ALH A130: APPLIED PHARMACOLOGY

Item	Value
Curriculum Committee Approval Date	10/06/2021
Top Code	120100 - Health Occupations, General
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)
Associate Arts Local General Education (GE)	• OC Life Skills - Theory - AA (OE1)

Course Description

Basic principles of pharmacology; drug classifications; methods and routes of administration; legal aspects of drug administration; pharmacokinetics: action, indication, contraindication, hazards, metabolism, and excretion. Use of drugs in the treatment of various disease processes and body systems. ADVISORY: BIOL A221. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Identify and differentiate common drugs affecting each body system including their action, dosage, side effects, and contraindications.

Course Objectives

- 1. Explain the way drugs are standardized and reference in drug listings.
- 2. Describe common pharmaceutical preparations.
- 3. Explain the legal aspects of drug administration and governmental controls.
- 4. Describe and differentiate the physiological utilization of drugs by the body, including absorption, metabolism, and excretion.
- 5. Describe common drug categories and their intended use.
- 6. List recommended method of drug administration for each drug category.
- 7. Identify and differentiate certain drugs affecting the body systems including their action, dosage, side effects, and contraindications, after preparing a chart of drugs used in their field.
- 8. Identify common drugs used in various body systems.

Lecture Content

Principles of Pharmacology Introduction to Pharmacology Legal and Ethic Aspects Basics of Pharmacology Drug Information and Forms Understanding dosages for special populations Reading and interpreting labels and orders Proper documentation Mathematics and Dosage Calculation for Pharmacology Math Review Measurment Systems and Equivalents Converting Between Systems Calculating Doses for Parenteral Medications Administration of Medications Safety and Quality Assurance Enteral Percutaneous Parenteral SQ IM ID Pharmacology for Multisystem Application Analgesics and Antipyretics Immunizations and the Immune System Antimicrobials, Antifungals and Antivirals Antineoplastic Agents Nutritional SUpplements and Alternative Medicines Medications Related to Body Systems Endocrine Systems Disorders Thyroid hormones Steroid/Corticosteroids Antidiabetic agents Hyperglycemics Eye and Ear Disorders Ophthalmic Otic Drugs for Vertigo Drugs for Skin Conditions Anti-infective Prophylactic Agents sunscreens scabicides/pediculocides Musculoskeletal Systems Disorders Osteoporotic medications Anti-rheumatic and anti-arthritic medications Anti-gout Skeletal muscles relaxants Anticholinesterase Gastrointestinal Systems Disorders Oral preparations Antacids Antiulcer and GERD agents Hepatitis B and C agents< / Pancreatic enzymes Gallstone solubilizing agents Antiemetics Circulatory Systems and Blood Disorders Anti-anginal Cardiac glycosides Anti-arrhythmic Diuretics Antihypertensive Peripheral vasodilators Hypolipidemics Anti-coagulants Thrombolytic Anti-platelet Topical hemostatics Hematopoietic erythropoetics Respiratory System Antihistamines Decongestants Nasal preps Decongestants Antitussives Mucolytic Glucocorticoids Asthmatic agents A and B influenza prophylactic agents RSV agents Urinary Tract Disorders Diuretics Anti-infective Antiseptics Anti-spasmodic OAB medications Medications for enuresis Reproductive Androgens BPH agents Estrogens Oral contraceptives Other contraceptives Post-coital contraceptives PMS agents ED medications Neurological Analgesics Anesthetics Sedatives Anti-seizure Anti-Parkinsons Headaches preparations Medication for spasticity CNS stimulants Cholinergic Anti-cholinergic Adrenergic Adrenergic blockers Mental and Behavioral Health Anxiolytics Anti-anxiety Minor Tranquilizers Anti-depressants Unipolar Bi-polar Medications for cognitive ability CNS stimulants Misused, Abused and Addictive Drugs Substance abuse deterrents Nicotine deterrents< / Alcohol deterrents Opioid deterrents Narcotic antagonists

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

Instructional Techniques

Lecture and application of ideas. Demonstration and practice of problem solving.

Reading Assignments

Approximately 2 hours per week required to read text and utilize online textbook tools.

Writing Assignments

Examinations contain written components. Pharmacy research project; students will write a 4-5 page paper on a drug of their choice indicating: action, indication, adverse effects, pregnancy category, usual dosing, sales statistics, and gross revenue. Students will make an informed decision after research as to whether they would themselves take the medication.

Out-of-class Assignments

Drug research project. Students will research the top 25 drugs in the US and make clinical cards containing the assigned info: action, indication, adverse effects, pregnancy category, usual adult dose and pediatric dose.

Demonstration of Critical Thinking

Written examinations

Required Writing, Problem Solving, Skills Demonstration

Examinations contain written components. Pharmacology mathematical calculations folowing physician orders.

Eligible Disciplines

Health: Masters degree in health science, health education, biology, nursing, physical education, kinesiology, exercise science, dietetics, or nutrition OR bachelors degree in any of the above AND masters degree in public health, or any biological science OR the equivalent. Masters degree required.

Textbooks Resources

1. Required Fulcher, Eugenia. Pharmacology Principles and Applications, ed. St. Louis: Elsevier, 2012 Rationale: -

Other Resources

1. Any HCW Drug Guide