

**GRAYSON COLLEGE****Course Syllabus**

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**DNTA 1349 Radiology in the Clinic****SPRING 2019****Dental Assisting Program****Lecture hours per week           1****Lab hours per week                 4****Clock hours per semester       80**

<b>Lecture Room 205</b>	<b>Thursday's</b>	<b>11:00 AM -Noon</b>
<b>Lab Room 201, &amp; 203</b>	<b>Friday's</b>	<b>8:00 AM-12:00 PM</b>

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**Professor Contact Information****Tonya Hance CDA, RDA****(903)463-8780****[hancet@grayson.edu](mailto:hancet@grayson.edu)****Office Location: Health Science Administration Office 132**

<b>Office Hours:</b>	<b>Monday</b>	<b>8:00 am to 3:00 pm</b>
	<b>Tuesday</b>	<b>8:00 am to 3:00 pm</b>
	<b>Wednesday</b>	<b>8:00 am to 12:00 pm</b>
	<b>Thursday</b>	<b>8:00 am to 9:00 am &amp; 1:00 pm to 3:00 pm</b>
	<b>Friday</b>	<b>1:00 pm to 3:00 pm</b>

<b>Professor's Class Schedule:</b>	<b>Monday</b>	<b>Clinical Evaluations</b>
	<b>Tuesday</b>	<b>Clinical Evaluations</b>
	<b>Wednesday</b>	<b>1:00 pm to 3:00 pm</b>
	<b>Thursday</b>	<b>9:00 am to 12:00 pm</b>
	<b>Friday</b>	<b>8:00 am to 12:00 pm</b>

<b>Credit Hours</b>	<b>3</b>
<b>Lecture Hours</b>	<b>1</b>
<b>Laboratory Hours</b>	<b>4</b>
<b>Course Length</b>	<b>16 Weeks</b>

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**Types of Instruction           Lecture/Lab**

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**Pre-requisites****DNTA 1311 Dental Science****DNTA 1301 Dental Materials****DNTA 1345 Preventive Dentistry****DNTA 1315 Chairside Dentistry****DNTA 1305 Dental Radiology I****DNTA 1202 Communication in the Dental Office****Co-requisites****DNTA1251 Office Management****DNTA1347 Advanced Dental Science****DNTA 2130 Clinical Seminar****DNTA1353 Dental Assisting Applications****DNTA 1460 Clinical I Dental Assisting**

**Course Description – (1-4-3) The Practical application of exposing, processing and mounting diagnostically acceptable radiographs obtained by utilizing various radiographic techniques. Specific federal and state safety and standard practices for the classroom and lab settings will be practiced.**

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#### **Student Learning Outcomes (Course Objectives)-**

- Perform radiographic techniques in the clinical setting
- Produce diagnostically acceptable radiographs utilizing the ALARA concept
- Perform FMX while identifying patient considerations and comfort
- Answer common patient questions regarding the need for dental radiographs
- Identify and correct miscellaneous technique errors

#### **Required Textbook and Materials**

1. Iannucci, Joen M., DDS, MS, and Laura Jansen Howerton, RDH, MS, **DENTAL RADIOGRAPHY PRINCIPLES AND TECHNIQUES**, 5th Edition (2017). Elsevier/Saunders Publishers (ISBN#9780323297424)
2. Microsoft Office Software
3. Pens, Pencils, Highlighters, Paper, Notebooks
4. Student Uniforms
5. Dental Assisting Student ID

#### **Reference Textbook**

Bird, Doni L., CDA, RDH, MA, and Debbie S. Robinson, CDA, MS, **MODERN DENTAL ASSISTING**, 12th Edition (2015). Elsevier/Saunders Publishers (ISBN#978-0-323-43030-2)

#### **Additional Resources**

- Texas State Board of Dental Examiners website: <http://www.tsbde.state.tx.us/>
- Dental Assisting National Boards website: <http://www.danb.org>

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#### **Required Assignments & Academic Calendar**

**In case of inclement weather, emergency closings, or other unforeseen disruptions to scheduled classes, student must log onto their Canvas accounts for directions on where or how to continue their coursework.**

**As a secondary means of communication the app GroupMe will be used. It is not a requirement of the class, but I strongly urge each of you join the class GroupMe. Any announcements such as inclement weather, class announcements, or in the event class must be canceled due to instructor illness or emergencies an announcement will be made in Canvas, as well as, GroupMe.**

**The Schedule below will have the Lecture chapters and Lab dates listed with lab activities and assignments.**

The schedule listed below is subject to change with fair notice from the professor. Changes will  
Revised Nov. 2018

