Instructor: Karen Castleberry  
Office: HSC 2023  
Phone: 423-697-4474  
E-mail: Karen.castleberry@chattanoogastate.edu

Lab instructor: Kristie Baumgartener  
E-mail: Use e-learn e-mail

Class/lab/credit Hours 3/3/4  
Semester: Fall

Lecture Room: HSC 1083  
Lab room: HSC 2007  
Office: HSC 2023

Catalog Course Description:  
A study of the theory and practice of dental radiology; emphasis on patient and operator safety, technical aspects of x-ray production, image quality, and preliminary interpretation

Prerequisites:  
Students must be college level in Reading and Writing, and at the 0850 level in Math.

Corequisites:  
All fall semester Dental Assisting classes (DAST1120, DAST1130, DAST1150) or permission of instructor

Entry Level Standards:  
High School Diploma or equivalent (GED);

Textbooks/materials:  
Companion Website: http://wps.prenhall.com/chet_johnson_essentials_8/  
Modern Dental Assisting, 9th ed., Bird, Doni and Robinson, Debbie  
Workbook to Accompany Modern Dental Assisting, 9th ed., Bird, Doni and Robinson, Debbie  
Login to Instruments website: http://evolve.elsevier.com/Boyd/dentalinstruments

Tennessee Dental Practice Act, Division Law, and Rules and Regulations  
http://health.state.tn.us/boards/Dentistry/

Policy Manuals:  
The Nursing and Allied Health Policy Manual
The Dental Assisting Program Policies and Procedures

Reference (Suggested but not required)

Review Questions and Answers for Dental Assisting, Finkbeiner, Betty L., Mosby

Student Learning Outcomes

<table>
<thead>
<tr>
<th>PSLO 2 Demonstrate dental assisting skills.</th>
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<tbody>
<tr>
<td>CSLO 1. Systematically collect diagnostic data.</td>
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<tr>
<td>CSLO 3. Perform a variety of intraoral functions related to dental treatment.</td>
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<tr>
<td>CSLO 8. Manage infection and hazard control protocol consistent with published professional guidelines to include OSHA and CDC.</td>
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<table>
<thead>
<tr>
<th>PSLO 3 Demonstrate professional behaviors</th>
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<tbody>
<tr>
<td>CSLO 9. Work and communicate effectively with patients and health professionals as a professional dental assistant.</td>
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<tr>
<td>CSLO 17. Students must become Registered as a Dental Assistant in Tennessee (or meet the requirements to practice in another state)</td>
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<tr>
<td>CSLO 18. Students must become prepared for Certification by the Dental Assisting National Board</td>
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Program Student Learning Outcomes (PSLO’s). The Dental Assisting Program Student Learning Outcomes were developed using:
- The Accreditation Standards for Dental Assisting Programs published by the Commission on Dental Accreditation (2009)
- The Content outline for the Dental Assisting National Board Exam (2009)
- The Rules and Regulations of the Tennessee Board of Dentistry 0460-.04 Rules Governing Dental Assistants

<table>
<thead>
<tr>
<th>CSLO:</th>
<th>CSLO 1</th>
<th>CSLO 3</th>
<th>CSLO 8</th>
<th>CSLO 9</th>
<th>CSLO 17</th>
<th>CSLO 18</th>
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</thead>
<tbody>
<tr>
<td>Assessments:</td>
<td>Laboratory Competencies/Critique Sheets</td>
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<td>Test 4 Fundamentals</td>
<td>Work Ethic Assessment</td>
<td>Radiology Final Exam required for state Certification</td>
<td>RHS Mock exam</td>
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<td></td>
<td>Tests 1-9</td>
<td>Test 5 Intraoral techniques</td>
<td>Test 4 Fundamentals</td>
<td>Laboratory Competencies/Critique Sheets</td>
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<td>RC? Ch. 12, 13</td>
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<td></td>
<td>Test 1 History</td>
<td>Test 4 Fundamentals</td>
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<td>Test 2 Biologic Effects and safety</td>
<td>Test 4 Fundamentals</td>
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<td></td>
<td>Test 3 Film and Processing</td>
<td>Test 4 Fundamentals</td>
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<td></td>
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<td>Test 5 Intraoral techniques</td>
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10/13/10
Topics:

Part I:  History and Radiation Basics
        History of Dental Radiography
        Characteristics and Measurement of Radiation
        The Dental X-ray Machine: Components and Functions
        Producing Quality Radiographs

Part II: Biological Effects of Radiation and Radiation Protection
        Effects of Radiation exposure
        Radiation Protection

Part III: Dental X-ray Film and Processing Techniques
        Dental X-ray Film
        Dental X-ray Film Processing

Part IV: Dental Radiographer Fundamentals
        Infection Control
        Legal and Ethical Responsibilities
        Patient Relations and Education

Part V:  Intraoral Techniques
        Intraoral Radiographic Procedures
        The Periapical Examination
        The Bitewing Examination
        The Occlusal Examination

Part VI: Radiographic Errors and Quality Assurance
        Identifying and Correcting Faulty Radiographs
        Quality Assurance in Dental Radiography

Part VII: Mounting and Viewing Dental Radiographs
        Mounting and introduction to Interpretation
        Recognizing Normal Radiographic Anatomy
        Recognizing Deviations from Normal Radiographic Anatomy
        The Use of Radiographs in the Detection of Dental Caries
        The Use of Radiographs in the Evaluation of Periodontal Diseases
Part VIII: Patient Management and Supplemental Techniques
Radiographic Techniques for Children
Managing Patients with Special Needs
Supplemental Radiographic Techniques
Digital Radiography

Part IX: Extraoral Techniques
Extraoral Radiography
Panoramic Radiography

Instructional Learning Activities

LA1. Students will use e-learn website to participate in these learning activities
   a. View powerpoint presentations
   b. Check MDA workbook chapter answers
   c. Participate in discussion boards
   d. Take tests
   e. Access related websites

LA2 Students will complete homework assignments to strengthen depth of understanding of subject
   a. Read assigned content in texts and complete recall questions
   b. Take practice test on the www.prenhall/johnson supplemental website
   c. Complete assigned MDA workbook chapters
   d. View assigned DVD (multimedia Procedures, videos and animations)
   e. Complete assigned IDO (Interactive Dental Office CD-ROM) exercises
   f. Use Evolve and Prentice Hall learning resources (games, labeling exercises, etc.)
   g. Take Evolve and Prentice Hall Practice Tests
   h. Develop a patient education brochure designed to answer the most frequently asked questions about the need for and safety of dental radiography

LA3 Classroom instructional activities include
   a. Lecture
   b. Discussion
   c. Critical thinking
   d. Ethical and legal considerations
   e. Viewing Video - “AT2000 Processor”
   f. Scan-X DVD

LA4 Laboratory instructional activities
   a. Instructor demonstrations
   b. Students perform laboratory exercises on manikins (DXTTR)
   c. Students perform laboratory exercises on student partners (without exposure to radiation)
   d. Students perform laboratory exercises on patients

Assessment
Tests are designed to measure the learning outcomes stated in the master syllabus. They may be multiple choice, true/false, matching, short answer, or essay, type questions.

Testing Procedures:
9 tests
40% of grade
Test 1 History and Radiation Basics

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Test 2 Biological Effects; Radiation Protection
Test 3 Dental X-ray Film and Processing techniques
Test 4 Dental Radiographer Fundamentals
Test 5 Intraoral Techniques
Test 6 Radiographic Errors and Quality Assurance
Test 7 Mounting and Viewing Dental Radiographs
Test 8 Patient Management and Supplemental Techniques
Test 9 Extraoral Techniques

Homework, Assignments, Professionalism  40% of Grade
Recall questions, Ch. 1-28
Work Ethics Appraisal

Final Exam  20% of grade
Total  100%

Laboratory Expectations: Pass/Fail*
Expose, Process and mount a diagnostic FMS using Bisecting Technique (manikin)
Expose, Process and mount a diagnostic FMS using Paralleling Technique (manikin)
Expose, Process and mount a diagnostic FMS – 1 hour timed test (manikin)
Expose, Process and mount two diagnostic FMS’s – 1 hour timed test (Patient)
Expose, Process and mount Vertical BWX
Position Patient for panoramic radiographs
Expose digital images (manikin)
Expose, Process occlusal radiographs (manikin)

*ALL LABORATORY PERFORMANCE OUTCOMES (referred to as “competencies” in the MDA workbook and program-competencies worksheet) MUST BE PASSED TO PASS this course. Passing means the student has successfully performed all steps identified in the competency evaluation form as determined by the laboratory instructor. Each student has three attempts to Pass the competencies.

