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Pharmacology Course Syllabus 2022-23

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Office Hours: Mon (2:34 – 3:19 pm) Tues & Thurs (2:40 – 3:25 pm);
and before school by appointment

Course Description

The Pharmacology course is designed to study how natural and synthetic chemical agents such as drugs affect biological systems. Knowledge of the properties of therapeutic agents is vital in providing quality health care. It is an ever changing, growing body of information that continually demands greater amounts of time and education from health care workers.

About the Teacher

I am a native Houstonian, who grew up on the West-side of Houston and am a product of the HISD School System. After graduating from Robert E. Lee (now Wisdom) High School, I attended the University of Texas in Austin studying Architecture, Interior Design, Sociology, Psychology and Behavioral Science. After receiving a Bachelor of Arts Degree in Natural Science and a Bachelor of Science Degree in Architectural Interiors, I returned to Houston to begin the first of my careers.

Prior to taking on a career in education, I worked as an Interior Designer for a Houston-based Architectural firm, travelling all over the United States, Mexico, Canada, Haiti and Belize designing banks and hospitals. At the height of a construction boom in Houston, I moved to M. D. Anderson Cancer Center to work on their Capital Campaign as a Development Officer and Proposal Writer, then worked in Marketing and Technical Writing for University of Houston and Hewlett Packard Enterprises.

In 2017, I fulfilled a life-long dream by becoming an Associate Teacher with HISD; this is my sixth-year teaching at Waltrip High School. I spend my free time training and showing dogs or pursuing my love of photography.

Course Objectives

By the end of this course the student will:

- ✓ demonstrate professional standards/employability skills as required by business and industry.
 - ✓ have explored the field of pharmacology and foundation of pharmacology.
 - ✓ be able to identify individuals and careers associated with manufacturing, dispensing, and administering pharmaceuticals.
 - ✓ be able to explain the ethical and legal responsibilities of pharmacists and pharmacy technicians.
 - ✓ use a comprehensive medical vocabulary in order to communicate effectively with other health care professionals.
 - ✓ demonstrates mathematical knowledge and skills to solve problems with systems of measurement used in the pharmacy.
 - ✓ recognize the effectiveness of a pharmaceutical agent, its form, and its route of administration.
 - ✓ must be able to select appropriate equipment and instruments and use technology for specific tasks.
 - ✓ be expected to practice safety in dispensing and administering pharmaceutical agents and prevent personal and client illness or injury.
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Curriculum

Unit 1: Meeting Employer Expectations in Health Science

This unit is designed to inform future Health Science students about industry expectations for employability skills and professional standards.

Unit 2: Pharmacology Basics in Health Science

Students in this unit will be able to identify the basics of how drugs work inside the human body. Students will analyze major subdivisions of pharmacotherapeutics, pharmacodynamics, and pharmacokinetics. Students will be able to differentiate between the positive and potentially negative effects of common medications. Common reference books on pharmacology will be explained.

Unit 3: Members of the Pharmacology Team

In this unit students will identify the role of the pharmacological team along with individuals responsible for the manufacturing, dispensing, and administering pharmaceuticals. The impact of the cost of health care in general and of pharmaceuticals in particular will be analyzed. Students will describe career pathways related to pharmacology along with emerging pharmacy opportunities.

Unit 4: Legal and Ethical Issues in Pharmacology

Student will learn the potential consequences of a failure to follow the legal and ethical responsibilities pharmacists and pharmacy technicians. They will explore the differences between product liability, contributory negligence, negligence, and regulatory law. Students will explain the elements of a lawsuit and define professional liability.

Unit 5: Using Medical Terminology in Pharmacology

Students are expected to communicate effectively with other healthcare professionals about a variety of topics including: Routes of drug medication, and various classifications of drugs. Students should display a working knowledge of basic medical terminology including root words, suffixes and prefixes.

Unit 6: Mathematics Used in Pharmacology

In this unit students must not only demonstrate their ability to use math to solve problems of measurement in pharmacy but also to convert measurements from one system to another. Students must also be able to analyze medication calculations, including metric, apothecary, and household systems.

Unit 7: Pharmacological Forms and Types of Drug Administration

Student become familiar with the different forms in which pharmaceuticals are dispensed. Students also demonstrate their ability to use and define terms associated with different drug forms. A pharmaceutical agents route of administration and examples of dosage forms are also defined.

Unit 8: The Use of Technology in Pharmacology

In this unit students will describe and analyze technology components and select appropriate equipment and instruments used for a specific task. Students will also explain how appropriate technology improve pharmacy efficiency.

Unit 9: Pharmacology Safety Standards

To prevent personal or client injury students will practice dispensing and administering pharmaceutical agents using recognized safety standards. Interpreting safety standards and examining unsafe practices allow students to demonstrate these skills in a clinical setting.

A complete listing and explanation of the above course objective as listed in Chapter 130 of the Texas Essential Knowledge and Skills is available [here](#).

Daily Required Materials

- ✓ Laptop (fully charged and functioning properly)
- ✓ pen or pencil and notebook paper
- ✓ three ring notebook (to maintain an organized portfolio of handouts and completed work)

Text

The class will read a variety of printed and electronic text, assigned by the teacher.

Grading Scale

- ✓ **Grades: Classwork and Homework 40%**
 - ✓ **Test, Quizzes and Projects 40%**
 - ✓ **Daily and Participation 20%**
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Student Expectations

- ✓ **Be Respectful:** When the teacher or anyone is talking, please be attentive and quiet. Do not get up and wander in the class while instruction is taking place.
- ✓ **Be Responsible:** Bring all materials to class. Turn in your work when it is due.
- ✓ **Engage in the learning process.** Attendance and participation are required. Be sure to see me about any missed work if you are absent.
- ✓ **Be on Time:** and come to class prepared to work. Students are required to have their school laptop for every class period. **Phones are not allowed to be used during class, at any time, unless specified by the instructor.**
- ✓ **Class Dismissal:** The class will be dismissed by the teacher not the bell. You will remain in your seat. There will be no congregating at the door.
- ✓ **Obey All School Rules:** You will be expected to obey all school rules in your student handbook including following dress code. Students are **not to wear hoodies** over their head during instruction.