

4/21/2021 9:17 AM

PHA5605 Advanced Topics in Infectious Disease Pharmacotherapy

Spring 2021

2 Credit Hours – [A-E Grading]

This course is designed to allow the student pharmacist with strong interest in infectious diseases to further develop the skills necessary to make optimal decisions regarding antimicrobial pharmacotherapy. This course will provide opportunities for advanced discussion of topics in antimicrobial stewardship and management of infectious diseases, with a focus on acute care practice, beyond those topics included in the Patient Care course series. Student pharmacists will build upon their current knowledge of infectious diseases through a variety of interactive activities including in-depth discussion of complex patient cases, a debate related to controversial clinical practice or questions, and student presentations.

Teaching Partnership Leader

Anthony M. Casapao, Pharm.D., M.P.H., BCIDP

- Email: Casapao@cop.ufl.ed
- Office: JAX Campus
- Phone: 904-244-9129
- Office Hours: Please see Canvas course site for posted office hours.

See Appendix A. for Course Directory of Faculty and Staff Contact Information.

Entrustable Professional Activities

This course will prepare you to perform the following activities which the public entrusts a Pharmacist to perform:

1. Interpret laboratory test results.
2. Identify common pathogen(s) for a diagnosis of an infectious disease.
3. Assess the patient's signs and symptoms to classify the type of infectious disease from a physician's diagnosis.
4. Evaluate an existing drug therapy problem.
5. Follow an evidence-based disease management guideline.
6. Develop a treatment plan with a patient.

4/21/2021 9:17 AM

7. Select monitoring parameters to determine the therapeutic and adverse effects related to the treatment plan.
8. Determine the appropriate time interval(s) to collect monitoring data.
9. Present the findings, recommendations and plan from an EHR patient review.
10. Lead a discussion about a recently published research manuscript and its application to patient care.

Course-Level Objectives

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

1. Identify and explain important components of antimicrobial stewardship programs.
2. Describe how a pharmacist contributes as a member of an interprofessional collaborative antimicrobial stewardship patient care team.
3. Indicate the appropriate empiric antimicrobial regimen by considering the most common pathogens for a given infection.
4. Analyze an antibiogram with consideration of resistance mechanisms and trends.
5. Develop knowledge and clinical application skills related to antimicrobial drug selection, dosing and monitoring with consideration for typical principles and practice in the acute care setting, particularly related to the management of various infections in patients.
6. Prepare an appropriate antimicrobial regimen for a given case including consideration of when definitive therapy is necessary.
7. Evaluate an existing antimicrobial regimen including recognition of the drug therapy problems.
8. Review patients' medical records for a patient with an infectious disease. Specifically, interpret and identify atypical information and present patient care recommendations/interventions concisely and effectively to another health professional with a focus on communication skills appropriate for providers.
9. Use clinical laboratory and medical records to make clinical decisions in antimicrobial stewardship and the management of patients with an infectious disease.
10. Debate on antimicrobial concepts and practices with consideration of information in the medical literature.

Course Pre-requisites

1. Successful completion of Blocks 1-17 of the Doctor of Pharmacy curriculum.

Course Co-requisites

1. None

4/21/2021 9:17 AM

Course Outline

Please routinely check your campus calendar and Canvas for any messages about changes in the schedule including meeting dates/times, deadlines, and room changes.

Legend	
Active Learning Session: Asynchronous – see campus calendar for times and locations	
Active Learning Session: Synchronous	
Start of a new module	
Video and Readings to be complete by the date	
Assignment due by the date	
<i>Supplemental information (lecture videos from previous courses) – NOT REQUIRED</i>	<i>Italics</i>
Quizzes and Exam	

