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 2010

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. define and utilize correctly standard terminology for radiographic positioning and projection;
2. satisfactorily perform under laboratory conditions with phantom radiography procedures of the skull, facial bones, and paranasal sinuses for both pediatric and geriatric patients; and
3. demonstrate and describe radiographic positioning and procedure for the skull, facial bones, and paranasal sinuses.

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

1. Define and utilize correctly standard terminology for radiographic positioning and projection:
   - 1.1 *define and utilize correctly standard terms including radiographic positioning, radiographic projection, and radiographic view;*
   - 1.2 *define and utilize correctly positioning terminology including recumbent, supine, prone, Trendelenburg, decubitus, erect and upright, anterior, posterior, and oblique;*
   - 1.3 *define and utilize correctly general skull lines terminology including glabelomeatal line, inter pupillary line, orbitomeatal line, infraorbitomeatal lines, acanthiomeatal line, and supraorbitomeatal line;* and
   - 1.4 *define and utilize correctly general planes terminology including sagittal or mid-sagittal, coronal or mid-coronal, transvers, and longitudinal*

Measurable Course Performance Objectives (MPOs) (continued):

2. Satisfactorily perform under laboratory conditions with phantom radiography procedures of the skull, facial bones, and paranasal sinuses for both pediatric and geriatric patients:

   2.1 *satisfactorily perform under laboratory conditions radiography procedures of the skull (cranium);*
   2.2 *satisfactorily perform under laboratory conditions radiography procedures of the facial bones;*
   2.3 *satisfactorily perform under laboratory conditions radiography procedures of the paranasal sinuses;* and
   2.4 *satisfactorily perform under laboratory conditions radiography procedures of pediatric skull and facial bones*

3. Demonstrate and describe radiographic positioning and procedure for the skull, facial bones, and paranasal sinuses:

   3.1 *properly prepare the patient for the exam;*
   3.2 *position the patient properly for the different views;*
   3.3 *determine and utilize the appropriate IR size;*
   3.4 *apply the correct source of image distance (SID)*;
   3.5 *place correct ID markers on a given image;*
   3.6 a*pply the proper radiation protection technique to the personnel and patient;* and
   3.7 *communicate effectively appropriate patient instruction throughout the exam*

Methods of Instruction: Instruction will consist of lectures, lab demonstrations, class discussions/participation, PowerPoint presentations, and film critique (radiographic review).

Outcomes Assessment: Quiz 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) required course curriculum. NOTE: Testing is primarily structured in multiple choice formats in conjunction with the ARRT exam. Also, the laboratory proficiency exam utilizes checklist rubrics to evaluate laboratory performance for the presence and mastery of course objectives.

Course Requirements: All students are required to:

1. Attend class. Attendance is mandatory for successful completion of this course.
2. Be in class on quiz/exam days. Students who arrive late on the day of a quiz/exam will forfeit the benefit of allotted time and must complete the task in the time remaining. There will be NO make-up quizzes or exams.
3. Turn off all cell phones during class.
4. Remain in the classroom during the entire class period.
5. Earn a "C" or better to pass this course. Students that do not earn a "C" or better will be required to withdraw from the Radiography Program per Radiography Program policy.

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

Grading Components	% of final course grade
• **4 or more Quizzes** (dates specified by the instructor) Quizzes will be administered regularly throughout the semester to test student mastery of course objectives. NOTE: The lowest quiz grade will be dropped and the remaining 3 highest quiz grades will be averaged to provide a Quiz Average, which counts as 20% of the final course grade.	**20%**
• **Laboratory Proficiency Exam** Laboratory experiences are designed to prepare students to perform radiographs of the skull, facial bones, and paranasal sinuses with both pediatric and geriatric patients. The laboratory proficiency exam will provide evidence of the extent of student achievement of some course goals. (See Flowsheet for Laboratory Proficiency Exam on page 6.)	**20%**
• **Midterm Exam** (date specified by the instructor) 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.	**20%**
• **Final Exam** 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.	**40%**

NOTE**: Laboratory attendance in RTC 109 is mandatory**. Participation and the lack thereof will have a considerable effect on the overall grade calculations. Failure to show interest in lab class, can demonstrate difficulty with the material or boredom. It is important to keep in mind that any knowledge students obtain in respect to individual instructors is unique**. Initial Laboratory Competencies** are graded as per Clinical Competency Examination Sheets. Each student is provided two opportunities to successfully complete his/her Initial Laboratory Competencies. If the second attempt is unsuccessful the student will receive a numerical grade of zero.

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 **Textbook of Radiographic Positioning and Related Anatomy**, 7th edition, by Kenneth L Bontrager; ISBN #: 978-0-323-05410-2

Course Resources: Mannequin, Loose Bones, Phantom, Radiographs, Audio-Visual Materials, the Internet, the Skeleton, and the Computer Lab

Week	Topics covered
1	Review class syllabus Skull basic anatomy (terminologies, radiographic baselines, and planes) Standard terminologies for positions and projections Read Chapter 12 Hand out from the instructor
2	**Quiz 1** on terminologies Skull (cranium) including pediatric cranium Read Chapter 12
3	**Quiz 2** on the skull Facial bones and orbits including pediatric facial bones Read Chapter 13
4	**Midterm Exam** on the cranium and facial bones Nasal bones and TMJ Read Chapter 13
5	**Quiz 3** on nasal bones and TMJ Zygomatic arch and mandible
6	**Quiz 4** on mandible Paranasal sinuses Read Chapter 13
7	Internal auditory canal and mastoids Review for the Final Exam **Final Exam**

FLOW-SHEET FOR LABORATORY PROFICIENCY EXAMINATION

BODY PART	***POSITION REQUIRED***	***# OF VIEWS***	***TOTAL #***
Skull	AP axial (Towne) Lateral PA (Caldwell) PA (no angle) Submentovertical (full basa) PA 25 ^{o} – 30° angle (Haas)	1 1 1 1 1 1	6
Paranasal Sinuses	Lateral PA (Caldwell) Parietoacanthial (Waters) Submentovertical (full basal)	1 1 1 1	4
Facial Bones (routine)	Zygomatic arch Lateral Parietoacanthial (Waters) PA (Caldwell)	1 1 1 1	4
Mandible	Axiolateral oblique PA (no angle) AP axial (Towne) PA semi-axial, 20 ^{o} – 25° angle Cephalic PA (modified Waters) Submentovertical (full basal)	1 1 1 1 1 1	6
Nasal Bones	Parietoacanthial (Waters) Lateral both laterals (2 views) PA (Caldwell)	1 2	3
Orbits	Rhese method	2	2