be announced in the classroom, through the Canvas course, and in GroupMe

**Table 1 Course Schedule**

Week	Date	Topics, Readings, Assignments, Deadlines
1	Jan. 17  Jan. 18	<p><b>Lecture:</b></p> <ul style="list-style-type: none"> <li>• Pass out and Go over Syllabus</li> <li>• Discuss Patient Requirements &amp; Patient days</li> </ul> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• Start 20 Minute FMS on Manikin / (Opt'.s 2, 3, &amp; 4) for an <b>Radiographic Technique Grade- Dr. Moore will grade (Due by 1/25/2019)</b></li> <li>• Turn in grades for 20 minute FMS if completed today- remaining students will complete next week.</li> <li>• Expose 4BWx on ADULT Manikin/ <b>Radiographic Technique GRADE- DR. MOORE WILL GRADE Due 1/25/19 by Noon (Opt. 1)</b></li> <li>• Practice Snap-A-Ray placement on Manikin in lab (<b>Skill Check-off 2/22/19 due by Noon</b>)</li> <li>• Practice other clinical skills/ homework/ computer lab</li> <li>• Clean lab, clinic and instruments used following INFECTION CONTROL PROTOCOL</li> <li>• <b>Dr. Moore Clinical Speech</b></li> </ul>
2	Jan. 24  Jan. 25	<p><b>Lecture:</b> C-22 Panoramic Imaging</p> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• Finish taking 20 Minute FMS on Manikin / (Opt.'s 2, 3, &amp; 4) for an <b>Radiographic Technique Grade- Dr. Moore will grade</b></li> <li>• <b>All 20 Minute FMS Due today by Noon</b></li> <li>• Expose 4BWx on ADULT Manikin/ <b>Radiographic Technique GRADE- DR. MOORE WILL GRADE Due by Noon Today (Opt. 1)</b></li> <li>• <b>C-22 Assignment ( will be given today in class and will be due by Noon today)</b></li> <li>• Practice &amp; Begin Exposing Snap-A-Ray placement on Manikin-(Opt. 1) once all the BW's are done.</li> <li>• Demonstrate preparing equipment, and preparing the patient for panoramic imaging, and demonstrate exposing a panoramic image. (<b>Skill Check-off 2/15/19 due by Noon</b>)</li> <li>• Practice other clinical skills in Lab</li> <li>• Homework/ computer lab/ Video</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
3	Jan. 31  Feb. 1	<p><b>Lecture:</b> C-23 Extraoral Radiography</p> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate Pediatric Occlusal Projection &amp; 2 BW's on Pediatric DXTTR (<b>Skill Check-off 3/1/19 due by Noon</b>)</li> <li>• Continue Practicing 20 Minute FMS on Manikin / (Opt.'s</li> </ul>

		<p>2,&amp; 3)</p> <ul style="list-style-type: none"> <li>• Continue practicing 4BW on ADULT Manikin (Opt. 4)</li> <li>• Finish Exposing Snap-A-Ray placement on Manikin (Opt. 1) once all the BW's are done.</li> <li>• <b>C-23 Assignment (will be given today in class and will be due by Noon today)</b></li> <li>• Finish Demonstrating preparing equipment for Panoramic imaging</li> <li>• Finish Demonstrating preparing patient for Panoramic imaging</li> <li>• Practice other clinical skills in Lab</li> <li>• Homework/ computer lab/ Video</li> </ul> <p>Clean lab, clinic and instruments following infection control protocol</p>
<b>Week</b>	<b>Date</b>	<b>Topics, Readings, Assignments, Deadlines</b>
4	Feb. 7  Feb. 8	<p><b>Lecture:</b> C-29 Normal Anatomy: Panoramic Images</p> <ul style="list-style-type: none"> <li>➤ Chapter 29 assignment will be assigned and due in Canvas by Noon on Friday 2/8/19 (Since we do not have a lab this week)</li> </ul> <p><b>Lab:</b></p> <p style="text-align: center;"><b>FACULTY PROFESSIONAL DEVELOPMENT</b> <b>STUDENT HOLIDAY- Enjoy Your Day Off!!!</b></p>
5	Feb. 14  Feb. 15	<p><b>Lecture:</b> <b>Test #1 C-22, 23, &amp; 29</b></p> <p><b>Lab:</b></p> <p style="text-align: center;"><b>Guest Speaker- Dr. Courtright</b></p> <ul style="list-style-type: none"> <li>• <b>Preparing equipment, and preparing the patient for panoramic imaging, and exposing a panoramic image check-off due by Noon Today.</b></li> <li>• <b>C-20, &amp; 21 Assignment ( will be given today in class and will be due by Noon today)</b></li> <li>• Practice Radiographic skills (if time allows)</li> <li>• One-on-one time to tutor any student struggling with taking radiographs</li> <li>• Practice other Clinical skills in Lab</li> <li>• Homework/computer lab/ Video</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
6	Feb. 21  Feb. 22	<p><b>Lecture:</b> C-20 Exposure &amp; Technique Errors &amp; C-21 Occlusal and Localization Techniques</p> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• <b>First Patient Day ( 1 hour limit per patient/ 9 patients total)</b></li> <li>• <b>Snap-A-Ray Skill Check-Off due by Noon Today (OPT. 1)- To be Graded by Dr. Moore</b></li> <li>• Sterilization Tech 1 per half hour</li> <li>• Practice clinical skills in lab</li> <li>• Fabricate Occlusal Guard/ Bleach Trays from impressions taken on patient</li> <li>• Videos/ Computer lab/ Homework</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>

