Instructor: Tracey A. Hobbs, MSN, RNC-OB

Contact Information:
E-Mail: thobbs@dcccd.edu
Office location: X1098
Office phone: 972-860-4661
Office Hours: Posted and by appointment

Class Meeting Times: Section 2001 0900-1300
Exams given at the beginning of class will begin promptly when class starts. Students not in attendance will not be allowed to make up the exam.
February 7, February 14, February 21, & February 28th

Location: X1004

Division Information: Allied Health; Nursing
Secretary: Ann Cortez
972-860-4754

Course Level: Introductory

Course Description: Read, interpret, and solve dosage calculation problems. This course lends itself to either a blocked or integrated approach. This course provides the basis for reading physician orders and solving dosage problems for a variety of client populations. Medication conversions from one system to another and from one unit to another within the same system are performed. The role of the nurse in medication administration is studied with an emphasis on the calculation of accurate dosages. Intravenous flow rates, medications given via infusion pumps, and pediatric medications are calculated. This course must be completed with a grade of “C” or better by the end of the first semester of the nursing curriculum in order for the student to progress to the second semester. It can be taken prior to admission to the nursing program.

End-of Course Outcomes: Solve dosage calculation problems; convert between various measurement systems.

Cross Reference(s): RNSG 1008: Dosage Calculations for Nursing

CIP Code Description: 51.3801 (Registered Nursing/Registered Nurse)

Year: 2012
Core Curriculum Intellectual Competencies (CCIC)

RNSG 1462 satisfies the following Core Curriculum Intellectual Competencies defined by the Texas Higher Education Coordinating Board.

1. **READING:** Reading at the college level means the ability to analyze and interpret a variety of printed materials—books, articles and documents. A core curriculum should offer students the opportunity to master both general methods of analyzing printed materials and specific methods for analyzing the subject matter of individual disciplines.

2. **WRITING:** Competency in writing is the ability to produce clear, correct and coherent prose adapted to purpose, occasion, and audience. Although correct grammar, spelling and punctuation are each a sine qua non in any composition, they do not automatically ensure that the composition itself makes sense or that the writer has much of anything to say. Students need to be familiar with the writing process including how to discover a topic and how to develop and organize it, how to phrase it effectively for their audience. These abilities can be acquired only through practice and reflection.

3. **SPEAKING:** Competence in speaking is the ability to communicate orally in clear, coherent and persuasive language appropriate to purpose, occasion and audience. Developing this competency includes acquiring poise and developing control of the language through experience in making presentations to small groups, to large groups and through the media.

4. **LISTENING:** Listening at the college level means the ability to analyze and interpret various forms of spoken communication.

5. **CRITICAL THINKING:** Critical thinking embraces methods of applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies. Problem solving is one of the applications of critical thinking, used to address an identified task.

6. **COMPUTER LITERACY:** Computer Literacy at the college level means the ability to use computer-based technology in communicating, solving problems and acquiring information. Core-educated students should have an understanding of the limits, problems and possibilities associated with the use of technology and should have the tools necessary to evaluate and learn new technologies as they become available.

**Exemplary Educational Objectives (EEO) in Fundamentals of Nursing Practice,**
RNSG 1413, as part of the Core Curriculum, satisfies the following Exemplary Educational Objectives in nursing set forth by the Texas Higher Education Coordinating Board.

• pass the National Council of Licensure Examination for Registered Nurses (NCLEX-RN).
• utilize critical thinking to provide competent nursing care across the life span utilizing problem solving methods.
• demonstrate caring behaviors and a holistic nursing approach.
• communicate therapeutically with clients, families, peers, and other professionals.
• integrate the teaching-learning process to restore health and/or to provide end of life care for individuals and their families.
• communicate and collaborate effectively to resolve conflict in the health care environment.
• delegate appropriate nursing care to other health care workers.
• manage material and human resources in a cost effective manner when caring for individuals and their families.
• practice within the ethical and legal framework of professional nursing.
• maintain accountability/responsibility for professional nursing values, behaviors, and growth.
• integrate the body of nursing knowledge to provide safe care.
• continue nursing education at a four year institution.

