

PHAR 7219: Drug Information Retrieval and Literature Evaluation

Fall Semester 2022

Course Description

This course focuses on the critical evaluation and use of medical literature in pharmacy practice.

Additional Course Information

This course focuses on the use of primary, secondary, and tertiary literature in pharmacy practice and strategies used to evaluate literature and information resources. It is designed to build upon drug information, biostatistics, and clinical research concepts learned in previous coursework. During this course, students will develop the skills necessary to critically evaluate medical literature and competently respond to questions related to drug therapy. At the end of this course, the student should have an appreciation of the role of timely and rigorously analyzed healthcare literature as an essential component of formulating and implementing optimal drug therapy plans.

Course Credit: 2 credit hours

Pre-Requisites:

- P2 Standing
- PHAR 7274: Biostatistics & Clinical Research Methods

Co-Requisites:

Completion or current enrollment in:

- PHAR 7481 Integrated Pharmacotherapy 1: Respiratory & Renal, and
- PHAR 7582 Integrated Pharmacotherapy 2: Infectious Diseases

Class Meeting Days, Time & Location: Fridays, 10:00 AM – 11:50 AM, in WTB 235

Course Coordinator:

Winter J. Smith, Pharm.D., BCPS

W.T. Brookshire Hall Room 247

Email: wsmith@uttyler.edu

Office hours:

- **MUST** make appointment: Wednesdays, 1-2 PM and Fridays, 12-2 PM (may be in person, via phone, or Zoom)
- Other days/times (via phone or Zoom) by appointment
- Preferred method of contact: email

Fisch College of Pharmacy (FCOP) and UT Tyler Policies

This is part 1 of the syllabus. Part 2 contains UT Tyler and the FCOP course policies and procedures. These are available as a PDF at <https://www.uttyler.edu/pharmacy/academic-affairs/files/fcop-syllabus-policies.pdf>. For experiential courses (i.e., IPPE and/or APPE), the Experiential Manual contains additional policies and instructions that supplement the Syllabus Part 1 and 2. Please note, the experiential manual may contain policies with different deadlines and/or instructions. The manual should be followed in these cases.

Required Incoming Knowledge and Skills

This course builds on knowledge and skills learned in PHAR 7274, and a focus of PHAR 7219 is application of this knowledge and skills. PHAR 7274 prerequisite knowledge and skills for each PHAR 7219 class session are denoted next to the course topic, as applicable, in the schedule below. It is the student's responsibility to review PHAR 7274 course content to ensure competency and preparation **prior to each PHAR 7219 class session.**

Required Materials

Most course required materials are available through the Robert R. Muntz Library. These materials are available either online* (<http://library.utt Tyler.edu/>) or on reserve.

1. Malone PM, Witt BA, Malone MJ, Peterson DM. Drug Information; A Guide for Pharmacists, Seventh Edition. McGraw-Hill Education, 2022. ISBN: 978-1-260-46030-8. Available in Access Pharmacy. Direct textbook link (must log in with UT Tyler credentials to access):
<https://ezproxy.utt Tyler.edu/login?url=https://accesspharmacy.mhmedical.com/Book.aspx?bookid=3132>
2. *Aparasu RR, Bentley JP. *Principles of Research Design and Drug Literature Evaluation*, Second Edition. McGraw-Hill Education, 2020. ISBN: 978-1-260-44178-9. Available in Access Pharmacy.
 - a. Direct textbook link (must log in with UT Tyler credentials to access):
<https://ezproxy.utt Tyler.edu/login?url=https://accesspharmacy.mhmedical.com/Book.aspx?bookid=2733>
3. Other required materials will be posted on the class Canvas site. The site address is:
utt Tyler.edu/canvas.

Course Format

The course may include, but are not limited to, the following activities:

1. Independent study of selected readings
2. Individual readiness assessment tests (iRATs)
3. Individual assignments, applications, and projects
4. Team assignments and applications