Week	Date	Topics, Readings, Assignments, Deadlines
7	Feb. 28  Mar. 1	<p><b>Lecture:</b> C-30 Introduction to Image Interpretation &amp; C-31 Descriptive Terminology</p> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• <b>Patient Day ( 1 hour limit per patient/ 9 patients total)</b></li> <li>• <b>C-30, &amp; 31 Assignment ( will be given today in class and will be due by Noon today)</b></li> <li>• <b>Pediatric Occlusal Projection &amp; 2 BW's on Pediatric DXTTR Check-Off due by Noon Today (OPT. 1)- To be Graded by Dr. Moore</b></li> <li>• Sterilization Tech 1 per half hour</li> <li>• Practice clinical skills in lab</li> <li>• Fabricate Occlusal Guard/ Bleach Trays from impressions taken on patient</li> <li>• Videos/ Computer lab/ Homework</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
8	Mar. 7  Mar. 8	<p><b>Lecture:</b>                   <b>TEST #2- C-20, 21, 30, &amp; 31</b></p> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• <b>Patient Day ( 1 hour limit per patient/ 9 patients total)</b></li> <li>• Sterilization Tech 1 per half hour</li> <li>• Practice clinical skills in lab</li> <li>• Fabricate Occlusal Guard/ Bleach Trays from impressions taken on patient</li> <li>• Videos/ Computer lab/ Homework</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
	March 11 - 15	<b>SPRING BREAK HOLIDAY</b> Enjoy your week.
9	Mar. 21  Mar. 22	<p><b>Lecture:</b> C-32 Identification of Restoration, Dental Materials, &amp; Foreign Objects.</p> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• <b>Patient Day ( 1 hour limit per patient/ 9 patients total)</b></li> <li>• <b>C-32 ( will be given today in class and will be due by Noon today)</b></li> <li>• Sterilization Tech 1 per half hour</li> <li>• Practice clinical skills in lab</li> <li>• Fabricate Occlusal Guard/ Bleach Trays from impressions taken on patient</li> <li>• Videos/ Computer lab/ Homework</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
10	Mar. 28  Mar. 29	<p><b>Lecture:</b> C-33 Interpretation of Dental Caries &amp; C-34 Interpretation of Periodontal Disease</p> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• <b>Patient Day ( 1 hour limit per patient/ 9 patients total)</b></li> </ul>

Week	Date	Topics, Readings, Assignments, Deadlines
		<ul style="list-style-type: none"> <li>• <b>C-33 &amp; 34 Assignment ( will be given today in class and will be due by Noon today)</b></li> <li>• Sterilization Tech 1 per half hour</li> <li>• Practice clinical skills in lab</li> <li>• Fabricate Occlusal Guard/ Bleach Trays from impressions taken on patient</li> <li>• Videos/ Computer lab/ Homework</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
11	Apr. 4  Apr. 5	<p><b><u>Lecture:</u></b>                    <b>Test #3 C-32, 33, &amp; 34</b></p> <p><b><u>Lab:</u></b></p> <ul style="list-style-type: none"> <li>• <b>Patient Day ( 1 hour limit per patient/ 9 patients total)</b></li> <li>• Sterilization Tech 1 per half hour</li> <li>• Practice clinical skills in lab</li> <li>• Fabricate Occlusal Guard/ Bleach Trays from impressions taken on patient</li> <li>• Videos/ Computer lab/ Homework</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
12	Apr. 11  Apr. 12	<p><b><u>Lecture:</u></b> C-35 Interpretation of Trauma, pulpal lesions, &amp; Periapical Lesions</p> <p><b><u>Lab:</u></b></p> <ul style="list-style-type: none"> <li>• <b>Patient Day ( 1 hour limit per patient/ 9 patients total)</b></li> <li>• <b>C-35 Assignment ( will be given today in class and will be due by Noon today)</b></li> <li>• Sterilization Tech 1 per half hour</li> <li>• Practice clinical skills in lab</li> <li>• Fabricate Occlusal Guard/ Bleach Trays from impressions taken on patient</li> <li>• Videos/ Computer lab/ Homework</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
13	Apr. 18  Apr. 19	<p><b><u>Lecture:</u></b> C-24 Imaging of Patient with Special Needs &amp; C-14 Legal Issues and the Dental Radiographer</p> <p><b><u>Lab:</u></b></p> <ul style="list-style-type: none"> <li>• <b>Last Patient Day ( 1 hour limit per patient/ 9 patients total)</b></li> <li>• <b>C-24 &amp; 14 Assignment ( will be given today in class and will be due by Noon today)</b></li> <li>• Sterilization Tech 1 per half hour</li> <li>• Practice clinical skills in lab</li> <li>• Fabricate Occlusal Guard/ Bleach Trays from impressions taken on patient</li> </ul>

		<ul style="list-style-type: none"> <li>• Videos/ Computer lab/ Homework</li> <li>• Clean lab, clinic and instruments following infection control protocol</li> </ul>
14	Apr. 25  Apr. 26	<p><b>Lecture:</b> Test #4 C-35, 24, &amp; 14</p> <p><b>Lab:</b></p> <ul style="list-style-type: none"> <li>• Dr. Moore's Farewell Speech/" Welcome to the Real World"</li> <li>• Final Exam Review/Study</li> <li>• Empty supplies from Clinic/ Clean Clinic</li> <li>• Complete filing all patient charts</li> <li>• Organize and shut down the lab</li> </ul>
15	May 2	<b>Final Exam 9:00-11:00 am in the computer lab</b>
16	May 9	<b>Final's Week, RDA Review, &amp; RDA Test</b>

**\*\* Please note that ALL Occlusal Guards and Bleach Trays that are fabricated in Lab are for practice purposes only and will be destroyed by the Instructor or Dr. Moore after turned in for grade \*\***

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## Chapter 22 Panoramic Imaging

### Course Outline:

- Basic Concepts
  - Purpose and Use
  - Fundamentals
  - Equipment
- Step-by-Step Procedures
  - Equipment preparation
  - Patient Preparation
  - Patient Positioning
- Common Errors
  - Patient-preparation errors
  - Patient- positioning errors
- Advantages and Disadvantages
  - Advantages of Panoramic Imaging
  - Disadvantages of Panoramic Imaging

### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with panoramic imaging

2. Describe the purpose and uses of panoramic imaging
3. Describe the fundamentals of panoramic imaging
4. Describe the equipment used in panoramic imaging
5. Describe patient preparation, equipment preparation, and patient- positioning procedures before exposing a panoramic projection.
6. Identify the patient-preparation and patient- positioning errors seen on panoramic images
7. Discuss the causes of patient-preparation and patient-positioning errors and the necessary measures needed to correct such errors.
8. Discuss the advantages and disadvantages of panoramic imaging

### **Chapter 23 Extraoral Imaging**

#### **Course Outline:**

- Basic Concepts
  - Purpose and use
  - Equipment
- Step-by-Step Procedures
  - Equipment Preparation
  - Patient Preparation
  - Patient Positioning
- Extraoral Projection Techniques
  - Lateral Jaw Imaging
  - Skull Imaging
  - Temporomandibular Joint Imaging

#### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with extraoral imaging
2. Describe the purpose and uses for extraoral imaging.
3. Describe the equipment used in extraoral imaging.
4. Detail the equipment and patient preparations necessary before exposing an extraoral projection
5. Identify the specific purpose of each of the extraoral projections
6. Describe the head position, the receptor placement, and the beam alignment for each of the following: lateral jaw projection, lateral jaw projection-ramus of the mandible, lateral cephalometric projection, posteroanterior projection, Waters projection, submentoververtex projections, reverse Towne projection, and transcranial projection.

### **Chapter 29 Normal Anatomy: Panoramic Images**

#### **Course Outline:**

- Normal Anatomic Landmarks
  - Bony Landmarks of Maxilla and Surrounding Structures
  - Bony Landmarks of Mandible and Surrounding Structures
- Air spaces seen on Panoramic Images
- Soft tissue seen on Panoramic Images

#### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with normal anatomy on panoramic images
2. Identify and describe the bony landmarks of the maxilla
3. Identify and describe the bony landmarks of the mandible and surrounding structures as viewed on the panoramic Image
4. Identify air spaces as viewed on the panoramic image
5. Identify soft tissues as viewed on the panoramic image

## **Chapter 20 Exposure and Technique Errors**

### **Course Outline:**

- Receptor Exposure Errors
  - Exposure problems
  - Time and exposure factor problems
- Periapical Technique Errors
  - Receptor placement problems
  - Angulation problems
  - Position-indicating device alignment problems
- Bitewing Technique Errors
  - Receptor placement problems
  - Angulation problems
  - Position-indicating device alignment problems
- Miscellaneous Technique Errors
  - Film Bending
  - Film Creasing
  - Phalangioma
  - Double Exposure
  - Movement
  - Reversed Film

### **Expected Learning Outcomes (Objective)**

1. Define the key terms associated with exposure and technique errors
2. Identify and describe the appearance of the following errors: unexposed receptor, film exposed to light, underexposed receptor, and overexposed receptor
3. Describe vertical and horizontal angulation
4. Identify and describe the appearances of the following periapical technique errors: incorrect horizontal or vertical angulation, and incorrect beam alignment.
5. Describe and identify proper receptor placement for bite-wing radiographs.
6. Identify and describe the appearances of the following bitewing technique errors: incorrect horizontal and vertical angulation, and incorrect PID Alignment.
7. Identify and describe the appearances of the following miscellaneous technique errors: film bending, film creasing, phalangioma, double exposure, movement, and reversed film.

## Chapter 21 Occlusal and Localization Techniques

### Course Outline:

- Occlusal Technique
  - Basic concepts
  - Step-by-Step Procedures
- Localization Techniques
  - Basic concepts
  - Step-By-Step Procedure

### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with occlusal and localization techniques
2. Describe the purpose of occlusal examination
3. List the uses of occlusal examination
4. Describe the patient and equipment preparations that are necessary before using the occlusal technique
5. State the recommended vertical angulations for the following maxillary occlusal projections: topographic, lateral (right or left), and pediatric
6. State the recommended vertical angulations for the following mandibular occlusal projections; Topographic, the cross-sectional and the pediatric
7. State the purpose of localization techniques
8. Describe the buccal object rule
9. Describe the right angle technique
10. List the patient and equipment preparations that are necessary before using the buccal object rule or the right angle technique
11. Describe receptor placements for the buccal object rule and compare the resulting images
12. Describe receptor placements for the right angle technique and compare the resulting images

## Chapter 30 Introduction to Image Interpretation

### Course Outline:

- Basic Concepts
  - Interpretation terminology
  - Importance of Interpretation
- Guidelines
  - Who interprets images?
  - Interpretation versus diagnosis
  - When and where are images interpreted?
  - Interpretation and Patient Education

### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with interpreting images
2. Summarize the importance of the interpretation of images
3. Define the roles of the dentist and the dental auxiliary in the interpretation of dental images
4. Discuss the difference between interpretation and diagnosis
5. Describe who is able to interpret dental images
6. Describe when and where dental images are interpreted
7. Describe how interpretation can be used to educate the dental patient about the importance and use of dental images

## Chapter 31 Descriptive Terminology

### Course Outline:

- Definition and Uses
  - What is descriptive terminology
  - Why use descriptive terminology
  - Descriptive terminology versus diagnosis
- Review of Basic Terms
  - Radiograph/Dental Image versus x-ray
  - Radiolucent versus radiopaque
  - Terms used to describe radiolucent lesions
  - Terms used to describe radiopaque lesions