**Required Materials:**

**Prerequisites and Co-requisites:**
None

**Learning Outcomes:**
The student will be able to: convert from one system of measurement to another; calculate drug dosages using ratio and proportion; calculate drug dosages for infants and children; determine correct drip rates for intravenous infusions; and calculate medications used in the intensive care settings.

**Teaching/Learning Activities:**
Lecture
Class participation
Math study guides/practice tests

**Grading:**
There are five tests. The first test is a general math and abbreviation test that will be administered at the beginning of the first day of class. The final grade will be determined by averaging five test grades (one general math and abbreviation test and four dosage tests). There are **NO** make-ups or time extensions. The grading scale is as follows:

- A = 94-100
- B = 87-94
- C = 80-86
- D = 70-79
- F = 69 and below

This course must be completed with a grade of “C” or better by the end of the first semester of the nursing curriculum in order for the student to progress to the second semester. It can be taken prior to admission to the nursing program.

<table>
<thead>
<tr>
<th>Test</th>
<th>Percentage</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Math</td>
<td>20%</td>
<td>Administered at beginning of first class (2/7)</td>
</tr>
<tr>
<td>Dosage Exam 1</td>
<td>20%</td>
<td>Administered after first class (2/7)</td>
</tr>
<tr>
<td>Dosage Exam 2</td>
<td>20%</td>
<td>Administered after second class (2/14)</td>
</tr>
<tr>
<td>Dosage Exam 3</td>
<td>20%</td>
<td>Administered after third class (2/21)</td>
</tr>
<tr>
<td>Dosage Exam 4</td>
<td>20%</td>
<td>Administered on fourth class day (2/28)</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
All Dosage exams will be comprehensive; there will be NO make-up exams.

** Each test could cover previous material. Every test answer must be in the correct format and in the correct units to be counted correct.

Cell phones and pagers are not allowed in the classroom without the permission of the instructor. All electronic devices must be placed on vibrate. No computers will be allowed in the classroom. Only simple nonprogrammable calculators may be used during tests. Students may not use their phone in lieu of a calculator.

**Course Objectives:**
1) Communicate the six rights of safe medication administration. (Provider of Care)
2) Use the ratio/proportion method to calculate drug dosages that are commonly given by the nurse. (Provider of Care)
3) Convert a medication from one system of measurement to another. (Provider of Care)
4) Calculate drug dosages that require conversions from unit to another within the same system. (Provider of Care)
5) Reconstitute powdered drugs that the nurse will give parenterally. (Provider of Care)
6) Calculate drug dosages for infants and children and describe additional assessments by the nurse. (Provider of Care)
7) Determine the drip rate for intravenous medication that is regulated by the nurse and by an infusion pump. (Provider of Care)
8) Calculate drug dosages for Heparin. (Provider of Care)
9) Measure insulin correctly and describe the syringe that a nurse would use. (Provider of Care)

**Content Outline:**

I. Medication administration
   A. Medication Abbreviations
   B. Drug labels
   C. Six rights
   D. Medication administration record
   E. Charting of medication

II. Ratio proportion

III. Systems of measurement
   A. Apothecary
   B. Metric
   C. Household

IV. Conversion from one system to another

V. Reconstitution

VI. Intravenous calculations

VII. Heparin calculations

VIII. Insulin calculations

IX. Pediatric calculations

**Institutional Policies:**

**ADA Statement:** If you are a student with a disability and/or special needs who requires accommodations, please contact the college Disability Services Office.
Religious Holidays: Absences for observance of a religious holy day are excused. A student whose absence is excused to observe a religious holy day is allowed to take a make-up examination or complete an assignment within a reasonable time after the absence.

