TITLE: N 619 Principles of NA Practice III

COURSE UNITS: 1 cu

CATALOG DESCRIPTION:
This course explores the perioperative evaluation and anesthetic principles related to patient populations undergoing advanced surgical procedures. Emphasis is placed on selection and administration of anesthesia to these populations to ensure optimal patient care, comfort, and safety. Particular emphasis is also placed on monitoring, and implementing interventions to prevent and treat common perioperative emergencies.

PLACEMENT: Summer I/II Year II

FACULTY:  Lori Ann Winner, MSN, CRNA
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PRE-REQUISITE(S): N618 Principles of Nurse Anesthesia Practice II
N683 Applied Sciences Related To Anesthesia III
N792 Clinical Fieldwork for Nurse Anesthesia Practice II
N580 Pharmacology of Anesthetics

CO-REQUISITE(S): None

COURSE OVERVIEW:
This course explores the administration of anesthesia to populations undergoing advanced surgical procedures. In addition, monitoring and interventions for treating perioperative emergencies will be discussed.

COURSE OBJECTIVES:
1. Discuss cerebral perfusion pressure, cerebral autoregulation, and the extrinsic influences on these concepts.
2. Discuss the anesthetic implications in the treatment of intracranial masses and aneurysms.
3. Identify the complications in craniotomy procedures and discuss the interventions involved.
4. Discuss the anesthetic management of patients with massive blood loss from thoracolumbar procedures.
5. Discuss the impact of various pre-existing respiratory conditions on the selection and administration of an anesthetic.
6. Explore anesthetic considerations for patients undergoing a thoracotomy.
7. Describe methods to achieve one lung ventilation and its impact on ventilation and perfusion.
8. Discuss the concept of hypoxic pulmonary ventilation and its impact on the selection and delivery of anesthesia.
9. Discuss the implementation and management of double-lumen tubes and thoracic epidurals in thoracotomy procedures.
10. Identify specific anesthetics with positive and negative impacts on one-lung ventilation.
11. Discuss concepts of evoked potential monitoring. Identify surgical procedures where evoked potential monitoring is needed.
12. Discuss the impact on the selection of an anesthetic when evoked potential monitoring is implemented.
14. Discuss regional anesthetic techniques specific for orthopedic procedures and their effects on postoperative analgesia.
15. Identify postoperative adverse events and discuss anesthetic interventions in treatment.
16. Identify the anesthetic management for endoscopic sinus surgery, neck dissections, and para/thyroidectomy.
17. Discuss the process of laser airway surgery and the anesthetic management of adverse events.
18. Identify techniques involved to minimize blood loss in endoscopic surgery and their clinical manifestations.
19. Discuss the airways challenges in maxillofacial reconstructive surgery and any postoperative procedure with airway manipulation involved.
20. Explain the anesthetic management of patients undergoing both outpatient and in hospital surgical procedures involving plastic and reconstructive body surgery.
22. Describe anesthetic techniques used for both outpatient and inpatient short duration urologic surgeries in often elderly population.
24. Discuss various shock states, their effect on homeostasis, and interventions to maintain perfusion.
25. Explain anesthesia delivery to the traumatically injured patient with focus on oxygenation, airway management, and perfusion.
26. Examine the current trauma system.

TEACHING METHODS:
Lecture & group discussion

EVALUATION METHODS:
Exam # 1  33.3%
Exam # 2  33.3%
Exam # 3  33.3%
GRADING POLICY:
A+ 97-100  B+ 87-89  C+ 77-79  F 0-69
A  93-96    B  83-86  C  73-76
A- 90-92    B- 80-82  C- 70-72

Rounding will be done as follows:
  Grades of .5 and above will be rounded up to the next whole number
  Grades of .4 or less will be rounded down to the next whole number

Should a student be found responsible for cheating in this course, their grade for the course will be a failure. The University Code of Academic integrity will be followed in this course. It is available on Blackboard and the student handbook.

Code of Academic Integrity

Since the University is an academic community, its fundamental purpose is the pursuit of knowledge. Essential to the success of this educational mission is a commitment to the principles of academic integrity. Every member of the University community is responsible for upholding the highest standards of honesty at all times. Students, as members of the community, are also responsible for adhering to the principles and spirit of the following Code of Academic Integrity.

Academic Dishonesty Definitions

Activities that have the effect or intention of interfering with education, pursuit of knowledge, or fair evaluation of a student’s performance are prohibited. Examples of such activities include but are not limited to the following definitions:

A. Cheating: using or attempting to use unauthorized assistance, material, or study aids in examinations or other academic work or preventing, or attempting to prevent, another from using authorized assistance, material, or study aids. Example: using a cheat sheet in a quiz or exam, altering a graded exam and resubmitting it for a better grade, etc.

B. Plagiarism: using the ideas, data, or language of another without specific or proper acknowledgment. Example: copying another person's paper, article, or computer work and submitting it for an assignment, cloning someone else's ideas without attribution, failing to use quotation marks where appropriate, etc.

C. Fabrication: submitting contrived or altered information in any academic exercise. Example: making up data for an experiment, fudging data, citing nonexistent articles, contriving sources, etc.

D. Multiple submissions: submitting, without prior permission, any work submitted to fulfill another academic requirement.