### **Expected Learning Outcomes (Objectives)**

1. Identify the categories of information that should be documented for all lesions viewed on dental images
2. Define descriptive terminology and describe why the dental professional should use descriptive terms
3. Define the terms dental image, radiograph, x-ray, radiolucent, and radiopaque
4. Distinguish the terms radiograph, dental image, and x-ray.
5. Distinguish the terms radiolucent and radiopaque
6. Define the terms unilocular and multilocular
7. Define the terms periapical, inter-radicular, edentulous zone, pericoronal, and alveolar bone loss.
8. Identify radiolucent lesions on a dental image in terms of appearance, location, and size
9. Define the terms focal opacity, target lesion, multifocal confluent pattern, irregular/ill-defined opacity, ground glass opacity, mixed lucent-opaque lesion, and soft tissue opacity.
10. Identify radiopaque lesions on a dental image in terms of appearance, location and size.

## Chapter 32 Identification of Restorations, Dental Materials and Foreign Objects

### Course Outline:

- Identification of Restorations
  - Amalgam restorations
  - Gold restorations
  - Stainless Steel and Chrome Crowns
  - Post and core restorations
  - Porcelain restorations
  - Composite restorations
  - Acrylic restorations
- Identification of Materials Used in Dentistry
  - Materials used in Restorative Dentistry
  - Materials used in Endodontics
  - Materials used in Prosthodontics
  - Materials used in Orthodontics
  - Materials used in Oral Surgery
- Identification of Miscellaneous Objects
  - Jewelry

- Eyeglasses and Napkin Chain

### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with identifying restorations, materials and foreign objects on dental images
2. Discuss the importance of interpreting dental images while the patient is present
3. On dental images, identify and describe the appearance of the following restorations; amalgam, gold, stainless steel and chrome, post and core, porcelain fused to metal, composite and acrylic
4. On dental images, identify and describe the appearance of the following dental materials and devices: base materials, metallic pins, gutta percha, silver points, removable partial dentures, complete dentures, orthodontic bands, brackets and wires, fixed retainers, implants, suture wires, splints, and stabilizing arches and wires.
5. On dental images, identify and describe the appearance of the following miscellaneous objects: jewelry, eyeglasses and patient napkin chains

## **Chapter 33 Interpretation of Dental Caries**

### **Course Outline:**

- Description of Caries
- Detection of Caries
  - Clinical Examination
  - Dental Image Examination
- Interpretation of Caries on Dental Images
  - Interpretation Tips
  - Factors influencing Caries Interpretation
- Classification of Caries on Dental Images
  - Interproximal Caries
  - Occlusal Caries
  - Buccal or Lingual Caries
  - Root Surface Caries
  - Recurrent Caries
  - Rampant Caries

### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with the interpretation of dental caries
2. Describe dental caries
3. Explain why caries appears radiolucent on a dental image
4. Discuss interpretation tips for evaluating caries on a dental image
5. Discuss the factors that may influence the image interpretation of dental caries
6. Detail the classification of caries on dental images
7. On a dental image, identify and describe the appearance of the following: incipient, moderate, advanced and severe interproximal caries
8. On a dental image, identify and describe the appearance of the following: incipient, moderate, and severe occlusal caries
9. On a dental image, identify and describe the appearance of the following: buccal, lingual, root surface, recurrent, and rampant caries

## **Chapter 34 Interpretation of Periodontal Disease**

### **Course Outline:**

Revised Nov. 2018

- Description of the Periodontium
- Description of Periodontal Disease
- Detection of Periodontal Disease
  - Clinical Examination
  - Dental Image Examination
- Interpretation of Periodontal Disease on Dental Images
  - Bone Loss
  - Classification of Periodontal Disease
  - Predisposing Factors

### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with interpreting periodontal disease
2. Describe the healthy periodontium
3. Briefly describe periodontal disease
4. Discuss the importance of the clinical examination and interpretation of dental images in the diagnosis of periodontal disease
5. Describe the limitations of dental images in the detection of periodontal disease
6. Describe the type of dental images that should be used to document periodontal disease and the preferred exposure technique
7. State the difference between horizontal bone loss and vertical bone loss
8. State the difference between localized bone loss and generalized bone loss
9. State the differences among mild, moderate and severe bone loss
10. List each of the four American Dental Association (ADA) case types and describe the corresponding appearance on dental images
11. Recognize each of the four ADA case types on dental images
12. List two predisposing factors for periodontal disease
13. Recognize and describe the appearance of calculus on dental images

## **Chapter 35 Interpretation of Trauma, and Pulpal and Periapical Lesions**

### **Course Outline:**

- Trauma Viewed on Dental Images
  - Fractures
  - Injuries
- Resorption Viewed on Dental Images
  - External Resorption
  - Internal Resorption
- Pulpal Lesions Viewed on Dental Images
  - Pulpal Sclerosis
  - Pulpal Obliteration
  - Pulp Stones
- Periapical Lesions Viewed on Dental Images
  - Periapical Radiolucencies
  - Periapical Radiopacities

### **Expected Learning Outcomes (Objectives)**

1. Define the key terms associated with the interpretation of trauma, pulpal lesions, and periapical lesions as viewed on a dental image
2. Describe and identify the appearance of crown, root, and jaw fractures as viewed on a dental

- image.
3. Describe and identify the appearance of an avulsion as viewed on a dental image.
  4. Describe and identify the appearance of internal and external resorption as viewed on a dental image.
  5. Describe and identify the appearance of pulpal sclerosis, pulpal obliteration, and pulp stones as viewed on a dental image.
  6. Describe and identify the appearance of periapical granuloma, cyst, and abscess as viewed on a dental image.
  7. Describe and identify the appearance of condensing osteitis, sclerotic bone, and hypercementosis as viewed on a dental image.

