OGEECHEE TECHNICAL COLLEGE
RAD 132 – Clinical Radiography I
Course Syllabus
Fall 2009
Matthew Dunn
Full-Time
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Office Hours: By Appointment – See Door Schedule

COURSE ROOM, DAY AND TIME –
1st five weeks – M/W/Th – Class: Room 325 – Kennedy Building
Assigned Clinical Times on Fridays: 10/23, 10/30, & 11/6
2nd five weeks – M/Tu/W/Th – Assigned Clinical Sites

COURSE DESCRIPTION:
Introduces students to the hospital clinical setting and provides an opportunity for students to participate in or observe radiographic procedures. Topics include: orientation to hospital areas and procedures; orientation to mobile/surgery; orientation to radiography and fluoroscopy; participation in and/or observation of procedures related to body cavities, the shoulder girdle, and upper extremities. Emphasis is placed on clinical exposure to competencies in Chest, Abdomen, Upper Extremity and Bony thorax. The student is also introduced to and supervised in darkroom procedures, radiation protection, patient care, film management, radiographic exposure and radiographic image evaluation. Activities of students are under direct supervision.

Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of radiologic procedures. Through structured sequential, competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Topics include equipment utilization; exposure techniques; and progress toward completion of clinical competencies through participation in and/or observation of gastrointestinal (GI), genitourinary (GU), and biliary system procedures, and routine and special cranial and facial radiography. Execution of radiographic procedures will be conducted under direct and indirect supervision.

Clinical practice experiences shall be designed to provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well-being of the patient preparatory to, during and following the radiologic procedure.

COMPETENCY AREAS:

After completing this section, the student will be able to:

1. Locate departments, clinics, patient wards, operating rooms, administrative offices, and supply storage areas.
2. Identify the purpose of each department, office, and clinic in terms of its function as a part of a total health care delivery system.
3. Describe the layout of the radiology, radiation therapy, nuclear medicine, and diagnostic medical sonography departments.
4. Describe the services provided by the radiology, radiation therapy, nuclear medicine, and diagnostic medical sonography departments.
5. Describe the radiographic services offered outside departmental areas.
6. Identify the function of the radiology, radiation therapy, nuclear medicine, and diagnostic sonography departments in terms of membership in a total health care delivery system.
7. Discuss the rationale for hospital program policies.
8. Describe the rules and regulations of the clinical evaluation center(s).
9. Identify the major responsibilities and duties of a student radiographer.
10. Describe and/or perform administrative tasks required of a student radiographer.
11. Observe and/or participate in determining exposure factors and setting exposure controls on mobile/surgical radiographic equipment.
12. Observe and or participate in the use of radiation protection procedures for mobile/surgical environments.
13. Observe and/or participate in conducting mobile/surgical radiographic procedures.
14. Observe and/or participate in determining exposure factors and setting exposure controls for fixed radiographic and fluoroscopic equipment.
15. Observe and/or participate in the use of radiation protection procedures for radiography and fluoroscopy.
16. Observe and/or participate in the positioning of patients undergoing routine radiographic procedures involving the thoracic cavity.
17. Observe and/or participate in the evaluation of thoracic cavity radiographs in terms of positioning accuracy, image quality, and anatomical structures visualized.
18. Observe and/or participate in the positioning of patients undergoing routine radiographic procedures involving the abdominal cavity.
19. Observe and/or participate in routine radiographic procedures involving the abdominal cavity.
20. Observe and/or participate in the evaluation of abdominal cavity radiographs in terms of positioning accuracy, image quality, and anatomical structures visualized.
21. Observe and/or participate in the positioning of patients undergoing routine radiographic procedures involving the shoulder girdle.
22. Observe and/or participate in routine radiographic procedures involving the shoulder girdle.
23. Observe and/or participate in the evaluation of shoulder girdle radiographs in terms of positioning accuracy, image quality, and anatomical structures visualized.
24. Observe and/or participate in the positioning of patients undergoing routine radiographic procedures involving the upper extremities.
25. Observe and/or participate in routine radiographic procedures involving the upper extremities.
26. Observe and/or participate in the evaluation of upper extremity radiographs in terms of positioning accuracy, image quality, and anatomical structures visualized.
27. Evaluate the number, types and degree to which clinical competencies have been...
28. Develop a plan in conjunction with on-site clinical supervisors and OTC faculty to outline future completion and mastery of clinical competencies contained in this course.

29. Identify an area of concern or interest related to the content of this clinical experience, and research, review a publication, or otherwise explore this topic to your satisfaction.

