Faculty is required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. PHRM COURSE NUMBER: 1115

NUMBER OF CREDITS: 4

COURSE TITLE: Pharmacology for Technicians I

CATALOG DESCRIPTION: Introduces pharmacy technician students to the general principles of pharmacology. Drugs are discussed in the context of drug classes, mechanics of action, disease types, and body systems. The goal is to provide pharmacy technicians with sufficient background information so that they will be able to play a key role in avoiding dispensing errors. Although emphasis will be given to the approximately 200 most commonly prescribed drugs, many more drugs will be discussed during the semester.

AUDIENCE: Pharmacy Technician Students

FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)

Area: by meeting the following competencies:
Area: by meeting the following competencies:
Area: by meeting the following competencies:

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: N/A

LENGTH OF COURSE: Semester

THIS COURSE IS USUALLY OFFERED:
Every other year □ fall x□ spring x□ summer □ undetermined □

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT: The academic objectives of this course are:
   a. To learn the basic concepts of pharmacology in the context of disease types and drug classes used to treat these diseases. Many medications will be covered, but emphasis will be placed on learning the most common drugs, including the brand/generic names, side effects and therapeutic uses and then reiterated in lab exercises.
2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
   a. This course will help students improve the effectiveness of their thinking skills through critical thinking exercises using various real life scenarios within retail and hospital pharmacy situations.
   b. Students will use laboratory activities to apply principles learned in lecture.

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   a. Participation in online discussions.
   b. Cooperative attitude with other students and instructor.
   c. Ability to communicate via D2L, through email, discussion groups, and classroom materials.
   d. Participation in laboratory activities.
   e. Participation in group activities.

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:
   a. Understanding the need to communicate with a diverse population.
   b. Gaining a self-awareness regarding the feelings toward people regardless of culture, values, or socioeconomic status.

TOPICS TO BE COVERED:
The basic concepts of pharmacology will be discussed in the context of disease types and drug classes used to treat these diseases. Many medications will be covered, but emphasis will be placed on learning the most common drugs, including the brand/generic names, side effects and therapeutic uses.

COURSE LEARNING OUTCOMES (GENERAL):
1. Examine principles of drug action in the body and individual cells, including body absorption and distribution in relation to therapeutic blood levels and the process of clearing systemically dispersed agents through metabolism and elimination.
2. Anticipate how best to promote safety and avoid medication errors through drug label and medication order literacy skills. Be able to communicate effectively with patients and other members of the healthcare team. Implement appropriate patient warning labels to promote thorough understanding of drug regimen requirements by patients and medical staff.
3. Anticipate possible side effects and related dispensing strategy for each drug class as well as for specific agents. Analyze labeling requirements for various classes of pharmaceuticals and cautions when dispensing based on thorough understanding of interactions between classes of pharmaceuticals, individual agents, and natural supplements.
4. Describe ways various classes of anti-infective drugs work against microorganisms and identify uses of these drugs in eliminating specific microorganisms from the body.
5. Explain the action of neurotransmitters in the nervous system, relate classes of pharmaceuticals that affect or change neurotransmitter action, and describe therapeutic results obtained with the various neurological agent classes.

6. Explain principles of how various classes of pharmaceuticals act when utilized in aiding respiratory gas exchanges, circulating blood pressure and cardiac rhythms, and blood filtration.

7. Compare action of pharmaceutical agents when applied to the digestive system and examine, compare, and describe how these agents affect other physiological processes (e.g., blood pressure and sugar levels).

8. Define the action of the endocrine glands and hormones, delineate hormone supplement and replacement therapies, and compile adverse effects of inadequate and excess administration.

9. Identify the physiological action and deficiency symptoms of vitamin classes, explore natural supplements and potential therapeutic value, and examine the use of natural supplements in conjunction with prescription medications.

STUDENT LEARNING OUTCOMES (SPECIFIC):

Achieve expected course outcomes and a percentage score acceptable to the respective program. Students should be prepared to take the Pharmacy Technician Certification Exam following completion of their pharmacy technician courses.

LEARNING/TEACHING TECHNIQUES used in the course are:

- [ ] Collaborative Learning
- [x] Student Presentations
- [x] Creative Projects
- [x] Lecture
- [x] Demonstrations
- [x] Lab
- [x] Problem Solving
- [x] Interactive Lectures
- [ ] Individual Coaching
- [ ] Films/Videos/Slides
- [ ] Other (describe below)

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- [x] Reading
- [x] Oral Presentations
- [x] Textbook Problems
- [x] Group Problems
- [ ] Other (describe below)
- [x] Tests
- [x] Worksheets
- [ ] Papers
- [ ] Term Paper
- [ ] Individual Projects
- [x] Collaborative Projects
- [ ] Portfolio

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

The information in this course outline is subject to revision
To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or via your preferred Telecommunications Relay Service.

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