**FLORIDA VOCATIONAL INSTITUTE**

**SYLLABUS/LESSON PLAN**

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| **Daily/Weekly Lesson Plan Outline – 4 weeks / 40 Clock Hrs. / 40 Lab Hrs.** | | | | | |
| **COURSE TITLE** | | | | **Review Date:** | |
| **Pharmacy Technician** | | | | **11/20/2015** | |
| **CODE** | **SUBJECT** |  |  | **LEC HRS** | **LAB HRS** |
| **PHT120** | **Pharmacology I** | | | 40 | 40 |
| **COURSE DESCRIPTION:** In this course will introduce the student to the realm of pharmacology and pharmacokinetics, beginning with definition and medical terminology needed to further understand the subject of pharmacology and mechanism of action of all major drug classification that will be divided by body system disorders. Subjects included on this course will include: Drug abuse and misuse, Antibiotics and Anti-invectives. Instructor may provide additional resources or materials as a part of the lesson plan.  **Prerequisite:** None  **Required Resources:**  **Text Books:** Pharmacology: Principles and Applications, 3rd e. Elsevier.  **Learning Resources Center materials are available**  **Instructional Methods:**  Lecture/Discussion  Audiovisual  Research  **Mode of Delivery:**  Residential  **Equipment**/**Technology/Software**  Utilization of power point presentations, media center websites, reference materials, and other technology as available  **COURSE OBJECTIVES:**  In this course, student will:   * To understand the fundamental scientific principles of drug action and the various mechanisms by which drugs can mediate their pharmacological effect * To understand the fundamental principles of pharmacokinetics that underlay the absorption, distribution, metabolism and elimination of drugs in the body and thereby affect drug effectiveness * To understand the biochemical reactions that result in the metabolism of drugs within the body * To understand the rationale behind designing different dosing regimens of particular drugs in specific patient populations * To understand how specific patient characteristics and genetics can affect the response to a particular class of drugs * To understand the scientific basis underlying how two different drugs can interact within the body and can have undesirable effects either on drug concentrations or drug clinical effects | | | | | |
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|  | **Objectives to be covered** | **Lecture/ Labs** | **Method of Assessment** |
| **Week 1** |  |  |  |
| **Day 1** | * Introduction to Pharmacology and its Legal and Ethics Aspects | **Lecture:**   * Pharmacology as a Health Science * Why study Pharmacology * Role of professionals in medication administration * History of Pharmacology * Society and the need for drug regulation * Drug Standards and Patient safety * International, federal and state status for regulation of medications * Federal legislation related to drugs * The Food and Drug Administration and the introduction of new drugs. * FDA regulations * Process of testing new drugs * The Drug Enforcement Administration and controlled substances * The Drug Enforcement Administration in the medical office * Ordering and securing controlled substances * Record keeping and inventory control * Disposing of nonscheduled drugs * Preventing drug dependence and drug abuse * Role of allied health professionals in medication administration * Ethics of the health professional in medication management   **Laboratory:**   * Chapter review Exercises | * Handout * Book Exercise |
| **Day 2** | * Basics of Pharmacology | **Lecture:**   * Five basic categories  of pharmacology * Pharmacognosy—origins of drugs * Pharmacokinetics—how the body processes drugs (ADME) * Pharmacodynamics—drug’s actions in the body * Pharmacotherapeutics —indications for  or effects of medication use * Toxicology—poisonous effects  of drugs on the body * Identifying undesirable effects of drugs * Drugs and their receptor sites * Mechanisms of drug interactions * Drug-drug interactions * Nutrient-drug interactions   **Laboratory:**   * Chapter review Exercises * Disease-drug interactions | * Handout * Book Exercise |
| **Day 3** | * Drug information and Drug Forms | **Lecture:**   * Drug Classifications * “Off-label” uses for medications * Drug nomenclature * Sources of drug information * Drug forms and drug delivery systems * Oral medications * Solid oral preparations * Liquid oral preparations * Miscellaneous oral medications * Percutaneous medications * Parenteral medications * Water-based parenteral medications * Oil-based parenteral medications * Other forms of medication * Packaging medications for patient compliance   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Day 4** | * Understanding Dosages for Special Population * Reading and Interpreting Medication labels and orders and documenting appropriately | **Lecture:**   * Variables affecting drug dosage and actions * Precautions and contraindications  to medication use in certain populations * Assisting other special populations with medications * Medications and cultural differences * Reading a label for stock medications * Parts of a medication label * Ordering medications * Verbal orders * Standing orders * Medication orders * Prescriptions | * Handout * Book Exercise |
| **Week 2** |  |  |  |
