HPRS 2300
PHARMACOLOGY FOR
HEALTH PROFESSIONS

SUMMER 2012
MRS. RAMIREZ CST, BAT
COURSE NAME AND TITLE: HPRS 2300 Pharmacology for Health Professions

COURSE (CATALOG) DESCRIPTION: A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

INSTRUCTOR: Yolanda Ramirez, CST, BAT
OFFICE: Sen. Eddie Lucio Building, U-119

OFFICE HOURS: 3-5pm- Tuesday
OFFICE PHONE: (956)364-4808

BUILDING SECRETARY: Tanya Villarreal (956)364-4636

I. REQUIRED TEXT AND MATERIALS:


COMPUTER AND SOFTWARE:

- Access to TSTC Moodle (https://mycourses.tstc.edu/). If you have trouble logging on, scroll down to Quick start guide for students. You can also call the TSTC network help services at 956-364-5000.
II. EVALUATION AND GRADING PROCEDURES

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Grade Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Exams</td>
<td>35%</td>
<td>93-100</td>
</tr>
<tr>
<td>Homework/Quizzes</td>
<td>15%</td>
<td>86-92</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>25%</td>
<td>78-85</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
<td>70-77</td>
</tr>
<tr>
<td>Total Percentage</td>
<td>100%</td>
<td>Below 70</td>
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Grading System: In order to receive credit for the course, a grade of “C” or better must be earned.

A. The course is the average of all exam grades (lecture) with the inclusion of accepted assignments.

B. Exams are graded on the basis of 100%.
   1. Exams are given at the end of each unit. Each exam will incorporate any combination of the following: multiple choice, matching, identification, and essay questions.
   2. Each exam is timed, requiring the learner to gain practice in time management.
   3. Make-up exams are not given. However, an exam may be taken late. The exam must be taken before the next class meeting. Arrangements must be made with the instructor. **There will be an automatic 15 point deduction from the score for the late exam. Each student will have only one (1) opportunity to take an exam after the scheduled class period.** If the exam is missed the student will be given a zero “0” for the grade.
   4. The final exam cannot be missed. A grade of zero “0” will be given to any student who misses the final exam.

C. Added credit assignments will not pass the student who fails all of the exams.

COURSE SCANS COMPETENCIES

<table>
<thead>
<tr>
<th>Competency Number</th>
<th>Competency Statement</th>
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</thead>
<tbody>
<tr>
<td>6A</td>
<td>Reading</td>
</tr>
<tr>
<td>6C</td>
<td>Arithmetic</td>
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<tr>
<td>6E</td>
<td>Speaking</td>
</tr>
<tr>
<td>7A</td>
<td>Creative Thinking</td>
</tr>
</tbody>
</table>
ACCOMMODATION STATEMENT

“If you have a documented disability which will make it difficult for you to carry out classwork as outlined and/or if you need special accommodations due to a disability, please contact (956) 364-4520 or visit the Support Services Office located in the Tech. Prep, Building P as soon as possible to make appropriate arrangements.”

III. CLASS PARTICIPATION POLICY

Class participation in this course is **MANDATORY**. Students must maintain a satisfactory class average for all daily assignments, class discussions, unit tests, quizzes, class projects, and all other assignments. Failure to abide by these policies will result in failure of the course.

It is the **STUDENTS RESPONSIBILITY** to “W” (withdraw) from the course when he/she feels they cannot meet the class participation standard. This withdrawl process will no longer be initiated by the instructor.

Students must remain in constant contact with the instructor to understand what their class participation status is at any time during the term.

Students wishing to withdraw must file a **Schedule Change Form** with the Admissions Office.

