Oakland University School of Nursing

Nurse Anesthesia Practice II

NRS 7471 (615)
CRN #10425

Faculty:

LINDA MCDONALD, DrAP, CRNA
Lecturer

Winter 2018

COURSE NUMBER:	NRS 7471 (615) – CRN #10425		

CREDIT & HOUR ALLOCATION:	Credits	Hrs/Wks	Total Hours Semester
	4	4 x 14	56

COURSE TITLE: Nurse Anesthesia Practice II

CLASS TIME & LOCATION: January 3, 2018 – April 25, 2018
Class: Tuesday, 1:30 – 3:30 PM, Beaumont Hospital
Class: Wednesday, 12:30-2:25 PM, Beaumont Hospital

FACULTY OF RECORD: Linda McDonald, DrAP, CRNA
Lecturer
Office Hours: By appointment only
Email: lamcdonald@oakland.edu

PREREQUISITES and/or CO-REQUISITES

Prerequisite: NRS 7625 (607)
Co-requisite: NRS 7635 (617)

COURSE OVERVIEW

This is the second of a series of three courses. Each course will focus on the principles and practice of nurse anesthesia including perioperative care for a wide variety of patients undergoing local, regional, or general anesthesia.. Anesthetic management of patients with
co-existing diseases will be studied. Simulation experiences will coincide with classroom content.

COURSE OBJECTIVES

Within the context of nurse anesthesia practice, students will:

1. Use the nursing process to design an appropriate plan of care for selected clients undergoing diagnostic or surgical interventions requiring anesthesia.

2. Identify surgical requirements of common specialty procedures and the impact on delivery of anesthesia.

3. Explain how various patient co-morbidities affect the delivery of nurse anesthesia care.

4. Exemplify in practice the Current ANA Standards of Professional Performance.

ESSENTIAL CONTENT

Burns

Chemical dependency

Difficult airway

Reconstructive

Trauma

Hemodynamic monitoring

Non-operating room anesthesia

Intraoperative Testing

Hepatic Disease

Hematologic Disorders

Endocrine Disorders

Musculoskeletal Disorders

Neuromuscular Disorders

Oncology

Pulmonary Disease

Cardiovascular Disease

Organ Transplant

Collagen Disease

ENT

Immunology

TECHNICAL REQUIREMENTS

All e-Learning courses at Oakland University are delivered using a learning management system called Moodle that allows instructors to design entire courses online or to enhance a classroom-based course. The Moodle software resides on a server allowing students to access it via a web browser, e.g. Mozilla, Firefox. Each course is uniquely designed by the instructor who may include some of the following components in his/her web-based or web enhanced course: course syllabus, course material/content, course assignments, quizzes/tests, hyperlinks to other websites on the Internet and/or other OU web pages, discussion boards, Internal email, and the course grade book.

Logging into Moodle
Students login to Moodle with their NetID (oakland.edu email) account password. Please remember that anytime you change your NetID password, it will be reflected in your Moodle login.

- Open the Moodle Login page: https://moodle.oakland.edu
- Log-in using the first part of your NetID username and password, e.g. if your email is jwilson3@oakland.edu then:
    - Username: jwilson3
    - Password: whatever your Oakland University email password is

If you have any problems/issues with Moodle, you need to contact or fill out a help desk request form for e-Learning and Instructional Support.

To view course materials in MOODLE you will need the latest version of Adobe Reader that can be downloaded free of charge at www.adobe.com

REQUIRED TEXTBOOKS/EQUIPMENT

- Fleisher, L. A. (2012). Anesthesia and uncommon diseases (6th ed). Philadelphia: Elsevier Saunders. *(Available online at Oakland.edu—libraries)*
- Hines, R.L. & Marschall, K.E. (2018). Stoelting's anesthesia & co-existing disease (7th ed.). Philadelphia, PA: Saunders Elsevier.
- Levitsky, M. (201e). *Pulmonary physiology – The essentials* (8th ed.). New York: McGraw-Hill.
- Miller, R.D. (2015). *Miller's anesthesia* (8th ed.) Philadelphia: Elsevier. *(Available online at Oakland.edu—libraries OR Inside Beaumont—references)*
- Nagelhout, J., & Elisha, S. (2018). *Nurse anesthesia* (6th ed.) St. Louis, MO: Elsevier.

