

Cover Sheet: Request 10660

PHA 5755 Principles of Medical Microbiology, Immunology, and Virology

Info

Process	Course New Ugrad/Pro
Status	Pending
Submitter	Beck,Diane Elizabeth beck@cop.ufl.edu
Created	1/2/2016 5:30:47 PM
Updated	2/12/2016 12:09:06 AM
Description	Introduces principles of medical microbiology, immunology and virology. In order to successfully manage a patient with an infectious disease, the student pharmacist must first understand the role of the host's immunologic response and the burden of disease caused by clinically important pathogens.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	COP - Interdisciplinary Studies	Whalen, Karen		1/2/2016
No document changes					
College	Approved	COP - College of Pharmacy	Beck, Diane Elizabeth		1/24/2016
No document changes					
University Curriculum Committee	Comment	PV - University Curriculum Committee (UCC)	Case, Brandon	Added to the February agenda.	1/25/2016
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			1/25/2016
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 10660

Info

Request: PHA 5755 Principles of Medical Microbiology, Immunology, and Virology

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

Created: 1/2/2016 5:30:47 PM

Form version: 1

Responses

Recommended Prefix: PHA

Course Level : 5

Number : 755

Lab Code : None

Course Title: Principles of Medical Microbiology, Immunology, and Virology

Transcript Title: Micro, Immun, Virol

Effective Term : Fall

Effective Year: 2016

Rotating Topic?: No

Amount of Credit: 2

Repeatable Credit?: No

S/U Only?: No

Contact Type : Regularly Scheduled

Degree Type: Professional

Weekly Contact Hours : 15

Category of Instruction : Introductory

Delivery Method(s): On-Campus

Course Description : Introduces principles of medical microbiology, immunology and virology. In order to successfully manage a patient with an infectious disease, the student pharmacist must first understand the role of the host's immunologic response and the burden of disease caused by clinically important pathogens

Prerequisites : Completion of all Year 1 Pharm.D. Curriculum Requirements including milestones.

Co-requisites : PHA 5163L Professional Practice Skills Laboratory III

Rationale and Placement in Curriculum : This course builds on concepts learned during the Pathophysiology and Physical Assessment II (PHA 5561) which was required in Year 1.

This is the first course in year 2 and precedes the Patient Care 2 course which introduces how to care for patients with infectious diseases.

Course Objectives : Upon completion of this course, the student will be able to develop and apply in a fundamental manner knowledge related to principles of medical microbiology, immunology and virology. Specifically:

1. Identify how the body's immune system interacts with invading microbes including bacteria and viruses and the physiological and pathological consequences.
2. Associate the role of the normal human microbiota in the prevention of disease.
3. Predict the pathogenesis of bacterial and viral infections.
4. Apply knowledge of clinical laboratory techniques in the diagnosis of infectious diseases.
5. Interpret microbiological, immunological and virological laboratory data in the context of a patient's clinical presentation and findings.
6. Correlate the major types of pathogenic microorganisms and the diseases they produce in humans.
7. Recognize infectious diseases for which an antimicrobial agent or vaccine would be indicated and which agents or drug classes would be therapeutically optimal.

8. List the major classes of antimicrobial agents and their general spectrum of activity.
9. Identify mechanisms of microbial resistance and their potential impact on treatment.
10. Collaborate effectively with other team members to evaluate patient cases that require application of the principles of medical microbiology, immunology and virology.
11. Solve case-based problems that require application of the following principles:
 - a. Interaction between the immune system and invading microbes
 - b. Clinical bacteriology and laboratory diagnostics
 - c. Pathogenesis, diseases, and antimicrobial agents of choice for gram positive microorganisms.
 - d. Pathogenesis, diseases, and antimicrobial agents of choice for gram negative microorganisms.
 - e. Clinical virology (laboratory diagnostics and common viral pathogens)

Course Textbook(s) and/or Other Assigned Reading: Required readings will be assigned from the following textbook available in AccessPharmacy: Karen C. Carroll, Stephen A. Morse, Timothy Mietzner, Steve Miller. Jawetz, Melnick, & Adelberg's Medical Microbiology, McGraw-Hill, 27th edition, 2015, ISBN 978-0-07-182498-9.

Other supplemental readings may be posted in the Canvas course site.

Weekly Schedule of Topics : 8-9-16 MODULE 1: INTERACTION BETWEEN IMMUNE SYSTEM AND INVADING MICROBES; MODULE 2: CLINICAL BACTERIOLOGY AND LABORATORY DIAGNOSTICS

8-12-16 MODULE 3: STAPHYLOCOCCI, STREPTOCOCCI, ENTEROCOCCI, CLOSTRIDIUM SP.