IV. CLASSROOM POLICIES

- Class participation and promptness are expected in order to ensure your continued success.
- Class preparedness and participation is essential in order to gain full knowledge of the subject matter being presented.
- Students will be expected to conduct themselves in a mature and attentive demeanor. Excessive talking and laughing will not be tolerated. **No cell phones or texting is allowed.**
- **All assignments are due prior to the commencement of class. Any assignment submitted thereafter will be deducted 15 points. No late assignments will be accepted.** Ample time will be allowed to complete all work. Reading of required material is essential for satisfactory completion of HPRS 2300.
- You will be tested on any material that has been assigned.
- The Final Exam will be comprehensive and will include information presented throughout the semester.
- **Quizzes are given at every class meeting. No make-up quizzes will be given if the student is absent or tardy a “0” will be assigned as a quiz grade.**
V. COURSE OBJECTIVES
Note: each unit (A-G) will be incorporated with the following learning outcomes as related to Essentials of Pharmacology for Health Occupations.

I. Introduction to Pharmacology

A. Consumer Saftey and Drug Names and References (chapter 1 and 2)
   Learning Outcomes
   1. Define relevant terms*
   2. Name the first drug law passed in this country for consumer safety, and give year it was passed.
   4. Explain what is meant by the DEA number.
   5. Differentiate among the following drug names: generic name, official name, and chemical name.*
   6. List at least two drug references available today.*
   7. Identify the types of information listed on drug cards.*
   8. Define the Key terms
   SCANS 6A – Reading

B. Sources and Bodily Effects of Drugs and Medication Preparation and Supplies (chapters 3 and 4)
   Learning Outcomes
   1. Define relevant terms*
   2. Identify the four sources of drugs*
   3. Differentiate between the following: drug action and drug effects, systemic effects and local effects, loading dose, maintenance dose, toxic dose, and lethal dose.
   4. Identify the fastest route of drug administration*
   5. Differentiate between various oral drug forms: sublingual tablet versus buccal tablet, solution versus suspension, syrup versus elixir, enteric-coated tablet versus scored tablet, and timed-release capsule versus lozenge*
   6. Define the following types of injections and explain how they differ in administration and absorption rate: IV, IM, ID*
   7. List and define at least eight drug forms used for topical (both dermal and mucosal) administration.
   SCANS 6C

C. Abbreviations and Systems of Measurement, Preparation and Responsibilities and Principles of Drug Administration (chapter 5 and 7)
   Learning Outcomes
   1. Define relevant terms*
   2. Identify common abbreviations and symbols used for medication orders*
   3. List the six parts of a medication order and the two additional items required on a prescription blank*
   4. Compare and contrast the three systems of measurement*
   5. Convert dosages from one system to another by use of the tables for metric, apothecary, and household equivalent*
   6. Identify the three steps for calculation of the dosage ordered when it differs from the dose on hand*
   7. Convert from one system of measurement to another using the rational proportion method*
   8. Solve dosage problems using the basic calculation method.
   9. Describe four responsibilities of the healthcare provider in safe administration of medications.
   10. List the six Rights of Medication Administration*
   11. Cite three instances of medication administration that require documentation*
   SCANS 6C

II. DRUG CLASSIFICATIONS

A. Autonomic Nervous System Drugs (chapter 13)
   Learning Outcomes
   1. Define relevant terms*
   2. Compare and contrast characteristics of the four categories of the autonomic nervous system drugs*
   3. Demonstrate the administration technique for instillation of ophthalmic medication to reduce systemic absorption.
   4. List the five categories of ophthalmic medications*
   SCANS 6C
B. Anti-infective Drugs (chapter 17)
   1. Define relevant terms*
   2. Identify side effects, contraindications, and interactions common to each category of anti-infective*
   3. Explain the unique features of patient education appropriate for each category of anti-infectives

SCANS 6C AND 6A

C. Analgesics, Sedatives, Hypnotics, and Anesthesia, Musculoskeletal, and Anti-inflammatory drugs (chapter 19 and 21)
   1. Define relevant terms*
   2. Compare and contract the purpose and action of non-opioid and adjuvant analgesics, sedatives, and hypnotics*
   3. List the side effects of the major analgesics, sedatives, and hypnotics*
   4. Identify commonly used skeletal muscle relaxants*
   5. Describe the side effects to be expected with muscle relaxants*
   6. List the drugs that can interact with the muscle relaxants and cause serious potentiation of effect*