30. Recognize malfunctions in radiographic and automatic processing equipment and report these malfunctions.

31. Inspect and clean screen and cassettes regularly to identify and remove causes of artifacts.

32. Perform "start up" and/or "shutdown" on the automatic processor (remove and cleaning of "cross-over bars").

33. Warm up x-ray tube

34. Store films and cassettes properly.

35. Imprint proper identification information on the film, process exposed film, reload cassettes.

36. Record appropriate information on request form.

37. Combine radiographic requisition and radiographs for interpretation and filing.

38. Determine set and modify exposure factors to achieve optimum image quality and minimize patient exposure.

39. Evaluate finished radiographs of the thoracic cavity, abdominal cavity, shoulder girdle, and upper extremities.

40. Observe and/or participate in the identification of and care for acute reactions to contrast media.

41. Achieve specific performance objectives, as listed in the Academic and Clinical Manual.

42. Evaluate the number, types and degree to which clinical competencies have been completed and mastered.

43. Exercise the priorities required in daily clinical practice.

44. Execute the imaging procedures under the appropriate level of supervision.

45. Adhere to the concepts of team practice that focus on organizational theories, roles of team members and conflict resolution.

46. Adapt to changes and varying clinical situations.

47. Support patient-centered clinically effective service for all patients regardless of age, gender, disability, special needs, ethnicity or culture.

48. Integrate the use of appropriate and effective written, oral, and nonverbal communication with patients, the public, and members of the health care team (peers, physicians, nurses, administration, etc.) in the clinical setting.

49. Chose patient and family education strategies appropriate to the comprehension level of patient/family.

50. Manage interactions with the patient and family in a manner that provides the desired psychosocial support.

51. Evaluate the patient’s status and condition before, during and following the radiologic procedure to demonstrate competence in assessment skills.

52. Demonstrate skills in assessment and evaluation of psychological and physical changes in the patient’s condition and carry out appropriate actions.

53. Examine gender, cultural, age and socioeconomic factors that influence patient compliance with procedures, diagnosis, treatment and follow-up of patients.

54. Adapt procedures to meet age-specific, disease-specific and cultural needs of
55. Assess patient using the ABC’s of CPR and demonstrate basic life support procedures.
56. Assess the patient and record patient histories.
57. Respond appropriately to patient emergencies.
59. Apply standard and transmission-based precautions.
60. Prepare the technologies and methodologies for the performance of radiologic procedures.
61. Demonstrate competency in the principles of radiation protection standards to include time, distance, shielding and radiation monitoring.
62. Apply the principles of total quality management.
63. Support safe, ethical and legal practices.
64. Integrate the radiographer’s scope of practice and practice standards into clinical practice setting.

PREREQUISITES:
Program admission, RAD 103, or RAD 108

COREQUISITES:
RAD 103 or RAD 108

CONTACT HOURS: 14

CREDIT HOURS: 5

REQUIRED TEXT:

Radiologic Technology Academic and Clinical Manual

- ISBN-10: 0323042090
- The OTC bookstore has this in stock.

- ISBN: 0766864461
- Optional pocket guide. Can be used in place of the Merrill’s pocket guide.

MATERIALS AND SUPPLIES:
Attendance in the clinical setting/area requires:
1. A clean uniform
2. Official OTC student ID badge (displayed on student uniform)
3. Initialed lead markers
4. Watch with a seconds hand
5. Clinical notebook and clinical manual
6. Pocket calculator
7. Dosimeters (worn in proper location)
8. A good attitude and a smile! 😊

CLASSROOM POLICIES AND PROCEDURES:

- Prior to attempting a grade for a radiographic examination, the student MUST present the proper paperwork to the Clinical Instructor or qualified radiographer.

INSTRUCTIONAL STRATEGIES/METHODS:

- Observation, demonstration and mastery of radiographic procedures and radiographic equipment utilization, under direct and indirect supervision of a qualified radiographer (See student handbook for direct and indirect supervision policy).
- Critical thinking through discussion of case studies and radiographic film critique.
- Writing across the curriculum by pathology research and radiographic film analysis.

CRITICAL THINKING:

Today, employers often rate critical thinking as one of the most important requirements for employment. Technical skills alone are not sufficient to do the job now required in a high tech work place. The employee who possesses the combination of technical occupational skills and critical thinking skills is a valued asset to any organization. Healthcare professionals must analyze various situations that arise in a clinical setting and select the most appropriate response to each individual situation. To assist the student in developing skills in critical thinking and problem solving, various situations will be analyzed in the classroom and appropriate responses reinforced in the laboratory and clinical setting. Written examinations will also include situations in which the most appropriate solution must be selected from a choice of answers.