## **Chapter 24 Imaging of Patients with Special Needs**

### **Course Outline:**

- Patients with a Gag Reflex
  - Patient Management
  - Extreme cases of Gag Reflex
  - Helpful Hints
- Patients with Disabilities
  - Physical Disabilities
  - Developmental Disabilities
  - Patient Management Helpful Hints
- Pediatric Patients
  - Tooth Eruption Sequences
  - Prescribing of Dental Images
  - Recommended Techniques
  - Types of Examinations
  - Digital Sensor Issues
  - Patient and Equipment Preparations
  - Patient Management Helpful Hints
- Patients with Specific Dental Needs
  - Endodontic Patients
  - Endentulous Patients

### **Expected Learning Outcomes (Objectives):**

1. Define the key terms associated with patients who have special needs.
2. List the areas of the oral cavity that are most likely to elicit the gag reflex when stimulated.
3. List two precipitating factors responsible for initiating the gag reflex.
4. Describe how to control the gag reflex using operator attitude, patient and equipment preparations, exposure sequencing, and receptor placement and technique.
5. Describe common physical disabilities and what modifications in technique may be necessary during the imaging examination.
6. Describe common developmental disabilities and what modifications in technique may be

necessary during imaging examination.

7. List helpful hints that can be used when treating a person with a disability.
8. Describe the tooth eruption sequences, prescribing of dental images, recommended techniques, types of examinations, digital sensor issues, patient and equipment preparation, and patient management pertaining to the pediatric dental patient.
9. Describe the use of receptor placement modifications and recommended periapical technique during endodontic (root canal) procedures.
10. Describe the purposes of the imaging examination in the edentulous patient.
11. List and describe the three types of imaging examination that may be used for the edentulous patient.

## **Chapter 14 Legal Issues and the Dental Radiographer**

### **Course Outline:**

- Legal Issues and the Dental Radiographer
  - Federal and State Regulations
  - Licensure Requirements
- Legal Issues and the Dental Patient
  - Risk Management
  - Malpractice Issues
  - Patient Records
  - Patients who refuse Dental Radiographs

### **Expected Learning Outcomes (Objectives):**

1. Define key words associated with legal issues
2. List federal and state regulations affecting the use of dental x-ray equipment
3. Describe the general application of federal and state regulations as they affect the dental auxiliary
4. Describe licensure requirements for exposing dental radiograph
5. Define the legal concept of informed consent
6. Describe ways to obtain informed consent from a patient
7. Discuss the legal significance of the dental record
8. Describe the legal implications of patient refusal to have dental x-radiation
9. Discuss how confidentiality laws affect the information in the dental record
10. Describe the patient's rights with regard to the dental record

### **Methods of Evaluation**

### **Grading**

<b>Categories</b>	<b>Percentage</b>
Assessments/Tests	25%
Radiographic Techniques	40%
Behavior/Attendance/ Comp. Final Exam	35%
<b>Total Weighted</b>	<b>100%</b>

Grade	
90-100	A
80-89	B
75-79	C
74-70	D
69 or Below	F

Grades will be posted via Canvas

### **Late Work Policy**

**NO LATE WORK ACCEPTED.** This includes laboratory projects and patient charts.

Individuals arriving late for an exam will not be given additional time for the exam. Also, if any student has completed the exam and left the room prior to arrival of the late student, the late student **will not** be allowed to take the exam.

### **Extra Credit Policy**

**NO EXTRA CREDIT WILL BE GIVEN.**

### **Tests**

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**Examinations (cognitive domain)** are multiple-choice exams administered electronically via Canvas in a proctored computer lab setting on the GC campus as scheduled by the professor. These exams will measure knowledge, application, and synthesis of the course objectives using content from lectures, discussions, and reading assignments and assessment assignments.

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1. Examinations will be graded via Canvas and the grade will post once the student has submitted the exam.
  2. A separate exam will be given to the student who is absent from an exam. Make-up test are given only for excused absences. Make-up test will be placed in the testing center, and it will be up to the student to make sure the test is made up. You will have until the day before the next test is scheduled in this course to complete the make-up test.
  3. REFER to the Student Handbook for complete quiz and test policies.
  4. Tests fall into the tests category and make up 20% of your grade.
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Exam scores will be expressed in whole numbers. The length of time allowed for testing is based on the number of test items on the exam and will be determined by the professor. Examinations will begin on time and finish on time. Students who arrive late will be admitted at the discretion of the professor, and, if admitted, will have only the remaining time available. Students who are absent from an examination may be eligible for a make-up examination only when certain circumstances are met and approved by the professor.

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### **Assignments/ Assessments**

1. Homework will be due at 11:59 pm the night before each Test. Refer to the Course Schedule for individual Assignment due dates.
2. Chapter assignments and quizzes fall into the Homework category and makes up 15 % of your grade in this class.

