Fall 9-1-2006

**NUR 155.01: Meeting Adult Physiological Needs I**

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University of Montana  
College of Technology Practical Nursing Program  
NUR 155  
Spring 2006

Course:  NUR 155 Meeting Adult Physiological Needs

Date Revised:  September 11, 2006

Instructor:  
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Office Hours:  Thursday 3PM-4PM & by appointment

Semester Credits:  3

Co-requisite Courses:  NUR 151, NUR 154, & NUR 195-01 (152)

Course Design:  On-Line Distance Learning  
Clinical Lab as scheduled

Course Description:  
The focus of this lecture course is the application of nursing theories, principles, and skills to meet the basic human needs of adult clients experiencing more complex, recurring actual or potential health deviations.

The nursing process provides the framework which enables students to synthesize aspects of communication, ethical/legal issues, cultural diversity, and optimal wellness. Supervised care of the adult client is provided during the clinical experience in the acute care setting. Emphasis is placed on the use of nursing assessment, the nursing process and communication skills to enable the student to assist in identifying needs, planning, providing, and evaluating care for the adult client experiencing more complex health deviations.

Course Objectives:  At the completion of NUR 155, the student will:

1. Spell and define medical terminology accurately for each unit in the class.
2. Demonstrate on written examinations an understanding of the nursing assessments to assist in planning care to meet human needs of the adult client.
3. Demonstrate understanding of the nursing process by its application to direct nursing care of adult clients experiencing recurring medical/surgical health deviations.

4. Demonstrate on written examinations theoretical knowledge of the recurring medical/surgical health deviations in adult clients.

5. Describe, on written examinations, ethical and legal implications in the planning, implementing and evaluating of nursing care.

6. Describe, on written examinations, human development and cultural diversity as effectors of basic human needs.

7. Identify, on written examinations, teaching/learning needs of adult clients with common, recurring medical/surgical health deviations.

8. Practice in a professional manner, utilizing the criteria on the evaluation form for the course as a guide.

9. Demonstrate effective verbal and written communication and active listening skills during interactions with clients, families, and health team members, as evidenced by instructor and/or health care staff observations.

10. Demonstrate skill in applying the nursing process to care of adult clients with recurring health deviations, as evidenced by implementation of planned nursing interventions.

11. Demonstrate professional accountability and reliability as evidenced by preparation for clinical, requesting assistance when indicated and reporting errors to the clinical instructor and/or health care staff.

12. Demonstrate ethical behavior as evidenced by implementing care for clients regardless of age, values, development or sociocultural background.

13. Safely and accurately administer medication with supervision of clinical instructor or health care staff upon approval of instructor.

14. Document and report care given, maintaining client confidentiality, on agency forms, with instructor or staff approval.

15. Utilize accepted principles/practices and assistance as required to perform technical nursing procedures.

16. Utilize time and resources effectively in managing his/her assignment, as evidenced by completion of care within the allotted time.

17. Write nursing care plans for assigned clients, utilizing defining characteristics, approved NANDA format and diagnoses, client centered goals, nursing interventions and evaluation criteria as presented in NUR 152.

**Methods of Instruction:**

1. On-Line instruction
2. Computer simulations and computer-assisted-instruction
3. Study guides
4. Group discussion questions on-line
5. Audio-visual materials
6. Clinical instruction
7. Pre- and/or post-conferences
8. Observation and practice in clinical setting
9. Practice individualized physical and emotional assessment in clinical setting
10. Simulated nursing care experiences and feedback demonstrations by students
11. Written nursing care plans on one patient after each clinical week
12. Selected reference reading
Methods of Evaluation:

Weekly Mini-Exams – 25% (5 points (pts) per week)
Final Exam – 10% (100 pts total)
Mid-term - 10% (50 pts total)
Journal Topics – 10% (2 pts per week)
Case Studies – 10% (Includes a pathophysiology paper©)(case studies 10pts each, patho-paper 50 pts)
Presentation – 10% (100pts)
On-Line Discussions- 10% (10pt per week)
Campus Clinical Lab Tests - 15% (based on weekly objectives in clinical)

Both the theory and clinical component must be passed in order to pass NUR 155. Failure of the theory component will result in the earned letter grade. Failure of clinical will result in a failing grade for NUR 155 ©

ATTENDANCE POLICY: Regular online attendance is expected. Online attendance is asynchronous and is monitored by the instructor. Attendance for the online course is includes a minimum of one substantive five days a week. Substantive postings can include but are not limited to responding to discussion questions, posting case studies, and/or taking online quizzes. Lack of attendance will adversely affect final grades. Students will be evaluated weekly through a points system. Points will be given weekly based on attendance to the required assignments/posting for the online component.