E. Misrepresentation of academic records: misrepresenting or tampering with or attempting to tamper with any portion of a student’s transcripts or academic record, either before or after coming to the University of Pennsylvania. Example: forging a change of grade slip, tampering with computer records, falsifying academic information on one’s resume, etc.

F. Facilitating academic dishonesty: knowingly helping or attempting to help another violate any provision of the Code. Example: working together on a take-home exam, etc.

G. Unfair advantage: attempting to gain unauthorized advantage over fellow students in an academic exercise. Example: gaining or providing unauthorized access to examination materials, obstructing or interfering with another student’s efforts in an academic exercise, lying about a need for an extension for an exam or paper, continuing
to write even when time is up during an exam, destroying or keeping library materials for one's own use, etc.

* If a student is unsure whether his action(s) constitute a violation of the Code of Academic Integrity, then it is that student's responsibility to consult with the instructor to clarify any ambiguities. (Source: Office of the Provost, 1996)

http://www.vpul.upenn.edu/osl/pennbook.html

REQUIRED TEXTS:


RECOMMENDED TEXTS:


**Tuesday 1p-4p**

**WEEKLY TOPICAL OUTLINE:**

<table>
<thead>
<tr>
<th>Day/Time</th>
<th>Topic</th>
<th>Objective</th>
<th>Readings</th>
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<tr>
<td><strong>Week 1</strong>&lt;br&gt;May 20&lt;br&gt;Dawn Bent</td>
<td>Perioperative emergencies and nurse anesthesia interventions</td>
<td>5 &amp; 15</td>
<td>S &amp; M Ch. 38&lt;br&gt;M &amp; M Ch. 46 &amp; 48&lt;br&gt;Nagelhout Ch. 51 &amp; 54&lt;br&gt;Barash Ch. 29 &amp; 55</td>
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<td><strong>Week 2</strong>&lt;br&gt;May 27&lt;br&gt;Pete Conicelli</td>
<td>Orthopedic procedures and their impact on nurse anesthesia practice</td>
<td>13-15</td>
<td>Nagelhout Ch. 40&lt;br&gt;Barash Ch. 50</td>
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<td><strong>Week 3</strong>&lt;br&gt;June 3&lt;br&gt;Mike Ford</td>
<td>Urologic Procedures and the implications of nurse anesthesia practice</td>
<td>21 &amp; 22</td>
<td>M &amp; M pgs. 734-740; Ch 33.&lt;br&gt;Nagelhout Ch. 30, 32, &amp; 43.&lt;br&gt;Barash Ch. 52</td>
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<td><strong>Week 4</strong>&lt;br&gt;June 10&lt;br&gt;Lori Ann Winner</td>
<td><strong>Exam # 1</strong>&lt;br&gt;(Perioperative, Orthopedic and Urologic Anesthesia)</td>
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<td>Exam is content covered in previous weeks 1-3.</td>
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<td>Following Exam #1:&lt;br&gt;Outpatient Surgery&lt;br&gt;Obesity&lt;br&gt;Plastic &amp; Reconstructive Procedures</td>
<td>20 &amp; 22</td>
<td>Nagelhout Ch. 37, 38, &amp; 43&lt;br&gt;Barash Ch. 30-32, 43-44</td>
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<td><strong>Week 5</strong>&lt;br&gt;June 17&lt;br&gt;Yianni Augoustides</td>
<td>Thoracic Anesthesia and Pulmonary Mechanics on One Lung Ventilation</td>
<td>5-10</td>
<td>S &amp; M Ch. 16, 17, &amp; 27&lt;br&gt;Nagelhout Ch 17, 27&lt;br&gt;Barash Ch. 11, 27, &amp; 37&lt;br&gt;Macksey Ch 14</td>
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<td>Week 6</td>
<td>June 24</td>
<td>Trauma Anesthesia 23-26</td>
<td>M&amp;M Ch. 39 S&amp;M Ch. 41 Barash Ch. 36 &amp; 57 Nagelhout Ch. 36</td>
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<td>Eileen Verbrugghe</td>
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<th>Week 7</th>
<th>July 1</th>
<th>Anesthesia for the Burn patient 23-26</th>
<th>N&amp;P Ch. 35 &amp; 36 Barash Ch. 52 M&amp;M Ch 39, pgs. 819-822.</th>
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<td>Jill Krystofinski</td>
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<th>Week 8</th>
<th>July 8</th>
<th>Exam #2 (Outpatient, Obesity, Plastics, Trauma/Burns &amp; Thoracic Anesthesia) 23-26</th>
<th>Exam is content covered in previous weeks 4-7.</th>
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<th>Week 9</th>
<th>July 15</th>
<th>Anesthetic considerations for Head and Neck Procedures 16 - 19</th>
<th>S &amp; M Ch. 33-37 M &amp; M Ch. 39 Nagelhout Ch. 39 Barash Ch. 50</th>
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<p>| Week 11 | July 29 | End of semester evaluations with mentors | |</p>
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<th>Week 12</th>
<th>Exam #3 (ENT &amp; Evoked Potential Monitoring)</th>
<th>Exam is content covered in previous weeks 9-10.</th>
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**TOTAL NUMBER OF THEORY HOURS: 45**  
**TOTAL NUMBER OF CLINICAL HOURS: 0**