### **Classroom Quizzes (cognitive domain)**

Composed of a variety of question types (multiple-choice, fill-in-the-blank, essay, and others) that are administered at any time during any class period. The student may or may not be given advance notice of a quiz. The quiz grade will be calculated as the percentage of total points earned during the semester. A missed quiz is a missed opportunity to earn points; *quizzes are not available for makeup.*

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### **Skills Competency (psychomotor Domain)**

Fall into the Radiographic Techniques/Competencies consist of the following:

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- **Producing a Full Mouth Radiographic Survey in 20 minutes or less**
  - **Producing a Panoramic Image**
  - **Producing an Occlusal Projection**
  - **Producing a Snap-A-Ray**
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### **Radiographic Techniques/ Competencies**

1. Radiographic skills including check-offs are grading by the program supervising Dentist, and are graded based on a points system. Students who do not pass skill check-offs with a grade of a 74.5 or higher will be counseled by the instructor and/or program director.
2. Radiographic techniques and Skill check-offs all fall under the Competencies/Radiographic Techniques category to make up 40% of your grade.
3. REFER to the Student Handbook for complete Skills Competency Policy.

### **ADDITIONAL EVALUATION TOOLS MAY BE UTILIZED BY THE PROFESSOR TO MEASURE STUDENT PROGRESS.**

#### **Instructional Methods**

Face to Face

#### **Methods of Instruction**

Methods of instruction include lecture, discussion, required reading, audio and visual aids, computer aided instruction, skill demonstration, and skill practice.

#### **Instructor's Requirements**

Students are requested to read the assignment outlined in the syllabus and presentation outlines. Examination questions will be taken from reading assignments, handouts, and lecture material and assessment assignments.

The student should not expect that every objective will be lectured or discussed in the classroom. Success in the course is dependent on mastery of not only the material delivered in the classroom but also the assigned reading material. Because many assignments and study tools are performed via Canvas, access to computer hardware with internet connection and software to allow web navigation is required. Microsoft Office software, Word, PowerPoint, and Excel, is also required. However, a personal computer is not required. Dental Assisting students may access several computer lab resources on and off campus to facilitate completion of assignments. If the student is dependent upon computer resources outside the home, significant time management, organizational skill, and personal commitment is necessary to be successful.

Laboratory hours for skill demonstration and skill practice are posted to the course calendar. Skill sessions will be held in the classroom, the skill lab, and the simulation clinic.

In the event of technology failure, the student should contact the GC Help Desk for guidance.

### **Professional Behavior Grade**

The Professional Behavior Grade is observed when in attendance of all classes within the program. The score you earn will be reflected in each course. In this course the Professional Behavior Grade Falls into the Behavior/ Attendance/Comp. Final Exam Category and will make up 25% of your grade. Please refer to the following Rubric for grading criteria.

### **Professional Behavior Rubric**

Behavior	Description	Points
Ethics	Exhibiting ethical behavior, which includes, but not limited to: Always practicing high quality standard of care, and following HIPAA guidelines and protocols.	10
Personal Characteristics	You should also display loyalty, honesty, trustworthiness, dependability, reliability, initiative, self-discipline, and self-responsibility.	10
Teamwork	Respects the rights of others, respects confidentiality, is a team player; is cooperative; is assertive; displays a customer service attitude; seeks opportunities for continuous learning; demonstrates mannerly behavior; actively participates in group projects.	10
Appearance	Displays appropriate dress, grooming, hygiene and etiquette. Follows dress code.	10
Attitude/Demeanor	Demonstrates a positive attitude; a demeanor that exudes confidence but not cockiness; has realistic expectations of self.	10
Productivity	Follow safety practices; conserves materials; keeps work area neat and clean; follows directions and procedures; completes assignments on time, makes up assignments punctually; takes initiative to actively stay busy and continue practicing all skills learned to date.	10
Organization	Displays skills in prioritizing and management of time and stress; demonstrates flexibility in handling change.	10
Communication	Displays appropriate nonverbal (eye contact, body language) and oral (listening, telephone/email etiquette, grammar) skills.	10
Cooperation	Displays leadership skills; appropriately handles constructive criticism, conflicts and complaints; demonstrates problem-solving capability; follows chain of command.	10
Respect	Deals appropriately with cultural / racial diversity; does not engage in harassment of any kind. Respects professors, doctors, volunteers, and peers at all times, including maintaining appropriate relationships.	10

### **Dress Code**

The dress code will be strictly enforced. If not followed, it can affect your professional behavior grade.

REFER to the Student Handbook for complete Dress Code Policy.

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## **ATTENDANCE**

**Attendance and punctuality are vital components in the learning and evaluation processes. They are also an important part of your preparation for becoming a dependable employee.** Every workplace has attendance and tardy guidelines, which employees must follow. The Dental Assisting Program has designed the following policies in order to emphasize the importance of this aspect of employment according to Grayson College Policy.

Classes begin on the hour as scheduled. **Three tardies will equal an absence.** Students entering class after that time disturb other students as well as the instruction. The professor has the option of locking the classroom door. In this case, student(s) will not be allowed into the classroom until next break. The student will be counted absent for the time missed.

**It is required that you, the student, notify the Program Director if you will not be able to attend class on a particular day or time, before 9:00 a.m. Contact the Program Director by email, not personal cell phone.**

Tonya Hance- [hancet@grayson.edu](mailto:hancet@grayson.edu).

In each course, you will be given a grade based on your attendance to the Program for that semester. The Grade reflected in each course will be an accumulated attendance grade based on all absences/tardies (both excused and unexcused absences) throughout the entire program. The grade you **EARN** will be the same graded reflected in each course.

