**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** |
| **PHT130** | **Pharmacology II** | | | 40 | 40 |
| **COURSE DESCRIPTION:** This course is designed as a continuation of Pharmacology I, but new student will be able to enter as well, as there will be a review part of pharmacy and medical terminology that will allow the student to better assimilate the material of the course. Subjects included on this course, will be mainly focus on classification of drugs used for the following body systems: Cardiovascular, Muscle-Skeletal, Respiratory, Nervous, Endocrine/Lymphatic and Gastro Intestinal Systems. Out-of-class activities will be assigned and assessed as part of this module. 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:   * Understand the fundamental scientific principles of drug action and the various mechanisms by which drugs can mediate their pharmacological effect * Understand the fundamental principles of pharmacokinetics that underly the absorption, distribution, metabolism and elimination of drugs in the body and thereby affect drug effectiveness * Understand the biochemical reactions that result in the metabolism of drugs within the body * Understand the rationale behind designing different dosing regimens of particular drugs in specific patient populations * Understand how specific patient characteristics and genetics can affect the response to a particular class of drugs * 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** | * Review to Basics of Pharmacology | * 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 * Disease-drug interactions | * Handout * Book Exercise |
| **Day 2** | * Musculoskeletal System Disorders | * Osteoporosis and medications for treatment * Joint diseases and their treatment * Gouty arthritis * Diseases involving muscles * Diseases with muscle spasticity * Fibromyalgia | * Handout * Book Exercise |
| **Day 3** | * Gastrointestinal system Disorders | * Gastrointestinal system and how drugs act * Drugs used in the mouth * Agents used for mouth conditions * Drugs used for gastric conditions * Antacids * Other medications for peptic ulcers * Drugs used to treat hepatitis B and C * Drugs used as pancreatic enzymes replacements * Drugs used with gallbladder disease * Drugs for emesis | * Handout * Book Exercise |
| **Day 4** | * Gastrointestinal system Disorders | * Drugs used for intestinal conditions * Antiflatulents * Laxatives and cathartics * Types of laxatives * Drugs used for relief of diarrhea * Lower GI anti-inflammatory agents * Anorectal preparations * Drugs used for intestinal parasites * Drugs used to suppress appetite | * Handout * Book Exercise |
| **Week 2** |  |  |  |
| **Day 1** | * Endocrine System Disorders | * What are hormones? * What is Insulin’s function? * Drugs used as antidiabetic agents * Diabetes mellitus * Administration of insulin in type 1 diabetes mellitus * Mixing insulin * Insulin delivery systems * Adverse reactions to insulin * Drugs used as oral antidiabetic agents * Other injectables for type 2 and type 1 diabetes mellitus * Hyperglycemic agents | * Handout * Book Exercise |
| **Day 2** | * Reproductive System Disorders | * Influence of hormones on the reproductive system * Drugs that affect the male reproductive system * Androgens * Testosterone * Anabolic Steroids * Medications for benign prostatic hypertrophy (BPH) * Medications for erectile dysfunction * PDE5 Inhibitors * Drugs that affect the female reproductive system * Estrogens * Forms of estrogen preparations * Progesterone |  |
| **Day 3** | * Reproductive System Disorders | * Forms of contraception * Oral contraceptives * Taking oral contraceptives effectively * Other forms of contraception * Implants and transdermal patches * Contraception by injection * Spermicides * Barrier devices * Postcoital contraception * RU-486 (abortion pill) * Drugs for premenstrual syndrome and dysmenorrhea * Medications for infertility * Medications for miscellaneous reproductive conditions * Medications that impair or enhance libido as a side effect | * Handout * Book Exercise |
| **Day 4** | * Urinary System Disorders | * Fluid and electrolyte balance * Replacement therapy * Treating urinary tract infections * Drugs to treat urinary tract infections * Short‑ and intermediate-acting sulfonamides * Antiinfectives * Urinary tract antiseptics * Miscellaneous urinary tract medications * Urinary tract antispasmodics and drugs for overactive bladder * Drugs for enuresis | * Handout * Book Exercise |
| **Week 3** |  |  |  |
