

GRAYSON COLLEGE

Course Syllabus

DNTA 1301 Dental Materials Fall 2018

Dental Assisting Program

Lecture hours per week 2

Lab hours per week 4

Clock hours per semester 96

Lecture Room 205 Tuesday's 10:00 AM to 11:50 AM

Lab Room 203 Wednesday's 8:00 AM to 11:50 AM

Professor Contact Information Wendy

Renfro RDA, CDA (903) 415-2529

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Office Location: Health Sciences Professor's Office A126

Schedule:

Monday 8:00 AM to 09:00 AM
Tuesday 8:00 AM to 10:00 AM
Wednesday 1:00 PM to 3:00 PM
Thursday 1:00 PM to 3:00 PM
Friday 1:00 PM to 3:00 PM

Professor's Class Schedule:

Monday 9:00 AM to 11:50 AM; 1:00 PM to 2:50 PM
Tuesday 10:00 AM to 11:50 AM, 1:00 PM to 3:50 PM
Wednesday 8:00 AM to 11:50 AM
Thursday 8:00 AM TO 11:50 AM
Friday 8:00 AM to 11:50 AM

Credit Hours 4.00
Lecture Hours 2.00
Laboratory Hours 4.00
Course Length 16 Weeks

Type of Instruction Lecture/Lab Co-
requisites

DNTA 1311 Dental Science

DNTA 1305 Dental Radiology

DNTA 1245 Preventive Dentistry

DNTA 1315 Chairside Dentistry

DNTA 1202 Communication and Behavior in the Dental Office

Course Description – (2-4-4) Composition, properties, procedures and safety standards related to dental materials. Dental Materials such as: impression materials, lab stone, temporary and permanent cements, provisional crowns, denture relines, composite restorations, amalgam restorations, temporary restorations, bases, liners, and products used to clean and polish.

Student Learning Outcomes (Course Objectives)-

1. Describe the vital role that a dental auxiliary plays in the preparation and placement of dental materials
 2. Develop an understanding of the chemistry involved in dental materials to include Elements, matter, measurement, bonding, and chemical properties of dental materials
 3. Demonstrate infection control and safety practices in dealing with dental materials And proficiency in utilization and maintenance of laboratory equipment
 4. Actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners
 5. Think analytically and creatively to explore ideas, make connection, draw conclusion, and solve problems
 6. Demonstrate proficiency in the use of technologies in the broadest sense related to their field of study: Sort & Mount teeth; Composite Restoration; Cements; Amalgam Polishing; Alginate impressions; Bleaching Trays; Mouth Protectors; Gypsum Model Pour/Trimming; Pit & Fissure Sealants
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Course Learning Outcomes

1. Manipulate required materials to assist dentist with procedures
 2. Demonstrate the basic principles of laboratory safety
 3. Comply with OSHA and other regulatory agencies' standards for safety and infection control
 4. Describe the history, ADA specifications, general properties, classifications, manipulation and relation to the oral environment of dental materials.
 5. Identify composition, properties, and uses and demonstrate manipulation of gypsum and construction of a study cast.
 6. Identify composition, properties, and uses and demonstrate manipulation of cavity liners, varnishes and bases.
 7. Identify composition, properties, and uses and demonstrate manipulation of dental cements.
 8. Identify composition, property uses and demonstrate manipulation of dental resins and amalgams.
 9. Identify and describe uses, types, and characteristics of dental gold, porcelain and other metals.
 10. Identify classifications, uses, composition, and properties and demonstrate manipulation of dental materials and waxes.
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Required Textbooks (ISBN # included) and Materials:

1. Bird, Doni L., CDA,RDH,MA, and Debbie S. Robinson, CDA,MS, **MODERN DENTAL ASSISTING.** Twelfth Edition (2018). Elsevier/Saunders Publishers (ISBN#978-0-323-4303-2)
2. Microsoft Office software
3. **Wristwatch w/ second hand (Optional)**
4. Pens, Pencils, Highlighters
5. Paper, folder or notebook

- 6. Student Uniforms
- 7. Dental Assisting Student ID

Additional Resources

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

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. I strongly urge each student to join the class Group Me system to stay up to date with announcements/ questions and reminders.

The schedule listed below is subject to change with fair notice from the professor. Changes will be announced in the classroom and through the Canvas course.

Table 1 Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	Aug. 21 Aug. 22	<p>Lecture :</p> <ul style="list-style-type: none"> • Welcome and Syllabus • C 1 – <i>Introduction to Dental Materials</i> • C 2 – <i>Oral Environment and Patient Considerations</i> • Classroom Activity <p>Lab:</p> <ul style="list-style-type: none"> • Tour of lab/ lab stations/ Assign Lab partners • Discuss the importance of Personal Protective Equipment and Safety Precautions while Mixing Alginate • Demonstrate Mixing of Alginate Impression Material • Have students take Maxillary Impression on Hypsodont (if time allows) • Instruct students on proper cleaning/ sterilization techniques for alginate materials and trays. • Clean lab/ clinic utilizing Infection Control Protocol
2	Aug. 28 Aug. 29	<p>Lecture : C-3 <i>Physical and Mechanical Properties of Dental Materials</i> C- 4 <i>General Handling and Safety of Dental Materials in the Dental Office</i> Classroom Activity</p> <p>Lab:</p> <ul style="list-style-type: none"> • Complete Skill Check-offs for C 4 • Practice Maxillary Alginate Impressions on Lab Partners in the Clinic • Demonstrate proper Gypsum Mixing and Pour-up (STUDY MODELS) Techniques • Practice Pouring up Maxillary Impression taken on lab partner • Instruct students on proper cleaning/ sterilizing techniques after pour-ups • Clean Lab/ Clinic utilizing infection control protocol