Table 1. Daily Activity

Date	Mod #	Activity	Contact Hours [Hr.]a	Learning Objectives Covered	Faculty Module Leader
4/21/2021	1	Module 1: Microbiology and Antimicrobial Review		1-7	Dr. Casapao
4/21/2021	1.1	Required to Watch: Welcome Video Introduction Video	0.5		Dr. Casapao
4/21/2021, Asynchronous- See Campus Calendar for times and locations	1.2	Active Learning Session 1: Microbiology and Antimicrobial Review	2.0		Dr. Casapao
4/21/2021	2	Module 2: Antimicrobial Stewardship, Antibogram, and MRSA		1-9	Dr. Casapao
4/21/2021	2.1	Required to Watch Videos: Antimicrobial Stewardship Antibiogram MRSA	0.5		Dr. Casapao Dr. Kunz Coyne
4/21/2021	2.2	Required Readings: MRSA bacteremia, infective endocarditis, and pneumonia, (pages e35-e37) of MRSA IDSA 2011 guidelines (PMID:21208910)	0.25		
4/21/2021, 11:59PM	2.3	Assignment: Discussion Board Post: Group 4-6			

4/21/2021 9:17 AM

4/21/2021, 11:59PM	2.3	Assignment: Upload Case Presentation: Group 1-3			
4/22/2021	2.4	Active Learning Session 2: Antimicrobial Stewardship, Antibigram, and MRSA	2.0	1-9	Dr. Casapao
4/22/2021	3	Module 3: SSTI, UTI, and Following Up Cultures		5-9	Dr. Casapao
4/22/2021	3.1	Required to Watch Videos: SSTI UTI Following up Cultures	0.5		Dr. Casapao
4/22/2021	3.2	Required Readings: Table 2 (pages 151-152) of SSTI IDSA 2014 guidelines (PMID:24973422) Acute Pyelonephritis, (pages e115-e117) of UTI IDSA and ESMID 2010 guidelines (PMID:21292654)	0.5		
4/22/2021, 11:59PM	3.3	Assignment: Discussion Board Post: Group 1-3			
4/22/2021, 11:59PM	3.3	Assignment: Upload Case Presentation: Group 4-6			
4/23/2021	3.4	Active Learning Session 3: SSTI, UTI, and Following up Cultures	1.75	5-9	Dr. Casapao
4/23/2021		QUIZ #1: (Modules 1-2)	0.25	1-7	
4/23/2021	4	Module 4: Pneumonia, Pseudomonas, and Treatment Failures		5-9	Dr. Casapao
4/23/2021	4.1	Required to Watch Videos: Pneumonia Pseudomonas Treatment failure	0.5		Dr. Casapao
4/23/2021	4.2	Required Readings: Section X and XII, (pages e81-e85 and e86-e89) of HAP and VAP IDSA 2016 guidelines (PMID:27418577)	1.0		
4/23/2021, 11:59PM	4.3	Assignment: Discussion Board Post: Group 1-3			

4/21/2021 9:17 AM

4/23/2021, 11:59PM	4.3	Assignment: Upload Case Presentation: Group 4-6			
4/26/2021	4.4	Active Learning Session 4: Pneumonia, Pseudomonas, and Treatment Failures	1.75	5-9	Dr. Casapao
4/26/2021		QUIZ #2: (Module 3)	0.25	3-7	
4/26/2021	5	Module 5: Diabetic Foot Infection and Vancomycin Kinetics		5-9	Dr. Casapao
4/26/2021	5.1	Required to Watch Videos: DFI Vancomycin Kinetics	0.5		Dr. Casapao Dr. Kunz Coyne
4/26/2021	5.2	Required Readings: Section VI initially select and modify antibiotic regimens for DFI and Tables 6-8 of DFI IDSA 2012 guidelines (pages e147-e152) (PMID: 22619242)	0.5		
4/26/2021, 11:59PM	5.3	Assignment: Discussion Board Post: Group 4-6			
4/26/2021, 11:59PM	5.3	Assignment: Upload Case Presentation: Group 1-3			
4/27/2021	5.4	Active Learning Session 5: Diabetic Foot Infections and Vancomycin Kinetics	2.0	5-9	Dr. Casapao
4/27/2021	6	Module 6: CNS and Sepsis		3-9	Dr. Casapao
4/27/2021	6.1	Required to Watch Videos: Bacterial Meningitis Sepsis	0.5		Dr. Casapao
4/27/2021	6.2	Required Readings: Table 3 and 4 (pages 1274-1275) of Bacterial Meningitis IDSA 2004 guidelines (PMID: 15494903)	0.5		
4/27/2021, 11:59PM	6.3	Assignment: Discussion Board Post: Group 4-6			
4/27/2021, 11:59PM	6.3	Assignment: Upload Case Presentation: Group 1-3			
4/28/2021	6.4	Active Learning Session 6: CNS and Sepsis	1.75	3-9	Dr. Casapao
4/28/2021		QUIZ #3: (Modules 4-5)	0.25		