Teaching/learning strategies

Active engagement is an essential component of the learning process.   Studies have shown that active learning strategies lead to a deeper understanding of course material, greater assimilation of learning and increased retention of information. This class will utilize different active learning techniques, including a flipped classroom approach, team-based learning, and case studies, as well as traditional lectures. It is an expectation that students come to class having read the required readings and having a basic understanding of the topic to be covered.

The required readings contain far more content than that which can be addressed in a 2-hour lecture. The readings will provide you with a breadth of material while the class periods will concentrate on a more detailed analysis and discussion of selected topics that are drawn from the readings. You will be reading a good deal of information that will not be covered in class, but will be considered testable for the exams. Please feel free to ask questions about material that is (or isn't) being covered in classroom. Your comments and questions are welcomed, encouraged and valued!

The following learning principles, taken from the book *Make It Stick,* will be implemented in this course:

- Some kinds of difficulties during learning help to make the learning stronger and better remembered
- When learning is easy, it is often superficial and easily forgotten
- Not all of our intellectual abilities are hardwired. In fact, when learning is effortful, it changes the brain, making new connections and increasing intellectual ability
- You learn better when you wrestle with new problems before being shown the solution, rather than the other way around
- To achieve excellence in any area, you must strive to surpass your current level of ability
- Striving, by nature, often results in setbacks, and setbacks are often what provide the essential information needed to adjust strategies to achieve mastery

EVALUATION TECHNIQUES

There will be a combination of quizzes, exams and reflection assignments. Quizzes will be open quizzes that must be taken before the lecture. There will be an allowance of 1.5 minute per question and only one attempt. Reflection assignments must be completed and turned in with 15 minutes of the class period. Reflection assignments will be worth 1 point each—full credit will be given to assignments that are completed thoughtfully. Exams will consist of approximately 75% new material and 25% cumulative review (from NRS 7625 and 7471). The final exam will be cumulative.

The following chart explains how the course grade will be determined.

Quizzes/Assignments	15%
Exams (4)	60%
Final exam	25%
TOTAL	**100%**

Students will be evaluated based on their ability to meet the course requirements and completion of clinical activities. Students must achieve an overall average of 3.0 or better to earn a satisfactory grade for NRS 7471. Failure to achieve a satisfactory grade will result in recommendation for dismissal from the nurse anesthesia program. *The instructor reserves the right to administer additional quizzes or assignments and to change the weighing scale*.

oakland university grading scale conversion

GRADUATE GRADE CONVERSION				
PERCENTAGE	**GPA**		**PERCENTAGE**	**GPA**
99.00 - 100	4.0		80.00 - 80.99	3.0
97.00 - 98.99	3.9		78.00 – 79.99	2.9
95.00 - 96.99	3.8		76.00 – 77.99	2.8
93.00 - 94.99	3.7		74.00 – 75.99	2.7
91.00 - 92.99	3.6		72.00 – 73.99	2.6
89.00 - 90.99	3.5		70.00 - 71.99	2.5
87.00 - 88.99	3.4		68.00 – 69.99	2.4
85.00 - 86.99	3.3		66.00 – 67.99	2.3
83.00 - 84.99	3.2		64.00 – 65.99	2.2
81.00 - 82.99	3.1		62.00 – 63.99	2.1
			60.00 – 61.99	2.0

