

Principles of Anesthesia I
NUR 882: - 3 credits
Mondays: 12:40 – 3:30 pm, A-107 LS
Summer 2009

Catalog Course Description: Art and science of nurse anesthesia and basic principles of anesthesia practice. History of anesthesia administration. Use and care of anesthesia related equipment.

Course Objectives:

At the completion of this course the student will be able to:

1. Describe the contributions of nurses to the practice of anesthesia.
2. Appropriately operate commonly used anesthesia equipment.
3. Integrate knowledge from previous courses into anesthesia care concepts.
4. Interpret electrophysiological and hemodynamic monitoring data.
5. Develop appropriate management interventions for non-critical patient population.

Prerequisites: NUR 879

Standards Documents: The curriculum is guided by the following documents:

1. The American Association of Colleges of Nursing (1996). *The Essentials of Masters Education for Advanced Practice Nursing*. Washington, D.C.
2. The American Nurses Association Code of Ethics (<http://www.nursingworld.org>)
3. Scope and Standards for Nurse Anesthesia Practice
4. Code of Ethics for the Certified Registered Nurse Anesthetist

Course Faculty: **Gayle Lourens, MS, BSN, CRNA**

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Office: A-121 Life Sciences

Office Hours: Variable – Appointments arranged usually; however, available as needed by students in the Nurse Anesthesia Program to accommodate student schedules

a. Required Text:

Cote, C.J., Todres, I.D.; (2001) *A Practice of Anesthesia for Infants and Children, 4th ed.*, Philadelphia, Pennsylvania: W.B. Saunders Company. ISBN: 0-7216-7286-8.

Davis, P.D., *Basic Physics and Measurement of Anesthesia, 5th Ed.*, Elsevier Science Health Science division. ISBN: 0-7506-4828-7.

Dorsch, J.A., Dorsch, S.E., *Understanding Anesthesia Equipment, 5th ed.*, Philadelphia, Pennsylvania: Lippincott Williams and Wilkins Publishing Company. ISBN: 0-683-30487-9.

Guyton, A.C., Hall, J.E.; (2006) *Textbook of Medical Physiology, 11th ed.*, Philadelphia, Pennsylvania: Elsevier Saunders Publishing Company. ISBN: 0-7216-0240-1.

Hughes, S.C., Levinson, G.; (2002) *Anesthesia for Obstetrics, 4th ed.*, Philadelphia, Pennsylvania: Lippincott Williams and Wilkins Publishing Company. ISBN: 0-683-30665-0.

Jaffe, R.A., Samuels, S.I. (2009). *Anesthesiologist's Manual of Surgical Procedures, 4th ed.*, Philadelphia, Pennsylvania: Lippincott Williams and Wilkins Publishing Company. ISBN: 0-7817-6670-2

Morgan, G.E., Mikhail, M. S., Murray, M.J.; *Clinical Anesthesiology, 4th ed.*, New York, New York: McGraw Hill Medical Publishing Company. ISBN: 0-8385-1553-3.

Nagelhout, J.J., Plause, K. L.; *Nurse Anesthesia, 4th ed.*, Philadelphia, Pennsylvania: Elsevier Saunders Publishing Company. ISBN:0-7216-0363-7.

Stoelting, R.K., Hillier, S.C.; (2006) *Pharmacology and Physiology in Anesthetic Practice, 4th ed.*, Baltimore, Maryland: Lippincott, Williams and Wilkins Publishing Company. ISBN: 0-7817-5469-0.

Optional Texts:

Miller, R.D.; (2005) *Miller's Anesthesia, 6th ed.* Philadelphia, Pennsylvania: Elsevier Saunders Publishing Company. ISBN: 0-443-06618-3 (set).

c. Required Resources, References, Supplies: Calculator.

Evaluation:

a. Learning Assessments and Grading:

Percentage	Grade
94 - 100	4.0
87 - 93	3.5
80 - 86	3.0 (passing)
75 - 79	2.5
70 - 74	2.0

University & College Policies:

The College of Nursing expects that students will demonstrate professional behavior in all situations. Specific expectations for clinical and other professional venues can be found in the appropriate handbook. You are responsible for reviewing and acting in accordance with the policies and procedures found in the following sources, including the following topics: Professionalism, Academic Integrity, Accommodations for Students with Disabilities, Disruptive Behavior, Attendance, Compliance, and Progression.