Week	Date	Topics, Readings, Assignments, Deadlines
3	Sept. 4 Sept. 5	<p>Lecture: Test C 1,2,3 &4 C- 15 <i>Impression Materials</i> Classroom Activity</p> <p>Lab:</p> <ul style="list-style-type: none"> • Practice Mandibular Alginate Impressions on lab partner in the clinic • Pour-up study models on impression taken lab partner • Practice Cord Placement on Typodont • Practice/ Complete Skills C 15 • Mix Elastomeric Impression Materials/ Impress on typodont • Practice Bite Registrations (Wax and Elastomeric) on lab partner • Clean Lab & Clinic utilizing infection control protocol
4	Sept. 11 Sept. 12	<p>Lecture: Continue C 15 <i>Impression Materials</i> Classroom Activity</p> <p>Lab:</p> <ul style="list-style-type: none"> • Maxillary/ Mandibular Impressions on lab partner in clinic/ Pour up study models • Practice Mixing Elastomeric Impression materials • Practice Making a double bite impression for a crown • Practice Bite Registration with Elastomeric material • Practice Cord Placement on Typodont • Study Group time • Clean Lab & Clinic utilizing infection control protocol
5	Sept. 18 Sept. 19	<p>Lecture: Test C 15 C 16 <i>Gypsum and Wax Products</i> /Classroom Activity</p> <p>Lab:</p> <ul style="list-style-type: none"> • Complete Skill Check-offs for C 15 • Alginate Max. & Mand. impressions on partner in Clinic, Pour up study models • Demonstrate / Practice Trimming of study models • Practice C 16 Skills • Clean lab and clinic utilizing infection control protocol
6	Sept. 25 Sept. 26	<p>Lecture: Test C 16 C -18 <i>Provisional Restorations</i> Video – Crown and Bridge Procedure/ Classroom Activity</p> <p>Lab:</p> <ul style="list-style-type: none"> • Complete Skill Complete Skills C 16 • Fabricate provisional crowns on typodonts (SKILLS C 18) • Demonstrate/ Practice trimming and polishing Provisional Crowns • / Study groups • Clean lab/ clinic utilizing infection control protocol
7	Oct. 2	<p>Lecture: Test C 18 C -5 <i>Principles of Bonding</i> C- 9 <i>Dental Ceramics</i> Classroom Activity</p>

Week	Date	Topics, Readings, Assignments, Deadlines
	Oct. 3	Lab: <ul style="list-style-type: none"> • Complete Skill Complete Skills C 16 • Video over varnish and bonding techniques • Practice Provisional Crowns • Study group • Clean lab/ clinic utilizing infection control protocol
8	Oct. 9 Oct. 10	Lecture : Test C 5 & 9 <i>C -6 Composites, Glass Ionomers and Compomers.</i> <i>C -14 Dental Cements</i> Classroom Activity Lab: <ul style="list-style-type: none"> • Manipulate composite resin materials with typodonts • Practice mixing various cements/ liners/ bases • Max./ Mand. Alginate impressions on lab partners/ pour up study models and turn in for a GRADE. • Practice/ Complete Skill Complete Skills C 6 & 14 • Practice other clinical skills/ study groups
9	Oct. 16 Oct. 17	Lecture: Test C 6 & 14 <i>C 10 Dental Amalgams</i> <i>C 11 Casting Metals, Solders, Wrought Metals</i> Classroom Activity Lab: <ul style="list-style-type: none"> • Manipulate composite resin materials • Triturate amalgam/ load amalgam carrier/ transfer/ dispose of amalgam • Practice / Complete Skill Check-offs for C 10 • Clean lab and clinic utilizing infection control protocol
10	Oct. 23 Oct. 24	Lecture: Test 10 & 11 <i>C – 7 Preventive & Desensitizing Materials</i> Classroom Activity Lab: <ul style="list-style-type: none"> • Fabricate Bleach Trays / Mouth Guards • Assemble / Place/ Remove Matrix Bands • Practice Wedge Placement • Clean lab and clinic utilizing infection control protocol

Week	Date	Topics, Readings, Assignments, Deadlines
11	Oct. 30 Oct. 31	<p>Lecture: C – 19 <i>Preventive and Corrective Oral Appliances</i> C- 8 <i>Teeth Whitening Materials and Procedures</i> Classroom Activity</p> <p>Lab:</p> <ul style="list-style-type: none"> • Practice Skills 19 & 8 • Fabricate Bleach Trays/ Mouth Guards • Assemble/ Place/ Remove Matrix Bands • Practice Wedge Placement • Clean lab and clinic utilizing infection control protocol
12	Nov. 6 Nov. 7	<p>Lecture: Test C 7, 19 & 8 C- 12 <i>Dental Implants</i> Classroom Activity</p> <p>Lab:</p> <ul style="list-style-type: none"> • Practice Bleach Trays / Mouth Guards/ Custom Trays • Practice Matrix Bands • Complete Skill Check-offs for C 7, 19 and 8 • Clean lab and clinic utilizing infection control protocol
13	Nov. 13 Nov. 14	<p>Lecture: Test C 12 C 13 <i>Abrasion, Finishing and Polishing</i> Video on Polishing restorations and oral appliances Classroom Activity</p> <p>Lab:</p> <ul style="list-style-type: none"> • Practice Skills C 13 • Practice Polishing Dentures / Partials on Lathe • Study Groups/ Practice other clinical skills • Clean lab and clinic utilizing infection control protocol
14	Nov. 20 Nov. 21	<p>Lecture: Test C 13 Go over Final Review</p> <p>Lab:</p> <ul style="list-style-type: none"> • Complete Skill Check-off for C 13 • Clean lab and clinic/ empty lab stations • Work on final review