4/21/2021 9:17 AM

4/28/2021	7	Module 7: IE, Allergies, and Alternatives		3-9	Dr. Casapao
4/28/2021	7.1	Required to Watch Videos: Infective Endocarditis Allergies and Alternatives	0.5		Dr. Casapao Dr. Kunz Coyne
4/28/2021	7.2	Required Readings: Enterococci section AND Table 12-15 (pages 1455-1461) of IE AHA 2015 guidelines (PMID:26373316)	0.5		
4/28/2021, 11:59PM	7.3	Assignment: Discussion Board Post: Group 1-3			
4/28/2021, 11:59PM	7.3	Assignment: Upload Case Presentation: Group 4-6			
4/29/2021	7.4	Active Learning Session 7: IE, Allergies, and Alternatives	2.0	3-9	Dr. Casapao
4/29/2021, 11:59PM	7	Assignment: Upload Case Presentation: Group 1-6			
4/30/2021	2-7	Active Learning Session 8: Reviewing Patient Cases	2.25	3-9	Dr. Casapao
4/30/2021	8	QUIZ #4: (Modules 6-7)	0.25		
DUE: 5/3/2021, 6:00AM	9	Assignment: Submit your paper to CANVAS for Groups 1-4			
5/3/2021	9	Active Learning Session 9: Team Debate and Panel Discussion Groups 1-4	2.0	10	Dr. Casapao
DUE: 5/3/2021, 11:59PM	9	Assignment: Submit your evaluations to CANVAS for Group 1-4		10	
DUE: 5/4/2021, 6:00AM	10	Assignment: Submit your paper to CANVAS for Group 5-6		10	
5/4/2021	10	Active Learning Session 10: Team Debate and Panel Discussion Groups 5-6	2.0	10	Dr. Casapao
DUE: 5/4/2021, 11:59PM	10	Assignment: Submit your evaluations to CANVAS for Group 5-6		10	
5/5/2021		Reading Day			

4/21/2021 9:17 AM

5/6/2021		Final Exam—See campus calendar for time & location	3.0	1-9	
		<i>Total Contact Hours</i>	30.25		

Required Textbooks/Readings

Readings and References will be posted by instructor on Canvas

- Use [UF VPN to access UF Libraries Resources](#) when off-campus.
- The UF HSC library staff can assist you with questions or issues related to accessing online library materials. For assistance contact your College of Pharmacy librarian or visit the [HSC Library Website](#) at this URL: <http://www.library.health.ufl.edu/>

Suggested Textbooks/Readings

None

Other Required Learning Resources

None

Materials & Supplies Fees

None

Student Evaluation & Grading

Evaluation Methods and How Grades are calculated.

Table 2. Assessment items to calculate final grade

Assessment Item	Grade Percentage
<i>In-class quizzes (4 quizzes @ 5% each)</i>	20
<i>Case presentations and evaluation (4 @ 5% each) See rubric in Appendix D</i>	20
<i>Group Debate Presentation and Paper (See rubric in Appendix B & C)</i>	20
<i>Participation in active learning sessions (4 sessions @ 5% each using an audience response system)</i>	20
<i>Final cumulative exam</i>	20
<i>Total</i>	100%

Table 3. Grading Scale

Percentage Range	Letter Grade
92.50-100%	A

4/21/2021 9:17 AM

Rounding of grades:

Final grades in Canvas will be rounded to the 2nd decimal place. If the decimal is X.495 or higher, Canvas will round the grade to X.50. The above scale depicts this policy and grades are determined accordingly. Grade assignment is made using this policy and NO EXCEPTIONS will be made in situations where a student's grade is "close."