| **Day 1** | * Analgesic and Antipyretics | * What is Pain? * Pain and emotional responses * Pain and medications * Types of Analgesics * Opioid and opiate analgesics * Uses of opioids and opiates * Opioid and opiate precautions * Nonopioid analgesics * Non-steroidal anti-inflamatory drugs (NSAID) * Salicylate analgesics * Non-salicylates for pain * Combination nonopioid medications * Combing analgesics for greater effectiveness * Adjuvant medications for analgesia * Children and analgesics * The elderly and analgesics   **Laboratory:**   * Chapter review Exercises * Analgesic Ladder Exercise | * Handout * Book Exercise |
| **Day 2** | * Antimicrobials and Antibiotics | **Lecture:**   * What is an antibiotic? * Antimicrobials versus antibiotics * Bactericidal versus bacteriostatic * Factors in the choice  of antibiotics * Drug sensitivity * Patient factors * Antibiotic resistance * Superinfection and antibiotic use * Prophylactic use of antibiotics * Misuse of antibiotics   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. |  |
| **Day 3** | * Antibacterial Drugs | **Lecture:**   * Antibiotic Drugs * Penicillins * Cephalosporins * Carbapenems * Macrolides * Tetracyclines * Aminoglycosides * Quinolones * Sulfonamides * Other antibiotics * Chloramphenicol * Lincomycin and derivatives * Oxazolidinones * Ketolides * Vancomycin * Metronidazole * Tigecycline   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Day 4** | * Antifungals and Antivirals | **Lecture:**   * Drugs to treat fungal infections * Topical Antifungals * Systemic antifungals * Drugs to treat viral infections * Classification of antiviral drugs * Non-HIV antiviral medications * HIV antivirals * Nucleoside Reverse Transcriptase Inhibitor (NRTIs) * Nonnucleoside Reverse Transcriptase Inhibitor (NNTIs) * Protease Inhibitors * Intregrase Inhibitors * Fusion Inhibitors   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Week 3** |  |  |  |
| **Day 1** | * Immunizations and The immune System | **Lecture:**   * Role of lymphocytes in immunity * Inborn versus acquired immunity * Types of active and passive immunizing agents * Vaccines * Toxoids * Immune globulins * Antitoxins * Who should be immunized? * Indications for immunizations * Contraindications to immunizations * Adverse reactions to immunizations * Documentation of immunizations * Agents for artificially acquired active immunity * Vaccines for specific populations * Patient safety with agents for active immunization * Agents for artificial passive immunity * Education concerning immunizations   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Day 2** | * Nutritional Supplements and Alternative Medicines | **Lecture:**   * Vitamins * Classification of vitamins * Fat-soluble vitamins * Water-soluble vitamins * Using of vitamin supplements in the elderly * Minerals * Use of mineral supplements * Alternative medications * Cultural differences in using alternative medicine * Safety and regulation of herbal supplements   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise * In-service |
| **Day 3** | * Antineoplastic Agents | **Lecture:**   * What is Cancer? * Classifying tumors * Antineoplastic agents * Side effects of antineoplastics * Factors to consider with chemotherapy * Classes of antineoplastic agents * Alkylating or alkylating-like agents * Antimetabolites * Hormones and hormone antagonists * Antitumor antibiotics * Immunosuppressants * Radioisotopes * Handling and administering antineoplastic agents   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Day 4** | * Drugs for Skin Conditions | **Lecture:**   * Classification of dermatologic preparations * Dermatologic preparations and absorption * Types of preparations for the skin * Antiinfective and antiinflammatory topicals * Acne preparations * Keratolytic agents * Treatments for seborrheic dermatitis * Medications for psoriasis * Topical anesthesia and antipruretics * Topical treatment of burns and chronic wounds * Prophylactic agents * Medications for scabies and pediculosis * Other dermatologic preparations   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Week 4** |  |  |  |
| **Day 1** | * Eye Disorders | **Lecture:**   * Eye * Antiinfective and antiinflammatory agents * Agents for glaucoma * Mydriatics and cycloplegics * Local ophthalmic anesthetic agents * Immunomodulators * Ophthalmic antiallergic and decongestant agents * Ophthalmic staining agents   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Day 2** | * Ear Disorders | **Lecture:**   * Ear * Otic preparations * Vertigo and ototoxicity * Storage of eye and ear preparations   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Day 3** | * Misused, Abused, and Addictive Drugs | **Lecture:**   * What is drug misuse? Abuse? * Factors that contribute to drug misuse and abuse * Behaviors found with drug abuse * Drugs of abuse not requiring a prescription * Nicotine * Smoking cessation products * Ethyl alcohol or ethanol * Drug interactions with alcohol * Drugs used to treat alcoholism * Other alcohol preparations   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
| **Day 4** | * Misused, Abused, and Addictive Drugs | **Lecture:**   * Prescription drug abuse * Opiates and opioids * Signs and symptoms of opioid and opiate withdrawal * Abused central nervous system stimulants * Amphetamines * Cocaine * Abused central nervous system depressants * Barbiturates * Benzodiazepines * Marijuana and hashish * Hallucinogens, psychedelics, and psychotomimetics * Inhalants * Anabolic steroids * Care of patients with drug misuse and abuse problems   **Laboratory:**   * Chapter review Exercises * Medlist Top 200 Gen. | * Handout * Book Exercise |
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**Qualitative Measure of Satisfactory Academic Progress (SAP)**

