

**PHAR 7219: Drug Information Retrieval and Literature Evaluation**  
Fall Semester 2024

**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:**

- Mondays, 10:00 AM – 11:50 AM; W.T. Brookshire Hall room #235
- Supplemental Instruction (Optional): Select Wednesdays, 9-10 am, via Zoom (see schedule below)

**Course Coordinator:**

Winter J. Smith, Pharm.D., BCPS

W.T. Brookshire Hall Room 247

Email: [wsmith@uttyler.edu](mailto:wsmith@uttyler.edu)

Office hours:

- **MUST** make appointment: Mondays, 1-2 PM and Wednesdays, 12-2 PM (may be virtual or in-person)
- Other days/times 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. 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. 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](http://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)	ACPE Std. 11 & 12 (1-4)	Grading Method	Assessment Methods
1. Discuss the legal and ethical aspects surrounding the provision of drug information.	7	1, 4	ES	1, 2
2. Describe the benefits and limitations of primary, secondary, and tertiary drug information sources, including print and electronic formats.	1, 7	4	ES	1, 2
3. Understand the fundamental concepts of artificial intelligence (AI) and its applications in drug information practice, including AI benefits, risks, and appropriate use.	1	4	ES	1, 2, 3
4. Identify appropriate sources for the information needed to address specific drug information questions in an efficient manner.	1, 7	4	ES, RUB	1, 2, 3, 4
5. Evaluate the quality and applicability of drug information within a source.	1, 7	4	ES, RUB	1, 2, 3, 4
6. Develop a professional drug information question response.	1, 7	1	ES, RUB	1, 2, 3
7. Communicate drug information with clarity and accuracy at a level appropriate for the audience.	7, 11	1	ES, RUB	1, 2, 3, 4

ES = ExamSoft; RUB = Rubric

### 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 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 and team readiness assessment tests (iRATs, tRATs), individual and team cumulative assessment tests (iCATs, tCATs), midterm examinations, final written examinations, skills assessments, graded application assignments, participation in team-based 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.

All examinations, tests, and assignments, including the final examination, may be **cumulative**. Students are responsible for material presented during 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 Part 2 of the syllabus (<https://www.utt Tyler.edu/pharmacy/academic-affairs/files/fcop-syllabus-policies.pdf>).

During the time the course is in progress, students who obtain less than 75% on any summative assessment or a total course grade of less than 75% during a particular semester will receive an academic alert from the course coordinator and the Office of Academic Affairs and be subject to weekly in-course remediation with the course instructor(s).

### 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.

<b>Standard Grade Calculation*</b>	
Individual Assessments: <b>100%</b>	
iRATs and/or Individual Applications	5%
Drug Information Question Response (DIQR)	15%
Journal Club (JC)	10%
Midterm Exam	25%
<b>Cumulative</b> Final Exam	45%
<b>Total</b>	<b>100%</b>