- CON Student handbook <http://nursing.msu.edu/handbooks.asp>
- MSU Spartan Life Student Handbook and Resource Guide <http://www.vps.msu.edu/SpLife/index.htm>
- Information for Current Students—including Rights, Responsibilities and Regulations for Students <http://www.msu.edu/current/index.html>
- Academic Programs <http://www.reg.msu.edu/UCC/AcademicPrograms.asp>

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Additional Course Objectives:

At the completion of this course the student will be able to:

6. Discuss issues related to the practice of nurse anesthesia, including ethics, history, scope of practice, relations with other advanced nursing practice roles, and medical direction in the operating room
7. Integrate anatomical and physical findings, functional status, patient history and surgical considerations to formulate and modify perioperative care.
8. Interpret and utilize data obtained from noninvasive and invasive monitoring modalities as they relate to care throughout the perianesthetic continuum.
9. Recognize, evaluate, and plan treatment for patients with perioperative pain.
10. Synthesize information obtained in a comprehensive preoperative evaluation; formulate a basic anesthesia plan of care, including proper positioning, fluid administration, basic monitoring, and airway management; and effectively communicate these findings with individuals influencing patient care.

Additional Prerequisites: Acceptance into the Nurse Anesthesia Program

Instruction:

a. Methodology:

Independent study, classroom activities, lectures, assignments, exams, internet assignments, self-evaluation, computer-aided instruction and student/faculty conferences.

Professionalism:

A. General Statement

The student is held accountable and responsible for the all policies in the most current version of The Michigan State University Student Handbook and Resources Guide (The Spartan Life: <http://www.vps.msu.edu/SpLife/acfree.htm>), The College of Nursing Handbook (<http://nursing.msu.edu>), and the Nurse Anesthesia Program Supplement.

B. Testing

All materials brought into a test, except for number 2 pencils with an eraser and calculator must be left in the front of the classroom. Students may not wear coats or jackets during the examination.

If the instructor suspects any sharing during an exam, all students involved will receive a 0 on that exam, and will face all consequences of academic dishonesty according to the MSU College of Nursing Student Handbook.

Students must use MSU College of Nursing approved calculator for examinations. Students may not borrow calculators from other students during the examination.

Any student who is absent from an examination must notify faculty prior to the examination. The student will be given the opportunity to make-up the missed exam with the faculty member during office hours. Only one test can be missed and the student given a chance to take a make-up examination during this course. Any other missed exams will be assigned a grade of zero.

C. Calculators:

Calculators are permitted; however, cellular telephone calculators and PDA calculators will not be used. No sharing of calculators will be permitted during exams. If calculators are forgotten, students must calculate the answers manually.

D. Electronic Communication Devices

All cellular telephones are to be placed in the vibration mode or turned off during class. Beepers should be placed in the vibration mode during class. No cellular phones or beepers will be permitted on the student's person during examinations.

E. Children in the Classroom

Because of the intensity of these courses, faculty are unable to provide an environment conducive to learning and testing with children present. Students are expected to make child care arrangements in advance.

F. Appeal of Test Question/Grades

Appeals of test questions must be made within 5 days after the date of the examination. All appeals will be evaluated individually and must be made on the "Appeal of Test Question" form (attached).

According to the policies of The Michigan State University College of Nursing, grades may be appealed only for reasons of discrimination. All appeals must be made in writing. See the current Student Handbook for the appropriate form. The appeal must be made to the faculty member and course coordinator within one week. The appeal must be accompanied by a legible copy of all student work in the course at the occurrence/failure.

After appealing to the faculty and course chair, the student may appeal to the MSU College of Nursing Student Services Office. Grade appeals must be made in writing to the Director of Student Services and to the Associate Dean of Academic Affairs with 5 working days after appealing to the faculty and course chair.

The third level of appeal may be made in writing to the Dean of the MSU College of Nursing. The last level of appeal is at the university level. Students are referred to The MSU Student Handbook for this process of grade appeal.

G. Progression in the Major

NUR 882 is a required course in the nurse anesthesia curriculum. In order to progress, a student must pass this course with a grade of "B" or better

H. Change in Calendar

The faculty reserves the right to alter the calendar as circumstances may dictate. All changes will be announced in class, posted on the College of Nursing website, or via College of Nursing email. Students not present in class are responsible for obtaining this information.