The qualitative element used to communicate Satisfactory Academic progress is the institutions published grading scale. Theory is evaluated after each unit of study. Students must maintain a cumulative theory grade average of at least 70% (C) at the end of each progress report period. Students must make up failed or missed tests and incomplete assignments. Practical skills performances are counted toward course completion. If performance does not meet satisfactory academic requirements, demonstration of the skills must be repeated until a satisfactory level of performance is achieved.

The school’s satisfactory academic progress policies must contain a Pace (quantitative) measure. The policy defines the pace at which our students must progress to ensure educational program completion within the maximum timeframe of 150%. For Florida Vocational Institute the maximum time frame is no longer than 150% of the published length of the educational programs as measured in the cumulative number of clock hours the student is required to complete.

The school uses the following grading scale:

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| **Letter** | **Number** | **Grade Point** |
| **A** | 100 - 90% | 4.0 |
| **B** | 89 - 80% | 3.0 |
| **C** | 79 - 70% | 2.0 |
| **D** | 69 - 60% | 1.0 |
| **F** | Below 60% | 0.0 |
| **I** | Incomplete | Withdraw / No Grade |

*Not Used in GPA computation: I = Incomplete; W = Withdraw; P = Pass; NP = Not Pass*

Pass - Satisfactory completion of non-graded Externship.

Fail - Unsatisfactory completion of non-graded Externship.

The students who have failed to meet the Qualitative standards are placed first on Financial Aid Warning; if no improvement over the next payment period, the student will be placed on academic suspension, with a loss of Title IV, HEA fund and they appeal the decision. Please review the appeal and probation requirements state in this policy for guidance on this process. The Director of Financial Aid in coordination with the Office of Academic Affairs monitors qualitative progress.

**Final grade calculation criteria**

Q= 20 %

CA= 10%

MT= 30%

F= 40%

FG= 100%

**Evaluation Record Code**

Q= Quizzes

CA=Class Activity

MT= Mid Term

F= Final

R= Retest

FG= Final Grade

**Attendance**

Regular attendance is required of all students. Promptness and dependability are qualities important in all occupations. Students should begin to develop these qualities and habits the day the students begin their training.

Attendance is taken daily in class by the instructor and submitted to the Registrar before the end of each class day. Students are expected to attend all scheduled class meetings and to arrive on time.  Attendance records will be maintained by the Registrar and will be part of the student’s permanent academic record.