Week	Date	Topics, Readings, Assignments, Deadlines
15	Nov. 27 Nov. 28	Final Review
16	Dec. 5	Final Exam

Chapter 1 Introduction to Dental Materials

Chapter Outline

- The role of the dental auxiliary in the use of dental materials
- Evidence based dentistry
- The historical development of dental materials
- The agencies responsible for standards
 - American Dental Association
 - U.S. Food and Drug Administration
 - International Agencies
- Future development in dental biomaterials

Expected Learning Outcomes (Objectives)

1. Discuss the importance of the study of dental materials for the allied oral health practitioner.
2. Discuss why it is necessary that an allied oral health practitioner have an understanding of dental materials for the delivery of dental care.
3. Discuss evidence based decision making as it relates to dental materials; what questions might you ask yourself or your practice to make sure you are increasing for successful patient care outcomes?
4. Review the historical development of dental materials.
5. List and compare the agencies responsible for setting standards and specifications of dental materials.
6. Discuss the requirements necessary for a consumer product to qualify for the ADA seal of acceptance.

Chapter 2 Oral Environment and Patient Considerations

Chapter Outline:

- Classification of dental materials
 - Preventive/ therapeutic materials
 - Restorative materials
 - Auxiliary materials
- Biocompatibility
- Biomechanics
- Force and Stress
 - Compressive Force
 - Tensile Force
 - Shearing Force
 - Torsion or Torque

- Moisture and acid levels
 - Solubility
 - Water sorption
 - Corrosion
 - Tarnish
- Galvanism
- Temperature
 - Dimensional change
 - Coefficient of thermal expansion
 - Percolation
 - Thermal conductivity
 - Insulators
- Retention
 - Bonding
 - Adhesion
 - Wetting
 - Viscosity
 - Film thickness
 - Surface energy
- Microleakage
- Esthetics
 - Hue
 - Chroma
 - Value
- Oral Biofilm and Dental Materials
- Detection of Restorative Materials

Expected Learning Outcomes (Objectives)

1. Discuss the qualities of the oral environment that make it challenging for long-term performance of dental materials.
2. Describe the long term clinical requirements of therapeutic and restorative materials.
3. List and give examples of the four types of biting forces and the tooth structures most ideally suited to them.
4. Define stress, strain, and ultimate strength and compare the ultimate strength of restorative materials during each type of stress to tooth structures.
5. Describe the effects of moisture and acidity on dental materials.
6. Describe the clinical significance of galvanism and how it can be prevented.
7. Define thermal conductivity and thermal expansion and contraction and compare the values of thermal expansion and conductivity of restorative materials with those of tooth structures.
8. Describe the process used to achieve mechanical, chemical adhesion, and bonding retention.
9. Describe the factors that determine successful adhesion, including wettability, viscosity, film thickness, and surface characteristics.
10. Describe microleakage and how the results of this process can lead to recurrent decay and postoperative sensitivity.
11. Define biocompatibility and discuss why requirements for biocompatibility may fluctuate.
12. Compare the three visible light wavelengths that are sensed when recognizing color.
13. Describe tooth color in terms of hue, value, and chroma.
14. Explain the importance of detection of restorations and methods for detection.

Chapter 3 Physical and Mechanical Properties of Dental Materials

Chapter Outline

- Physical Structures
 - Primary Bonds
 - Secondary Bonds
 - The Three States of Matter
- Application
- Composition
- Reaction
- Manipulation

Expected Learning Outcomes (Objectives)

1. Define primary and secondary bonds and give an example of how each determine the properties of the material.
2. Describe the three forms of matter and give a defining characteristic of each.
3. Define density and explain the relationship of density, volume, and crystalline structure.
4. Define hardness and describe how hardness contributes to abrasion resistance.
5. Define elasticity and give an example of when elasticity is desirable in dental procedures.
6. Relate stiffness and proportional limit and describe how these properties apply to restorative dental materials.
7. Define ductility and malleability and explain how these characteristics contribute to the edge strength of a gold crown.
8. Differentiate between toughness and resilience.
9. Define brittleness and discuss how this property applies to restorative dental materials.
10. Define viscosity and thixotropic materials and describe the clinical significance of each.
11. Differentiate between therapeutic, preventive and restorative materials.
12. Discuss the component classifications that may make up a dental material.
13. Describe the reaction stages a material undergoes to acquire its final state.
14. Describe the variables in the manipulation of a material.

Chapter 4 General Handling and Safety of Dental Materials in the Dental Office

Chapter Outline:

- Material Hazards in the Dental Environment
 - Exposure to Biological Contaminants
- Bio-Aerosols in the Dental Setting
 - Dental Bio-Aerosols
- Chemical Safety in the Dental Office
 - Hazardous Chemicals
 - Skin and Eyes
 - Inhalation
 - Ingestion
 - Exposure to Bisphenol A
 - Exposure to Mercury
- Acute and Chronic Chemical Toxicity
 - Acute Chemical Toxicity
 - Chronic Chemical Toxicity
- Personal Chemical Protection
 - Hand Protection
 - Eye Protection
 - Protective Clothing
 - Inhalation Protection
- Control of Chemical Spills
 - Mercury Spill
 - Flammable Liquids

- Acids
- Eyewash
- Ventilation
- General Precautions for Storing Chemicals
- Disposal of Chemicals
 - Empty Containers
 - Hazardous Waste Disposal
- Dental Laboratory Infection Control
- Occupational Safety and Health Administration Hazard Communication Standard
 - Written Hazard Communication Program
 - Chemical Inventory
 - Safety Data Sheets
- Labeling of Chemical Containers and Safety Data Sheets
- Labeling Exemptions
 - National Fire Protection Association Labels
 - Employee Training
- Eco-Conscience Green Practices
- Patient Safety

Expected Learning Outcomes (Objectives)

1. Identify five job related health and safety hazards for employees in dental offices, and explain the methods of prevention.
2. Explain the components of the Occupational Safety and Health Administration Hazard Communication Standard.
3. Describe the ways that chemicals can enter the body.
4. Describe the employee and employer responsibility for safety training.
5. Describe the basic infection control methods for the handling of dental materials in the treatment area.
6. Identify the concepts and benefits of going green in the dental practice.
7. Discuss how the ADA Top Ten Initiatives of sustainability can be incorporated into a general dental practice.