Students must attend every agency clinical experience. In the case of an unavoidable absence on an assigned day, the student must call the assigned unit at least 30 minutes prior to the assigned arrival time. Students are allowed one personal leave day for clinical for this course. Tardiness is defined as up to 30 minutes late for an assignment. Chronic tardiness past two occurrences will be considered an absence. A student contract will be formulated with a student with attendance and punctuality problems. Personal appointments made during scheduled clinical hours will be considered as absences.

Disability Statement: Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Please speak with me after class or in my office. Please be prepared to provide a letter from your DSS Coordinator. For students planning to request testing accommodations, be sure to bring the form to me in advance of the two-day deadline for scheduling in the ASC.

Tabers (2006). *Cyclopedia Medical Dictionary*

Course Outline: Week 1 begins September 25, 2006

1. Week 1: Introduction to Med-Surg Nursing
2. Week 2-3: Musculoskeletal System Disorders
3. Week 4: Beginning Concepts in GI Care
4. Week 5: Continuing Concepts in GI Care
5. Week 6-7: GU Disorders
6. Week 8: Concepts in Integumentary Care
7. Week 9-10: Concepts in Endocrine Care
Week 1: Introduction to Medical-Surgical Nursing

Central Objective: Identify types of anesthesia and describe the process for preparing patient for surgical procedures.

Student Objectives:
1. Describe the difference between regional and general anesthesia.
2. Describe risks involved with anesthesia and surgical procedures.
3. Discuss dangers of aspiration during surgical procedures.
4. Identify information to include when preparing a patient for surgery.
5. Discuss nursing interventions to prevent or treat postoperative complications.

Week 2-3: Musculoskeletal Disorders

Central Objective: Utilizing the nursing process and the appropriate diagnoses, examine the needs of the client with a musculoskeletal disorder or injury.

Student Objectives:
A. Describe the pathophysiology, treatment and nursing implications for the following musculoskeletal disorders:
   1. Rheumatoid arthritis
   2. Osteoarthritis
   3. Gout
   4. Osteoporosis
   5. Carpal tunnel syndrome
   6. Progressive systemic sclerosis
   7. Bursitis

B. Describe the following diagnostic studies and nursing interventions for each:
   1. Radiographs, CAT scan, and MRI
   2. Arthroscopy
   3. Arthrocentesis (joint aspiration)
   4. Arthrography
   5. Bone scan
   6. Common laboratory tests for M/S disease
   7. Doppler ultrasound
   8. Bone biopsy
   9. Describe & demonstrate correct application & use of:
      • Traction
      • Open reduction; closed reduction
      • Internal fixation; external fixation
      • Casts
      • Crutches
      • Slings

C. Regarding connective tissue disorders, the student will:
   1. Define connective tissue
   2. Describe the function of connective tissue
   3. Describe the characteristics and prevalence of connective tissue diseases
   4. Identify the data to be collected in the nursing assessment of a patient with a connective tissue disorder
   5. Assist in developing a nursing care plan for a patient whose life has been affected by a connective tissue disease
D. Regarding fractures, the student will:
   1. Identify the types of fractures
   2. Describe the five stages of the healing process
   3. Discuss the major complications of fractures, their signs and symptoms, and their management
   4. Discuss the nursing care of a patient with a fracture

E. Regarding amputations, the student will:
   1. Identify the clinical indications for amputations
   2. Describe the different types of amputations
   3. Discuss the medical and surgical management of the amputation patient.
   4. Identify appropriate nursing interventions during the pre-operative and postoperative phases of care
   5. Assist in developing a nursing care plan for the amputation patient.

**Learning Objectives:**

**Review** A & P of M/S System  
**Lab:** Skills: Body mechanics; ROM/activity, positions & positioning, casting, traction, assistive devices
POST-OP HIP SURGERY

DO NOT!

Stand with toes turned in.
Bend WAY over
Cross legs

DO NOT!

Pull blankets up like this
Lie without pillow between legs

DO NOT!

Get up like this
Sit low on toilet or chair
Week 4-5: Concepts in GI Care

Central Objective: Utilizing the nursing process and the appropriate nursing diagnosis, examine the needs of the client with compromised digestive function.

