NPN 111 Pharmacology 3 Credits

Instructors:
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Office Hours posted on office door and extra time by appointment only

Hours: Lecture/Lab (Saturday 9am-7pm) Clinical (Friday 4pm-10pm)

Description:
Introduces dosage calculations and medication administration of commonly used medications. Includes an overview of common drugs, drug classifications, and effects administered in the following modes: oral, sublingual, rectal, topical, intradermal, intramuscular, subcutaneous, intravenous including IV fluid administration skills. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy.

Components: Lecture: 1 credit (15 contact hours). Lab/Clinical: 2 credits (90 contact hours).

Pre-requisites: Current CPR card for Health Care Providers; Current certification must be maintained throughout the program. Successful completion of a Medicaid Nurse Aide equivalent course within the past three (3) years or proof of active status on the Medicaid Nurse Aide Registry. Admission into the Practical Nursing Program.

Pre-requisite or Co-requisite: (BIO 135 or BIO 139) and (AHS 115 or CLA 131 or AHS 120 or OST 103) and (AHS 100 or PSY 223). Minimum “C” grade.

Implementation: Fall 2008

Competencies/Student Outcomes:
Upon completion of this course, the student can:
1. Apply basic fundamental principles of pharmacology to medication management.
2. Apply pharmacological implications to common therapeutic and variety of health diagnostic procedures.
3. Correctly initiate and maintain intravenous therapy.
4. Correctly convert units of measurement related to medication dosage calculations.
5. Discuss the role of the practical nurse in the administration of blood and blood products.
6. Correctly use medical terminology related to medication administration.
7. Perform medication dosage calculations correctly.
8. Identify principles of measurement and conversion related to medications.
9. Discuss pharmacokinetics related to absorption, metabolism, excretion of drugs and cultural variances.
10. Prepare and administer oral, topical, rectal and parenteral medications.
11. Describe therapeutic and diagnostic procedures that utilize pharmacological media.
12. Discuss the importance of life-long learning in maintaining professional competence.
13. Use appropriate therapeutic communication skills when administering medications.
14. Practice in a legal and ethical manner as expected for the practical nurse when administering medications.
15. Identify legal and ethical responsibilities of the practical nurse when administering medications.

Outline:
I. Calculations of Drug Dosage
   A. Conversion interchanging systems of measurement
   B. Oral medication calculations
   C. Pediatric calculations
   D. Intravenous calculations
II. General Principles of Pharmacology
   A. Abbreviations and symbols
   B. Definition of terms
   C. Sources of drugs
   D. Drug forms
   E. Drug references
   F. Laws regulating drug standards
   G. Legal & ethical considerations
III. Principles of Drug Action/Interaction
   A. Drug action
      1. Modes of action
      2. Types of effects
      3. Types of reactions
      4. Tolerance
   B. Pharmacokinetics
   C. Variables influencing drug action
      1. Cultural and psychological factors
      2. Effects and response to functional health patterns
      3. Client compliance
   D. Adverse Drug Reaction
      1. Toxic effects of drugs
      2. Sensitivities
      3. Anaphylaxis
IV. Drug Administration
   A. Principles of drug administration
   B. Routes of drug administration
C. Process of administering medications
D. Common therapeutic and diagnostic procedures with pharmacological implications
E. Nurse’s role and responsibilities in administration of medications according to 201KAR20:490

1. Correctness of medication order
2. Assessment of client for drug effectiveness and possible drug interactions
3. Ensuring correct dosage/route/client
4. Proper administration technique
5. Client teaching R/T medications
6. Cultural and psychosocial implications
7. Reporting adverse effects

F. Nurse’s role in initiating, maintaining, and discontinuing IV therapy
   1. Blood and blood products
   2. TPN
   3. Central venous lines

G. Classification of drugs and commonly represented drugs
   1. Drugs used to maintain oxygenation
   2. Drugs used to maintain metabolism
   3. Drugs used to maintain fluid balance
   4. Drugs used to maintain activity and rest
   5. Drugs used to maintain elimination
   6. Drugs used to maintain psychosocial well-being
   7. Drugs used to maintain cellular reproduction and integrity of tissue
   8. Drugs used to maintain perception and coordination

Experiments/Activities:
As students are taught concepts and skills, they perform them in the clinical area.
1. Perform conversions with accuracy interchanging apothecary, metric, and household systems.
2. Perform steps in dosage calculations of oral and parenteral medications.
3. Perform steps in pediatric dosage calculations.
4. Perform IV therapy calculations.
5. Practice interpreting abbreviations and symbols of medication orders.
6. Discuss the significance of Controlled Substance Act of 1970.
7. Discuss the legal/ethical nursing responsibilities related to medications.
8. Discuss, in small groups, the nurse’s role in drug action/interaction.
9. List the “rights of drug administration.”
10. List causes of common medication errors.
11. Practice various routes of administering drugs in simulated situations and in the clinical facility.
12. Practice calculating selected drug dosages.
13. Perform medication calculations correctly.
14. Prepare and administer enteral, parenteral, and percutaneous medication.
15. Identify actions and adverse reactions of commonly used medications with classifications.
17. Initiate peripheral IV therapy/continuous and intermittent
18. Transcribe a physician’s order for IV therapy.
19. Discuss types of infusion pumps/controllers.
21. Convert a continuous infusion to an intermittent infusion.
22. Document all psychomotor skills appropriately.
23. Discuss local and systemic complications of IV therapy including preventative measures and nursing interventions if complications should occur.
25. Demonstrate administration of premixed piggybacks.
27. Demonstrate heparin/saline flush.
29. Perform appropriate psychomotor skills to selected individuals with alterations of body fluids.
30. Provide care for individuals experiencing alterations in body fluids utilizing the nursing process.
31. Observe in a hemodialysis unit.
32. Discontinue IV/heploc/saline loc.
33. Initiate and monitor patient receiving blood transfusion.
34. Implement plan of care for patient receiving total parenteral nutrition.
35. Discuss pharmacokinetics relating to absorption, metabolism, and excretion.
36. Perform IV therapy according to 201 KAR 20:490 regarding the role of the practical nurse in care of central lines.
37. Review the KARs regarding the role of the PN in IV therapy practice.

