Santa Monica College

Course Outline For
NURSING 20, Introduction To Medical-Surgical Nursing

Course Title: Introduction To Medical-Surgical Nursing
Units: 2
Total Instructional Hours (usually 18 per unit): 36
Hours per week (full semester equivalent) in Lecture: 2
In-Class Lab: 0
Arranged: 0

Date Submitted: May 2011
Date Updated: August 2012
Transferability: Transfers to CSU
IGETC Area:
CSU GE Area:
SMC GE Area:

Degree Applicability: Credit - Degree Applicable
Prerequisite(s): NURSNG 15
NURSNG 15L
Pre/Corequisite(s): None
Corequisite(s): NURSNG 20L
NURSNG 17
Skills Advisory(s): None

I. Catalog Description
The focus of this course is on the pathophysiology and required nursing assistance for adult patients, including the geriatric patient, with acid-base imbalances, electrolyte imbalances and related endocrine health deviations. Universal self-care requisites are applied to specific client groups requiring nursing care to manage hypertension and peripheral vascular disease. The pathophysiology and required nursing assistance for clients with health deviations affecting the musculoskeletal system, and the eye and ear are also explored. Special emphasis is placed on having the student utilize Orem's Self-Care Model and the nursing process in planning, implementing and evaluating nursing care of selected patients. Strategies to promote critical thinking will serve as the foundation for making nursing care decisions.

II. Examples of Appropriate Text or Other Required Reading: (include all publication dates; for transferable courses at least one text should
have been published within the last five years)

4. Santa Monica College nursing student handbook, Santa Monica College Nursing Program, current ed. online

Recommended Texts

III. Course Objectives

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

1. Analyze multiple factors that influence acid-base electrolyte states and develop nursing interventions to restore homeostasis.
2. Describe the core components of diabetic teaching.
3. Discuss the required nursing assistance for patients, including the older adult, experiencing selected health deviations.
4. Utilize critical thinking and effective communication to rationally resolve problems related to direct client care.
5. Explain the purpose and nursing implications for commonly performed laboratory and diagnostic tests used to assess acid-base imbalances and electrolyte imbalances; disorders of the endocrine and musculoskeletal systems; and in diagnosis of peripheral vascular disease.
6. Analyze multiple factors that influence acid-base electrolyte states and develop nursing interventions to restore homeostasis.

Theoretical Objectives

Upon completion of instruction, the Nursing 20 student will achieve the following objectives at a minimum of 75% or higher level:
A. Critical Thinking

1. Implement skills and attitudes of critical thinking.
2. Discuss the relationship between the nursing process, critical thinking, the problem-solving process and the decision-making process.
3. Discuss Maslow’s hierarchy of needs as a framework for priority setting.

B. Communication

1. Discuss the use of small groups in the healthcare setting.
2. Describe the components of small groups that affect the group’s functioning: goals, norms, leader/member behavior, roles and interaction patterns.
3. Discuss the importance of communicating through appropriate channels to effectively achieve goals in the health care setting.

C. Clients with Acid-Base and Electrolyte Imbalances

1. Describe the etiology, pathophysiology, clinical manifestations, management and nursing interventions for electrolyte deficit and excess of each of the following: sodium, potassium, calcium, magnesium, and phosphorus.
2. Explain the relationship of pH to hydrogen ion concentration.
3. List and explain the role of homeostatic mechanisms that maintain plasma pH within normal limits.
4. Compare metabolic acidosis and metabolic alkalosis with regard to etiology, physiologic cause, clinical manifestations, diagnosis and management.
5. Compare respiratory alkalosis and respiratory acidosis with regard to etiology, physiologic cause, clinical manifestations, diagnosis and management.
6. Discuss the compensatory role of the kidneys and lungs in response to the acid-base imbalances.
7. Interpret selected sample arterial blood gas reports.
8. Discuss nursing management of the older adult with an electrolyte imbalance.

D. Clients with Endocrine Disorders

1. Describe the functions of each of the endocrine glands and the hormone(s) secreted by each.
2. Identify the laboratory and diagnostic tests used to determine alterations in function of each of the endocrine glands.
3. Compare and contrast hypothyroidism and hyperthyroidism: the
causes, clinical manifestations, management, and nursing interventions.

4. Calculate the therapeutic self-care demand for the client undergoing thyroidectomy.

5. Compare and contrast hyperparathyroidism and hypoparathyroidism: the causes, clinical manifestations, management, and nursing interventions.

6. Compare and contrast Addison’s disease with Cushing’s syndrome, the causes, clinical manifestations, management, and nursing interventions.

7. Develop a teaching plan for client requiring corticosteroid therapy.

8. Explain and predict the fluid and electrolyte imbalances that can occur with hormonal alterations.

9. Compare and contrast the etiology, pathophysiology, clinical manifestations, complications and treatment of clients with type 1 and type 2 diabetes mellitus.

