PHA6264: Pharmaceutical Health Technology Assessment

3 credit hours

Note: The final syllabus posted in the course Canvas site is the most current and supersedes the syllabus posted on the internet.

Class Meeting Times

Sundays, 5:00-7:00 PM Eastern

Class Meeting Location

Class meetings are held in Zoom, which can be accessed via the course Canvas site. If you are having trouble accessing the course Canvas site, please contact Distance Education Support Services at DESS@ahc.ufl.edu.

Instructor

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Office Hours (Zoom or phone): By appointment

Course Description

This course covers the essentials of health technology assessment (HTA) as applied to pharmaceuticals. The purpose of HTA is to assess a pharmaceutical treatment's comparative benefits, costs, and value. Students will explore how to structure an evaluation question, systematically identify relevant clinical and economic evidence, and interpret the results of an HTA. Finally, students will learn how HTA is applied to pricing, reimbursement, and coverage decisions in the US and abroad.

Course Objectives

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

- 1. Describe the role and motivation for pharmaceutical HTA in the market access pathway
- 2. Explain how pharmaceutical HTA incorporates clinical evidence, pharmacoeconomic data, and ethical analysis to assess the benefits, risks, costs, and cost-effectiveness of pharmaceuticals.
- 3. Analyze how the pharmaceutical HTA approach can be used to assess the value of pharmaceuticals to patients, healthcare payers, and society



- 4. Analyze and critically appraise how different pharmacoeconomic methods can be used in pharmaceutical HTA and the consequences on HTA results and interpretations.
- 5. Explain and contrast how pharmaceutical HTA is used in US healthcare and select other countries with internationally influential HTA organizations.
- 6. Assess how pharmaceutical HTA can be used as an input to drug pricing negotiations and value-based pricing policies.

Relationship to Program-level Student Learning Outcomes

This course pertains to the following program-level student learning outcome:

1. Apply pharmacoeconomic theories and methods to assess the cost-effectiveness of pharmaceutical interventions and critically evaluate the implications of pharmacoeconomic studies.

Required Textbooks and/or Software

The book "The Right Price" by Peter J. Neumann, Joshua T. Cohen, and Daniel A. Olldendorf, Oxford University Press (ISBN-10: 0197512879), will be used during most course weeks.

Additional reading assignments from journal articles, current websites, and news articles are assigned for each week. These reading assignments are provided in Canvas and listed below.

Recommended Materials

None

Course Pre-Requisites

None

Structure and Organization

This course is organized into weekly modules in UF's e-learning system, Canvas. Each module's assigned work (e.g., readings, videos, discussion boards, and assignments) is detailed in Canvas. In addition, the faculty and students meet synchronously once per week using Zoom. This course is self-paced to accommodate the time constraints of individual students. However, students are expected to complete the assigned work for each module before each weekly synchronous class meeting and by the posted deadline.



Course Schedule

Week/ Module	Class Meeting	Topic	Work to turn in by 3:00 PM on day of class
0	March 10	Course Introduction	None
1	March 17	Pharmaceutical HTA: what and why? The market for pharmaceuticals What is HTA and why is it used	 Quiz 1 Discussion post 1
2	March 24	 HTA Methods Key aspects of HTA: PICO, Systematic review, Meta-analysis, Cost-effectiveness, Budget impact 	Quiz 2Discussion post 2
3	March 31	Measuring Health Outcomes • Surrogate/final endpoints • LYs/QALY/EVLYG	Quiz 3Discussion post 3
4	April 7	Pharmacoeconomics for HTA CEA vs. Budget Impact Assessing uncertainty Cost-effectiveness thresholds	Quiz 4Discussion post 4
5	April 14	HTA and Health EquityHTA to support health equityDistributional CEA	 Quiz 5 Discussion post 5
6	April 21	 The use of HTA in the US and Abroad The role of HTA in the US International perspectives 	Quiz 6Discussion post 6
7	April 28	 HTA and Value-Based Pricing Price vs. value Pricing in rare and severe diseases US and international drug pricing policy 	Quiz 7Discussion post 7

Required Readings

Week 0

Syllabus

Week 1

- Neumann, Cohen, and Ollendorf. The Right Price: Chapters 1, 2, and 3.
- Institute for Clinical and Economic Review (ICER). Guide to Understanding HTA.
- NICHSR. <u>HTA 101: I (Introduction)</u>
- NICHSR. <u>HTA 101: IIA-IIB (Fundamental Concepts Section A and B).</u>