If a student is absent from a lab the student will fail all the competencies for day that they missed. Students must meet with the Instructor(s) to reschedule a time to make up the missed lab. Once a date and time has been arranged the student must fill out a Lab Make-up form and sign and date the form. If the student fails to attend the make-up lab on the arranged date and time without a doctor’s note or some other form of documentation, then the student will fail their second competencies and another Lab Make-up form must be filled out.

Grading Scale (Departmental)

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90 – 100</td>
<td>A</td>
</tr>
<tr>
<td>80 – 89</td>
<td>B</td>
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<tr>
<td>75 – 79</td>
<td>C</td>
</tr>
<tr>
<td>65 – 74</td>
<td>D</td>
</tr>
<tr>
<td>below 65</td>
<td>F</td>
</tr>
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</table>

A grade of “C: or better is required to receive credit for this class.

Course Delivery Format

Hybrid Format – This format requires significant online activity. Students in hybrid classes must
access course content and assessments using the Internet in order to pass the class, whether it meets full-time or part-time in the classroom. Faculty need not hand out a copy of the syllabus and any other required course material, including their contact information.

College Policies

This class is governed by the policies and procedures stated in the current Chattanooga State Student Handbook.

ADA Statement
Students who have educational, psychological, and/or physical disabilities may be eligible for accommodations that provide equal access to educational programs and activities at Chattanooga State. These students should notify the instructor immediately, and should contact Disabilities Support Services within the first two weeks of the semester in order to discuss individual needs. The student must provide documentation of the disability so that reasonable accommodations can be requested in a timely manner. All students are expected to fulfill essential course requirements in order to receive a passing grade in a class, with or without reasonable accommodations.

Disruptive Students
The term "classroom disruption" means – student behavior that a reasonable person would view as substantially or repeatedly interfering with the activities of a class. A student who persists in disrupting a class will be directed by the faculty member to leave the classroom for the remainder of the class period. The student will be told the reason(s) for such action and given an opportunity to discuss the matter with the faculty member as soon as practical. The faculty member will promptly consult with the division dean and the college judicial officer. If a disruption is serious, and other reasonable measures have failed, the class may be adjourned, and the campus police summoned. Unauthorized use of any electronic device constitutes a disturbance. Also, if a student is concerned about the conduct of another student, he or she should please see the teacher, department head, or division dean.

Affirmative Action
Students who feel that he or she has not received equal access to educational programming should contact the college affirmative action officer.

Academic Integrity/Academic Honesty
In their academic activities, students are expected to maintain high standards of honesty and integrity. Academic dishonesty is prohibited. Such conduct includes, but is not limited to, an attempt by one or more students to use unauthorized information in the taking of an exam, to submit as one's own work, themes, reports, drawings, laboratory notes, computer programs, or other products prepared by another person, or to knowingly assist another student in obtaining or using unauthorized materials. Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions, which may be imposed through the regular institutional procedures as a result of academic misconduct, the instructor has the authority to assign an "F" or zero for an activity or to assign an "F" for the course.

Email Communication

Please note all communication with instructors about your course work should be through the eLearn Email system. For assistance on how to use the eLearn Email tool go to this url: http://river.chattanoogastate.edu/orientations/Student_PDFs/eLearn_eMail_aug09.pdf.

For all other communication the official email system used by the college is through Tiger Mail. This is accessible by clicking the blue paw icon from the top right hand side of your Tiger Web home page https://tigerweb.chattanoogastate.edu/cp/home/displaylogin.
The instructor reserves the right to modify this syllabus in writing during the course of the semester.

Instructor Policies

- No food, drink or chewing gum allowed in the radiography labs
- School Uniforms (scrubs) are to be worn to all labs and make-up labs.
- Students may not bring guests, including children to class or lab except as a patient
- Electronic devices including cell phones, recorders, cameras, laptops, and other equipment must be kept in silent mode in a purse or backpack and may be used in class only with permission of instructor.
- If you must be absent from a lab, try to make up the lab by attending an earlier or later lab on the same day. The same lab is presented 3 times a day on Tuesdays and Thursdays.
- If you are confused about a task, concept or assignment, please ask the instructor – not another student.

Important Dates:

Refer to the academic calendar at www.chattanoogastate.edu for important dates