JEFFERSON COLLEGE

COURSE SYLLABUS

HIT 150

Introduction to Pharmacology

2 Credit Hours

Prepared by:
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HIT150 Introduction to Pharmacology

I. CATALOGUE DESCRIPTION
   A. Prerequisite: BIO 212 with a “C” or better. Reading Proficiency.
   B. Credit hour award: 2
   C. Description: This online introductory course covers basic concepts of drug therapy and will concentrate on major drug classifications, as they relate to specific body systems. There will be multiple examinations and online activities to reiterate the topics covered. (Su)

II. EXPECTED LEARNING OUTCOMES/CORRESPONDING ASSESSMENT MEASURES

<table>
<thead>
<tr>
<th>Expected Learning Outcomes</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>Identify drug classifications</td>
<td>Online Activity/Discussion Board Summative Examination</td>
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<tr>
<td>Define common drug terms</td>
<td>Summative Examination</td>
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<tr>
<td>Summarize drug legislation and drug standards</td>
<td>Online Activity/Discussion Board Summative Examination</td>
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<tr>
<td>Name various pharmaceutical preparations</td>
<td>Summative Examination</td>
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<td>Describe the types of drug interactions</td>
<td>Online Activity/Discussion Board Summative Examination</td>
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<td>Identify herbal therapies and drug-herb interactions</td>
<td>Summative Examination</td>
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<td>Identify the genetic basis of many diseases</td>
<td>Online Activity/Discussion Board Summative Examination</td>
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<td>Identify antineoplastic drugs</td>
<td>Summative Examination</td>
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<td>Identify immunizing agents and immunosuppressives</td>
<td>Summative Examination</td>
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<td>Identify hormones secreted by the endocrine glands</td>
<td>Summative Examination</td>
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<td>Recognize the drugs that are known as prostaglandins and prostaglandin inhibitors</td>
<td>Summative Examination</td>
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<td>Identify drugs that affect the skin and mucous membranes</td>
<td>Summative Examination</td>
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<td>Differentiate between narcotic pain medications and non-narcotic pain medications</td>
<td>Online Activity/Discussion Board Summative Examination</td>
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<td>Identify the drug groups that affect the digestive system</td>
<td>Summative Examination</td>
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<td>Identify antihistamines</td>
<td>Summative Examination</td>
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<td>Identify drugs that affect the respiratory system</td>
<td>Summative Examination</td>
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<tr>
<td>Identify drugs that affect the circulatory system</td>
<td>Summative Examination</td>
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<tr>
<td>Identify diuretics and other drugs that affect the urinary system</td>
<td>Summative Examination</td>
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<td>Identify drugs that affect the central nervous system</td>
<td>Summative Examination</td>
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<tr>
<td>Identify drugs that affect the autonomic nervous system</td>
<td>Summative Examination</td>
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III. COURSE OUTLINE

A. Consumer Safety and Drug Regulations
   1. Drug laws
   2. FDA and DEA
   3. Health care workers and the law

B. Drug Names and References
   1. Identifying names
   2. Legal terms referring to drugs
   3. Terms indicating drug actions
   4. The Internet as reference
   5. Drug cards.

C. Sources and Bodily Effects of Drugs
   1. Drug processing by the body (Pharmacokinetics)
   2. Absorption, Distribution, Metabolism, Excretion
   3. Unexpected responses to drugs.

D. Medication preparation and supplies
   1. A space-age drug form
   2. Standard drug forms and supplies

E. Abbreviations and systems of measurement
   1. Abbreviations
   2. Systems of Measurement

F. Safe Dosage Preparation
   1. Basic Arithmetic Test
   2. Calculation Guidelines
   3. Basic Calculation/ Ratio and Proportion
   4. Pediatric Dosage
   5. Geriatric Dosage
   6. Prevention of Medication Errors

G. Responsibilities and Principles of Drug Administration
   1. Responsible drug administration
   2. Medication errors
   3. Principles of administration

H. Administration by the Gastrointestinal Route
   1. Administration of medications orally
   2. Administration of medications by nasogastric tube
   3. Administration of medications by gastric tube
4. Administration of medications rectally

I. Administration by the Parenteral Route
   1. Sublingual and buccal administration
   2. Transcutaneous drug delivery system
   3. Inhalation therapy
   4. Injections/Skin/Medications
   5. Application to the Mucous Membranes
   6. Eye Medications

J. Poison Control
   1. Poisoning by ingestion
   2. Poisoning by inhalation
   3. External poisoning of skin or eyes
   4. Poisoning by sting and snakebite
   5. People at risk

K. Vitamins, Minerals, and Herbs
   1. Fat-Soluble vitamins
   2. Water-Soluble vitamins
   3. Minerals/Antioxidants/Alternative Medicines
   4. Online references

L. Skin Medications
   1. Antipruritics
   2. Corticosteroids
   3. Emollients and Demulcents
   4. Keratolytics
   5. Scabicides and Pediculicides
   6. Antifungals
   7. Antivirals
   8. Local Anti-Infectives
   9. Agents Used to Treat Acne
   10. Cautions for Topical Medications

M. Autonomic Nervous System Drugs
   1. Adrenergics
   2. Adrenergic Blockers
   3. Cholinergics/Cholinergic Blockers

N. Antineoplastic Drugs
   1. Antimetabolites
   2. Alkylating Agents
   3. Plant Alkaloids
   4. Antibiotic Antineoplastics
   5. Hormone Therapy
   6. Biological Response Modifiers
   7. Monoclonal Antibodies
   8. Radioactive Isotopes
   9. Cautions and Responsibilities for Antineoplastic Drugs
O. Urinary System Drugs
1. Diuretics
2. Medications for Gout
3. Antispasmodics/Cholinergics
4. Analgesics
5. Treatment of Benign Prostatic Hypertrophy (BPH)
6. Alpha-Blockers

