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Course Description

This course provides fundamental information about the nursing process of clients in critical care settings. The course requires synthesis of pathophysiologic, pharmacologic, and therapeutic concepts. Utilization of family theory, stress-adaptation, psychosocial concepts and legal/ethical issues are incorporated throughout.

Objectives

At the completion of Nursing Care of the Critically Ill Client the student will be able to:
1. Discuss the legal and ethical issues that commonly occur in the critical care setting.
2. Describe needs of families of the critically ill.
3. Interpret basic dysrhythmias and describe the appropriate interventions.
4. Describe the physiologic basis, indications and implications for hemodynamic monitoring.
5. Explain the concept of oxygen delivery and consumption, and how it can be altered in the critically ill.
6. Identify medications commonly used in the critical care setting and their indications and side effects.
7. Describe the pathophysiology and management of clients with acute nervous system alterations.
8. Contrast the pathological cause and the effect of cardiac disturbances, identifying the treatment modalities for each.
9. Examine the etiology, pathophysiology, assessment and intervention for acute respiratory, hematologic, renal, endocrine and GI dysfunction.
10. Correlate the different types of shock to their pathophysiology and treatment.
11. Discuss the unique considerations for the neonatal, pediatric, geriatric and burn client in the critical care setting.

Course Faculty: Mary Kisting, RN, MS, CCRN, CNS

Office Number: (517) 355-3309
Office and Hours: Office hours by appointment; A115 Life Sciences Bldg
E-Mail: kisting@msu.edu

Required Text (Equipment):

Recommended Media:
"SVO2: The delicate balance" (11 minutes) in the Media Lab.
**Supplemental Reading:**


* Faculty has desk copy
** Copy available in MSU library

**Instructional Model**

Credits: 2

The completion of assigned readings prior to class is necessary to facilitate understanding and integration of content presented. Students will be responsible for all readings, material covered in class, and information sent via e-mail/Angel. Classes focusing on systems pathologies will utilize a case study format, which will require familiarity with content prior to class.
Learning Experiences - Teaching Methods

The course will consist of a variety of instructional methods including lecture, discussion, and student presentation. Initial classes will clarify basic critical care concepts. Case studies will be utilized for classes 6-15, which will require understanding of the readings prior to class. Any questions or areas of uncertainty will be addressed at the beginning of each period to facilitate the understanding of case studies for that week. Research article class presentation will entail a brief oral description of a current (within the last 2-3 years) or classic research study in/or related to critical care followed by a concise critique as to significance and quality of the study. Include the following: Title, Author, Publication date, Source, Purpose of study, Subjects, Findings, Critique/Analysis.

Evaluation/Grading Scale:

A. The course grade will be based upon five section examinations, one cumulative final examination, and the analysis and presentation of a published research study. Students are responsible for all reading assignments and lecture material.

| Examination 1 | 14% |
| Examination 2 | 14% |
| Examination 3 | 14% |
| Examination 4 | 14% |
| Examination 5 | 14% |
| Research presentation | 5% |
| Final Exam | 25% |

B. The following scale will be used for grade determination.

<table>
<thead>
<tr>
<th>%</th>
<th>Grade Point</th>
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<tbody>
<tr>
<td>94-100</td>
<td>4.0</td>
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<tr>
<td>89-93</td>
<td>3.5</td>
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<td>84-88</td>
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<td>79-83</td>
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<td>70-74</td>
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<tr>
<td>65-69</td>
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Policies

Attendance:

Attendance at class is STRONGLY recommended.

Academic Dishonesty:

Academic dishonesty in ANY FORM will not be tolerated. If cheating in any form is observed and documented by a faculty member, the student will be reported to the Student Affairs Committee and a grade of 0.0 will be issued for the course.

Taping:

Lectures may be audio taped with instructor permission.

CON & MSU Policy:

Students should refer to the College of Nursing and MSU Student Handbooks for any areas not specifically covered in the syllabus.

Weather

Class will meet as scheduled unless the Michigan State University cancels classes. University does not have a standing policy related to cancellation of class due to adverse weather conditions, such as above normal snow accumulation or frigid temperatures. It is the responsibility of the student to listen to the public/community radio/television for announcements and closings.

Communication

Lecture notes will be available through Blackboard/Angel. Students are responsible for any announcements and information sent electronically.

Student Faculty Relationship

There are no scheduled student/faculty conferences for the course. Feel free to contact faculty as needed for any questions, concerns, suggestions or issues. The role of student representative will be available to serve a method for confidential or general communication for the group.
Examinations

Examinations are primarily multiple choice questions. All students are expected to take examinations on the designated date unless prior arrangements are made with the course faculty. Alternative exams may be used for make-up. Alternative exams may include essay and/or short answer questions. Make-up examinations will normally be completed within one week of the scheduled exam.