Academic Dishonesty: Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. As a college student, you are considered a responsible audit. Your enrollment indicates acceptance of the Dallas County Community Colleges Code of Student Conduct published in the Dallas County Community Colleges Catalog. https://www1.dcccd.edu/catO506/ss/code.cfm

Withdrawal Policy (with drop date): If you are unable to complete this course, it is your responsibility to withdraw formally. The withdrawal request must be received in the Registrar’s office by February 22, 2012. Failure to do so will result in your receiving a performance grade, usually an “F.” If you drop a class or withdraw from the college before the official drop/withdrawal deadline, you will receive a “W” (Withdraw) in each class dropped.

Repeating This Course: Additional tuition will be charged for repeating a course for the third or subsequent time. Developmental Studies and some other courses will not be charged a higher tuition rate. Third attempts include courses taken at any Dallas County Community Colleges since the Fall 2002 Semester.

STOP BEFORE YOU DROP: Section 51.907 of the Texas Education Code applies to students who enroll in a Texas public institution of higher education for the first time in fall 2007 or later. Based on this law, DCCCD or any other Texas Public institution of higher education may not permit a student to drop more than six courses during their entire undergraduate career. All courses dropped after the official drop and add period for the course are included in the six-course limit, including courses dropped at another Texas public institution of higher education, unless it qualifies as an exception. Contact your college's counseling/advising office for further details related to exceptions. Policies and procedures for implementation of this law will be developed and published as soon as the Texas Higher Education Coordinating Board finalizes its rules associated with this statute. Students affected by this law who plan to attend another institution of higher education should become familiar with that institution’s policies on dropping courses.
https://www1.dcccd.edu/coursedrops

Financial Aid Statement:
Effective fall 2006, the DCCCD will introduce a new failing grade—a grade of “N” as a companion grade to the current failing grade of “F.” Federal rules require students who fail all classes within a semester/term because of lack of “participation” to repay their financial aid. The District has established two kinds of failing grades, on based upon poor academic performance (the traditional grade of “F”) and one based upon lack a of “participation” (a new grade of “N”). However, it is important to know that both grades will be shown on a student’s transcript as a grade of “F.” The assignment of a grade of “N” or “F” is for administrative, record-keeping purposes to help determine when a student will/will not be required to repay federal financial aid. If a faculty member determines that a student has failed the course, the faculty member assigns either a grade of “N” or “F” based upon the student’s performance AFTER the official drop date. If the student “participates” in the class AFTER the official drop date, the faculty member assigns a grade of “F.” “Participation” for this purpose only is defined as – Submits or completes an assignment after the official drop date, or – Attends at least one class after the official drop date. If a student has not demonstrated one of the above and the instructor determines that the student has failed the course, the student will be assigned a grade of “N” by the faculty member. In such case, the student’s transcript will record the “N” grade as an “F.”
The last date to withdraw from the course with a grade of “W” is February 22, 2012. If a student is unable to complete a course or courses, it is the responsibility of the student to withdraw formally from the course. Failure to withdraw will result in a performance grade, usually a grade of “F”.

**Disclaimer Reserving Right to Change Syllabus:** The instructor reserves the right to amend this syllabus as necessary.

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**Brookhaven College SCANS Statement**

- **What Are SCANS Skills?**
  These are the skills that employers need the most from their workers. SCANS skills are the predictors of success in the workplace.

- **Who Defined These Skills?**
  In 1989, the U.S. Departments of Labor and Education jointly surveyed U.S. employers to find out the most important skills and competencies needed by workers. The results of that survey identified SCANS (Secretary’s Commission on Achieving Necessary Skills).

- **Brookhaven College Students and SCANS**
  Brookhaven College is committed to the preparation of our students for success in the workplace.

At Brookhaven College, courses provide learning outcomes which result in the mastery of SCANS skills. Although each course will not include *every* SCANS skill, each course syllabus will identify the specific SCANS skills and competencies taught in that course. Throughout a formal program of study (certificate, degree, or transfer program), a student will have the opportunity to master *all* SCANS and competencies.