89.50-92.49%	A-
86.50-89.49%	B+
82.50-86.49%	B
79.50-82.49%	B-
76.50-79.49%	C+
72.50-76.49%	C
69.50-72.49%	C-
66.50-69.49%	D+
62.50-66.49%	D
59.50-62.49%	D-
< 59.50%	E

Educational Technology Use

The following technology below will be used during the course and the student must have the appropriate technology and software.

1. ExamSoft™ Testing Platform
2. Canvas™ Learning Management System
3. Polleverywhere
4. Neehr Perfect

For technical support, navigate to [Educational Technology and IT Support Contact Information](#) at this URL: <http://curriculum.pharmacy.ufl.edu/current-students/technical-help/>

Pharm.D. Course Policies

The Policies in the following link apply to this course. Review the [General Pharm.D. Course Policies](#) carefully, at this URL: <http://curriculum.pharmacy.ufl.edu/current-students/course-policies/>

Policy for Academic Commitment Device to Improve Study Behavior

Students are required to submit a decision if she, he, hen, or they either wants to set a commitment or no commitment during the duration of this course. The purpose is to assist students by potentially improving their study behavior by locking in a commitment to a certain course of action in the future. Commitment options will be proposed by Dr. Casapao. An example of a commitment would be removing distractions or including additional study methods for the entire time of this course. If the student decides to set a commitment, it must be submitted by the end of the **first day of class** and approved by Dr. Casapao. This is a voluntary engagement that requires full completion of the goal/commitment defined as reaching 100% of the commitment in order to receive the incentive. Accountability of full completion of the goal/commitment will be decided by a referee. Further information can be found in the CANVAS website.

4/21/2021 9:17 AM

Appendix A. Course Directory

Teaching Partnership Leader/Course Director:

Name: Anthony Casapao, Pharm.D., M.P.H., BCIDP

Email: Casapao@cop.ufl.edu

Office: JAX campus

Phone: 904-244-9129

Questions to Ask:

- Concerns about performance
- Guidance when there are performance problems (failing grades)
- General questions about content

Academic Coordinator:

Name: Misti R. Merrill

Email: mmerrill@cop.ufl.edu

Office: HPNP 4312

Phone: 352-273-6312

Absence/Tardy Email: absent3PD@cop.ufl.edu

Educational Coordinators:

Name: McKenzie Wallen

Email: mwallen@cop.ufl.edu

Office: Jacksonville Campus

Name: Iveta R. Allen

Email: iallen1@cop.ufl.edu

Office: Orlando Campus

Questions to Ask:

- Issues related to course policies (absences, make up exams, missed attendance)
- Absence/tardy requests (Only the Academic Coordinator handles absence requests)
- Questions about dates, deadlines, meeting place
- Availability of handouts and other course materials
- Assignment directions
- Questions about grade entries in gradebook (missing grades, incorrect grade)
- Assistance with ExamSoft® (Distance campus students may contact the Educational Coordinator for use of Exemplify and assistance during exams. The Academic Coordinator is the contact person for issues related to grading and posting of ExamSoft grades.)

4/21/2021 9:17 AM

● Appendix B. Debate Presentation Rubric

Debate Presentation Grading Form

Date: _____

Team: _____ (Affirmative or Negative)

