**FLORIDA VOCATIONAL INSTITUTE**

**SYLLABUS / LESSON PLAN**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Daily/Weekly Lesson Plan Outline – 3 weeks / 30 Clock Hrs. / 30 Lab Hrs.** | | | | | |
| **COURSE TITLE** | | | | **Review Date:** | |
| **Medical Assistant** | | | | **01/04/2016** | |
| **CODE** | **SUBJECT** |  |  | **LEC HRS** | **LAB HRS** |
| **MAS 110** | **Diagnostic Imaging and X-Ray** | | | **30** | **30** |
| **COURSE DESCRIPTION:** This course prepare students to prep and perform limited X-Ray work on extremities and body region .Students will learn about machine maintenance, principal of use ,safety precautions and X-Ray procedures. The course is also designed to provide a basic knowledge on other imaging procedures including MRI, CT as well as Ultrasound.  **Prerequisite: None**  **Required Resources:**  **Text Books*:*** *KINN”S The Medical Assistant, An applied Learning Approach. Barbara B. Proctor, Alexandra P. Adams. 12th Edition. Elsevier (Chapter 43, 50)*  *Other: handouts*  **Learning Resources Center materials are available**  **Instructional Methods:**  Lecture/Discussion  Audiovisual  **Mode of Delivery:**  Residential  **Equipment/Technology/Software**  Utilization of power point presentations, media center websites, reference materials, and other technology as available  **Course objectives/Competencies:** At the end of the course, students will be able to:   * Describe the medical use of X-Rays * Describe the properties of X-Rays * Describe the structures and function of the Musculo-Skeletal System * Explain the effects of radiation * Describe the methods for radiation protection * Follow OSHA regulations regarding Radiology Department * Describe other Diagnostic Imaging procedures including MRI and CT scan * Deal with emergencies during a radiology procedure. | | | | | |
|  |  |  |  |  | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Objectives to be covered** | **Lecture/ Labs** | **Method of Assessment** |
| **Week 1** |  |  |  |
| **Day 1** | Basic Principles of Radiography  Review Anatomy concepts | **Lecture:**   1. Explaining the definition of Radiology 2. Describing the role of MA in Radiology Department 3. Defining of X-Ray 4. Explaining the discovery of X-Rays 5. Explaining the properties of the X-Rays   Reviewing Body Planes and Cavities **Laboratory:**  Students will conduct a short research after lecture and then they will come out with the results. A group discussion of the information collected will follow (X-Ray Properties) | Book Exercise |
| **Day 2** | Musculoskeletal System | **Lecture:**   1. Explaining the different types of muscles and the muscle function 2. Describing different muscular disorders. Muscular Dystrophy 3. Explaining the structure of the bones 4. Compact bone 5. Spongy bone 6. Characteristics of Long bones, irregular bone and short bones 7. Explaining the process of ossification 8. Describing Axial Skeleton and Appendicular Skeleton 9. Explaining the different types of body movements 10. Explaining the Joints   **Laboratory:**  Instructor will illustrate the skeleton and students will identify bones as the Instructor point at them. | Questions |
| **Day3** | Musculoskeletal disorders  Basic Principles of Radiology | **Lecture:**   1. Explaining Musculoskeletal diseases and disorders 2. Explaining Spinal Column Disorders: Scoliosis, Lordosis, Kyphosis 3. Describing the classification of Body Structures: Radiolucent and Radiopaque 4. Explaining Radiography Positioning   **Laboratory:**  Students presentation of a project related  To spinal cord disorders | Questions |
| **Day 4** | Presentation: Breast Cancer | **Laboratory:**   1. Presentation about Breast Cancer Including incidence 2. Statistics 3. Male breast cancer 4. Female breast cancer 5. Signs and symptoms 6. Diagnosis 7. Treatment 8. Prognosis | Presentation |
| **Week 2** |  |  |  |
| **Day 1** | Diagnosis through Radiographic Examination | **Lecture:**   1. Giving examples of disorders diagnosed by Radiographic Procedures: Breast Cancer, Pneumonia, cardiomegaly, Fractures. 2. Explaining the use of Contrast Medium 3. Describing radiographic Procedures Using Contrast Medium   **Laboratory:**  Students requested to collect statistics about breast cancer for few minutes and then discussing results for the rest of the activity scheduled time | Questions |
| **Day 2** | Production of Radiation  Effects of Radiation | **Lecture:**   1. Describing Radiographic Equipment 2. Explaining the Control Console 3. Describing the Production of Radiation: 4. Explaining the different types of Radiation: Primary Radiation, Attenuated Radiation, Absorbed Radiation, Remnant or Useful Radiation, Scattered Radiation 5. Describing Radio-Sensitivity of body cells 6. Explaining the Biological Effect of radiation 7. Explaining the Molecular Effect of radiation   **Laboratory:**  Activity where students interact showing pictures collected by research concerning radiosensitive body structures, biological effects of radiation | Quiz |
| **Day 3** | Effects of Radiation  Occupational Exposure | **Lecture:**   1. Explaining: 2. Cellular effects of Radiation 3. Organic effects of Radiation 4. Somatic Effect of Radiation 5. Genetic Effects of Radiation 6. Occupational Exposure 7. Personnel Safety 8. Personnel Monitoring 9. Effective Dose Equivalent Limits 10. Occupational Protection during pregnancy 11. Patient Protection: Shielding 12. Beam restriction: Filtering, Collimator 13. Prime or exposure factors; KVP, mA, SID 14. Maximum Permissible Dose. 15. Heat Units   **Laboratory:**  Presentation: Acute Radiation Syndrome | Presentation |
| **Day4** | Diagnostic Imaging Modalities | **Lecture:**   1. Describing other Diagnostic Imaging tests such as Fluoroscopy, CT scans, Magnetic Resonance Imaging, Sonography, and Nuclear Medicine 2. Explaining the role of the Medical Assistant in diagnostic imaging 3. Explaining the patient preparation for radiographic examination 4. Giving examples of diagnostic procedures and Patient preparation   **Laboratory:**  Simulation: Giving instructions to patients for a diagnostic test and patient preparation as needed. Patient positioning  Quiz | Questions  Laboratory  Quiz |
| **Week 3** |  |  |  |
| **Day 1** | Transferring patients to radiology department. | **Lecture:**   1. Checking Hospital Equipment for safety 2. Describing the examination of transfer equipment 3. Assessing the patient’s condition 4. Explaining how to give instructions to the patient, use of good body mechanics 5. Explaining different methods of patient transfer | Questions |
| **Day 2** | Foreign-Body Localization | **Lecture:**   1. Describing types of Foreign bodies 2. Radiographing for foreign body 3. localization 4. Explaining how to verify patient identification and the radiographic requisition | Questions |
| **Day 3** | Dealing with emergencies  Study Guide | **Lecture:**   1. Explaining the proper action in case of 2. Fainting 3. Chills 4. Convulsions 5. Vomiting   **Laboratory:**  Study Guide  Discussion of guide answers | Questions  Study Guide |
| **Day 4** | Final Test | Final test  Analysis of test results | Test |

**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:

|  |  |  |
| --- | --- | --- |
| **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 students 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.