**\*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 %

**PHAR 7219 Fall 2024 Course Schedule**

WEEK	DAY	TOPIC	PHAR 7274 PREREQUISITE KNOWLEDGE & SKILLS	INSTRUCTOR	CLO(S)	DISEASE STATE	
1	MON 8/26/24 10-11:50 AM	<ul style="list-style-type: none"> <li>Course Overview</li> <li>Ethics: Ethical and Legal Aspects of DI Practice</li> </ul>	N/A	W. Smith A. Schwartz	1	\$20.99	
2	MON 9/2/2024	<b>NO CLASS – Labor Day Holiday</b>					
3	MON 9/9/24 10-11:50 AM	<ul style="list-style-type: none"> <li>Health Information Retrieval and Evaluation: Types of Biomedical Resources</li> <li>Health Information Retrieval and Evaluation: Electronic Resources</li> <li>Pharmaceutical Calculations: Using Tertiary Resources for Adult and Pediatric Drug Dosing</li> </ul>	Fundamentals of Clinical Research	W. Smith	2, 4, 5	\$20.99	
	WED 9/11/24 9-10 AM	<b>Supplemental Instruction (Optional)</b>					
4	MON 9/16/24 10-11:50 AM	<ul style="list-style-type: none"> <li>Health Information Retrieval and Evaluation: Primary Literature Article Anatomy</li> <li>Health Information Retrieval and Evaluation: Systematic Approach to Developing Clinical Questions</li> </ul>	Fundamentals of Clinical Research	A. Schwartz	2, 4	\$20.99	
	WED 9/18/24 9-10 AM	<b>Supplemental Instruction (Optional)</b>					
5	MON 9/23/24 10-11:50 AM	<ul style="list-style-type: none"> <li>Health Information Retrieval and Evaluation: Introduction to Artificial Intelligence and its Application in DI practice</li> <li>Professional Communication: Writing Styles, Referencing, and Plagiarism; Writing Professional Drug Information Responses; DIQR Assignment Instructions</li> </ul>	Fundamentals of Clinical Research	W. Smith	3, 4, 5, 6, 7	\$20.99	
	WED 9/25/24 9-10 AM	<b>Supplemental Instruction (Optional)</b>					
6	MON 9/30/24 10-11:50 AM	<ul style="list-style-type: none"> <li>Health Information Retrieval and Evaluation: Navigating Library Resources, Article Citation Anatomy, and Literature Search Strategies</li> <li>Health Information Retrieval and Evaluation: Selecting Appropriate Resources for Drug Information Question Responses</li> </ul>	N/A	E. Rodgers (Pharmacy Librarian); A. Schwartz; W. Smith	4, 5	\$20.99	
7	MON 10/7/24 10-11:30 AM	<b>Midterm Exam</b>			W. Smith	1-7	\$20.99
8	MON 10/14/24 10-11:50 AM	<p><b>***DIQR outline draft 1 &amp; references due by 8 am ***</b></p> <ul style="list-style-type: none"> <li>Health Information Retrieval and Evaluation: Evaluating Randomized Controlled Trials (RCTs)</li> </ul>	<ul style="list-style-type: none"> <li>Descriptive Statistics</li> <li>Hypothesis Testing</li> <li>Power and Sample Size</li> <li>Randomized-Controlled Trials</li> </ul>	W. Smith	5	\$20.99	

WEEK	DAY	TOPIC	PHAR 7274 PREREQUISITE KNOWLEDGE & SKILLS	INSTRUCTOR	CLO(S)	DISEASE STATE
	WED 10/16/24 9-10 AM	Supplemental Instruction (Optional)				
9	MON 10/21/24 10-11:50 AM	Health Information Retrieval and Evaluation: Evaluating RCTs, continued, and journal club assignment instructions	<ul style="list-style-type: none"> <li>Comparing Proportions</li> <li>Comparing Means</li> <li>Statistical versus Clinical Significance</li> </ul>	W. Smith	5	\$20.99
10	MON 10/28/24 10-11:50 AM	***DIQR outline draft 2 & references due by 8 am *** Health Information Retrieval and Evaluation: Evaluating Non-inferiority RCTs and Review Articles	<ul style="list-style-type: none"> <li>Equivalence and Noninferiority Trials</li> <li>Systematic Reviews and Meta-Analysis</li> </ul>	W. Smith	5	\$20.99
	WED 10/30/24 9-10 AM	Supplemental Instruction (Optional)				
11	MON 11/4/24 10-11:50 AM	Professional Communication: DIQR writing and submission	N/A	W. Smith	5, 6, 7	\$20.99
12	MON 11/11/24 10-11:50 AM	*** Journal Club Handout due by 8 am *** Professional Communication: Individual Journal Club Presentations	N/A	W. Smith; F. Yu; R. Dunn, A. Schwartz	5, 7	\$20.99
13	MON 11/18/24 10-11:50 AM	<ul style="list-style-type: none"> <li>Health Information Retrieval and Evaluation: Interpreting Clinical Practice Guidelines</li> <li>Health Information Retrieval and Evaluation: Evaluating Direct-to-Consumer Advertising, Pharmaceutical Rep Info, and Patient Health Information Resources</li> </ul>	N/A	W. Smith	2, 5, 7	\$20.99
	WED 11/20/24 9-10 AM	Supplemental Instruction (Optional)				
14	MON 11/25/24	NO CLASS - Thanksgiving Holiday				
15	MON 12/2/24 10 AM-12 PM	Cumulative Final Exam		W. Smith	1-7	\$20.99
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.						

**Commented [WS1]:** Will need 3 additional rooms and 3 additional faculty members to complete all JC presentations in one class period.

**Commented [WS2R1]:** Need to confirm availability of Drs. Yu, Dunn, and Schwartz