| **Day 1** | * Circulatory System and Blood Disorders | * Function of the circulatory system * How drugs affect  the cardiac electrical conduction system * Drugs for angina pectoris * Nitrates * Beta-andrenergic blockers * Calcium Channel Blockers * Combining medications for angina * Congestive heart failure and its treatment * Medications for treating congestive heart failure * Cardiac dysrhythmias and their treatment | * Handout * Book Exercise |
| **Day 2** | * Circulatory System and Blood Disorders | * Hypertension and its treatment * Antihypertensive therapy * Antihypertensive therapy and lifestyle changes * Adding medications for treatment of hypertension * Categories of antihypertensive medications * Diuretics * Adrenergic-inhibiting agents * Vasodilators * Calcium Chanel Blockers * Hyperlipidemia and its treatment * HMG-CoA reductase Inhibitor (Statins) * Medications that affect coagulation * Anticoagulants * Warfarin * Antiplatelet medications * Thrombolytic medications * Topical hemostatics * Medications used as hematopoietics and erythropoietics | * Handout * Book Exercise * In-service |
| **Day 3** | * Respiratory System Disorders | * How respiration controls body functions * Oxygen Therapy * Understanding upper respiratory tract conditions * Treatment of nasal congestion * Antihistamines * Decongestants * Cromolyn sodium * Glucocorticoids * OTC products for upper respiratory conditions * Combination OTC products * Zinc-based OTC products * Herbal cold prophylactic products * Drugs used for coughs * Antitussives * Opioid cough suppressants * Nonopiod Cough suppressant | * Handout * Book Exercise |
| **Day 4** | * Respiratory System Disorders | * Understanding lower respiratory tract disorders * Drugs for conditions of the lower respiratory tract * Mucokinetic agents * Expectorants * Inhalation medications used for bronchodilators * Epinephrine, ephedra, and beta-adrenergic drugs * Xanthine derivatives * Anticholinergic medications * Glucocorticoids * Prophylactic medications for asthma * Influenza A and B * Medications for inhibition of influenza * Medications for respiratory syncytial virus infection | * Handout * Book Exercise |
| **Week 4** |  |  |  |
| **Day 1** | * Drugs for Neurologic System Disorders | * Effects of long-term drug use on the central nervous system * Analgesics * Classes of analgesics: narcotics and non-narcotics * Anesthetics * General anesthetics * Preanesthetic medications * Midazolam for conscious sedation * Local anesthetics * Procaine * Lidocaine * Cocaine * Sedatives and hypnotics * Treatment of sleep disorders * Barbiturates * Benzodiazepines * Other medications used as sedatives and hypnotics * Other products available OTC for insomnia * Antiseizure medications | * Handout * Book Exercise |
| **Day 2** | * Drugs for Neurologic System Disorders | * Drugs for Parkinson disease * Drugs for restless leg syndrome * Drugs for headaches * Migraine headaches * Treatment of migraines * Prevention of migraine headaches * Treatment of additional types of headaches * Cluster headaches * Tension headaches * Drugs for spasticity * Central nervous system stimulants * Autonomic nervous system drugs * Cholinergic or parasympathomimetic medications * Anticholinergic or parasympatholytic medications * Adrenergic agonists * or sympathomimetic drugs * Adrenergic blocking agents or sympatholytic drugs * Beta-adrenergic receptor blockers (beta blockers) * Drugs specific for stroke prevention | * Handout * Book Exercise |
| **Day 3** | * Drugs for Mental Health and Behavioral Disorders | * What is mental health? * What is a mentally healthy person? * Role of medication therapy in psychotherapy * Anxiety and daily living * Neurosis vs. psychosis * Anxiolytics or drugs for anxiety (minor tranquilizers) * Benzodiazepines * Neuroleptics or drugs for psychosis (major tranquilizers) * Uses for antipsychotics or neuroleptics * Potency and neuroleptics * Side effects of neuroleptics * Treatment of psychosis with parenteral medications * Treatment of schizophrenia | * Handout * Book Exercise |
| **Day 4** | * Drugs for Mental Health and Behavioral Disorders | * Depression and its treatment * Antidepressant medications * Tricyclic antidepressants * Atypical antidepressants * Monoamine oxidase inhibitors * Selective serotonin reuptake inhibitors * Natural reuptake inhibitors * Antimanic medications * Drugs for Alzheimer’s disease * Drugs used for attention-deficit/ hyperactivity disorder (ADHD) | * Handout * Book Exercise |

**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.