8-15-16 MODULE 4: GRAM-NEGATIVES, PART I

8-17-16 MODULE 5: GRAM-NEGATIVES, PART II

8-19-16 MODULE 6: CLINICAL VIROLOGY, LABORATORY DIAGNOSTICS AND COMMON VIRAL PATHOGENS

8-22-16 Final Exam

Grading Scheme	Assessment Item	Grade Percentage
Individual Readiness Assessment Tests (iRAT)	(5 @ 3% each)	15%
Team Readiness Assessment Tests (tRAT)	(5 @ 5% each)	25%
Team-member Participation in Classroom Active Learning*		10%
Final Exam (Comprehensive)		50%
Total		100%

*Team participation: Teams will be given up to 1 point for meaningful contributions to the inter-team discussions for each TBL session. Passing score for team participation is 3 out of 5 possible points.

Instructor(s) : Jacqueline Jourjy, Pharm.D., BCPS (Leader)
 Lindsey Childs-Kean, Pharm.D., MPH, BCPS
 Kenneth Klinker, Pharm.D.
 Bin Liu, Ph.D.
 Bulitta Juergen, Ph.D.
 Sihong Song, Ph.D.

PHA 5755 Principles of Medical Microbiology, Immunology and Virology

Fall 2016

2 Semester Credit Hours

Block 5

Course Purpose:

The purpose of this course is to establish the student pharmacist's foundation in the principles of medical microbiology, immunology and virology that will build upon the knowledge and skills gained in the Pathophysiology and Patient Assessment course sequence. In order to successfully manage a patient with an infectious disease, the student pharmacist must first understand the role of the host's immunologic response and the burden of disease caused by clinically important pathogens. The content in this course will lay the foundation for the subsequent patient care series where the pharmacology and medicinal chemistry of anti-infective agents and pharmacotherapy of infectious diseases will be learned and applied to optimize the care of a patient.

Course Faculty and Office Hours

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

Teaching Partnership Leader: Jacqueline Jourjy, Pharm.D., BCPS

Email: jjourjy@cop.ufl.edu

Office: 6550 Sanger Road, Orlando (UF Lake Nona Campus)

Phone: 407-313-7006

Office Hours: By appointment

Teaching Partners:

Name

Lindsey Childs-Kean, Pharm.D., MPH, BCPS

Kenneth Klinker, Pharm.D.

Bin Liu, Ph.D.

Bulitta Juergen, Ph.D.

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Phone:

727-394-6213

352-273-7747

407-313-7010

352-273-7867

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 A2.** Interpret patient data, and identify medication-related problems and develop a prioritized problem list.
2. **EPA A3.** Formulate evidence-based care plans in collaboration with an interprofessional team. Utilize clinical guidelines in the development of a pharmacotherapy plan.

Course-Level Objectives

Upon completion of this course, the student will be able to develop and apply in a fundamental manner knowledge related to principles of medical microbiology, immunology and virology. Specifically:

1. Identify how the body's immune system interacts with invading microbes including bacteria and viruses and the physiological and pathological consequences.
2. Associate the role of the normal human microbiota in the prevention of disease.
3. Predict the pathogenesis of bacterial and viral infections.
4. Apply knowledge of clinical laboratory techniques in the diagnosis of infectious diseases.
5. Interpret microbiological, immunological and virological laboratory data in the context of a patient's clinical presentation and findings.
6. Correlate the major types of pathogenic microorganisms and the diseases they produce in humans.
7. Recognize infectious diseases for which an antimicrobial agent or vaccine would be indicated and which agents or drug classes would be therapeutically optimal.
8. List the major classes of antimicrobial agents and their general spectrum of activity.
9. Identify mechanisms of microbial resistance and their potential impact on treatment.
10. Collaborate effectively with other team members to evaluate patient cases that require application of the principles of medical microbiology, immunology and virology.
11. Solve case-based problems that require application of the following principles:
 - a. Interaction between the immune system and invading microbes
 - b. Clinical bacteriology and laboratory diagnostics
 - c. Pathogenesis, diseases, and antimicrobial agents of choice for gram positive microorganisms.
 - d. Pathogenesis, diseases, and antimicrobial agents of choice for gram negative microorganisms.
 - e. Clinical virology (laboratory diagnostics and common viral pathogens)

Pre-Requisite or Co-Requisite Knowledge and Skills

Pre-requisites:

Completion of all Year 1 Pharm.D. Curriculum Requirements including milestones

Co-requisite:

PHA 5163L Professional Practice Skills Laboratory III

Course Outline

*Note: The Instructor Contact Hours listed below only designate structured learning that involves a faculty member. As noted by UF policy, for each 1 hour of “Instructor Contact,” students are expected to spend a minimum of 2 hours of additional time completing learning activities. Example: If a week has 15 hours of Instructor Contact, the student should plan on a minimum of 30 hours of additional study. Therefore, the typical student will devote 45 hours of effort to the course that week. Note this is a “typical” student – some students will find they devote less time and others will find need to devote more time.