P. Gastrointestinal Drugs
1. Antacids
2. Agents for Treatment of Ulcers and Gastroesophageal Reflux Disease
3. Antispasmodics/Anticholinergics
4. For Inflammatory Bowel Disease
5. Antidiarrhea Agents
6. Antiflatulents
7. Laxatives and Cathartics
8. Antiemetics/Prophylaxis

Q. Anti-infective Drugs
1. Vaccines
2. Aminoglycosides
3. Cephalosporins
4. Macrolides
5. Penicillins
6. Quinolones
7. Tetracyclines
8. Antifungals
9. Antituberculosis Agents
10. Miscellaneous Anti-Infectives
11. Agents for VRE. Antivirals
12. Treatment of Human Immunodeficiency Virus/AIDS Infections. HIV Information and Resources
13. Sulfonamides
14. Urinary Anti-Infectives

R. Eye Medications
1. Anti-Infectives
2. Anti-Inflammatory agents
3. Antiglaucoma agents
4. Mydriatics
5. Local anesthetics

S. Analgesics, Sedatives, and Hypnotics
1. Analgesics
2. Local Anesthetic
3. Antimigraine Agents
4. Sedatives and Hypnotics

T. Psychotropic Medications, Alcohol, and Drug Abuse
1. CNS Stimulants
2. Selective Norepinephrine Reuptake Inhibitor (SNRI)
3. Antidepressants
4. Antimanic agents
5. Anxiolytics
6. Antipsychotic Medications/Major Tranquilizers.
7. Alcohol/ Drug abuse.

U. Musculoskeletal and Anti-inflammatory Drugs
1. Skeletal Muscle Relaxants
2. Anti-Inflammatory Drugs
3. Osteoporosis Therapy

V. Anticonvulsants, Antiparkinsonian Drugs, and Agents for Alzheimer's Disease, Older Adults
1. Anticonvulsants
2. Drugs for absence epilepsy
3. Drugs for Grand Mal and Psychomotor epilepsy
4. Antiparkinsonian drugs
5. Agents for Alzheimer's Disease
6. Cumulative Effects of Drugs
7. Potentially Inappropriate Medication Use in Older Adults
8. Drugs That May Cause Mental Impairment
9. Nonsteroidal Anti-inflammatory Drugs
10. Polypharmacy

W. Endocrine System Drugs
1. Pituitary Hormones
2. Adrenal Corticosteroids
3. Thyroid Agents
4. Antithyroid agents
5. Antidiabetic agents

X. Reproductive System Drugs
1. Androgens
2. Impotence Agents
3. Estrogens
4. Progestins
5. Choice of Contraceptives
6. Drugs for Labor and Delivery
7. Other Gonadotropic Drugs
8. Infertility Drugs

Y. Cardiovascular Drugs
1. Cardiac Glycosides
2. Antiarrhythmic Agents
3. Antihypertensives
4. Other Antihypertensives
5. Coronary Vasodilators
6. Antilipemic Agents
7. Vasoconstrictors
8. Anticoagulants
9. Platelet Inhibitor Therapy
10. Thrombolytic Agents
11. Colony Stimulating Factors (CSFs)

Z. Respiratory System Drugs and Antihistamines
1. Oxygen
2. Respiratory Stimulants
3. Bronchodilators
4. Corticosteroids
5. Asthma Prophylaxis
6. Mucolytics and Expectorants
7. Antitussives
8. Antihistamines
9. Decongestants
10. Smoking Cessation Aids.

IV. METHOD(S) OF INSTRUCTION

A. Online lecture
B. Readings from online resources
C. Online Activity (i.e. Discussion Boards)

V. REQUIRED TEXTBOOKS


VI. REQUIRED MATERIALS

A. Online textbook/ software
B. A computer with internet access (available through the Jefferson College Labs)
C. Paper, notebooks, pens, pencils with erasers

VII. SUPPLEMENTAL REFERENCES

A. Class handouts

VIII. METHOD OF EVALUATION

A. Summative Written Examinations – 4 examinations worth up to 50%
B. Online activities: 5 online activities worth 40%

C. Attendance/online participation with activities grade will equal 10% of total course grade

D. Grading Scale:
   A = 90-100%
   B = 80-89.9%
   C = 70-79.9%
   D = 60-69.9%
   F = 0-59.9%

IX. ADA AA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Library: phone 636-797-3000, ext. 3169).

X. ACADEMIC HONESTY STATEMENT

All students are responsible for complying with campus policies as stated in the Student Handbook. Any student who cheats or plagiarizes will be subject to dismissal from the Health Information Technology program and will be referred to the college for disciplinary action. (See College website, http://www.jeffco.edu).

XI. OUTSIDE OF CLASS ACADEMICALLY-RELATED ACTIVITIES

The US Department of Education mandates that students be made aware of expectations regarding coursework to be completed outside the classroom. Students are expected to spend substantial time outside of class meetings engaging in academically-related activities such as reading, studying, and completing assignments. Specifically, time spent on academically-related activities outside of class combined with time spent in class meetings is expected to be a minimum of 37.5 hours over the duration of the term for each credit hour.