Week 2

NICHSR. <u>HTA 101: III (Primary Data Methods)</u>, IV (Integrative Methods), V (Economic Analysis), VI (Determine Topics), VII (Retrieve Evidence)

Week 3

- Neumann, Cohen, and Ollendorf. The Right Price: Chapter 4 and pages 179-190 in Ch.9
- Weinstein et al. QALYs: The Basics.
- Neumann and Cohen. QALYs in 2018 Advantages and Concerns
- Day and Mezzio. Demystifying ICER's Equal Value of Life Years Gained Metric
- Press Release by House Energy and Commerce Committee Chair. <u>Introduce Legislation to Ban QALYs</u>.
- Cohen et al. The much-maligned quality-adjusted life year is a vital tool for health care policy.
- Kemp and Prasad. <u>Surrogate endpoints in oncology.</u>

Week 4

- NICHSR. <u>HTA 101: V (Economic Analysis Me</u>thods)
- Weinstein & Stason. Foundations of Cost-Effectiveness Analysis for Health and Medical Practices.
- Vanness et al. A Health Opportunity Cost Threshold for CEA in the US.
- Dubois. CEA thresholds in the US: are they coming?

Week 5

ICER. Advancing HTA Methods that Support Health Equity

Week 6

- Neumann, Cohen, and Ollendorf. The Right Price: Chapters 6 and 7.
- Kim & Basu. How Does CEA Inform Health Care Decisions.
- Mulligan et al. Health Technology Assessment for the U.S. Healthcare System
- Neumann, Wilke, and Garrison. <u>A Health Economics Approach to US Value Assessment Frameworks Introduction: An ISPOR Special Task Force Report</u>
- Lakdawalla et al. Create a U.S. Institute of HTA to preserve innovation and control costs

Week 7

- Neumann, Cohen, and Ollendorf. The Right Price: Chapters 11 and 12.
- Rand and Kesselheim. Getting the Price Right: Lessons for Medicare Price Negotiation from Peer Countries
- Yeung et al. Value-Based Pricing of US Prescription Drugs.
- Miljkovic et al. Association Between US Drug Price and Measures of Efficacy for Oncology Drugs
- Sullivan et al. Medicare Drug Price Negotiation in the United States

Evaluation Methods

Weekly Quizzes (55%):

There will be a total of 7 independent quizzes related to the topics covered in week/module 1-7. The quizzes will be completed individually and consist of multiple-choice questions and occasionally some questions requiring a short essay-based response. Each quiz is scored between 0-100 and is weighted equally.

Discussion Board and Class Participation (30%):

Students are expected to actively contribute to discussions both in the synchronous class meetings and through online discussion boards in Canvas. Participation points will be awarded for each of the modules. Students are expected to post at least one substantive comment to the Canvas discussion board during week/module 1-7. The post can be an original/new post or a comment on another post.

Substantive posts are characterized by the following: demonstrates understanding significant ideas relevant to the issue, elaborates with accurate explanations or evidence, provides accurate information, distinguishes fact from opinion, stimulates inquiry through thoughtful posts, asks clarifying questions, synthesizes points of agreement or disagreement, attempts to motivate the group discussion, presents creative approaches to the topic. Posts should include citations when appropriate. All citations should be in AMA format.

Students are expected to contribute to the class discussion. The instructor will call on individual students during synchronous class meetings. This strategy is intended elevate and advance the conversation, not to challenge the student with a question that is difficult to answer. Students are encouraged to be prepared for the discussion, but they should be comfortable responding to the question with another question or expressing points of ambiguity about the topic.

Each Discussion Board and Class Participation will be scored between 0-100 each and is weighted equally.

Class presentation (15%):

Each student will be responsible for giving one presentation (approx. minutes) during the Sunday class meeting (Week 1 to 7). The presentation will be based on summarizing different parts of a published HTA report. On the first day of the course, a list with topics will be provided on Canvas with further details on the presentation format.

Timeline for instructor feedback:

Grades and feedback from the instructor will be posted within 3 calendar days.

Diversity, Equity, and Inclusion



"An inclusive classroom climate refers to an environment where all students feel supported intellectually and academically and are extended a sense of belonging in the classroom regardless of identity, learning preferences, or education." -Yale Center for Teaching and Learning

The online Pharmaceutical Outcomes and Policy (POP) graduate program embraces the idea that we all benefit from our individual differences and that our collected diversity is a source of strength. Additionally, as members of the health care community, improving health equity for our patients or others whom we serve, begins with us.