10. Discuss the core components of diabetic teaching: nutritional management, exercise, pharmacologic therapy (insulin or oral hypoglycemic agents), self-monitoring of blood glucose, and education.


12. Describe the self-management options for a client with diabetes to employ during ‘sick days.

13. Describe the major macrovascular, microvascular, and neuropathic complications of diabetes and the self-care behaviors important in the prevention of each.

14. Compare and contrast the clinical manifestations and treatment of clients with diabetic ketoacidosis (DKA) and clients with hyperosmolar hyperglycemic nonketotic syndrome (HHNK).

15. Describe the unique manifestations of diabetes in the older adult.

16. Identify the barriers to learning and self-care that may be encountered in the older adult with diabetes.

E. Clients with Peripheral Vascular Disorders and/or Hypertension

1. Identify the diagnostic tests that determine alterations in peripheral circulation.

2. Compare and contrast the pathophysiology and clinical manifestations of arterial and venous insufficiency.

3. Calculate the therapeutic self-care demand for clients with arterial or venous insufficiency.

4. Define blood pressure and identify risk factors for hypertension.

5. Describe the effect of untreated hypertension on the brain, eyes, kidneys, heart and peripheral vessels.

6. Describe the treatment approach for hypertension including
lifestyle changes and medication therapy.

7. Describe the necessity for immediate treatment of hypertensive crisis.

8. Discuss treatment and compliance issues unique to the older adult with hypertension

**F. Clients with Musculoskeletal Disorders**

1. Describe the physiologic changes that occur with aging in the musculoskeletal system.

2. Describe the nursing assessment of the client with a musculoskeletal problem

3. Identify nursing diagnoses common to clients with musculoskeletal disorders.

4. Describe the following diagnostic tests and discuss the nursing responsibilities for each: arthrography, arthrocentesis, arthroscopy, bone scan, electromyography, bone biopsy, CT, and MRI.

5. Discuss the pathophysiology, assessment findings and nursing interventions of clients with osteoarthritis.

6. Discuss the management of contusion, strain, sprain, and dislocation.

7. Specify the clinical manifestations of a fracture and describe the emergency medical and nursing management of a client with a fracture.

8. Describe the physiology of bone healing.

9. Identify the different types of fractures and the medical and nursing management of each.

10. Describe the principles and methods of fracture reduction, fracture immobilization and management of open fractures.

11. Discuss the prevention and management of immediate and delayed complications of fractures.

12. Plan care for a client with a fracture of the hip, including considerations for the older adult.

13. Develop a plan of care for the postoperative client with an amputation.

14. Describe the rehabilitation and health education needs of a client who has had an amputation.

15. Describe the various types of traction and the principles of effective traction.

16. Plan required nursing assistance for a client with a cast and a client in traction.

17. Discuss nursing and medical assessment of neurologic and circulatory function of a client with surgery/trauma to an extremity.

18. Describe the rehabilitative and health teaching needs of the client in a cast, in traction, or with an internal or external fixation device.
19. Utilize the nursing process and Orem’s model in planning care for clients having a total knee replacement and a total hip replacement.

20. Describe the rehabilitative and common knowledge deficits of clients with low back pain, osteoporosis and osteomyelitis.

21. Calculate the therapeutic self-care demand for clients with low back pain, osteoporotic vertebral fracture and osteomyelitis.

22. Describe the current philosophy of restorative care.

23. Describe nursing strategies appropriate for promoting self-care through activities of daily living, ambulation and the use of supportive devices.

24. Discuss and demonstrate the use of crutches and various crutch gaits.

25. Describe the nursing assessment of a client with alteration of body image resulting from deforming or disfiguring conditions.

G. Clients with Disorders of the Eye and Ear

1. Identify common diagnostic tests for assessment of vision and hearing.

2. Describe the pathophysiology and therapeutic management for health deviations associated with common ocular disorders: cataracts, glaucoma, macular degeneration and detached retina.

3. Describe the pathophysiology and therapeutic management for health deviations associated with common ear disorders: cerumen impaction, vertigo, and hearing loss.

4. Identify clinical manifestations, unique characteristics and nursing interventions for older adults with sensory deficits.

H. Older Adult (See other objectives for the Older Adult under each previous sections.)

1. Discuss community resources available to caregivers of older adults.

2. Identify the bio-psycho-socio-spiritual impact of the role of caregiver as it relates to providing care to the older adult.