Debate Topic: _____

Criteria	Levels of Performance	Score
Opening Statement	9-10: The statement clearly outlined the main points and supporting evidence and captured the attention of the audience. 8-8.9: The statement mostly outlined the main points and supporting evidence, and partially captured the attention of the audience. 7-7.9: The statement outlined the main points, but lacked supporting evidence, and partially captured the attention of the audience. 0-6.9: The statement did not outline the main points and lacked supporting evidence and did not capture the attention of the audience.	
Organization and Clarity	9-10: All arguments were clearly linked to a premise (idea) and organized in a logical manner. 8-8.9: Most arguments were clearly linked to a premise (idea) and organized in a logical manner. 7-7.9: All arguments were clearly linked to a premise (idea), but the organization was sometimes unclear or illogical. 0-6.9: Arguments were not linked to a premise (idea) at all.	
Information	9-10: All information presented was clear, accurate, and thorough. 8-8.9: Most information presented was clear, accurate, and thorough. 7-7.9: Most information presented was clear and accurate, but not usually thorough. 0-6.9: Information had some major inaccuracies OR was not clear.	
Use of Facts/ Statistics/ Examples	9-10: Every major point was well supported with several relevant facts, statistics, and/or examples with citations/references. 8-8.9: Every major point was adequately supported with relevant facts, statistics, and/or examples. Some had citations/references. 7-7.9: Every major point was supported with facts, statistics, and/or examples, but the relevance of some were questionable. 0-6.9: No points were supported. No citations/references were given at all.	
Rebuttal	9-10: All counter-arguments were accurate, relevant, and strong. 8-8.9: Most counter-arguments were accurate, relevant, and strong. 7-7.9: Most counter-arguments were accurate and relevant, but several were weak. 0-6.9: Counter-arguments were neither accurate nor relevant.	
Closing Statement	9-10: The statement was clear, relevant, and effectively summarized the team's position. 8-8.9: The statement was mostly clear, relevant, and partially summarized the team's position. 7-7.9: The statement was clear, but lacked relevancy and partially summarized the team's position. 0-6.9: The statement was neither clear nor relevant and did not adequately summarize the team's position.	

4/21/2021 9:17 AM

Understanding of Topic and Effectiveness	9-10: The team clearly understood the topic in-depth and presented their information forcefully and convincingly. 8-8.9: The team clearly understood the topic and presented their information with ease. 7-7.9: The team seemed to understand the topic and presentation of their information was satisfactory. 0-6.9: The team did not show an adequate understanding of the topic.	
Presentation Style	9-10: Team consistently used gestures, eye contact, tone of voice, and a level of enthusiasm in a way that kept the attention of the audience. 8-8.9: Team usually used gestures, eye contact, tone of voice, and a level of enthusiasm in a way that kept the attention of the audience. 7-7.9: Team sometimes used gestures, eye contact, tone of voice, and a level of enthusiasm in a way that kept the attention of the audience. 0-6.9: The team's presentation style did not keep the attention of the audience.	
Responses to Audience Questions	9-10: Responses were clear, relevant, and well-informed. 8-8.9: Responses were mostly clear, relevant, and well-informed. 7-7.9: Responses were clear, but lacked relevancy, and were partially informed. 0-6.9: Responses were neither clear nor relevant and were not informed.	
Respect for Other Team	9-10: All statements, body language, and responses were respectful and appropriate. 8-8.9: Statements and responses were respectful and appropriate language was used, but body language was occasionally inappropriate. 7-7.9: Most statements and responses were respectful and language was appropriate, however, sarcasm was displaced. 0-6.9: Statements, responses, and/or body language were consistently disrespectful.	
Total Score:		

*** List at least 2 major strengths and 2 recommendations that would improve this presentation.**

Strengths:

Areas of Improvement:

Name: _____

4/21/2021 9:17 AM

● Appendix C. Debate Paper Rubric

Debate Paper Grading Form

Date: _____

Team #: _____

Criteria		Score
Introduction	9-10: The introduction states the main topic, previews the structure of the paper, and engages the reader. 8-8.9: The introduction states the main topic and previews the structure of the paper, but does not engage the reader. 7-7.9: The introduction states the main topic, but does not adequately preview the structure of the paper nor engage the reader. 0-6.9: The introduction does not state the main topic and does not preview the structure of the paper nor does it engage the audience.	
Supportive Information	9-10: All supportive information for the main points is present and reported accurately. 8-8.9: Almost all supportive information for the main points is present and reported accurately. 7-7.9: Some supportive information is reported accurately. 0-6.9: No supportive information is present or most are inaccurately supported.	
Position Statement	9-10: The position statement is clearly stated and is supported by detailed research and information. 8-8.9: The position statement is stated, but the research and information are not current. 7-7.9: The position statement is somewhat clear, but lacks supporting research and information. 0-6.9: The position statement is not clearly stated and supporting research and information is lacking.	
Grammar and Spelling	9-10: There are no errors in spelling or grammar present. 8-8.9: There are 1-2 errors in spelling or grammar present. 7-7.9: There are 3-4 errors in spelling or grammar present. 0-6.9: There are > 4 errors in spelling or grammar present.	
Conclusion	9-10: The conclusion effectively summarizes the main points and discusses potential future research and/or questions from current research. 8-8.9: The conclusion summarizes the main points, but lacks a discussion of potential future research and/or questions from current research. 7-7.9: The conclusion somewhat summarizes the main points and discusses of potential future research and/or questions from current research. 0-6.9: The conclusion does not summarize the main points and lacks a discussion of potential future research and/or questions from current research.	
Deductions		
Total Score		