Chapter 15 **Impression Materials**

Chapter Outline:

- Overview of Impressions
 - Types of Impressions
 - Types of Impression Materials
 - Key Properties
- Impression Trays
 - Stock Trays
 - Custom Trays
 - Bite Registration Trays
- Hydrocolloids
 - Reversible Hydrocolloids
 - Irreversible Hydrocolloids
- Making Alginate Impressions
- Criteria for Clinically Acceptable Alginate Impressions
- Elastomers
 - Polysulfide
 - Silicone Rubber Impression Materials
 - Polyvinyl Siloxane
 - Vinyl Polyether Silicone Hybrid
 - Components of Impression Making for Crown and Bridge Procedures
- Making the Impression
- Digital Impressions
 - Scanning Devices
 - Advantages of Digital Impressions
 - Disadvantages of Digital Impressions

- Soft Tissue Management
- Expanded Use of Digital Impressions
- Inelastic Impression Materials
 - Dental Impression Compound
 - Impression Plaster
 - Zinc Oxide Eugenol Impression Material
 - Impression Wax
- Disinfecting Impressions

Expected Learning Outcomes (Objectives)

1. Describe the purpose of an impression.
2. Describe the three basic types of impressions.
3. Explain the importance of the key properties of impression materials.
4. Define sol and gel and describe these states as they occur with hydrocolloids.
5. Explain why alginate is an irreversible hydrocolloid.
6. List the supplies needed to make an alginate impression and explain how they are used.
7. Select trays for alginate impressions for a patient.
8. Mix alginate, load and seat the tray, and remove the set impression.
9. Evaluate upper and lower alginate impressions, in accordance with the criteria for acceptability.
10. Disinfect alginate impressions and prepare them for transport to the office laboratory.
11. Troubleshoot problems experienced with alginate impressions.
12. Describe the various types of elastomers and explain why they are called elastomers.
13. Compare similarities and differences among the physical and mechanical properties of polyvinyl siloxane and polyether impression materials.
14. Discuss the advantages and disadvantages of using polyether impression material for a crown impression.
15. Explain why polyvinyl siloxane impression material is so popular.
16. Explain the difference between a hydrophobic and a hydrophilic impression material.
17. Evaluate cord placement and gingival retraction for acceptability.
18. Use ferric sulfate astringent to control gingival bleeding before making an impression.
19. Make a registration of a patient's bite in centric occlusion.
20. Assemble the cartridge of impression material with mixing tip and load into the dispenser.
21. Explain what a digital impression is.
22. Describe the advantages and disadvantages of digital impressions.
23. Disinfect PVS and Polyether impressions and prepare them for transport to the dental laboratory.

Chapter 16 Gypsum and Wax Products

Chapter Outline:

- Uses and Desirable Qualities of Gypsum Products
- Properties and Behaviors of Gypsum Products
 - Physical Properties
- Classification of Gypsum
 - Impression Plaster
 - Model Plaster
 - Dental Stone
 - Dental Stone, High Strength, Low Expansion
 - Dental Stone, High Strength, High Expansion
- Manipulation of Gypsum Products
 - Material Selection
 - Proportioning (Ratio's)
 - Mixing/ Spatulation
 - Initial Setting and Working Time
 - Final Setting Time
- Control of Setting Times
- Fabricating and Trimming of Diagnostic / Working Casts
- Storage

- Infection Control and Safety Issues
- Separating the Impression from the Cast
- Trimming
- Metal Plated and Epoxy Dies and Resin Reinforced Die Stone
- Investment Materials
- Composition of Properties of Dental Waxes
 - Melting Range
 - Flow
 - Excess Residue
 - Thermal Expansion
- Classification of Waxes
 - Pattern Waxes
 - Processing Waxes
 - Impression Waxes
- Manipulation of Waxes
- Lost Wax Technique

Expected Learning Outcomes (Objectives)

1. Differentiate between negative and positive reproduction.
2. Differentiate among diagnostic cast, working cast, and dies.
3. Describe the chemical and physical nature of gypsum products.
4. Explain the manufacturing process for gypsum products and how this affects their physical characteristics.
5. Compare the following properties and behaviors of gypsum products: strength, dimensional accuracy, solubility, and reproduction of detail.
6. List the American Dental Association–recognized gypsum products and their most appropriate uses.
7. Explain initial and final set of gypsum and the factors that affect the setting time, setting expansion, and strength.
8. Explain the procedure for mixing and handling gypsum products to create diagnostic casts.
9. Identify the common components of dental waxes.
10. Compare the properties of waxes.
11. Describe the clinical/laboratory significance of each of the properties of waxes.
12. Discuss the three classifications of waxes.
13. Differentiate between direct and indirect waxing and identify which property of dental waxes is most important in their difference.
14. Describe the usual color, form, and use of inlay, casting, baseplate, boxing, utility, and sticky waxes.
15. Prepare model plaster or stone for pouring.
16. Pour the anatomic portion of maxillary and mandibular diagnostic casts.
17. Pour the base portion of maxillary and mandibular diagnostic casts.
18. Trim maxillary and mandibular diagnostic casts.
19. Obtain a bite registration using bite registration or utility wax.