SCANS 6C AND 6A

D. Cardiovascular Drugs and Respiratory System Drugs and Antihistamines (chapter 25 and 26)
   1. Define relevant terms*
   2. Identify the different types of antiarrhythmics and the side effects for each*
   3. Name the five antilipemic agents and describe their action*
   4. Compare and contrast heparin and coumarin derivatives in terms of administration, action, and antidotes*
   5. Describe uses of and precautions necessary with oxygen therapy.
   6. Classify a list of respiratory system drugs according to action.
   7. List uses, side effects, and contraindications for bronchofilators and antussives*

Critical Thinking Student Learning Objectives
   1. The student will demonstrate the ability to identify the essential question, issue, and/or problem.
   2. The student will demonstrate the ability to gather data relevant to the essential question, issue, and/or problem.
   3. The student will demonstrate the ability to interpret appropriate data effectively.
   4. The student will demonstrate the ability to recognize and evaluate assumptions, major alternatives points of view, and related theories, principles, and ideas relevant to the question, issue, and/or problem.
   5. The student will demonstrate the ability to develop informed conclusions/solutions.
   6. The student will demonstrate the ability to articulate implications and consequences that emerge from the conclusion/solution.
   7. The student will demonstrate the ability to effectively communicate any or all parts of the above process in written or oral form.

VI. CORRELATION TO WECM LEARNING OUTCOMES
   The WECM learning outcomes are identifies in section IV with an asterisk.
VII. STUDENT EVALUATION

A. Five (5) exams and a research project over learning outcomes
B. Homework assignments
C. Weekly quizzes
D. SCANS competencies will be evaluated as part of unit performance tests. There will be a comprehensive final given at the end of the semester. Written homework assignments will be given as required.
E. Student responsibilities are as follows:
   1. Be on time and attentive for class.
   2. Be prepared for class by bringing required textbook, paper, and pens.
   3. Participations in class discussion are expected.
   4. Complete written assignments on time.
   5. Complete reading assignments on time.
   6. Take notes; organize information.
   7. If absent from class, acquire notes, handouts, assignments, etc., from instructor or classmates.
      It is your responsibility to find out what you have missed!
   8. Come prepared for scheduled Exams (scantron, paper, pencils, or pens)
   9. Be courteous and respectful of others.
F. Lecture:
   Tuesday 1:00pm – 2:30pm
   Thursday 1:00pm – 2:30pm

VIII. COURSE CONTENT

This course will cover essentials of pharmacology and drug references.

IV. REQUIRED READING ASSIGNMENTS

Essentials of Pharmacology for Health Occupations Book 6th Edition

Chapter 1 -- Consumer Safety and Drug Regulations
Chapter 2 – Drug Names and References
Chapter 3 – Sources and Bodily Effects of Drugs
Chapter 4 – Medication Preparations and Supplies
Chapter 5 – Abbreviations and Systems of Measurement
Chapter 7 – Responsibilities and Principles of Drug Administration
Chapter 10 – Poison Control
Chapter 13 – Autonomic Nervous System Drugs
Chapter 17 – Anti-infective Drugs
Chapter 19 – Analgesics, Sedatives, and hypnotics
Chapter 21 – Musculoskeletal and Anti-inflammatory Drugs
Chapter 25 – Cardiovascular Drugs
Chapter 26 – Respiratory System Drugs and Antihistamines