### **Attendance Grading Rubric**

0-2 Total Absences	100
3-4 Total Absences	89
5-6 Total Absences	70

Six or more absences will result in the student being counseled and could result in being dismissed from the program. However, we understand there are always extenuating circumstances. In the event a student has six or more absences, a committee consisting of the Dental Faculty and the Dean of Health Sciences will meet to determine if the absences fall into the extenuating circumstances category, and what action will be taken.

#### Excused Absence

**Test, practical's, assignments, or skills assessments may be made-up (with the exception of quizzes)**  
**Doctor's note for yourself or a child**  
**Death of an immediate Family Member: spouse, child, parent, sibling, or grandparent (must bring an Obituary or Funeral/Memorial Program)**

#### Unexcused Absence

**Test, practical's, assignments, or skills assessments may not be made-up (quizzes are never made-up)**

Illness without a doctor's note  
 Missing for a trip or vacation

Basically missing for any other reason besides an illness with a Doctor's note, or a death of an immediate family member.

## **Student Conduct & Discipline**

Students are to maintain classroom decorum that includes respect for other students and the professor.

Disruptive behaviors such as harassment of fellow students and/or professors; persistent talking in class while lecture is in progress; using electronic equipment without authorization (cell phone/texting) or repeated tardy arrival to class will not be tolerated. Students will be counseled initially, but may be dismissed from the classroom for repeated offenses.

We have a **Classroom Disruption Policy** that is: Each Student will be given one (1) warning and then dismissed from class for the rest of the day and will not be able to make up any work missed

Cell phones need to be kept on silent notification at all times and left in the classroom. Cell phones during Lab, Pre-Clinical or Clinical days can result in lowered behavior grades.

**PLEASE REFER TO THE STUDENT HANDBOOK FOR DETAILED RULES AND POLICIES.**

## **Academic Integrity**

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic certificate or degree depends upon the absolute integrity of the work done by the student for that award, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic Dishonesty, any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the college's policy on plagiarism (see GC Student Handbook for details). Grayson College subscribes to turnitin.com, which allows faculty to search the web and identify plagiarized material.

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## **Copyright Notice**

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials, including music and software. Copying, displaying, reproducing, or distributing copyrighted works may infringe the copyright owner's rights and such infringement is subject to appropriate disciplinary action as well as criminal penalties provided by federal law. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act.

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## **Withdrawal from Class**

The administration of this institution has set deadlines for withdrawal from any college-level

courses. These dates and times are published in that semester's schedule of classes. Administrative procedures must be followed. It is the student's responsibility to handle student initiated withdrawal requirements from any class. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled (see GC College Catalog for details).

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## **Disability Services**

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room SC 115 in the Student Success Center.

The contact information for the Office of Disability Services is:

Jeffri Hodge

(903) 463-8751 (voice or TTY)

[hodgej@grayson.edu](mailto:hodgej@grayson.edu)

If you anticipate issues related to the format or requirements of this course, please meet with the Coordinator of Disability Services. The Coordinator is available to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Services to notify them of your eligibility for reasonable accommodations. Disability Services can then plan how best to coordinate your accommodations.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

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## **Financial Aid**

Effective July 1, 2000 students receiving Title IV funds (Pell, Federal Grants, and Student Loans), who subsequently withdraw from classes, will be required to return a portion of the federal financial aid received. Only the percentage of aid earned (determined by the percentage of time attended) will be eligible for retention on the student's behalf. Any aid that is not earned must be returned to its source. If there is a student account balance resulting from these adjustments, the student is responsible for payment. Further details can be obtained from the Office of Financial Aid.

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## **Drop Rule**

Under section 51.907 of the Texas Education Code, "an institution of higher education may not permit a student to drop more than six courses, including any course a transfer student has dropped at another institution of higher education." This statute was enacted by the State of Texas in spring 2007 and applies to students who enroll in a public institution of higher education as first-time freshmen in fall 2007 or later. Any course that a student drops is counted toward the six-course limit

if (1) the student drops a course after census date or (2) the student is not dropping the course in order to withdraw from the institution. Some exemptions for good cause could allow a student to drop a course without having it counted toward this limit, but it is the responsibility of the student to establish that good cause before the drop. Students with questions should contact the Counseling Office or the Office of Admissions & Records for more information before dropping a course!

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## **TITLE IX**

GC policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status.

Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation.

For more information on Title IX, please contact:

- Dr. Regina Organ, Title IX Coordinator ([903-463-8714](tel:903-463-8714))
  - Dr. Dava Washburn, Title IX Coordinator ([903-463-8634](tel:903-463-8634))
  - Dr. Kim Williams, Title IX Deputy Coordinator- South Campus ([903\) 415-2506](tel:903-415-2506))
  - Mr. Mike McBrayer, Title IX Deputy Coordinator ([903\) 463-8753](tel:903-463-8753))
  - Website: <http://www.grayson.edu/campus-life/campus-police/title-ix-policies.html>
  - GC Police Department: ([903\) 463-8777](tel:903-463-8777)- Main Campus) ([903\) 415-2501](tel:903-415-2501) - South Campus)
  - GC Counseling Center: ([903\) 463-8730](tel:903-463-8730))
  - For Any On-campus Emergencies: 911
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**Grayson College is not responsible for illness/injury that occurs during the normal course of classroom/lab/clinical experiences.**

**These descriptions and timelines are subject to change at the discretion of the Professor.**

**Grayson College campus-wide student policies may be found on our Current Student Page on our website: <http://grayson.edu/current-students/index.html>**

***Revised: August 23, 2015***