Student Objectives:

A. Examine:
   1. Basic clinical manifestations, treatment and nursing implications for common disorders of the gastrointestinal tract and accessory organs:
      a. Disorders affecting ingestion
         (1) Anorexia
         (2) Stomatitis
         (3) Oral cancer
      b. Disorders affecting digestion and absorption
         (1) Nausea and vomiting
         (2) Hiatal hernia
         (3) Gastroesophageal reflux disease (GERD)
         (4) Gastritis
         (5) Peptic ulcer
         (6) Stomach cancer
         (7) Obesity
      c. Disorders affecting absorption and elimination
         (1) Diarrhea
         (2) Constipation
         (3) Intestinal obstruction
         (4) Appendicitis
         (5) Peritonitis
         (6) Abdominal hernia
         (7) Inflammatory bowel disease
         (8) Diverticular disease
         (9) Cancer of the colon
      d. Disorders of the liver
         (1) Hepatitis
         (2) Cirrhosis
         (3) Cancer of the liver
      e. Disorders of the gall bladder
         (1) Cholecystitis and choledolithiasis
      f. Disorders of the pancreas
         (1) Pancreatitis
         (2) Cancer of the pancreas

B. Describe the following diagnostic studies and the standard nursing implications for each:
   1. Radiological exams, including: upper GI, barium swallow, barium enema, cholangiography, liver scan, CT, MRI, ultrasonography
   2. Endoscopic exams including: Esophagoscopy, endoscopic retrograde cholangiography, endoscopic retrograde cholangio-pancreatography (ERCP), colonoscopy, esophagogastro-duodenoscopy, proctoscopy and sigmoidoscopy gastroscopy
3. Laboratory tests including: Gastric analysis, stool occult blood, fecal fat, stool ova and parasites, serum bilirubin, serum enzymes (AST, ALT, LDH), prothrombin time and INR, serum amylase, urine amylase.

4. Describe the following therapeutic regimens and the basic nursing implications for:
5. Gastrointestinal intubation and intestinal decompression
6. Surgery: gastric, colon and gall bladder
7. Nutritional replacement and modifications to include TPN, gastrostomy and nasogastric feedings
8. Fecal diversions

C. The student will be able to:
1. List the indications for GI ostomy surgery
2. Describe the nursing interventions to prepare the patient for ostomy surgery.
3. Explain the types of procedures used for fecal diversion.
4. Assist in developing a nursing care plan for the patient with each of the following types of fecal diversions: ileostomy, continent ileostomy, ileoanal reservoir, and colostomy.
5. List the data to be included in the nursing assessment of the patient with a digestive disorder; the patient with liver, gall bladder or pancreatic disease.
6. Describe the care of the patient who has an esophageal balloon tube in place.
7. Assist in developing a nursing care plan for patient with digestive, liver, gall bladder or pancreatic dysfunction.

Learning Objectives:

Review:
Anatomy and Physiology of the Digestive Tract

Lab: Skills: enteral feedings, ostomy care, appropriate lab studies/interpretation, TPN considerations
Central Objective: Utilizing the nursing process and the appropriate nursing diagnosis, examine the needs of the individual with compromised GU function – and fluid & electrolyte & acid-base imbalances related to client well-being.

Student Objectives:

A. The student will be able to:
   1. Define key terms
   2. Recall A&P of the GU system
   3. Relate diagnostic test results to urinary disorders and client implications
   4. Discuss common disturbances in fluid balance, including causes, signs and symptoms, treatment and nursing care.
   5. Describe the major functions of the following electrolytes: sodium, potassium, magnesium, calcium and chloride.
   6. Discuss common disturbances in electrolyte balance including causes, signs and symptoms, treatment and nursing care.
   7. List data to be collected in the assessment of fluid and electrolyte status and in fluid or electrolyte imbalances.
   8. Explain why the elderly are at increased risk for fluid and electrolyte imbalances, and age appropriate assessment techniques.
   9. List the four types of acid-base imbalance.
  10. Identify the major causes and signs and symptoms of each acid-base imbalance.
  11. Apply knowledge of peritoneal dialysis, hemodialysis, and kidney transplant
  12. List the types of shock.
  13. Explain the first aid emergency treatment of shock outside the medical facility.
  14. Identify general medical and nursing interventions for each type of shock.
  15. Explain the rationale for medical/surgical treatment of shock.
  16. Compare & contrast acute vs. chronic renal failure

