>Module 6: Infectious Diseases/Transplant and Pathology</p> <p>Online/Individual Study:</p>			<p>Knowledge assessed via</p>

			<p>Video-lectures</p> <ol style="list-style-type: none"> 1. CYP2C19-voriconazole, IFNL3-interferon, HIV medications 2. Organ transplant (CYP3A5-tacrolimus) 3. Clinical laboratory testing in PGx <p>Outside Study: Journal Article Readings (Content aligns with Video-lectures)</p>	<p>0.5 0.5 0.5 N/A</p>	<p>3 Hours (Re-watch videos and study for in class activity)</p>	<p>class participation, discussion board postings, and final exam.</p>
May 5 (F)	Weitzel/ McDonough	1,2,3,4,5,6	<p>Module 6: Infectious Diseases/Transplant and Pathology</p> <p>In-Class Activity:</p> <p>Small group active learning activities – Discuss and complete representative infectious diseases patient cases. Group(s) will be asked to discuss drug therapy recommendations. Remainder of time to be used to prepare for patient cases.</p> <p>Discussion Board/Active Learning:</p> <p>Clinical laboratory testing reflection/discussion topic</p>	<p>2</p> <p>1</p>		<p>Graded Participation: See Rubric in Appendix C – Must Achieve “Satisfactory”</p> <p>Graded Discussion Board: See Rubric in Appendix B – Must Achieve “Satisfactory”</p>

Monday (2 hrs)	-	-	Final Exam Discussion Board/Active Learning: Survey or reflection 2	2 1.5	10 Hours (Study for Final Exam)	Graded Exam: Must Pass with a score >70% to pass the course Must receive a passing score on the Survey/reflection to pass the course.
			Total Contact Hours	30 (Instructor Contact Hours)	61 Hours (Outside Study Contact Hours)	

Student Evaluation & Grading

This course is pass/fail. *In order to pass the course, all of the assessment items below must be successfully completed and students must achieve a grade of 70% or higher on the final exam.*

Assessment Item	Assessment Criteria
Surveys/Reflections (2) <ul style="list-style-type: none"> • Survey/Reflection 1 • Survey/Reflection 2 	Completion of survey or reflection assignments is mandatory. Grades will be pass or fail.
Discussion Board/Reflection Assignments (2)	See Rubric in Appendix B – Must Achieve “Satisfactory”

<ul style="list-style-type: none"> • Electronic Health Record Discussion Board Assignment • Clinical Laboratory Discussion Board Assignment 	<p>Completion of all discussion board assignments is mandatory. Reflections are expected to contain student recollections and thoughts about the topic and not phrases copied verbatim from the speaker's slides, handouts, or other materials.</p> <p>Grades will be pass or fail. Assignments will be graded individually for each student. A passing score will be awarded for reflections that include the required components and provide insightful reflection.</p>
<p>In-Class Discussions – Bioethics, Journal Evaluation, and Patient Cases (6)</p>	<p>See Rubric in Appendix C – Must Achieve “Satisfactory”</p> <p>Participation in all in-class discussions is mandatory. Student groups will be randomly called on to present and discuss their answer(s) to case questions and their reasoning/rationale for their answer. Participation grades will be assigned for the group, with each member of the group receiving the same grade. Students' answers are expected to reflect evidence-based information and employ patient-centered, sound clinical reasoning.</p> <p>Grades will be pass or fail. A passing score will be awarded for active participation in the discussion that includes the required components (i.e., all case questions are answered), contains evidence-based information, and provides insightful reflection.</p>
<p>Final Exam (1)</p>	<p>The final exam will be case-based and multiple choice, with questions based on lectures, reading, and in-class discussions/active learning assignments. The final exam will be available for 24 hours (Friday of Week 2), is an open-book assessment, and must be completed individually by each student. A grade of 70% or higher is required to pass the final exam and the course.</p>