Course content

DATE	#	TOPIC	SPEAKER
		Anesthesia for Specific Populations/Procedures	
1/3/2018	1	Anesthesia for ENT Procedures	Mary Golinski
1/9/2018	2	Anesthesia for Advanced ENT	Mary Golinski
1/10/2018	3	Enhanced Recovery After Surgery	Linda McDonald
1/16/2018	4	Anesthesia for the Burn Patient	Linda McDonald
1/17/2018	5	Trauma Anesthesia	Mary Golinski
1/23/2018	6	Advanced Monitoring	Anne Hranchook
1/24/2018	7	Anesthesia for Transplants	Linda McDonald
		Anesthesia and Co-existing Diseases	
1/30/2018		**Exam #1 (topics 1-7)**	
1/31/2018	8	Hematologic Disorders	Anne Hranchook
2/6/2018	9	Muscle Diseases	Mary Golinski
2/7/2018	10	Endocrine Diseases	Anne Hranchook
2/13/2018	11	Diabetes	Kendal Gillihan
2/14/2018	12	Renal Disease	Tabatha Malvitz
		WINTER BREAK 2/17/18- 2/25/18	
2/27/2018		**Exam #2 (topics 8-12)**	
2/28/2018	13	Skin & Bone Diseases	Linda McDonald
3/6/2018	14	Cancer	Laura Rodgers
3/7/2018	15	CNS & Spinal Cord Disorders	Linda McDonald
3/13/2018	16	Liver Diseases	Nicole Donofrio
3/14/2018	17	Sepsis	Mary Golinski
3/20/2018	18	Cardiovascular Disorders-part I	Andrea Bittinger
3/21/2018		Cardiovascular Disorders-part II	Andrea Bittinger

3/27/2018		**Exam #3 (topics 13-18)**	
3/28/2018	19	Psychiatric Diseases & Substance Abuse	Andrea Bittinger
		Anesthesia and the Respiratory System	
4/3/2018	20	Anesthesia-specific Pulmonary Physiology-part I	Scott Schaus
4/4/2018		Anesthesia-specific Pulmonary Physiology-part II	Scott Schaus
4/10/2018	21	Difficult Airway	Mary Golinski
4/11/2018	22	Pulmonary diseases	Anne Hranchook
4/17/2018		**Exam #4 (topics 19-22)**	
4/24/2018		**FINAL EXAM (Cumulative)**	

ACADEMIC CONDUCT

Students are expected to practice and uphold standards of academic integrity and honesty as outline in the Oakland University graduate catalog and the Oakland University-Beaumont Graduate Program of Nurse Anesthesia student handbook. Completion of <u>course assignments</u>, quizzes and examinations <u>must be the result of the student's individual effort</u>, unless the instructor instructs otherwise. Academic dishonesty will result in a numerical grade of 0.0 for the course. Students identified as committing academic misconduct will be reported to the Program Director, Dean of the School of Nursing and the Dean of Students.

Attendance

Attendance at all lectures and exams is mandatory. In an extreme emergency, students who are unable to attend a class must notify the faculty of record for the course within 2 hours of the scheduled class time.

Examinations

Testing procedure:
Examination dates can be found for NRS 7471 above. During the examination, students will be required to sit with their laptops facing the front of the classroom or the monitor at distant sites. Students should sit with a minimum of one open chair between students when possible. Desks should be clear of all personal items except for a scratch sheet of paper and a pen/pencil. Cell phones may not be on desk during an examination. If a calculator is required, it will be provided by the instructor. Students may not leave the classroom until their exam is completed. Scratch sheets must be turned into the instructor/proctor at the completion of the exam.

Appeal process:
Examination/quiz scores will be made available to students within 3 days of completing the exam. Students will be able to review the examinations before the next scheduled class as time permits. Appeals regarding test questions may be made to the faculty within 24 hours of reviewing the exam. Please include an explanation for each appeal along with references. Appeals will be considered and class scores will be adjusted as deemed necessary by faculty.