B. Describe the diagnostic studies; including purpose, procedure and normal values such as:
   1. Urine pH
   2. Urine concentration test (specify gravity)
   3. Urine Osmolality
   4. Creatinine clearance test – urine
   5. Urine sodium and potassium
   6. Arterial blood gas values

C. Utilize the nursing process (assessment, diagnosis, plan, implementation, evaluation) for the client experiencing fluid volume imbalances:
   1. Fluid volume, deficient
      a. Related to inadequate fluid intake, excessive fluid loss, high blood glucose, inadequate ADH production or effect, high fever
   2. Acute confusion
      a. Related to decreased cerebral tissue perfusion
   3. Constipation

Lab: IVs, suctions, drains, recall I&O, lab tests, urostomies, recall foleys
Week 8: Integumentary Disorders

Central Objective: Utilizing the nursing process and the appropriate nursing diagnosis, examine the needs of the client having compromised skin integrity.

Student Objectives:
A. Examine:
   1. Anatomy and Physiology of skin
   2. Components of the nursing assessment of the skin
   3. Key terms used in describing the skin and skin lesions

B. Describe the following diagnostic studies and the standard nursing interventions for:
   1. Skin biopsy; shave, punch and excisional
   2. Potassium hydroxide (KOH)
   3. Tzanck’s smear
   4. Wood light inspection
   5. Patch test for allergy

C. Describe the following therapeutic regimens and the basic nursing implications for:
   1. Dressings
   2. Drug therapy: oral and topical
   3. Wet compresses and soaks
   4. Phototherapy
   5. Negative pressure wound therapy
   6. Burn therapy, including debridement and skin grafting
   7. Acne therapy
   8. Plastic surgery; aesthetic and reconstructive

D. Describe the basic use, classification, and nursing implications for the following medications:
   1. Keratolytics
   2. Topical antibacterials antivirals and antifungals
   3. Topical antiinflammatories
   4. Vitamin A derivatives
   5. Pediculicides and scabicides
   6. Antipsoriatics

E. Examine:
   1. The basic clinical manifestations, pathophysiology, management and nursing care of the following integumentary disorders
      a. Pruritus
      b. Atopic dermatitis (eczema)
      c. Seborrheic dermatitis
      d. Psoriasis
      e. Intertrigo
      f. Fungal infections
      g. Acne
      h. Herpes Simplex
      i. Herpex Zoster
      j. Infestations (scabies, lice)
      k. Skin cancer
      l. Burns
      m. Pressure ulcers

F. At completion of this unit the student will:
1. Describe common problems associated with immobility.
2. Discuss the impact of exercise and positioning on preventing complications related to immobility.
3. Identify the risk factors for pressure ulcers.
4. Describe the stages of pressure ulcers.
5. Describe methods of preventing and treating pressure ulcers.
6. Discuss the effects of immobility on respiratory status, nutrition and elimination.
7. Wound complications - factors that impair healing.

Review: Anatomy and Physiology of Skin

Lab: wound care, wound vacs, suture removal, staple removal
Week 9-10: Endocrine Disorders

Central Objective: Utilizing the nursing process and the appropriate nursing diagnosis, examine the needs of the individual with compromised endocrine function.

Student Objectives:

1. Examine:
   The basic clinical manifestations, pathophysiology, nursing implications and management of the following endocrine disorders.
   a. Hyperthyroidism and Grave’s disease
   b. Hypothyroidism and Myxedema
   c. Hyperparathyroidism
   d. Hypoparathyroidism
   e. Addison’s Disease
   f. Cushing’s Syndrome and Cushing’s disease
   g. Diabetes mellitus
   h. Hypoglycemia
   i. Hyperglycemia
   j. Diabetes Insipidus
   k. Syndrome of Inappropriate Antidiuretic Hormone (SIADH)
   l. Goiter
   m. Acromegaly
   n. Gigantism
   o. Cretinism
   p. Hypopituitarism
   q. Pituitary tumors

2. Describe the following diagnostic studies and the standard nursing interventions for laboratory Studies:
   - T3, T4, TSH and TRH
   - Pituitary hormone level
   - Fasting blood sugars
   - Glucose tolerance test
   - Two hour postprandial glucose level
   - Hypertonic saline test
   - Fluid deprivation test
   - Radioactive iodine uptake
   - Thyroid scan
   - CT scan – cerebral
   - Cerebral angiogram

3. Describe the following therapeutic regimens and the basic pre and postoperative nursing implications for:
   a. Thyroidectomy
   b. Adrenalectomy

