**ESSEX COUNTY COLLEGE**

**Nursing and Allied Health Division**

**RTC 109 – Radiologic Positioning Principles III**

**Course Outline**

**Course Number & Name:**  RTC 109 Radiologic Positioning Principles III

**Credit Hours:**  2.0 **Contact Hours:**  3.0 **Lecture:** 2.0 **Lab:**  1.0 **Other:**  N/A

**Prerequisites**:  Grade of “C” or better in RTC 108

**Co-requisites**: RTC 110 **Concurrent Courses:** None

**Course Outline Revision Date:**  Fall 2011

**Course Description**: This course provides precise and detailed information, with related terminology, on the various positions of the skull including routine positions and positions with regard to facial bones, paranasal sinuses, and mastoid. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiographic room. Critiques of radiographic films are conducted in the classroom/laboratory.

**Course Goals**: Upon completion of this course the student radiographer will be able to:

1. identify all anatomical lines and landmarks and anatomy associated with cranial imaging;

2. identify all pertinent positioning of the cranium; and

3. determine proper technique, IR selection, and central ray position for all radiographic positions, patients, body habitus, and pathology situations.

**Measurable Course Performance Objectives (MPO)**: Upon completion of this course the student radiographer should specifically be able to:

1. Identify all anatomical lines and landmarks and anatomy associated with cranial imaging:

1.1 *identify on a radiograph and/or diagram the cranial anatomy of the following: skull, facial bones/nasal bones/orbits, paranasal sinuses, mandible and TMJ, and mastoids and inner ear;* and

1.2 *identify on a radiograph and/or diagram the following cranial lines and landmarks: glabella, nasion, IPL, acanthion, gonion, pinna, TEA, SOM, midlateral orbital margin, IOM, outer canthus, inner canthus, mental point, SOG, supercillary ridge (arch), tragus, AML, LML, MML, GAL, GML, OML, and IOML*

**Measurable Course Performance Objectives (MPOs)** (continued):

2. Identify all pertinent positioning of the cranium:

2.1 *identify proper positioning of the following: skull, facial bones/nasal bones/orbits, paranasal sinuses, mandible and TMJ, and mastoids and inner ear;* and

2.2 *demonstrate proper positioning of the following: skull, facial bones/nasal bones/orbits, paranasal sinuses, mandible and TMJ, and mastoids and inner ear*

3. Determine proper technique, IR selection, and central ray position for all radiographic positions, patients, body habitus, and pathology situations:

3.1 *accommodate technique and positioning modifications for body habitus;* and

3.2 *accommodate technique and positioning for trauma, pediatric, and geriatric procedures*

**Methods of Instruction**: Instruction will consist of lectures, class discussions/participation, PowerPoint slide shows, class activities, radiograph review, and laboratory activities.

**Outcomes Assessment:** Test and exam questions are blueprinted to the course objectives which are based on the minimum standards required by the American Radiology of Radiologic Technologists (ARRT) and the American Society of Radiologic Technologists (ASRT) suggested course curriculum. Note: Tests and exams are primarily structured in multiple-choice formats in conjunction with the ARRT exam. Also, checklist rubrics may be used to evaluate students for the level of mastery of course objectives.

**Course Requirements:** All students are required to:

1. Read the textbook and do the suggested homework problems in a timely manner.

2. Attend and be an active participant in all classes.

3. Take tests/exams in class and adhere to the test/exam schedule.

4. Turn off cell phones while in class.

5. Remain in the classroom during the entire class period.

6. Earn a “C” or better to pass this class. Students who do not earn a “C” or better will be required to withdraw from the Radiography Program as per program policy.

**Methods of Evaluation:** Final course grades will be computed as follows:

**% of**

**Grading Components final course grade**

* 4 or more Tests (dates specified by the instructor)  50%

Tests will be administered regularly throughout the semester to test student mastery of course objectives.

* **Laboratory Competency (6) 20%**

The laboratory competency assessment, in which student performance will be rated by a laboratory competency rubric, will provide evidence of the extent of student achievement of some course goals. (See Required Laboratory Competencies on page 6.)