Students with chronic absences in excess of 20% of the scheduled hours for a course will receive a failing grade for the course. Early departures and tardies will be calculated in quarter hour increments. A student will be withdrawn from any course or program if he/she does not attend within a 14 consecutive calendar day period (excluding school holidays or breaks, no longer than 5 consecutive days).  All students must complete a 100% of all externship or clinical hours within the assigned grading period.

Students are responsible for making up assignments and work missed as a result of absence at the discretion of the instructor. The instructor may assign additional outside make-up work to be completed for each absence. Students enrolled in clock hour programs will be required to attend make up classes for any missed hours scheduled by the instructor if the students has missed more than **10%** of scheduled hours.  Students enrolled in a clock hour program must attend a minimum of **85 %** of the scheduled program hours in order to graduate.

Attendance is reviewed by the instructors, program directors and the Director of Education on a weekly basis with a focus on those who have been absent for **10%** of the scheduled course hours. Students will be notified by phone, text or e-mail if their attendance is danger of violating attendance requirements.

Students may appeal the school’s actions related to the attendance policy if the absence was due to extenuating or mitigating circumstances, for example illness, military duty, death of a family member, court appearances or jury duty. The student should first discuss the issue with his or her instructor. Appeals must be received within **seven (7)** calendar days of the student being notified of the decision that he or she wishes to appeal.

Students are expected to inform faculty in advance of any pending dates where a student may be absent and should make every effort to attend the alternate class in the morning or evening. Students are only allowed to miss up to 15% of their entire program hours, anything in excess of the 15% needs to be made up and could impact the student final course grade. It is the responsibility of the student to make up work or time missed.

**MAKE –UP HOURS/TIME**

Students enrolled in clock hour programs will be required to attend make up classes for any missed clock hours scheduled if the student has missed more than 15% of scheduled hours.  Students enrolled in a clock hour program must attend a minimum of 85 % of the scheduled program hours in order to graduate. Make-up hours for class must be made up during alternative schedules, including daytime, evening or a Friday schedule. Special circumstances will be managed by the Program Director with approval from Campus Vice President.

If absence at any time during the program exceeds **more than 10%,** the student will be placed on a mandatory prescribed school schedule which may include attending Friday scheduled sessions.

**MAKE-UP CLASS WORK**

Arrangements to make-up assignments, project, test, and homework missed as a result of absence must be made with the approval of the instructor. Make-up work must be completed within ten (10) calendar days after the end of the module

**DRESS CODE**

1. While on campus and in lectures, students must wear uniform and footwear appropriate for the college learning environment. The student should demonstrate appropriate hygiene to avoid offensive odor.
2. In the student laboratory, appropriate clothing must be worn at all designated times as per the specific course syllabus. Close-toed shoes must be worn in the lab at all times.
3. During clinical rotation, the student must adhere to the dress code of the facility to which he/she is assigned. In addition to the facility’s dress code, or if the dress code is optional, the following rules apply:
   1. Students must comply with number 2 above. If the facility requires the student to wear a scrub uniform, it must be school’s uniform. The student is responsible for purchasing the correct scrub uniform. The student must wear their Student ID batch at all times.
   2. Students must not wear clothing made of denim material of any color. (No jeans or JEAN skirts, etc.)
   3. Students must not wear under t-shirts, unless they are of one color with no words, letters, slogans, graphics, etc., of any kind
   4. Students must wear closed-toe shoes (no sandals or canvas shoes) with socks or hosiery.
   5. While attending practicum rotations, student’s hair must be clean, neat and of a normal hair color. Male students must either shave regularly, or if they choose to wear a mustache and/or beard, they must keep them clean and well groomed.
   6. Before attending practicum rotation, students must bathe regularly to avoid offensive odor. In addition, students must refrain from use of cologne/perfume/aftershave lotion, or makeup.
   7. Keep fingernails clean and at a reasonable length.
   8. Students not conforming to the dress code of the facility or the program may be sent home from the practicum site at the preceptor’s or course instructor’s discretion and attendance won’t be granted.

**Cell Phones and Pagers**

No student will be called out of class for a telephone call, except in case of an emergency. It is suggested that family friends be informed of this rule. Phones will not be in used inclass.