Chapter 18 **Provisional Restorations**

Chapter Outline:

- Dental Procedures That May Require Provisional Coverage.
- Criteria For Provisional Coverage
 - Maintain Prepared Tooth Position Relative to Adjacent and Opposing Teeth
 - Protect the Exposed Tooth Surfaces and Margins
 - Protect the Gingival Tissues
 - Provide Function and Esthetics
 - Retention
- Properties of Provisional Materials

- Strength
- Hardness
- Tissue Compatibility
- Esthetics
- Handling
- Provisional Crown Materials
 - Preformed / Prefabricated Crowns
 - Stainless Steel Crowns
 - Aluminum Shell Crowns
 - Polycarbonate and Celluloid Crown Forms
 - Customized Provisional Crowns
- Acrylic Provisional Materials
- Bis-Acrylic Composite Provisional Materials
 - Direct Technique
 - Indirect Technique and Indirect Direct Technique
 - Vacuum Former Acetate Technique
- Cementing the Provisional Crown
- Removing the Provisional Crown
- Intracoronal Cement Provisionals
- Advanced Techniques
- Patient Education

Expected Learning Outcomes (Objectives)

- 1.** Explain the purpose of provisional coverage.
- 2.** Describe examples of circumstances that may require provisional coverage.
- 3.** Identify the criteria necessary for a high-quality provisional restoration.
- 4.** Describe the properties of provisional materials.
- 5.** Distinguish among properties that are important for posterior coverage, anterior coverage, and both anterior and posterior coverage.
- 6.** Distinguish between intracoronal and extracoronal restorations.
- 7.** Summarize the advantages and disadvantages of preformed and custom crowns.
- 8.** Differentiate among direct, indirect, and vacuum former fabrication techniques.
- 9.** Summarize the advantages and disadvantages of acrylic and bis-acrylic composite provisional materials.
- 10.** Describe the technique for fabrication of metal, polycarbonate, custom, and cement provisional restorations.
- 11.** Summarize patient education and home care instructions.
- 12.** Fabricate and cement a metal provisional crown.
- 13.** Fabricate and cement a polycarbonate crown.
- 14.** Fabricate and cement a custom provisional crown.
- 15.** Place an intracoronal cement temporary restoration.

Chapter 5 **Principles of Bonding**

Chapter Outline:

- Basic Principles of Bonding
 - Preparation for Bonding
 - Bonding to the Etched Surface
 - Surface Wetting
 - Bond Strength
 - Enamel Etching
 - Dentin Etching
 - Enamel and Dentin Etching
- Bonding Systems

Revised: August 2018

- History of the Development of Bonding Systems
- Total Etch Bonding Systems
- Self-Etch Bonding Systems
- Modes of Cure
- Oxygen-Inhibited Layer
- Biocompatibility
- Compatibility with Other Resins
- Microleakage
- Contamination of Bonding Site
- Postoperative Sensitivity
- Clinical Applications of Bonding
 - Bonding of Restoration
 - Ceramic Bonding Repair
 - Metal Bonding
 - Amalgam Bonding
 - Composite Resin Repair
 - Orthodontic Bracket Bonding
 - Bonding of Ceramic Veneers
 - Bonding of Endodontic Posts

Expected Learning Outcomes (Objectives)

1. Discuss the effects of acid etching on enamel and dentin.
2. Describe the basic steps of bonding.
3. Explain the differences between bonding to enamel and bonding to dentin.
4. Discuss the significance of the smear layer.
5. Describe “wet” dentin bonding.
6. Compare total-etch and self-etch bonding techniques.
7. Explain how the hybrid layer is formed and its importance in bonding to dentin.
8. Discuss the factors that interfere with good bonding.
9. Discuss the adverse effects of microleakage at restoration margins.
10. Describe how to bond ceramic veneers.
11. Describe the bonding of orthodontic brackets.
12. Describe the bonding of endodontic posts.
13. Explain the differences in bonding to enamel, dentin, metal, and ceramic.
14. List the factors that contribute to tooth sensitivity after bonding.
15. Etch enamel and dentin with phosphoric acid as permitted by state law.
16. Apply a bonding system to etched enamel and dentin as permitted by state law.

Chapter 9 Dental Ceramics

Chapter Outline:

- Dental Ceramics
 - Glass and Nonglass Ceramics
 - Advantages and Disadvantages of Ceramic Restorations
- Glass Based Ceramics
 - Porcelains
- Non-Glass Based Ceramics
 - Alumina
 - Zirconia
- Physical and Mechanical Properties
 - Thermal Properties
 - Optical Properties
 - Biocompatibility
- Processing Techniques
 - Sintering

- Slip casting
- Heat Pressing
- Computer Aided Machining
- CAD/CAM Technology
 - Basic Components of CAD/CAM Systems
 - Incorporating CAD/CAM Technology into Private Practice
 - Ceramic CAD/CAM Materials
- Clinical Applications for Ceramic Materials
 - Rationale for Selection of Ceramic Materials
 - Veneers
 - Porcelain-Metal Restorations
 - Finishing and Polishing Ceramic Restorations
 - Cementation of All Ceramic Restorations
 - Maintenance of All Ceramic Restorations
 - Removal of All Ceramic Restorations
- Shade Taking
 - Hue, Chroma, and Value
 - Involving the Dental Assistant / Hygienist and the Patient
 - Lighting for Shade Taking
 - Matching the Shade
 - Characterizing the Shade