Week	Date	Instructor	Related Learning Objective	Topic/Learning Activities	Instructor Contact Hours
Week 1	8/9/16		1 2-5	MODULE 1: INTERACTION BETWEEN IMMUNE SYSTEM AND INVADING MICROBES MODULE 2: CLINICAL BACTERIOLOGY AND LABORATORY DIAGNOSTICS Online/Individual Study: Readings Watch lectures Self-Assessment In-class Activity: Readiness Assessment Test #1 Review module concepts (as needed) Team-Based Learning Application	8 hours lecture 2 hours
	8/12/16		3-10	MODULE 3: STAPHYLOCOCCI, STREPTOCOCCI, ENTEROCOCCI, CLOSTRIDIUM SP. Online/Individual Study: Readings	3 hours lecture

Week	Date	Instructor	Related Learning Objective	Topic/Learning Activities	Instructor Contact Hours
				Watch lectures Self-Assessment In-class Activity: Readiness Assessment Test #2 Review module concepts (as needed) Team-Based Learning Application	2 hours
Week 2	8/15/16		3-10	MODULE 4: GRAM-NEGATIVES, PART I Online/Individual Study: Readings Watch lectures Self-Assessment In-class Activity: Readiness Assessment Test #3 Review module concepts (as needed) Team-Based Learning Application	3 hours lecture 2 hours
	8/17/16		3-10	MODULE 5: GRAM-NEGATIVES, PART II Online/Individual Study: Readings Watch lectures Self-Assessment In-class Activity: Readiness Assessment Test #4 Review module concepts (as needed) Team-Based Learning Application	3 hours lecture 2 hours
	8/19/16		3-10	MODULE 6: CLINICAL VIROLOGY, LABORATORY DIAGNOSTICS AND COMMON VIRAL PATHOGENS Online/Individual Study: Readings	

Week	Date	Instructor	Related Learning Objective	Topic/Learning Activities	Instructor Contact Hours
				Watch lectures Self-Assessment In-class Activity: Readiness Assessment Test #5 Review module concepts (as needed) Team-Based Learning Application	3 hours lecture 2 hours
	8/22/16			FINAL COMPREHENSIVE EXAM	
				Total Instructor Contact Hours	30

Textbooks

Required readings will be assigned from the following textbook available in AccessPharmacy:

Karen C. Carroll, Stephen A. Morse, Timothy Mietzner, Steve Miller. Jawetz, Melnick, & Adelberg's Medical Microbiology, McGraw-Hill, 27th edition, 2015, ISBN 978-0-07-182498-9.

Other supplemental readings may be posted in the Canvas course site.

Materials and Supplies Fees:

None

Student Evaluation & Grading

Evaluation Methods and how grades are determined

Assessment Item	Grade Percentage
Individual Readiness Assessment Tests (iRAT) (5 @ 3% each)	15%
Team Readiness Assessment Tests (tRAT) (5 @ 5% each)	25%

Team-member Participation in Classroom Active Learning Team participation: Teams will be given up to 1 point for meaningful contributions to the inter-team discussions for each TBL session. Passing score for team participation is 3 out of 5 possible points.	10%
Final Exam (Comprehensive)	50%
Total	100%

*Please note that team-related activity (specifically, tRAT and team participation) grades will be adjusted downward should your peer evaluations collected within the Professional Development Course indicate that your contributions to your team needs improvement. The adjustment will be 10% of the available points for that activity. For example, if your peer evaluations indicated your contributions needed improvement, you would receive a 2.5% grade point reduction from your tRAT performance and a 1% reduction from your team participation grade, for a total of a 3.5% reduction in your *final course grade*.

Grading Scale

> 92.5%	A
89.5-92.4%	A-
86.5-89.4%	B+
82.5-86.4%	B
79.5-82.4%	B-
76.5-79.4%	C+
72.5-76.4%	C
69.5-72.4%	C-
66.5-69.4%	D+
62.5-66.4%	D
59.5-62.4%	D-
< 59.4%	E

Rounding of grades: Final course grade will only be rounded up if the decimal is 0.5 or higher. The above scale depicts this policy.

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. ExamSoft®
2. 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: documented illness, 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

Policy across All 1PD-3PD courses:

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.

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

Old quizzes and assignments are not provided.

General College of Pharmacy Course Policies

The College of Pharmacy has a website that lists course policies that are common to all courses. This website covers the following:

1. University Grading Policies (Assigning Grade Points)
2. Concerns, Appeals, and Complaints
3. Academic Integrity Policy
4. Psychomotor and Learning Expectations
5. How to Request Learning Accommodations
6. Faculty and Course Evaluations
7. Computer and Other Technology Requirements
8. Expectations in Class and Other Learning Activities
9. Communications - Discussion Board Policy
10. Communications - Email
11. Religious Holidays
12. Counseling & Student Health Services
13. How to Access Services for Student Success
14. Faculty Lectures/Presentations Download Policy

Please see the following URL for this information:

<http://file.cop.ufl.edu/studaff/policies/General%20COP%20Course%20Policies.pdf>

Appendix A. Faculty and Staff: Who to Contact

Academic Coordinator:

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

Teaching Partnership Leaders

1. Issues related to course policies (absences, make up exams, missed attendance)
2. Questions about grades
3. Concerns about performance
4. Guidance when there are performance problems (failing grades)
5. 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

Syllabus Final Version:

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