Course Title: Introduction to Medical-Surgical Nursing  Units: 2
IGETC Area:
Date Submitted: May 2002  CSU GE Area:
Updated: May 2004, October 2006  Transfer: CSU

I. Catalog Description:

Prerequisites: Nursing 15, 15L
Co-requisites: Nursing 20L, Nursing 17

The focus of this course is on the pathophysiology and required nursing assistance for adult clients, including the geriatric client, 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 clients. Strategies to promote critical thinking will serve as the foundation for making nursing care decisions.

This course will be taken concurrently with the laboratory component of the course, Nursing 20L.

II. Required Texts and References:

A. Required Texts

Brunner’s Textbook of Medical-Surgical Nursing (11th ed.), Smeltzer, Bare, Hinkle and Cheever, Lippincott, 2008

Gerontologic Nursing (3rd ed.). Meiner and Lueckenotte, Mosby, 2006

Manual of Laboratory and Diagnostic Tests (8th ed.), Fischbach, Lippincott, 2009

SMC Nursing Student Handbook, current edition
B. Recommended References


Taber’s Encyclopedic Medical Dictionary (20th ed.), F.A. Davis, 2005

III. Course Objectives:

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

A. Analyze multiple factors that influence acid-base and electrolyte states and develop nursing interventions to restore homeostasis.

B. Describe the core components of diabetic teaching.

C. Discuss the required nursing assistance for clients, including the older adult, experiencing selected health deviations.

D. 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.

E. Utilize critical thinking and effective communication to rationally resolve problems related to direct client care.

IV. Theoretical Objectives:

Upon completion of instruction, the Nursing 20 nursing 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 healthcare 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.
11. State the purpose and implications of glycoslated hemoglobin (hemoglobin A1C).
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.

V. Methods of Presentation:

Lecture/discussion, audio-visual aids, classroom demonstrations, group presentations, assigned readings, computer aided instruction, web-based instruction, group exercises, written assignments, laboratory clinical experiences, and guest speakers as available.
VI. Course Content:

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<tr>
<th>Coverage</th>
<th>Topic</th>
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<tbody>
<tr>
<td>6.25%</td>
<td>Critical Thinking</td>
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<tr>
<td>6.25%</td>
<td>Communication</td>
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<tr>
<td>18.75%</td>
<td>Acid-Base and Electrolyte Balance and Imbalances, I.V. Therapy</td>
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<td>18.75%</td>
<td>Endocrine Disorders</td>
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<tr>
<td>6.25%</td>
<td>Older Adult (Caregiving)</td>
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VII. Methods of Evaluation

- Homework and Other Assignments: 10%
- Quiz: 2%
- Exams: 59%
- Final: 29%

A = 92%
B = 83%
C = 75%
D = 70%
F = Below 70%

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 a short answer question.
3. Meet the theoretical and clinical course objectives.