Contact information

Linda McDonald, DNAP, CRNA

- Email: linda.mcdonald@beaumont.org
- Office phone:
  - o 248-898-1812
  - o 3 days/week in office, 2 days/week in OR
- Cell phone:
  - o 248-408-2016
  - o Feel free to text or call weekdays until 8pm.
  - o Texts, calls or emails on weekends may not be answered until Monday

SIMULATION COURSE DESCRIPTION

Simulation Coordinator
Laura Rodgers, DNAP, CRNA
248-898-6234
Laura.rodgers@beaumont.org

Course Description

During this course the students utilize the Simulation Lab for practical application of skills learned in lecture. They will participate in scenarios and situations that allow them to learn with a "hands on" technique. This will increase the student's ability to critically think through situations that will be experienced and essential in the OR.

Course Overview

During this course the students will utilize the simulation lab to work on perfecting various skills necessary to the practice of nurse anesthesia in the operating room. This will increase the student's confidence with their proficiency with the various skills expected to be mastered for their practice in the operating room.
This course will be an adjunct to the didactics lectures in NRS 7471 and will take place in the Simulation Learning Center.

Class Objectives

Students completing NRS 615 Simulation will:
  I. *Regional (Spinal/Epidural)*
   a. The student will state indications and contraindications for the use of spinal and epidural anesthetics.
   b. The learner will state complications and treatments when appropriate for complications to spinal and epidural anesthetics.
   c. The learner will indicate the appropriate local anesthetic, its dose, and its concentration for the given scenario and patient history.
   d. The learner will demonstrate the correct technique for insertion of spinal and epidural anesthetics.
   e. The learner will evaluate the effectiveness of the spinal or epidural placement and the appropriate action to be taken at that point.
   f. The learner will verbalize signs and symptoms as well as appropriate treatment of high spinal and local anesthetic toxicity.
 II. *Difficult Airway*
   a. The learner will be able to assess the difficult airway and employ the correct airway management techniques.
   b. The learner will demonstrate a systematic approach for the management of the difficult airway.
   c. The learner will demonstrate proper technique for the use of multiple alternative airway devices.

d. The learner will demonstrate ability to perform chricothyrotomy on patient simulators.
e. The learner will understand the principles and preparation for an awake fiberoptic intubation.
f. The learner will show proficiency in managing the extubation and endotracheal tube exchange of the patient with a difficult airway.

III. *Hemodynamics*
a. Upon completion of the session, the student will be able to:
b. Identify external landmarks for central venous access.
c. Determine the steps required for accurate invasive pressure monitoring.
d. Identify from ta monitor the following waveforms; arterial, right atrial, right ventricular, pulmonary artery and pulmonary artery wedge.
e. Determine the potential causes and interventions for a patient who presents with hypovolemia.
f. From hemodynamic data presented, determine the potential causes for abnormal cardiac output values, central venous pressures, pulmonary artery pressures, and abnormal physiologic conditions.

IV. *High Risk/Low Frequency Scenarios*
a. Student will, through the critical thinking process, determine the event that is occurring in the simulation lab and determine the anesthetic plan to utilize.
b. Student will respond to hemodynamic and physical changes that occur on a High-Fidelity Patient Simulator (HFPS) and treat the patient accordingly.
c. Student will participate in debriefing session with student group at the completion of the simulation experience.

Required Textbook/equipment

- **Regional textbook:**
  - **Neural Blockade in Clinical Anesthesia and Management of Pain, Volume 494** (edited by Michael J. Cousins, Phillip O. Bridenbaugh)
    or
  - **Hadzic's Peripheral Nerve Blocks and Anatomy For Ultrasound-Guided Regional Anesthesia,** Second Edition
- Elisha, S. (2013). *Critical events in anesthesia: A clinical guide for nurse anesthetists. American Association of Nurse Anesthetists (buy at AANA bookstore-much cheaper than amazon)*
- Students will be required to purchase a spinal and epidural tray for practice throughout the program. Details will be provided at the beginning of the semester