CPR
Not applicable

Uniform
Not applicable
<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Content</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>1-14-04</td>
<td><strong>Introduction</strong>&lt;br&gt;Critical Care Nursing – Individual and family response&lt;br&gt;Psychosocial &amp; legal-ethical issues&lt;br&gt;ECG Interpretation</td>
<td>Pp. 9-23, Pp. 25-37, Pp. 41-54</td>
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<td>2</td>
<td>1-21-04</td>
<td><strong>Dysrhythmias</strong>&lt;br&gt;Mechanical and electrical events in the heart&lt;br&gt;Basic Dysrhythmias&lt;br&gt;Interventions for common dysrhythmias&lt;br&gt;Cardiac pacing</td>
<td>Pp. 54-80</td>
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<tr>
<td>3</td>
<td>1-28-04</td>
<td><strong>Hemodynamic monitoring</strong>&lt;br&gt;Physiologic basis for hemodynamic monitoring&lt;br&gt;RAP, LAP, PAP, IAP, CO, mixed venous saturation&lt;br&gt;Conditions that alter hemodynamic values and treatment</td>
<td>Pp. 83-114</td>
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<tr>
<td>4</td>
<td>2-4-04</td>
<td><strong>Examination 1</strong>&lt;br&gt;Oxygen delivery/consumption and monitoring&lt;br&gt;Ventilators&lt;br&gt;ABGs</td>
<td>Pp. 117-163</td>
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<td>5</td>
<td>2-11-04</td>
<td><strong>Medications/Code Management</strong>&lt;br&gt;Caregiver roles&lt;br&gt;Equipment&lt;br&gt;Medications&lt;br&gt;Special problems &amp; treatment&lt;br&gt;Post resuscitation care</td>
<td>Pp. 165-200</td>
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<td>6</td>
<td>2-18-04</td>
<td><strong>Examination 2</strong>&lt;br&gt;Nervous system alterations and treatment&lt;br&gt;Increased ICP&lt;br&gt;Head/spinal cord injury&lt;br&gt;Acute cerebrovascular disease&lt;br&gt;Seizures&lt;br&gt;Meningitis</td>
<td>Pp. 283-343</td>
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<td>7</td>
<td>2-25-04</td>
<td><strong>Cardiovascular dysfunction and treatment</strong>&lt;br&gt;Coronary artery disease&lt;br&gt;Congestive heart failure&lt;br&gt;Pericardial/endocardial disease&lt;br&gt;Aortic aneurysm</td>
<td>Pp. 239-281</td>
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<td>Week</td>
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| 8    | 3-3-04 | **Examination 3**  
Respiratory dysfunction and treatments  
Respiratory failure  
Acute respiratory distress syndrome  
Chronic obstructive pulmonary disease  
Asthma  
Pneumonia  
Pulmonary embolus/ Pneumothorax |  
|      |        | **Spring break**                                                     | **Enjoy**                                                              |       |
| 9    | 3-10-04|                                                                 | **Spring break**                                                      |       |
| 9    | 3-17-04| **Acute renal failure and treatment**  
Pre, intra, and post renal failure  
Renal replacement therapies |  
|      |        | **Enjoy**                                                            | **Acute renal failure and treatment**  
Pre, intra, and post renal failure  
Renal replacement therapies |       |
| 10   | 3-24-04| **Examination 4**  
Hematological and immune disorders  
Anemias  
Malignant white blood cell disorders  
Secondary immunodeficiency  
Bleeding disorders |  
|      |        | **Enjoy**                                                            | **Examination 4**  
Hematological and immune disorders  
Anemias  
Malignant white blood cell disorders  
Secondary immunodeficiency  
Bleeding disorders |       |
| 11   | 3-31-04| **Gastrointestinal disorders**  
Gastrointestinal bleeding  
Pancreatitis  
Hepatic failure  
Research Article Presentations |  
|      |        | **Enjoy**                                                            | **Gastrointestinal disorders**  
Gastrointestinal bleeding  
Pancreatitis  
Hepatic failure  
Research Article Presentations |       |
| 12   | 4-7-04 | **Endocrine**  
Pancreatic endocrine emergencies  
Acute adrenal crisis  
Thyroid crises  
Antidiuretic hormone disorders  
Research Article Presentations |  
|      |        | **Enjoy**                                                            | **Endocrine**  
Pancreatic endocrine emergencies  
Acute adrenal crisis  
Thyroid crises  
Antidiuretic hormone disorders  
Research Article Presentations |       |
| 13   | 4-14-04| **Examination 5**  
Trauma  
Trauma systems  
Mechanisms of trauma injury  
Initial phases of care  
Specific organ injuries  
Critical care phase |  
|      |        | **Enjoy**                                                            | **Examination 5**  
Trauma  
Trauma systems  
Mechanisms of trauma injury  
Initial phases of care  
Specific organ injuries  
Critical care phase |       |
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<tr>
<th>Date</th>
<th>Date</th>
<th>Topic</th>
<th>Pages</th>
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<tbody>
<tr>
<td>14</td>
<td>4-21-04</td>
<td><strong>Shock</strong></td>
<td>Pp. 203-236</td>
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<td></td>
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<td>Stages of shock</td>
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<td>Hypovolemic</td>
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<td>Cardiogenic shock</td>
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<td>Obstructive shock</td>
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<td>Distributive shock</td>
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<td>Interventions</td>
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<td><strong>Research article presentations</strong></td>
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<td>15</td>
<td>4-28-04</td>
<td><strong>Special and unique considerations</strong></td>
<td>Pp. 595-630</td>
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<tr>
<td></td>
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<td>Neonatal critical care considerations</td>
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<td>Pediatric critical care considerations</td>
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<td>Geriatric considerations</td>
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<td>Burns</td>
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<td><strong>Research article presentations</strong></td>
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<td>16</td>
<td>4-5-04</td>
<td><strong>Final examination</strong></td>
<td>The works (cumulative)</td>
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<td>16</td>
<td>4-5-04</td>
<td>12:45-2:45pm</td>
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