Expected Learning Outcomes (Objectives)

- 1.** Discuss the attributes and shortcomings of dental porcelains.
- 2.** Compare the clinical applications of restorations made from porcelain with those made from lithium disilicate.
- 3.** Explain why crowns made from zirconia can be used to restore molars.
- 4.** Describe the methods used to process ceramic restorations.
- 5.** Present a rationale for the selection of ceramic materials for restorations used in the anterior and posterior parts of the mouth.
- 6.** Describe how porcelain bonds to metal for porcelain-fused-to-metal (PFM) crowns.
- 7.** Select a cement for use with glass-based ceramic materials.
- 8.** Describe common causes for failure of ceramic restorations.
- 9.** Finish and polish ceramic restorations without generating too much heat or stress in the material.
- 10.** Compare the relative strengths of feldspathic porcelain, lithium disilicate, and zirconium.
- 11.** Explain how CAD/CAM technology is used to fabricate a ceramic crown.
- 12.** List the clinical applications for all-ceramic restorations.
- 13.** Prepare the ceramic restoration for bonding with a resin cement.
- 14.** Assist the dentist in cementing an all-ceramic crown or veneers.
- 15.** Define chroma, value, and hue.
- 16.** Properly prepare the conditions in the operatory for shade taking.
- 17.** Assist the dentist in shade taking.

Chapter 6 Composites, Glass Ionomers, and Compomers

Chapter Outline:

- Direct-Placement Esthetic Restorative Materials
- Composite Resin
 - Components
 - Classifications of Composites by Filler Size
 - Physical and Mechanical Properties of Composites
 - Clinical Handling of Composites
 - Matrix Systems
 - Light Curing
 - Composite Repair

- Finishing and Polishing
- Why Composites Fail
- Indirect Placement Composite Resins
 - Laboratory Processed Composites
- Glass Ionomer Cements
 - Packaging
 - Physical and Mechanical Properties
 - Uses for Glass Ionomer Cements
- Hybrid (Resin-Modified) Ionomers
 - Nano ionomers
- Compomers
- Giomers

Expected Learning Outcomes (Objectives)

- 1.** Describe the various types of composite resin restorative materials.
- 2.** Discuss the advantages, and disadvantages, of each type of composite resin.
- 3.** Discuss the similarities and differences among chemical-cured, light-cured, and dual-cured composite resins.
- 4.** Describe how fillers affect the properties of composites.
- 5.** Explain why incremental placement of composite resin is recommended.
- 6.** Describe the factors that determine how long an increment of composite resin should be light-cured.
- 7.** Place a sectional matrix for a class II composite.
- 8.** Select an appropriate type of composite for a class II cavity preparation.
- 9.** As permitted by state law, place a composite in a class II cavity preparation.
- 10.** Light-cure a composite resin restoration following recommended exposure times.
- 11.** As permitted by state law, finish and polish a class III composite restoration.
- 12.** Discuss the procedural differences between direct and indirect composite restorations.
- 13.** Describe the composition of glass ionomer restoratives and their uses, advantages, and disadvantages.
- 14.** Explain the effects of fluoride-releasing, resin-modified glass ionomer restorations in the prevention of recurrent caries.
- 15.** List the components of compomers.
- 16.** Describe the uses of compomers.
- 17.** Compare the clinical applications of composite resin restorative materials with glass ionomer cement restorative materials.

Chapter 10 **Dental Amalgam**

Chapter Outline:

- Dental Amalgam
 - Alloy Used in Dental Amalgam
 - Silver Based Amalgam Alloy Particles
 - Composition
 - Setting Transformation
 - Setting Reactions
 - Tarnish
 - Corrosion
 - Creep
 - Dimensional Change
 - Strength
 - Thermal Conductivity
 - Handling Characteristics of High Copper Alloys
 - Manipulation of Amalgam

Expected Learning Outcomes (Objectives)

- 1.** Discuss the safety of amalgam as a restorative material.

2. List the main components in dental amalgam.
3. Describe the advantages of high-copper amalgams over low-copper amalgams.
4. Explain the role of the gamma-2 phase in corrosion of amalgam.
5. Describe the particle shapes in lathe-cut, admix, and spherical alloys, and discuss their effects on the condensation resistance of freshly mixed amalgam.
6. Define creep, corrosion, and tarnish.
7. Compare the strength of amalgam with that of composite resin or glass ionomer cement.
8. Discuss the effect of mixing time on the strength and manipulation of amalgam.
9. Discuss the advantages and disadvantages of amalgam as a restorative material.
10. Perform safe mercury hygiene practices in the dental office.
11. Collect and process amalgam scrap for recycling.
12. Select an appropriate size of matrix band for a class II amalgam preparation.
13. Assemble a Tofflemire band in its retainer.
14. Evaluate a class II amalgam matrix setup for meeting proper placement criteria.
15. Assist with or place (as allowed by state law) amalgam in a class II cavity preparation.

Chapter 11 **Casting Metals, Solders, and Wrought Metal Alloys**

Chapter Outline:

- Casting Alloys
 - All Metal Castings
 - Porcelain Bonding Alloys
 - Titanium and Its Alloys
 - Sintered Alloy Composites
 - Removable Prosthetic Casting Alloys
 - IdentAlloy Program
 - Biocompatibility
 - Resistance to Tarnish and Corrosion
- Solders
 - Gold Solders
 - Silver Solders
- Wrought Metal Alloys
 - Wire
 - Preformed Provisional Crowns
 - Endodontic Files and Reamers
- Metals Used in Orthodontics
 - Wires
 - Brackets and Bands
 - Retainers and Removable Orthodontic Appliances
 - Space Maintainers
- Endodontic Posts
 - Purpose of the Post
 - Classification
 - Custom Posts
 - Preformed Posts

Expected Learning Outcomes (Objectives)

1. Describe the differences among the types of gold alloy used for dental restorations.
2. Define karat and fineness.
3. Differentiate among high-noble, noble, and base-metal alloys.
4. Describe the characteristics needed for porcelain bonding alloys.
5. Describe the characteristics of metals used for casting partial denture frameworks.
6. Explain the biocompatibility problems associated with some alloys.
7. Explain how solders are used.