Our instructors are committed to creating course environments that celebrate diversity, honor inclusivity, and ensure equity for all students. It is important that all class-related interactions feel like a safe space for students of all backgrounds and learning styles to feel welcome, heard, and supported.

And, as this is your learning experience, your suggestions to ensure this commitment is fulfilled are encouraged and appreciated. Interactions that do not honor the spirit of this commitment will be addressed as they arise on an as needed basis.

Attendance Policy for this Course

Students are expected to attend the synchronous class meetings. Students who miss 30 minutes or more of the synchronous class meeting are considered absent.

Unexcused absences from a class carry a 5-point (1/2 letter grade) penalty taken off the final grade.

Excused absences require a make-up reflection paper on the module topic to be submitted within 2 weeks of the missed class (unless the class is near the end of the semester and a shorter timeline will be required). Absences are considered excused when the student (not a peer) has emailed the instructor before the synchronous class meeting begins and conveys why the student will miss class, such as illness, job conflict, and other emergencies. Two or more excused absences will be addressed by the instructor and may result in an incomplete final grade for the course.

Attendance Policy for Online POP

Students are expected to formally <u>drop or withdraw</u> from the course if they no longer wish to participate. See the program's <u>Academic Calendar</u> for applicable deadlines. In some cases, the University may automatically drop students for inactivity and/or for failure to pay tuition. It is crucial for students to communicate with the DESS (DESS@ahc.ufl.edu) about their status in the course, and about any tuition deferments or other special conditions related to their tuition payment. Any student who remains enrolled in the course after the drop/add deadline is considered tuition-liable, unless exempted by University petition. The official UF Attendance Policy can be found <u>here</u>.

Make-up Policy:

Each assignment is posted with a clear due date. **Assignments that are not submitted by the due date will be given a zero.** The instructor will consider extenuating circumstances on a case-by-case basis – if she is contacted by the student in advance of the due date. No other makeup assignments are offered. Contact the instructor for any concerns.

Grading Policy

The only passing grades for graduate students are A, A-, B+, B, B-, C+, C, and S. Grades of B-, C+ or C count toward a graduate degree if an equal number of credits in courses numbered 5000 or higher have been earned with grades of B+, A- and A, respectively. Grade points are not given for S and U grades; S and U grades are not used to calculate grade point averages. All letter-graded courses eligible to count toward the graduate degree, except 1000- and 2000-level courses, are used to calculate the cumulative grade-point average. Letter grades of C-, D+, D, D- or E are not considered passing at the graduate level, although the grade points associated with these letter grades are included in grade point average calculations. See the <u>UF graduate academic regulations</u> for more information.

Α	>92.500%
A-	89.500–92.499%
B+	86.500-89.499%
В	82.500-86.499%
B-	79.500–82.499%
C+	76.500–79.499%

С	72.500–76.499%
C-	69.500–72.499%
D+	66.500–69.499%
D	62.500–66.499%
D-	59.500–62.499%
Е	<59.499%

Course Technology Support

Your instructor is not able to handle technological issues or answer questions related to computer issues.

- Assistance accessing course Canvas page: Contact Distance Education Support Services at DESS@ahc.ufl.edu
- **IT Support:** Contact UF Computing Help Desk at 352-392-HELP (4357) or helpdesk@ufl.edu or submit an online request form. If a technical problem causes you to miss an assignment, you must report the problem to the Help Desk and then email your instructor your Help Desk ticket number to the instructor in order to receive an extension.

Students Requiring Academic Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the <u>Disability Resource Center</u>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course technologies meet online learning accessibility standards for sight and hearing-impaired learners. Likewise, course materials are developed in accordance with accessibility standards. Course documents and webpages are formatted for screen-reader accessibility with the use of headings, styles, or alternative text tagging for images. Accessibility design tools in Microsoft Office products and in Canvas are used to evaluate and update accessibility issues detected in the instructional materials. Synchronous class sessions in Zoom are recorded. These recordings are posted to the course site to accommodate students unable to attend.

- Canvas Accessibility
- Zoom Accessibility



Course Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Click here for guidance on how to give feedback in a professional and respectful manner. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/.