IV. Methods of Presentation:
Observation and Demonstration, Visiting Lecturers, Other (Specify), Group Work, Lecture and Discussion
Other Methods: audio-visual aids, classroom demonstrations, group presentations, assigned readings, computer aided instruction, group exercises, written assignments, simulation

V. Course Content
<table>
<thead>
<tr>
<th>% of course</th>
<th>Topic</th>
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<tbody>
<tr>
<td>6%</td>
<td>Critical thinking skills and attitudes, problem-solving, decision-making, priority setting utilizing Maslow’s hierarchy of needs.</td>
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<tr>
<td>6%</td>
<td>Communication, small group theory, organizational communication channels</td>
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<tr>
<td>19%</td>
<td>Acid-Base and Electrolyte Balance and Imbalances, I.V. Therapy</td>
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<tr>
<td>19%</td>
<td>Endocrine Disorders</td>
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<tr>
<td>13%</td>
<td>Peripheral Vascular Disease and Hypertension</td>
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<tr>
<td>19%</td>
<td>Musculoskeletal Disorders</td>
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<tr>
<td>13%</td>
<td>Eye and Ear Disorders</td>
</tr>
<tr>
<td>6%</td>
<td>Older Adult: Caregiver role strain and community resources</td>
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<td>100%</td>
<td>Total</td>
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VI. **Methods of Evaluation:** (Actual point distribution will vary from instructor to instructor but approximate values are shown.)

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Evaluation Method</th>
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<tbody>
<tr>
<td>59%</td>
<td>Exams/Tests</td>
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<tr>
<td>3 %</td>
<td>Quizzes/Classroom Assessments</td>
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<tr>
<td>5 %</td>
<td>Group Projects - Group Paper</td>
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<tr>
<td>4 %</td>
<td>Other - Online Learning Activities</td>
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<tr>
<td>29 %</td>
<td>Final exam</td>
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<td>100 %</td>
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<tr>
<th>Grade</th>
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<tbody>
<tr>
<td>A = 92%</td>
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<td>B = 83%</td>
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<td>C = 75%</td>
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<tr>
<td>D = 70%</td>
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<td>F = Below 70%</td>
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To pass Nursing 20 each student will:
1. Successfully pass both Nursing 20 and Nursing 20L.
2. Earn a grade of C (75%) or better in the exams and theory assignments. Exams are primarily multiple-choice and may include alternative item formats.

3. Meet the theoretical and clinical course objectives.

VII. Sample Assignments:

<table>
<thead>
<tr>
<th></th>
<th>CRITICAL THINKING AND COMMUNICATION GROUP PAPER</th>
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<tbody>
<tr>
<td>1.</td>
<td>Write a scholarly paper based upon the assigned case study using the grading rubrics for guidelines. One typed paper will be submitted by the group. In addition, everyone in the group will perform a peer evaluation of each other’s collaborative work skills directly to the instructor. Each student’s average peer evaluation grade will be used in calculating their individual grade on the group paper. Go to Doc Sharing on the N20 e-companion website to download additional copies of the Collaborative Work Skills rubric. The Collaborative Work Skills Rubric is due the same day as the group paper. The paper will be graded based upon the scores received in the grading rubrics for this assignment. Possible points for each criterion are in parenthesis.</td>
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<th>ONLINE LEARNING ACTIVITY</th>
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<td>2.</td>
<td>SoftwareForNurses is an online learning program which contains scenarios that address knowledge of adult medical-surgical content and decision-making skills for some of the topics included in this course. If you have previously registered for SoftwareForNurses in another course, you can continue to use your log-in information.</td>
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Grading: You may choose 10 of the following scenarios for credit, however, a minimum of 5 scenarios must be completed from each of the 5 content areas (i.e., at least 1 scenario from each of the 5 content areas). A hardcopy printout of each scenario score is due to the theory instructor prior to the start of the corresponding unit exam. Be sure your name appears on the printout. No points will be given for late submissions. A student will earn 1 point for each of the 10 scenarios that are completed with a score of 85% or higher. Students may repeat the scenario until a score of 85%
<table>
<thead>
<tr>
<th>SoftwareForNurses scenarios approved for Nursing 20:</th>
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| **Clinical Nursing Concepts:** Acid-Base Balance (4 scenarios) *Due prior to start of Exam 1*  
Adult Health Nursing: Endocrine Health Problems (3 scenarios) *Due prior to start of Exam 2*  
Adult Health Nursing: Peripheral Vascular Health Problems (3 scenarios) *Due prior to start of Exam 3*  
Adult Health Nursing: Musculoskeletal Problems (3 scenarios) *Due prior to start of Exam 4*  
Adult Health Nursing: Eye/Ear Health Problems (3 scenarios) *Due prior to start of Final Exam* |

VIII. Student Learning Outcomes

1. Utilizing Orem's Self-Care Model and the Nursing Process, students will assess the therapeutic self-care requisites of adults and older adults with acid-base and electrolyte imbalances, and endocrine, peripheral vascular, musculoskeletal and sensory disorders. As assessed by: Score of 75% or greater on the comprehensive final exam.

2. Utilizing principles of critical thinking and communication, students will analyze a patient care dilemma. As assessed by: Group Paper