



Advanced Pharmacology for Anesthesia Practice **Course**
CRNA 7305
Summer 2026

Scheduled Class Days and Times: See Course Schedule

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Instructor's Name: Eric Roberts, DNAP, CRNA

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Instructor's Name: David Warren DNAP, APRN, CRNA, AGACNP-BC, FNP-C, ENP-C

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Course Description: This advanced pharmacology course covers the study of drug absorption, action, and application (pharmacokinetics, pharmacodynamics, and pharmacotherapeutics) as they pertain to the field of nurse anesthesia. The curriculum encompasses a wide range of anesthetic agents, including those inhaled, those administered intravenously, both opioid and non-opioid pain relievers, muscle relaxants, local anesthetics, reversal drugs, and other adjuvants used in anesthesia practice.

Prerequisites:

- NURS.6361 Pharmacology of Critical Care

Student Learning Outcomes:

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

1. Understand the principles of pharmacodynamics and pharmacokinetics in drug action.
2. Apply your knowledge of pharmacodynamics and pharmacokinetics to analyze the uses of anesthetic agents.
3. Evaluate the actions, side effects, and drug profiles of anesthetic agents and adjuvants.
4. Apply your understanding of pharmacodynamics and pharmacokinetics to analyze the applications of accessory drugs used in anesthesia.
5. Analyze the pharmacodynamics and pharmacokinetics of non-anesthetic drugs commonly used in clinical practice, and evaluate their potential interactions with anesthetic agents.
6. Understand and explain the processes of uptake, distribution, biotransformation, and excretion of anesthetic agents and adjuvants.
7. Recognize, evaluate and manage the physiological responses coincident to the provision of anesthesia services. {D.21}
8. Recognize and appropriately manage complications that occur during the provision of anesthesia services. {D.22}

Required Textbooks and Readings:

- **Primary Textbook:** Flood, P. & Rathmell, J. P. (2021). *Stoelting's pharmacology & physiology in anesthetic practice*. (7th ed.). (R. D., Urman, Ed.). Wolters Kluwer.

Recommended Textbooks and Readings:

- APEX Anesthesia Review

Special Course Notes:

- 1) **Proctoring Notice:** Examinations in this course will be administered using ExamSoft and will be proctored by a faculty or staff member of The University of Texas at Tyler. Proctoring is required to ensure academic integrity and adherence to testing standards. Additional details regarding exam procedures, scheduling, and proctoring expectations will be provided in advance of each examination.
- 2) **Dress Code:** Nurse Anesthesia Residents (NARs) are expected to wear office or business casual attire.
- 3) **Participation.** I invite you to engage, ask questions, and talk about the course content with your classmates. You can learn a great deal from discussing ideas and perspectives with your peers and professor. Participation can also help you articulate your thoughts and develop critical thinking skills.
- 4) **Time Management.** Try scheduling specific blocks of time and ensure you have enough room to finish assignments, allowing additional time for any tech issues that arise.
- 5) **Ask for help if needed.** If you are struggling with a course concept, reach out to your instructor(s) for support.

- 6) **Evaluations:** Course and instructor evaluations are required by the Council on Accreditation (COA) for Nurse Anesthesia Educational Programs. NARs must submit these evaluations at the end of each semester.

Assignments and Weights/Percentage/Point Values

1. Assignments	10%
2. Quizzes (10)	10%
3. Exam 1	15%
4. Exam 2	15%
5. Exam 3	15%
6. Final Written Examination	30%

Grading Scale:

Specific guidelines and grading criteria for all assignments are in the Modules. Final grades for the course will be determined based upon the following point assignments:

A - 90-100

B - 80-89

C - 70-79

D - 60-69

F - Below 60

Grades will not be rounded when calculating the average (79.5 is not rounded to 80, and 89.5 is not rounded to 90). The simple average of all unit exam grades, including a final must be at or above 80% to pass the course. Once the student has achieved a simple unit exam average of 80% or higher, course grades will be determined based on the weighted calculation of exams and other required course work. Students are required to achieve an average of 80% (B) to complete the course successfully.

Academic Integrity: Cheating of any kind, as defined in Section 8 of the UT Tyler Manual of Policies and Procedures (MOPP) for Student Affairs (<https://www.uttyler.edu/mopp/>), will not be tolerated. Consequences may include:

- reprimand
- exam failure
- course failure
- expulsion from the Nursing program
- expulsion from the University
- other consequences as assigned

Exam and homework materials, questions, and problems are the intellectual property of faculty, UT Tyler, or publishers.

- These materials may not be distributed without permission.

- Distributing or uploading them to online resources destroys the integrity of the assignment and the course, allowing others an unfair advantage by letting them view the materials.
- Uploading these materials to online resources is a violation of UT Tyler's academic misconduct policies and may result in formal conduct charges.
- Sanctions for uploading or otherwise divulging the contents of these materials can include:
 - a reduced or failing grade on an assignment
 - a reduced or failing grade for the course
 - removal from the Nursing program
 - removal from UT Tyler

Late Policy: NARs are expected to complete assignments and arrive on time for quizzes, OSCEs, and examinations. If a situation arises that would preclude the NAR from completing an assignment or arriving on time for a quiz, OSCE, or examination, the NAR is expected to communicate with the instructor as early as possible to discuss alternate arrangements. Alternate arrangements are made at the discretion of the instructor. Failure to notify the instructor may result in a grade of zero (0%).