8. List metals used for solders.
9. Describe how wrought metal alloys differ from casting alloys.
10. Describe the uses of wrought wire.
11. Explain the use of the different types of metal wire for orthodontic arch wire.
12. Prepare the surfaces of teeth for bonding of an orthodontic bracket.
13. Select and use a resin cement to bond an orthodontic bracket (as permitted by state law).
14. Explain the purpose of an endodontic post.
15. Describe the types of materials used for preformed endodontic posts.

Chapter 7 Preventive and Desensitizing Materials

Chapter Outline:

- Fluoride
 - Topical and Systemic Effects
- Protections Against Erosion
- Bacterial Inhibition
- Fluoride and Antibacterial Rinses for the Control of Dental Caries
- Methods of Delivery
 - Dietary Fluoride Supplements
 - In-Office Fluoride Applications (Topical)
 - Self-Applied Topical Gels and Pastes
 - Over the Counter Fluoride Rinses
 - Fluoride Containing Toothpaste
 - Fluoride Containing Prophylaxis Pastes
- Safety
- Pit and Fissure Sealants
 - Purpose
 - Indications
 - Susceptibility of Teeth to Fissure Caries
 - Composition
 - Working Time
 - Color and Wear
 - Placement
 - Patient Record Entries
 - Effectiveness
 - Troubleshooting Problems with Sealants
 - Glass Ionomers Cement as a Sealant
- Desensitizing Agents
 - Mechanism of Tooth Sensitivity
 - Treatment
 - Categories and Components of Desensitizing Agents
- Remineralization
 - Products
 - Resin Infiltration

Expected Learning Outcomes (Objectives)

1. Fluoride and caries control:
 - a. Describe the applications of fluoride in prevention.
 - b. Explain how fluoride protects teeth from caries.
 - c. Discuss the various methods of fluoride delivery.
 - d. Explain the benefit of using an antibacterial rinse in conjunction with fluoride.
 - e. Describe the antibacterial effects of chlorhexidine.
 - f. Apply topical fluoride gel, foam, or varnish correctly (as permitted by state law).
2. Sealants:
 - a. Describe how sealants protect pits and fissures from dental caries.

- b. List the components of sealant material.
- c. Recite the steps for applying sealants.
- d. Apply sealants to teeth (as permitted by state law).
- 3. Desensitizing agents:
 - a. Recite causes of tooth sensitivity.
 - b. Explain how desensitizing agents work.
 - c. List the types of materials used to treat sensitive teeth.
 - d. Apply desensitizing agents to sensitive teeth (as permitted by state law).
- 4. Remineralization products:
 - a. Explain the process of remineralization of enamel.
 - b. Describe how products for remineralization work.
 - c. Explain how resin infiltration of the early white spot lesion works.
 - d. Apply remineralizing products (as permitted by state law).

Chapter 19 Preventive and Corrective Oral Appliances

Chapter Outline:

- Sports Mouth Guards
 - Stock Guards
 - Boil and Bite Guards
 - Custom Fit Guards
 - Protection
- Night Guards (Bruxism Mouth Guards)
 - Types of Materials
 - Design of the Guard
 - Maintenance
- Oral Appliances for Preventions of Snoring and Obstructive Sleep Apnea
- Space Maintainers
- Orthodontic Tooth Aligners

Expected Learning Outcomes (Objectives)

1. Describe the uses of mouth guards.
2. List the materials for the fabrication of mouth guards.
3. Explain to a patient how to care for a mouth guard.
4. Fabricate a sports mouth guard.
5. Describe what obstructive sleep apnea is.
6. Describe the use of oral appliances to prevent snoring or obstructive sleep apnea.
7. Explain how space maintainers prevent the drifting of teeth and loss of space.
8. Describe how thermoplastic orthodontic aligners work.

Chapter 8 Teeth Whitening Materials and Procedures

Chapter Outline:

- Teeth Whitening (Bleaching)
 - Types of Stains
 - How Whitening Works
 - In-Office Whitening
 - Home Whitening (Prescribed by Dentist)

Revised: August 2018

- Over the Counter Products
- Role of the Dental Assistant or Hygienist
- Potential Side Effects
- Restorative Considerations
- Contraindications
- Retreatment
- Enamel Micro abrasion
 - Adverse Outcomes

Expected Learning Outcomes (Objectives)

- 1.** Describe how whitening materials penetrate the tooth.
- 2.** Explain the differences between professionally supervised home whitening and over-the-counter (OTC) systems.
- 3.** Describe the precautions to take to protect the oral tissues when applying in-office power whitening products.
- 4.** Compare the whitening materials used for in-office, take home, and OTC home use.
- 5.** List the potential side effects of home whitening.
- 6.** Describe the methods to whiten nonvisual teeth.
- 7.** Discuss the relative effectiveness of whitening products and whitening toothpastes in removing stains from teeth.
- 8.** List the steps in the procedures for in-office power whitening.
- 9.** Fabricate home whitening trays.
- 10.** Demonstrate to a patient how home whitening products are used.
- 11.** Describe clinical situations in which enamel micro abrasion might be used.
- 12.** Explain how enamel micro abrasion works.