**SCANS WORKPLACE COMPETENCIES**

<table>
<thead>
<tr>
<th>1A Managing Resources</th>
<th>1b Interpersonal Skills</th>
<th>1c Information Skills</th>
<th>1d Systems Knowledge</th>
<th>1e Using Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage time</td>
<td>Work on teams</td>
<td>Acquire/evaluate data</td>
<td>Work in social systems</td>
<td>Select equipment/tools</td>
</tr>
<tr>
<td>Manage money</td>
<td>Teach others</td>
<td>Organize/maintain data</td>
<td>Work in technological systems</td>
<td>Apply technology to tasks</td>
</tr>
<tr>
<td>Manage materials</td>
<td>Serve customers</td>
<td>Interpret/communicate data</td>
<td>Monitor/correct systems</td>
<td>Maintain/troubleshoot technologies</td>
</tr>
<tr>
<td>Manage space</td>
<td>Lead others</td>
<td>Process data with</td>
<td>Design/improve</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>(5) Manage human resources</th>
<th>(5) Negotiate conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) Work with diversity</td>
<td></td>
</tr>
</tbody>
</table>
## SCANS FOUNDATION SKILLS

<table>
<thead>
<tr>
<th>SCANS COMPETENCY</th>
<th>LEARNING OUTCOMES</th>
<th>EVALUATIVE METHOD – Performance will be measured by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a, (1), 1c (1)</td>
<td>List the steps of safe drug administration.</td>
<td>Written exam</td>
</tr>
<tr>
<td>1c (1,2), 2a (3), 2b (1,2,3,5)</td>
<td>Convert from one system of measurement to another system of measurement.</td>
<td>Written exam</td>
</tr>
<tr>
<td>1c (1,2) 2a (3), 2b (1,2,3)</td>
<td>Calculate drug dosages that require conversions.</td>
<td>Written exam</td>
</tr>
<tr>
<td>1c (1,2), 2b (1,2,3,5) 2a (3)</td>
<td>Reconstitute powdered drugs.</td>
<td>Written exam</td>
</tr>
<tr>
<td>1c (1,2), 2a (3), 2b (1,2,3)</td>
<td>Calculate drug dosages for children and infants.</td>
<td>Written exam</td>
</tr>
<tr>
<td>1c (1,2,3) 1d (2) 1e (1,2,3) 2a (3) 2b (1,2,3)</td>
<td>Determine the drip rate for intravenous infusions.</td>
<td>Written exam</td>
</tr>
<tr>
<td>1c (1,2,3) 1d, (2), 1e, (1,2,3) 2a (3), 2b (1,2,3)</td>
<td>Calculate drug dosages for Heparin.</td>
<td>Written exam</td>
</tr>
<tr>
<td>1c (1,2,3), 1d (2) 1e (1,2,3), 2a (3), 2b (1,2,3)</td>
<td>Measure Insulin correctly.</td>
<td>Written exam</td>
</tr>
<tr>
<td>1c (1,2,3) 1d (2) 1e (1,2,3) 2a (3) 2b (1,2,3)</td>
<td>Determine safe dosages for elderly.</td>
<td>Written exam</td>
</tr>
<tr>
<td>2a. Basic Skills</td>
<td>2b. Thinking Skills</td>
<td>2c. Personal</td>
</tr>
<tr>
<td>------------------------</td>
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<td>--------------------</td>
</tr>
<tr>
<td>(1) reading</td>
<td>(1) Creative thinking</td>
<td>(1) Responsibility</td>
</tr>
<tr>
<td>(2) Writing</td>
<td>(2) Decision making</td>
<td>(2) Self-esteem</td>
</tr>
<tr>
<td>(3) Arithmetic/Mathematics</td>
<td>(3) Problem solving</td>
<td>(3) Sociability</td>
</tr>
<tr>
<td>(4) Speaking</td>
<td>(4) Seeing things in the mind’s eye</td>
<td>(4) Self-management</td>
</tr>
<tr>
<td>(5) Listening</td>
<td>(5) Reasoning</td>
<td>(5) Integrity</td>
</tr>
<tr>
<td></td>
<td>(6) Knowing how to learn</td>
<td></td>
</tr>
</tbody>
</table>

January 2012/T. Hobbs