Web Enhanced Course Guidelines
This course is web enhanced. All students will be required to access the course website through http://www.elearning.kctcs.edu. The course website will be utilized for lecture content, assignments, and posting of grades. All students enrolled in this course have been issued a Madisonville Community College email address. Students are encouraged to check their email and the course website frequently for updated information. To access your online courses or any Kentucky Community and Technical College (KCTCS) web enhanced course through the Blackboard 7.1 website, you will need to use a special, unique username and password. (If you have already received and changed your password, continue to use your changed information to access your account.) You may access your course approximately two days prior to the course’s advertised starting date.

To access your course, please follow these instructions:
Point your browser to http://www.elearning.kctcs.edu/webapps/portal/frameset.jsp.
In the space provided for “Username,” enter your Peoplesoft or Webmail login username and password.
3. Click on the “Login” button.
4. Click the link to your course to get started.

If you have difficulty logging in or if you have any further questions, please contact the Blackboard 7.1 Help desk. You may call them at 1-866-606-1725 for help with questions about
It is the student’s responsibility to view all on-line material, including lectures, assignments, videos, and discussion boards located on Blackboard.

Attendance and Late/Make-up course work
Attendance during your educational program is important to your success. Attendance and participation in all learning experiences is essential for achieving an appropriate knowledge base and is necessary for success in the program. Attendance is expected in lectures, campus labs, clinical experiences, and all other assigned activities. Nursing employers are especially desirous of an employee who has demonstrated his/her reliability by good school attendance. The following rules apply to LPN program attendance:

An absence is defined as coming to class or leaving class early by more than 15 minutes. Two episodes of tardiness or leaving early (less than 15 minutes) will be counted as an absence.

Lecture/Campus Lab Absence Policy:
Attendance will be taken in all lecture classes. Students may not sign in for other students. It is the student’s responsibility to sign in, failure to do so will be counted as an absence.
If you are absent for any reason, you MUST call in prior to 8:00 am. If the absence occurs on a class day, the student must notify the nursing instructor/instructors office/s prior to 8:00 am. The telephone number of the school is (270) 824-7552. All quizzes and tests will be graded as a 0 for a NO CALL/NO SHOW DAY.

More than 2 absences from theory or math lab classes will result in a two-point deduction in the final course grade for each subsequent absence. Instructors will close the door at the beginning of a class period and students will not be permitted to enter the classroom until the next break.
If an exam is scheduled on the day you return to class you are expected to take the exam on that day. If an exam was given on the day of your absence, it is to be made up on your FIRST day back at school or at the convenience of your instructor. FIVE POINTS will be automatically deducted from the score of any make-up exam. It is the student’s responsibility to contact the instructor to schedule make-up exams. Exams will cover the same material other students were tested over, but may not be the same exam. **IF AN EXAM OR QUIZ HAS ALREADY STARTED, THE STUDENT WILL NOT BE ALLOWED TO ENTER THE ROOM AND A MAKE-UP EXAM OR QUIZ WILL BE SCHEDULED.**

Course Requirements/Attendance:
Students must complete this course with a minimum grade of 76% (letter grade C). Students are expected to attend all scheduled classes, read all assigned lessons, and complete all written assignments. If you are absent for any reason, you are required to call in prior to the start of the class day. Absences in excess of 2 class periods will result in a two point deduction in the final course grade for each subsequent absence.
Grades:
5 Exams 80%  
Math Tests Given in Lab and Assignments 20%

ADA Statement:
Students with documented disabilities that require individualized accommodations should schedule a conference with the Disability Resources Coordinator, Valerie Wolfe at their earliest convenience (Hatley Building Room 127 or LRC Room 112). Telephone number is 824-1670.

Evaluation of Writing:
All writing assignments will be evaluated for correct use of Standard English. Errors in English usage will result in penalty points and require the rewriting of assignments that do not meet acceptable standards.

Withdrawal Policy:
A student withdrawing from school without following proper withdrawal procedures will not receive a grade report or school transcript and may be denied re-entry. If the student returns with a verified excused absence, he/she may be readmitted and permitted to make up missed work. Failure to attend class does not constitute official withdrawal. Please schedule a conference with the Program Chair and your instructor prior to withdrawing from class.

KCTCS Student Code of Conduct:
Students may locate information regarding academic rights, academic offenses and the right to appeal infringements upon those rights at: [http://www.kctcs.edu/student/code.htm](http://www.kctcs.edu/student/code.htm)

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<th>Dates</th>
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<td>January 16th</td>
<td>Cover Syllabus</td>
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<td>Unit 1: Chapters 1, 2, 3, 4, 5, 7</td>
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