X. SUPPLEMENTARY RESOURCES/REFERENCES

A. PDR Drug Reference Book
B. Nursing Drug Handbook 2011
<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>CONTEXT</th>
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</thead>
</table>
| 1    | May 15, 2012 | Introduction  
Review CIS  
**Unit 1 Introduction to Pharmacology**  
- **Lesson 1** Consumer Safety & Drug Regulations |
|      | May 17, 2012 | **Unit 1 Introduction to Pharmacology**  
- **Lesson 2** Drug names and References  
- **Lesson 3** Sources and Bodily Effects of Drugs |
| 2    | May 22, 2012 | **Unit 1 Introduction to Pharmacology**  
- **Lesson 4** Medication Preparations and Supplies  
- Present Drug Classification Project |
|      | May 24, 2012 | **Unit 1 Test – Lessons 1-4** |
| 3    | May 29, 2012 | **Unit 2 Preparation, Measurements, and Poison Control**  
- **Lesson 1** Abbreviations and Systems of measurement  
- **Lesson 2** Responsibilities and Principles of Drug Administration  
- Drug Classification Proposal Due |
|      | May 31, 2012 | **Unit 2 Preparation, Measurements, and Poison Control**  
- **Lesson 3** Poison Control  
- Homework: Drug Card |
|      | June 5, 2012 | **Unit 2 Test – Lessons 1-3** |
| 4    | June 7, 2012 | **Unit 3 Drug Classifications**  
- **Lesson 1** Autonomic Nervous System Drugs  
- Homework drug card due at the beginning of class.  
- CT Project Resources Due |
|      | June 12, 2012 | **Unit 3 Drug Classifications**  
- **Lesson 2** Anti-infective Drugs |
|      | June 14, 2012 | **Unit 3 Test, Lessons 1-2** |
| 5    | June 19, 2012 | **Unit 3 Drug Classifications**  
- **Lesson 3** Analgesics, Sedatives, and Hypnotics |
|      | June 21, 2012 | **Unit 3 Drug Classifications**  
- **Lesson 4** Psychotropic Medications, Alcohol, and Drug Abuse |
| 6    | June 26, 2012 | **Unit 3 Test, Lessons 3-5**  
- **Lesson 5** Musculoskeletal and Anti-Inflammatory Drugs |
<p>|      | June 28, 2012 | <strong>Unit 3 Test, Lessons 3-5</strong> |</p>
<table>
<thead>
<tr>
<th></th>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>8</td>
<td>July 3, 2012</td>
<td><strong>Unit 4 System Specialty Drugs</strong>&lt;br&gt;● Lesson 1 Cardiovascular Drugs&lt;br&gt;● CT Project Rough Draft Due</td>
</tr>
<tr>
<td>9</td>
<td>July 5, 2012</td>
<td><strong>Unit 4 System Specialty Drugs</strong>&lt;br&gt;● Lesson 2 Respiratory System Drugs</td>
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<tr>
<td></td>
<td>July 10, 2012</td>
<td><strong>Unit 4 System Specialty Drugs</strong>&lt;br&gt;● Lesson 3 Urinary System Drugs</td>
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<tr>
<td></td>
<td>July 12, 2012</td>
<td><strong>Unit 4 Test, Lesson 1-3</strong></td>
</tr>
<tr>
<td>10</td>
<td>July 17, 2012</td>
<td>● Submit CT Project Final Draft&lt;br&gt;● Final Review Assignment</td>
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<tr>
<td></td>
<td>July 19, 2012</td>
<td><strong>Critical Thinking Presentations</strong></td>
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<tr>
<td>11</td>
<td>July 24, 2012</td>
<td><strong>Critical Thinking Presentations</strong></td>
</tr>
<tr>
<td></td>
<td>July 26, 2012</td>
<td>● Final Exam Review</td>
</tr>
<tr>
<td>12</td>
<td>July 31, 2012</td>
<td><strong>Final Exam</strong>&lt;br&gt;GO FOR IT!</td>
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<td></td>
<td>August 2, 2012</td>
<td>Good Luck!</td>
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Drug cards will be due at the beginning of each lesson starting with Chapter 13 – Autonomic Nervous System Drugs, Unit 3 Lesson 1. The drug cards will be graded as a quiz. The cards must be submitted on 3x5 or 5x7 cards and must contain the following information:

- Generic and Trade name
- Classification
- Drug Action
- Indications
- Side Effects

Keep your cards organized per unit and lesson. They must be available for reference at any time.

All drug cards must be submitted on time at the commencement of class. Late drug cards will not be accepted; however, the student is responsible for completing the assignment.