CLINICAL POLICIES AND PROCEDURES:

Ogeechee Technical College faculty will arrange clinical education with the clinical affiliates. While the student is in the clinical department, he/she must observe the regulations imposed by the clinical instructors with regards to patient safety and welfare. When performing clinical duties, the student is directly responsible to the radiographer in charge of the room to which the student is assigned. This course does not require the use of the World Wide Web during clinical hours. Therefore, **students found to be using the computer during clinical time will be dismissed from clinic.** If any operational or personal problems arise, the clinical instructor or OTC faculty should be contacted. **The use of pagers and cell phones during clinical assignments is strictly prohibited!!!** For emergencies, the clinical site phone number is provided on your schedule as well as in your clinical manual. Students must adhere to the Clinical Education Setting parking policies. Students found parking in prohibited area will have their Work Ethics grade lowered.
DIRECT SUPERVISION:

Student supervision under the following parameters:

- A qualified radiographer reviews the procedure in relation to the student’s achievement
- A qualified radiographer evaluates the condition of the patient in relation to the student’s knowledge;
- A qualified radiographer is present during the conduct of the procedure;
- A qualified radiographer reviews and approves the procedure.

ATTENDANCE POLICY:

Students are expected to be present and on time for all clinical assignments. Any absences from the clinical area will affect the student's clinical education and may affect their grade. Absences and tardies include not being in your assigned area while in clinic.

In case of illness or other emergency, the student must personally notify the clinical instructor, clinical coordinator, and/or program director prior to the scheduled clinical period. More than two unexcused absences will result in disciplinary action and may result in termination.

Students will be required to make-up missed clinical time. Make-up time is scheduled by program faculty. Missed clinical time could result in missing graded exams the student needs in an effort to complete the course. All clinical paperwork MUST be turned in on the last day of clinic. If the student does not complete their clinical coursework by the last clinical day, they must turn in what they have completed and grades will be assessed on what was finished. Zeros will be given for any incomplete clinical work.

The student is required to be in the clinical area at least 5 minutes prior to the starting time. A student who is more than 5 minutes late should contact the Clinical Coordinator and clinical site prior to the tardy. Otherwise, the student will be counted absent and may not be allowed to stay in the clinical area. The student should refer to the Radiologic Technology Academic and Clinical Manual for a more specific clinical attendance policy.

To receive credit for this course a student must attend 90% of the scheduled instructional time. Any student attending less than 90% of the scheduled instructional time will receive a "W" for the course if removed from the course before the quarter midterm. After the quarter midterm, any student who has maintained a passing grade within a course will receive a 'WP' for the course when attending less than 90% of the scheduled instructional time. If, however, the student has not maintained a passing grade, he or she will receive a 'WF' for the course. Attendance is counted from the first scheduled class meeting of each quarter.

Tardy means arriving after the scheduled time for instruction to begin. Early departure means leaving before the end of the scheduled time. Three (3) tardies or early departures equal one (1) absence for the course involved.

There is no attendance appeal.
All personal appointments, i.e. doctors, lawyers, vacations should be made on your time, not clinical time! Students are given ample notice of clinical assignments and therefore appointments should be made accordingly.

For further explanation, please see the Radiologic Technology Academic and Clinical Manual.

**CODE OF CONDUCT:**

Cheating - The program’s policy for cheating specifies that one (1) incident of cheating will result in a grade of zero (0) for that examination and DISMISSAL FROM THE PROGRAM. Cheating includes but is not limited to:

- Copying from the test of another student or allowing another student to copy from your test.
- Possessing materials or objects not authorized by the instructor during the test, including: “crib notes”, programmable calculators, open textbooks, notebooks or notes, even if unused.
- Copying, recording, buying, stealing, transporting or soliciting tests (pre or post testing), test keys, questions, written assignments, or computer programs.
- Seeking aid from or collaborating with another student for aid without permission from the instructor during a test.
- Discussing the test with a student who has not already taken the test.
- Substituting for another person or permitting another to substitute for you.
- Alteration of Scantron or any other grade sheets through changing answers or filling in of blank spaces after being graded.

A student dismissed for cheating or plagiarism will not be eligible for re-entry. Plagiarism is defined as copying someone else’s work and presenting it as one’s own without the knowledge of the original author. All quotes must be cited/referenced in the proper APA 5th edition format.