Course Learning Outcomes (CLOs)

| CLOs | PLO(s) Assessed for this CLO (1-15) | EPAs (1.1-6.1) | Assessment Methods | Grading Method | ACPE Std. 11 & 12 (1-4) |
|--|--|-------------------|-----------------------|-------------------|-------------------------------|
| 1. Discuss the legal and ethical aspects surrounding the provision of drug information. | 7 | 4.2 | 1, 2 | ES | N/A |
| 2. Describe the benefits and limitations of primary, secondary, and tertiary drug information sources, including print and electronic formats. | 1, 7 | 4.2 | 1, 2 | ES | N/A |
| 3. Identify appropriate sources for the information needed to address specific drug information questions in an efficient manner. | 1, 7 | 4.2 | 1, 2, 3, 4 | ES, RUB | N/A |
| 4. Evaluate the quality and applicability of drug information within a source. | 1, 7 | 4.2 | 1, 2, 3, 4 | ES, RUB | N/A |
| 5. Develop a professional drug information question response. | 1, 7 | 4.1, 4.2 | 1, 2, 3 | ES, RUB | 2, 3 |
| 6. Communicate drug information with clarity and accuracy at a level appropriate for the audience. | 7, 11 | 4.1, 4.2 | 1, 2, 3, 4 | ES, RUB | 2, 3 |

Course Assessment Methods

| | Assessment Method | Description |
|---|---|--|
| 1 | Midterm and Final Exam Multiple Choice or Multiple Select Question(s) | <i>Standard MCQ and select all that apply questions</i> |
| 2 | Midterm and Final Exam Open Ended Questions | <i>Calculations using drug information resources Clinical question development Writing sample evaluation Critical evaluation of primary literature, including results interpretation Application of clinical practice guidelines</i> |
| 3 | Individual Projects | <i>Drug information question response (DIQR): Individual drug information question response with feedback and revision</i> |
| | | <i>Journal Club (JC): Individual evaluation of primary literature and journal club handout development</i> |
| 4 | Oral Presentation | <i>Individual journal club verbal presentation</i> |

Grading Policy & Grade Calculation

Grades will be determined based on evaluation of individual readiness assessment tests (iRATs), individual assessment tests (iCATs), midterm examinations, final written examinations, skills assessments, graded application assignments, individual projects, peer evaluations and other assessment methods that may include, but not limited to, Objective Structured Clinical Examinations (OSCEs). Examinations, RATs and CATs may consist of, but not limited to, multiple-choice, true/false, fill in the blank, short-answer, essay, and problem-based questions.

During the time the course is in progress, students whose cumulative course percentage falls below 70.0% may receive an academic alert and be subject to periodic course content review in special sessions with the course instructor(s). The student's faculty advisor may receive an academic alert to act upon on the student's behalf.

All examinations, tests, and assignments, including the final examination, may be **cumulative**. Please note that assignments turned in after the due date (late) will receive a points deduction, unless permission is granted by the course coordinator for extenuating circumstances. Students are responsible for material presented during the prior courses.

The grading scale for all graded material is below. The final course grade will be assigned according to the calculated percentage and the percentages will not be rounded upward or downward. For additional information, see examination/assessment policy below.

PHAR 7219 Grade Calculation*

| | |
|---|--------------------|
| <u>Individual Component</u> | <u>100%</u> |
| iRATs and/or Individual Applications | 10% |
| Drug Information Question Response (DIQR) | 20% |
| Journal Club (JC) | 15% |
| Midterm Exam | 25% |
| <u>Cumulative</u> Final Exam | 30% |
| <u>Total</u> | <u>100%</u> |

***The final course letter grade will be determined according to the following grading scheme:**

| | |
|---|-----------------|
| A | 90 - 100 % |
| B | 80 - 89.999 % |
| C | 70 - 79.999 % |
| D | 65.0 - 69.999 % |
| F | < 65.0 % |

Class Attendance and Punctuality Expectations

Students are expected to attend all class sessions, exams, and other course activities and be on time. This includes the beginning of class and return from breaks. For certain class activities (e.g. exams), this requires arrival earlier than the scheduled start time. Students who are tardy or absent for unexcused reasons may miss graded assignments that cannot be made up. Students who are tardy for quizzes, exams, or other course assessments (e.g. journal club) may lose the opportunity to take the quiz or exam, or participate in the assessment, resulting in a grade of zero for that assessment. See the FCOP Syllabus, Part 2, for details of the examination and attendance policies.