I. Official Means of Written Communication-Electronic Mail

Keeping up with changes or news from Michigan State University and the College of Nursing is the responsibility of the student. Electronic mail or e-mail is an official means of written communication for all students, faculty, and staff.

Policies:

Academic Integrity: Article 2.3.3 of the [Academic Freedom Report](#) states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the (insert name of unit offering course) adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the all-University Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations. (See [Spartan Life: Student Handbook and Resource Guide](#) and/or the MSU Web site: www.msu.edu). Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including homework, lab work, quizzes, tests and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com Web site to complete any course work in NUR 882. Students who violate MSU rules may receive a penalty grade, including--but not limited to--a failing grade on the assignment or in the course. Contact your instructor if you are unsure about the appropriateness of your course work. (See also <http://www.msu.edu/unit/ombud/honestylinks.html>)

Accommodations for Students with Disabilities: **Students with disabilities should contact the Resource Center for Persons with Disabilities to establish reasonable accommodations. For an appointment with a disability specialist, call 353-9642 (voice), 355-1293 (TTY), or visit MyProfile.rcpd.msu.edu.**

Disruptive Behavior: Article 2.3.5 of the [Academic Freedom Report](#) (AFR) for students at Michigan State University states: "The student's behavior in the classroom shall be conducive to the teaching and learning process for all concerned." Article 2.3.10 of the AFR states that "The student has a right to scholarly relationships with faculty based on mutual trust and civility." [General Student Regulation 5.02](#) states: "No student shall . . . interfere with the functions and services of the University (for example, but not limited to, classes . . .) such that the function or service is obstructed or disrupted. Students whose conduct adversely affects the learning environment in this classroom may be subject to disciplinary action through the Student Faculty Judiciary process.

Attendance: Students whose names do not appear on the official class list for this course may not attend this class. Students who fail to attend the first four class sessions or class by the fifth day of the semester, whichever occurs first, may be dropped from the course.

Course Calendar: The course calendar will be handed out the first day of class. The course calendar may change based on the needs of the class. Exams and project due dates are posted on the calendar. The final exam schedule is determined by the university academic calendar.

Appeal of Test Question

All inquiries/appeals concerning a disputed answer on an examination must be made on this form. No appeal will be accepted unless received within five (5) days of the examination. All appeals will be evaluated individually.

Student Name: _____

Exam Number: _____ Date of Exam: _____ Date Submitted: _____

Submitted to: _____



1. Write the test number and question as it was written on the exam.

2. What was the *correct answer* according to the test key? _____

3. What answer did you select? _____

4. What concern do you have regarding the question and answer?

5. Cite *Three References* that support your rationale for the answer you selected over the answer on the answer key. References cannot be cited from the internet.

a. _____

b. _____

c. _____

Additional comments may be attached to this form.

Faculty Response to Appeal: **Accept** _____ **Reject** _____

Rationale:

Faculty Signature: _____ Date: _____

	Content/Topic	Faculty
May 19	Course Orientation, introduction to the OR, hazards in the OR, introduction to airway anatomy	Lourens
May 26	The adult airway, airway assessment and airway equipment.	Lourens
June 2	Historical perspective of the nurse anesthetist; Scope of practice, charting and consent	Lourens
June 9	Fluid and electrolyte management; hemotherapy; estimating blood loss, BMI, IBW and misc. calculation	Lourens
June 16	Exam I Hypothermia Pediatric and Neonatal airway	Lourens
June 23	Positioning, hemodynamic changes and complications associated with positioning	Lourens
June 30	Introduction to drug classes; introduction to table top set up; induction sequences, intro to pediatrics	Lourens
July 7	Pediatricsm pediatric and adult Airway complications (obstruction, bronchospasm, laryngospasm);	Lourens
July 14	Exam 2 Anesthesia for ENT procedures	Lourens
July 21	Anesthesia for orthopedic procedures, introduction to management plan	Lourens
July 28	Malignant hyperthermia, introduction to regional techniques – pain pathways, basics of regional drugs	Lourens
Aug 4	Exam 3 Introduction to management plan	Lourens
Aug 11	AANA – No classes	Lourens
Aug 19 Note Date	Final Exam	Lourens