4. Describe the basic use, classification, and nursing implications for the following medications:
   - Thyroid hormone replacement drugs
   - Antithyroid drugs
   - Calcium salts
   - Bisphosphonates
   - Glucocorticoids
• Mineralcorticoids
• ADH Hormone preparations
• Pituitary hormone suppressants
• Antidiabetic medications (Oral Hypoglycemic or Antihyperglycemic)
• Insulin

5. - Identify nursing assessment data relevant to the function of:
   a. The adrenal glands
   b. The pituitary glands
   c. The thyroid glands
   d. The parathyroid glands

6. - Describe:
   • The role of insulin in the body.
   • Significant differences in the two major types of diabetes mellitus.
   • Laboratory tests used in the diagnosis of diabetes mellitus.
   • Preparation needed to teach a newly diagnosed diabetic patient about the disease, treatment, and self-care.
   • Early signs and symptoms that might indicate ketoacidosis and describe appropriate nursing care.
   • Signs and symptoms of an insulin reaction (hypoglycemia) and describe appropriate nursing intervention.
   • The acute and long-term complications and results of poorly controlled diabetes mellitus.
   • Signs and symptoms of hypoglycemia and diabetes mellitus.
   • The pathophysiology of diabetes mellitus and hypoglycemia
   • Treatment of diabetes mellitus and hypoglycemia.

7. - Assist in the development of nursing care plans for patients with disorders of the adrenal, pituitary, thyroid and parathyroid glands.

**Review:** Anatomy and Physiology of the Endocrine System

**Lab:** review insulin, diet/ADA, neurological assessment, assessment of head & neck, lab values,
WRITTEN WORK

1. **Pathophysiology** – assignment is to be done on standard size paper and typed on one side. **APA format is REQUIRED.** The pathophysiology paper will require you to discuss:
   a. a brief client history
   b. signs and symptoms of disease/condition
   c. pathophysiology of disease/condition
   d. usual treatment/patient treatment
   e. expected outcomes
   f. nursing implications
   g. reference information - APA

The pathophysiology paper is due the last week of class. Work is to be handed in on the assigned date. No work will be accepted late without prior permission from the instructor. Late assignments will be penalized. If assignments (either patho paper or care plans) are late three times in one semester, the student may fail the course based on instructor discretion.

2. **Care Plan** – A weekly care plan will be turned in for each week to your clinical instructor case study. Papers are to be turned in on Monday of the following week. Plans submitted should meet the format discussed in NUR 155 &/or 195. The care plan should include:
   a. clinical prep form
   b. medication sheets
   c. nursing care plan
   d. clinical objectives form

Written work that is turned in to clinical instructors in the hospital settings will be graded on a Pass/Fail basis. If a student receives a grade of “Fail” on a written assignment, the work will be returned to the student, completed, and returned to the instructor within one week. Unsatisfactory written work will result in completion of a Student Contract. Unsatisfactory completion of a Student Contract by the scheduled completion date may result in failure of the course.

3. **On-line Discussion Postings** – Discussion questions will be posted weekly. The purpose of discussion areas is to create a forum for idea exchange; there is not typically a “right” or “wrong” response as long as there is data and thought behind it. Students are required to respond to the discussion questions with a substantial, researched (when applicable) response to the question. Unacceptable responses include but are not limited to the following examples: “yeah, I agree”, “you are so right”, “great thought”, or “I do not agree”. In addition to posting a response to the question, students must also post a thoughtful, substantial posting to at least one other student’s response to the discussion topic. Unacceptable responses include the as above.

4. **Journaling** – Journal entries will be submitted in a typed online paper that will not be shared with the class. Journal entries are to be one typed page (double-space) in length (minimally). Journal topics will be posted throughout the course allowing the students the opportunity to reflect on their learning experiences. There is not a right or wrong answer, students will be graded on thought content and timeliness in submissions (get them turned in on time). This **DOES NOT** have to be in APA format.

f/w/spring 2004/sec1
5. Mini-Quizzes, Mid-term and Final Exams – Weekly multiple choice or short answer mini-quizzes will consist of terminology, theory, and systems functions. The mid-term will cover muscular-skeletal, and Gastrointestinal Disorders and will be given during Week 6 (Oct 30-Nov 5). Final will cover all systems covered throughout the course with 70% of the exam dedicated to the last half of the semester (genitourinary disorders, integumentary disorders, and endocrine). Mid-term and final exams will consist of multiple choice and/or short answer questions. Quizzes, mid-term and final may be timed exams on Blackboard.