University Honesty Policy and Academic Integrity

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor 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." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Regarding academic integrity, students in the program are strongly encouraged to be mindful of what constitutes plagiarism. Written assignments that contain the research or other original published work of someone else must be properly quoted, cited, paraphrased, or referenced appropriately. A software (TurnItIn) that is integrated with Canvas Assignments may be utilized to help students determine if a written submission meets the criteria for a properly referenced research paper. Please ask for help, utilize resource materials and take advantage of opportunities like creating a draft of your paper to test, ensuring you have addressed any errors prior to the final submission.

Please watch these short videos about this topic:

- Understanding and Avoiding Plagiarism: Types of Plagiarism
- Avoiding Plagiarism

Software Use and Course Technology

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

The University policy on use of ChatGPT is available <u>here</u>.



Educational technology in the program is primarily the Canvas Learning Management System (LMS) and Zoom web conferencing software. These tools firmly support learning objectives and course goals. Writing with communication tools, reading articles from digital collections, and viewing video presentations in high-quality, accessible formats are essential to facilitate meaningful learning experiences. These experiences expand knowledge and influence professional work habits and skills such as information-gathering techniques and evidence-based practice. Synchronous class sessions in Zoom provide learners with opportunities to gain confidence and practice how they interact and collaborate in online meetings.

- Canvas Student Guide
- Zoom Resources

A minimum number of other technical skills are required for success in the online courses. These include accessing course webpages to read text and listen to recorded videos, using word processing tools (MS Word, PowerPoint), downloading/uploading content, submitting online assignments and using a variety of communication tools (Canvas Inbox, Discussions, Zoom Conferences).

Course Communication

Canvas (Inbox tool) will be used as the primary communication tool between the instructor and students. Check daily for new announcements or notifications about course updates. UF email will also be used occasionally for mass communication to the class, so please check your email at least once a day as well. All emails sent out to the entire class will also be posted as an Announcement on Canvas. The instructor will generally respond to student messages within 48 hours.

General questions about course content (e.g., assignments or lectures) or policies should be posted to the course discussion board. We expect students to help each other track down answers as best as possible. Read through all the other posts in the discussion board first before posting to make sure your question has not been addressed/answered already. Please include a clear subject title for your topics to make it clear what your post pertains to. The instructor will generally respond to questions posted on the course discussion board within 48 hours.

Emotions can easily be misinterpreted on a discussion board/emails, so make sure your message is clear before sending it since there are no physical gestures or voice inflections that accompany posts/emails. Any posts/emails deemed inappropriate by the faculty will be dealt with on a case-by-case basis with either the faculty directly or they will be sent on to the Associate Dean for Professional Affairs.

For personal issues/questions, please email your instructor. Be sure to include in your subject line the course listing and then a quick subject (e.g., PHAXXXX – Your Name -). This will allow instructors to quickly identify emails related to the course amongst the many emails that are received each day. Emails not correctly addressed may get lost in the shuffle and unintentionally deleted or ignored so be sure to follow the

guidelines exactly.

Student Privacy

There are federal laws protecting your privacy in terms of grades earned in courses and on individual assignments. For more information, please see the Notification to Students of FERPA Rights.

Recordings of weekly class sessions in Zoom are created for the purpose of course teaching and learning, as well as for use as a resource for students who miss a class session.

The use of video (or web camera) feature in Zoom is not a requirement, but rather is voluntary for meeting participants. For both the audio and video features in Zoom, you will have the option to Start or Stop these functions.

Students who participate with their camera engaged or who utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

- Zoom Software Privacy Statement
- Canvas (by Instructure) Privacy Policies

Security

Online activity in Canvas requires an active UF GatorLink account to log in, as well as enrollment in courses. The Zoom Conference meetings for weekly classes are accessed within Canvas. These meetings have a pass code applied as an additional security setting. Students in the class do not need to enter the passcode, however anyone not enrolled in the course cannot join the meeting without it.

Library Resources

For remote access to UF library resources such as e-journals or other digital collections, use the <u>UF VPN or proxy</u> server to connect.

Additional University Resources

• **U Matter, We Care:** If you or a friend is in distress, please contact <u>umatter@ufl.edu</u> or 352 392-1575 so that a team member can reach out to the student.



- Counseling and Wellness Center
- Sexual Assault Recovery Services (SARS): Student Health Care Center, 392-1161.
- University Police Department at 392-1111 (or 9-1-1 for emergencies), or police.ufl.edu
- <u>E-learning technical support</u>: 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
- Teaching Center: Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
- Writing Studio: 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
- Student Complaints