**SAFETY:**

Please refer to your Academic and Clinical Policy Manual.
DISTRIBUTION OF GRADES:

Competency Evaluations: 40%
Participation Evaluations: 15%
Clinical Evaluations: 15%
Film Critique Evaluations: 15%
Independent Study Papers: 15%

GRADING SCALE:
A 90-100
B 80-89
C 70-79
D 60-69
F 59 and below

DISABILITY STATEMENT:

Students with disabilities who believe that they may need accommodations in this class based on the impact of the disability are encouraged to contact Penny Hendrix in the Special Services Office, Room 332C, Kennedy Bldg., 912-486-7211, to coordinate reasonable accommodations.

WORK ETHICS:

Students will receive a work ethics grade each quarter for each fundamental and specific course in which they enroll. The work ethics grade of 3, 2, 1, or 0 will not affect the student’s academic grade point average (GPA). Work ethics grades will appear on the student’s quarterly Student Grade Reports and Transcripts. Performance factors and indicators include, but are not limited to, quality of work, ability to follow instructions, productivity, dependability, honesty, reliability, attendance and punctuality, attitude, integrity, enthusiasm, interpersonal skills, and initiative. The work ethics grade descriptions are

- Exceeds expectations: 3
- Meets expectations: 2
- Needs improvement: 1
- Unacceptable: 0

WARRANTY STATEMENT:

The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.

DISCLAIMER:

The instructor reserves the right to amend or correct this course syllabus as necessary. If the instructor amends or corrects this syllabus, students will be given a revised syllabus or corrections.
RAD 132 - CLINICAL RADIOGRAPHY I

INDEPENDENT STUDY PAPERS

Two (2) independent study papers are required for RAD 132. The papers must identify an area of concern or interest related to the clinical experience. The independent study papers should be approximately one (1) page in length and must be typed. You may email your paper as an attachment to mdunn@ogeecheetech.edu.

Papers must be submitted to OTC Faculty only - not Clinical Instructors. Independent study papers must be submitted according to the following schedule:

Paper # 1 – 11:55 pm Friday, November 20th
Paper # 2 – 11:55 pm Friday, December 4th

1. Independent study papers must include the following information:
   2. Student's name
   3. Clinical affiliate
   4. Procedure
   5. Clinical indication(s) for procedure (patient history)
   6. Projections taken by Technologist or Student (include film size, CR location, angle, etc.)
   7. Anatomy demonstrated
   8. Technique used
   9. Patient care activities (Patient preparation, dress, etc.)
   10. Radiation Protection measures utilized
   11. Diagnosis (Radiologist's report)
   12. Any problems encountered
   13. Analysis of procedure (include any suggestions to improved procedure)
At least four (4) of the following examinations must be challenged for Clinical Competency Evaluation (CCE) during the quarter. (This is a minimum number). The starred examinations are mandatory for graduation. The ARRT is requiring mandatory as well as elective examinations for the ARRT exam eligibility. Please refer to your Record of Clinical Competency for mandatory and elective requirements. If required examinations are not completed this quarter, they must be performed in subsequent quarters. (A total number of 53 CCEs are required for graduation.) (** mandatory/* elective)

** Shoulder (Internal and External Rotation)
** Wrist (PA, Obl, Lat)
** Elbow (AP, Lat)
** Chest (PA, Lat)
  * Clavicle (AP, Axial)
** Upright Abdomen
** Decubitus Abdomen
  * Lateral Decubitus Chest
** Wheelchair or stretcher chest
** Ribs

** Hand (PA, Obl, Lat)
** Forearm (AP, Lat)
** KUB (Flat Plate Abd)
** Finger/Thumb (AP, Lat)
  * Scapula (AP, Lat)
  * A-C Joints
** Humerus (AP, Lat)
** Scapular Y/ Transthoracic
  * Sternum
** Trauma Upper Extremity

NOTE: Failure to complete the required number of CCEs by the end of the quarter will result in a grade of Incomplete. Students will be required to complete any incomplete CCEs by mid-term of the next quarter. If these CCEs are not completed by the mid-term deadline, a grade of zero (0) will be given for each incomplete competency. Failure to complete required competencies may result in probation, suspension or dismissal from the program. Students are encouraged to plan quarterly activities.
**PARTICIPATIONS (8)**
2 participations are required on each examination prior to competency evaluation.

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**CLINICAL COMPETENCY EVALUATIONS (4)**
Successful completion of AT LEAST four (4) clinical competency evaluations is required for completion of RAD 132.

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**FILM CRITIQUE EVALUATIONS (2)**
2 film critique evaluations are required for completion of RAD 132.

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