Comments:

● Appendix D. Patient Case Presentation Rubric

Case Presentation Evaluation Form

Presenter: _____ Topic: _____

Evaluator: _____ Date: _____

Pharmaceutical Care Assessment	Ineffective or unsafe	Needs Significant Improvement	Required Competency	Exceeds Expectations	Exceptional
Evaluated the information to determine drug therapy related problems	----- 0 4.9	----- 5.0 7.2	----- 7.3 7.9	----- 8.0 8.9	----- 9.0 10
Select all that applies	No		Yes		N/A
<input type="checkbox"/> Briefly describes disease state					
<input type="checkbox"/> Highlights current therapies available for disease state					
<input type="checkbox"/> Determined at least one drug therapy related problem (not being treated, contraindication, not being properly monitored, drug interaction)					
<input type="checkbox"/> Outlines a potential intervention (medication, dose, duration, etc.)					
<input type="checkbox"/> Provides literature (guidelines/evidence) to justify for potential recommendation					
Comments:					

Pharmaceutical Care Plan	Ineffective or unsafe	Needs Significant Improvement	Required Competency	Exceeds Expectations	Exceptional
Develops a pharmaceutical care plan	----- 0 4.9	----- 5.0 7.2	----- 7.3 7.9	----- 8.0 8.9	----- 9.0 10
Select all that applies	No		Yes		N/A
<input type="checkbox"/> Includes <i>measurable</i> goals of therapy					
<input type="checkbox"/> Includes pharmacological recommendation(s) to resolve any drug therapy related issues					
<input type="checkbox"/> Provides complete recommendation(s) i.e. route, frequency, etc.					
<input type="checkbox"/> Patient counseling points provided					
<input type="checkbox"/> Provided monitoring and follow up plan					
Comments:					

Conclusions/Discussion	Ineffective or unsafe	Needs Significant Improvement	Required Competency	Exceeds Expectations	Exceptional
Clearly and concisely provides conclusion	----- 0 4.9	----- 5.0 7.2	----- 7.3 7.9	----- 8.0 8.9	----- 9.0 10
Select all that applies	No		Yes		N/A
<input type="checkbox"/> Summarizes overall hospital course and impression of the patient case – indicating typical or unique characteristic(s)					
<input type="checkbox"/> Discusses if findings are clinically significant/relevant and provides rationale					
Comments:					

4/21/2021 9:17 AM

Presentation Style	Ineffective or unsafe	Needs Significant Improvement	Required Competency	Exceeds Expectations	Exceptional
Includes the 6 C's of case: correct, clear, conscientious, complete, concise, & critical	----- 0 4.9	----- 5.0 7.2	----- 7.3 7.9	----- 8.0 8.9	----- 9.0 10
Select all that applies	No		Yes		N/A
<input type="checkbox"/> Tells a story from start to finish within allotted time					
<input type="checkbox"/> Free of grammatical errors/Proper use of medical terminology					
<input type="checkbox"/> Avoided unnecessary information making the assessment short and non-distracting					
<input type="checkbox"/> References listed appropriately (tertiary and guidelines for background or any additional)					
<input type="checkbox"/> Good eye contact with very little reading from notes/slides					
<input type="checkbox"/> Answers questions appropriately/accurately					
Comments:					
Overall: Final Grade (percentage)	----- 0 49	----- 50 72	----- 73 79	----- 80 89	----- 90 100