Repeating a Course: Students repeating this course may not use previously submitted assignments nor utilize the same patients for an assignment. Submitting the same or slightly modified assignments from previous semesters is considered self-plagiarism and is subject to academic discipline, including failing the assignment or the course.

Attendance and Make-up Policy: Punctuality and participation are essential; make-up opportunities for missing or late course requirements are at the discretion of the instructor.

Graded Course Requirements Information:

- **Assignments:** There will be online modules and worksheets designed to prepare you for in-person activities. Detailed information will be provided in Canvas.
- **Quizzes:** There will be ten (10) quizzes scheduled throughout the semester. Quizzes will be in-person and will be proctored by a faculty member or their designee. *No books, notes, or online resources are allowed to be used during quizzes, OSCEs, or exams.* The quizzes will account for 10% of the course grade.
- **Written Examinations:** There will be four (4) major content examinations in the course; examinations will be in-person and will be proctored by a faculty member or their designee. *No books, notes, or online resources are allowed to be used during quizzes, OSCEs, or exams.* The three written examinations will account for 45% of the course grade and the final written examination will account for 35% of the course grade.

Please Note: Detailed information along with grading rubrics for course assignments will be provided in Canvas.

Important Course Dates:**Classes Begin:** May 11, 2026**Census Date (withdraw without penalty):** May 26, 2026**Last Date to Withdraw:** July 15, 2026. Students please notify your course faculty and contact your advisor.**Exam 1:** June 4, 2026**Exam 2:** June 25, 2026**Exam 3:** July 30, 2026**Written Final Exam:** August 11, 2026**Calendar of Topics, Readings, and Due Dates:**

Course Schedule						
Week	Date	Time	Hours	Faculty	Content	Reading(s)
1	05/14/2026	1800-2100	3	Warren	General Principles of Anesthetic Pharmacology	Flood & Rathmell (2021) – Ch. 1, 2
2	05/20/2026	0830-1130	3	Roberts	Pharmacokinetics of Inhalational Anesthetics	Flood & Rathmell (2021) – Ch. 3, 4
3	05/28/2026	0830-1130	3	Roberts	Pharmacodynamics of Inhalational Anesthetics	
4	06/04/2026	0830-1000	1.5	Massey	EXAM 1	N/A
		1000-1130	1.5	Roberts	Local Anesthetics	Flood & Rathmell (2021) – Ch. 10
5	06/08/2026	0830-1130	3	Warren	Intravenous Anesthetics	Flood & Rathmell (2021) – Ch. 5
6	06/17/2026	0830-1130	3	Warren	Neuromuscular Blocking Agonists & Antagonists	Flood & Rathmell (2021) – Ch. 11, 12
7	06/25/2026	0830-1000	1.5	Massey	EXAM 2	N/A
		1000-1130	1.5	Massey	Diuretics	Flood & Rathmell (2021) – Ch. 16, 22
8	07/02/2026	0830-1130	3	Massey	Non-Opioid Analgesics	Flood & Rathmell (2021) – Ch. 8, 9
9	07/09/2026	0830-1030	2	Massey	Procoagulants & Anticoagulants	Flood & Rathmell (2021) – Ch. 27, 29, 30, 31
		1030-1130	1	Massey	Psychopharmacologic Agents	Flood & Rathmell (2021) – Ch. 43
10	07/16/2026	0830-1130	3	Roberts	Cardiovascular Pharmacology	Flood & Rathmell (2021) – Ch. 14, 15, 18, 19, 20, 21
11	07/23/2026	0830-1000	1.5	Massey	EXAM 3	N/A
		1000-1130	1.5	Massey	Gastrointestinal Pharmacology	Flood & Rathmell (2021) – Ch. 32, 34, 35
12	07/30/2026	0830-1130	3	Warren	Opioid Agonists & Antagonists	Flood & Rathmell (2021) – Ch. 6, 7
13	08/06/2026	0830-1030	2	Massey	Endocrine Pharmacology	Flood & Rathmell (2021) – Ch. 37, 38, 39, 40
		1030-1120	1	Massey	Pulmonary Pharmacology	Flood & Rathmell (2021) – Ch. 24, 25
14	08/11/2026	0830-1130	3	Massey	WRITTEN FINAL EXAM	N/A

Required Syllabus Language:

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, AI is encouraged during the course, and appropriate acknowledgement is expected. These programs can be powerful tools for learning and other productive pursuits, including helping you generate new ideas, identifying flaws in reasoning, and serving as a personalized learning tool. However, your ethical responsibilities as a student remain the same; you must follow UT Tyler's Honor Code and uphold UT Tyler's Academic Integrity Policy.

School of Nursing Policies and Additional Information:

https://www.uttyler.edu/nursing/college/student_guide_and_policies.php

Student Resources and University Policies are provided in Canvas.

- [Student Resources](#)
- [University Policy](#)