* **Midterm Exam** (date specified by the instructor)  **10%**

The midterm exam format may consist of multiple choice, short answer, and true/false questions and will include material from the readings, homework, lectures, and labs covered throughout the semester. The midterm exam will test the students’ mastery of course objectives and synthesis of course material covered from the beginning through the first half of the semester.

* **Final Exam** **20%**

The final exam format may consist of multiple choice, short answer, and true/false questions and will include material from the readings, homework, lectures, and labs covered throughout the semester. The final exam will test the students’ mastery of course objectives and synthesis of course material covered throughout the entire semester.

Note**: Laboratory Competency** includes all 6 required simulated laboratory competency evaluations. Students failing a competency will be remediated and re-evaluated. The grade for remediated competency will be an average of the failure and re-evaluation grades.

**Academic Integrity:** Dishonesty disrupts the search for truth that is inherent in the learning process and so devalues the purpose and the mission of the College. Academic dishonesty includes, but is not limited to, the following:

* plagiarism – the failure to acknowledge another writer’s words or ideas or to give proper credit to sources of information;
* cheating – knowingly obtaining or giving unauthorized information on any test/exam or any other academic assignment;
* interference – any interruption of the academic process that prevents others from the proper engagement in learning or teaching; and
* fraud – any act or instance of willful deceit or trickery.

Violations of academic integrity will be dealt with by imposing appropriate sanctions. Sanctions for acts of academic dishonesty could include the resubmission of an assignment, failure of the test/exam, failure in the course, probation, suspension from the College, and even expulsion from the College.

**Student Code of Conduct:** All students are expected to conduct themselves as responsible and considerate adults who respect the rights of others. Disruptive behavior will not be tolerated. All students are also expected to attend and be on time for all class meetings. No cell phones or similar electronic devices are permitted in class. Please refer to the Essex County College student handbook, *Lifeline*, for more specific information about the College’s Code of Conduct and attendance requirements.

**Course Content Outline:** based on the text **Radiographic Positioning and Procedures**, all 3 volumes, by E Frank, B Long & B Smith; ISBN # 978-0323073349. The accompanying workbook (ISBN # 973-0323073240) is also required.

**Week Topics covered**

1 Terminology, radiographic baselines and planes

Skull basic anatomy

Adult and pediatric skull

Division of cranial bones

2 **Test 1** on terminology, skull anatomy and positioning

Lecture: adult and pediatric facial bones and orbits anatomy and positioning

3 **Test 2** on facial bones and orbits

Lecture: nasal bones and TMJ anatomy and positioning

4 **Midterm Exam**

Lecture: zygomatic arch and mandible

5 **Test 3** on zygomatic arch and mandible

Lecture: mastoids and paranasal sinuses anatomy and positioning

6 **Test 4** on mandible and zygomatic arch

Complete all laboratory competencies

Review for the Final Exam

7 **Final Exam**

**ESSEX COUNTY COLLEGE RADIOGRAPHY PROGRAM**

**Summer 1 Semester – RTC 109 Required Laboratory Competencies**

|  |  |  |
| --- | --- | --- |
| **BODY PART** | **POSITION/S REQUIRED** | **VIEWS** |
| **Skull** | AP axial (Towne), left lateral, PA (Caldwell), PA (no angle), SMV (full basal), PA 25-30\* angle (Haas) | 6 |
| **Paranasal Sinuses** | Lateral (side of interest down), PA (Caldwell), PA (Waters), SMV (full basal) | 4 |
| **Facial Bones** | Zygomatic arch, lateral, PA (Waters), PA (Caldwell) | 4 |
| **Mandible** | Axiolateral oblique, PA no angle, AP axial (Towne), PA semi-axial, 20-25\*cephalad, PA (modified Waters), SMV (full basal) | 6 |
| **Nasal Bones** | Parietoacanthial (Waters), both lateral, PA (Caldwell) | 4 |
| **Orbits** | Bilateral Rhese method (3 point landing) | 2 |