FALL 2022 PHAR 7219 Course Schedule of Topics

| WEEK | DAY | TOPIC | PHAR 7274 PREREQUISITE KNOWLEDGE & SKILLS | INSTRUCTOR | CLO(s) | DISEASE STATES |
|------|-----------------------------|--|---|-------------------------|---------|----------------|
| 1 | F 8/26/22 10-11:50 AM | <ul style="list-style-type: none"> Course Overview Drug Information: Ethical and Legal Aspects of DI Practice | | W. Smith | 1 | S20.99 |
| 2 | F 9/2/22 10-11:50 AM | <ul style="list-style-type: none"> Drug Information: Types of Biomedical Resources Drug Information: Electronic Resources Calculations: Using Tertiary Resources for Adult and Pediatric Drug Dosing | Fundamentals of Clinical Research | W. Smith | 2, 3 | S20.99 |
| 3 | F 9/9/22 10-11:50 AM | <ul style="list-style-type: none"> Drug Information: Primary Literature Article Anatomy Drug Information: Systematic Approach to Developing Clinical Questions | Fundamentals of Clinical Research | W. Smith | 2, 3 | S20.99 |
| 4 | F 9/16/22 10-11:50 AM | <ul style="list-style-type: none"> Drug Information: Navigating Library Resources, Article Citation Anatomy, and Literature Search Strategies | | M. Skinner; W. Smith | 3 | S20.99 |
| 5 | F 9/23/22 10-11:50 AM | <ul style="list-style-type: none"> Drug Information: Selecting Appropriate Resources for Drug Information Question Responses Communication: Writing Styles, Referencing, and Plagiarism; Writing Professional Drug Information Responses; DIQR Assignment Instructions | Fundamentals of Clinical Research | W. Smith | 3, 5, 6 | S20.99 |
| 6 | F 9/30/22 10-11:50 AM | Drug Information: Evaluating Randomized Controlled Trials (RCTs) | <ul style="list-style-type: none"> Descriptive Statistics Hypothesis Testing Power and Sample Size Randomized-Controlled Trials | W. Smith | 4 | S20.99 |
| 7 | F 10/7/22 10-11:30 AM | Midterm Exam | | W. Smith | 1-6 | S20.99 |

| WEEK | DAY | TOPIC | PHAR 7274 PREREQUISITE KNOWLEDGE & SKILLS | INSTRUCTOR | CLO(s) | DISEASE STATES |
|---|------------------------------|--|--|--------------------------------|---------|----------------|
| 8 | F 10/14/22 10-11:50 AM | Drug Information: Evaluating RCTs, continued | <ul style="list-style-type: none"> • Comparing Proportions • Comparing Means • Statistical versus Clinical Significance | W. Smith | 4 | S20.99 |
| 9 | F 10/21/22 10-11:50 AM | <ul style="list-style-type: none"> • Drug Information: Evaluating RCTs, continued • Drug Information: Journal Club Step-by-Step; Journal Club (JC) Assignment Instructions | <ul style="list-style-type: none"> • Correlation and Regression • Logistic Regression and Survival Analysis | W. Smith | 4, 6 | S20.99 |
| 10 | F 10/28/22 10-11:50 AM | Drug Information: Evaluating Non-inferiority RCTs and Review Articles | <ul style="list-style-type: none"> • Equivalence and Noninferiority Trials • Systematic Reviews and Meta-Analysis | W. Smith | 4 | S20.99 |
| 11 | F 11/4/22 10-11:50 AM | <p>*** DIQR first draft due by 8 am ***</p> <ul style="list-style-type: none"> • Drug Information: Interpreting Clinical Practice Guidelines • Drug Information: Evaluating Direct-to-Consumer Advertising, Pharmaceutical Rep Info, and Patient Health Information Resources | | Pharm.D. Resident; W. Smith | 2, 4, 6 | S20.99 |
| 12 | F 11/11/22 10-11:50 AM | <p>*** Journal Club Handout due by 8 am ***</p> Communication: Individual Journal Club Presentations | | W. Smith; R. Dunn | 4, 6 | S20.99 |
| 13 | F 11/18/22 10-11:50 AM | <p>*** DIQR final version due by 8 am ***</p> Communication: Individual Journal Club Presentations, continued | | W. Smith; F. Yu | 4, 6 | S20.99 |
| | F 11/18/22 12-1 PM | Final Exam Review | | W. Smith | 1-6 | S20.99 |
| 14 | F 11/25/22 | NO CLASS - Thanksgiving Holiday | | | | |
| 15 | F 12/2/22 10 AM-12 PM | Cumulative Final Exam | | W. Smith | 1-6 | S20.99 |
| <i>Please note that dates, topics, and assignments are subject to change. In the event of a change, you will be given ample notification of the change.</i> | | | | | | |