Chapter 12 **Dental Implants**

Chapter Outline:

- Dental Implants
 - Endosseous Implants
 - Indications for Implants
 - Contraindications for Implants
 - Benefits of Implants
 - Implant Components
 - Implant Materials
 - Implant Designs
- Image Guided Implant Planning and Surgery
 - Implant Planning Software
 - Advantages of Guided Implant Surgery
- Implant Placement and Restoration
 - Informed Consent
 - Surgical Risks
 - Preparation of the Patient for Surgery
 - Postsurgical Instructions
 - Preparing the Operatory for Surgery
 - Two Stage Surgical Procedure
 - One Stage Surgical Procedure
 - Immediate Placement Surgical Procedure
 - Immediate Loading

- Restorative Phase
 - Implant Impression and Laboratory Components
 - Impression Procedures
 - Retention of the Implant Crown
 - Retention of the Removable Prosthesis
- Mini-Implants
 - Uses for Mini-Implants
- Bone Grafting
 - Purpose of Bone Grafting
 - Types of Bone Grafting
 - Barrier Membranes
 - Sinus Lift
- Implant Longevity
 - Long Term Success
- Implant Maintenance
 - Home Care
 - Hygiene Visit

Expected Learning Outcomes (Objectives)

- 1.** Describe the components of an implant used for a crown.
- 2.** Describe the most common materials used for dental implants.
- 3.** Explain osseointegration of an implant.
- 4.** Discuss the indications and contraindications for dental implants.
- 5.** Explain the advantages of image-guided implant surgery.
- 6.** Identify risks to the patient for implant surgery.
- 7.** Describe the sequence of the one-stage surgical procedure.
- 8.** Present postsurgical instructions to a patient.
- 9.** Compare the one-stage, two-stage, and immediate surgical procedures.
- 10.** Discuss the pros and cons of immediate loading of an implant.
- 11.** Explain the process of taking an implant impression.
- 12.** Compare the open-tray and closed-tray impression procedures.
- 13.** Make an impression for an implant, using the open- or closed-tray procedure (as permitted by state law).
- 14.** Identify the uses for mini-implants.
- 15.** Define the types of bone grafting.
- 16.** Describe the purpose of the sinus lift procedure.
- 17.** Describe the check-offs that should be done for dental implants at the hygiene visit.
- 18.** Demonstrate to a patient the use of home care aids for dental implants.
- 19.** Explain the rationale for the use of plastic instruments for cleaning titanium implants.
- 20.** Perform periodontal maintenance around an implant (hygienists) using appropriate probes, scalers, curettes, and ultrasonic tips.

Chapter 13 Abrasion, Finishing, and Polishing

Chapter Outline:

- Finishing, Polishing, and Cleaning
 - Factors affecting Abrasion
 - Mode of Delivery of Abrasives
 - Materials used in Abrasion

- Preparations Used for Abrasions
- Finishing and Polishing Procedures
 - Margination and Removal of Flash
 - Amalgam
 - Composite
 - Gold Alloy
 - Ceramics (Porcelain)
- Polishing During Oral Prophylaxis
 - Amalgam
 - Composite
 - Gold Alloys and Ceramics
 - Resin/ Cement Interface
 - Implants
 - Air Polishing and Air Abrasion

Expected Learning Outcomes (Objectives)

- 1.** Define abrasion, finishing, polishing, and cleaning.
- 2.** Discuss the purpose of finishing, polishing, and cleaning of dental restorations and tooth surfaces.
- 3.** Identify and discuss the factors that affect the rate and efficiency of abrasion.
- 4.** Compare the relative ranking of abrasives on restorations and tooth structures.
- 5.** Describe methods by which dental abrasives are applied.
- 6.** Discuss the contraindications to the use of abrasives on tooth structure and restorations.
- 7.** Describe the clinical decisions made to determine which abrasive to use when finishing, polishing, or cleaning dental restorations or tooth structures.
- 8.** Describe the abrasives and the procedures used for finishing and polishing metals, composite, and porcelain.
- 9.** Describe the abrasives and the procedures used for polishing and cleaning metals, composite, ceramic, and gold alloys as part of oral prophylaxis.
- 10.** Describe the safety and infection control precautions taken by the operator when using abrasives.
- 11.** Relate the instructions given to patients to prevent and remove stain from tooth surfaces and restorations.
- 12.** Finish and polish a preexisting amalgam restoration.
- 13.** Polish a preexisting composite restoration.

Chapter 14 **Dental Cements**

Chapter Outline:

- Uses of Dental Cements
 - Pulpal Protection
 - Luting, Bonding , Cementation
 - Restorations
 - Surgical Dressings
- Properties of Dental Cements
 - Strength
 - Solubility
 - Viscosity and Film Thickness
 - Biocompatibilities and Ant cariogenic Properties
 - Retention and Adhesion

- Esthetics
- Radiopacity
- Manipulation
 - Storage
 - Mixing
 - Working and Setting Times
 - Self-Etch and Total Etch
 - Light Curing, Self-Curing and Dual Curing
 - Loading the Restoration
 - Removal of Excess Cement
 - Cement Associate Peri-Implant Disease
 - Cleanup, Disinfection, and Sterilization
 - Considerations during Instrumentation
- Dental Cements
 - Zinc Oxide Eugenol
 - Zinc Phosphate
 - Zinc Polycarboxylate
 - Resin Based Cements

Expected Learning Outcomes (Objectives)

1. Compare the various types of cements and the uses of cements in dentistry for:
 - Pulpal protection
 - Luting
 - Restorations
 - Surgical dressing
2. Describe the properties of cement, and explain how these properties affect selection of cement for a dental procedure.
3. Identify the components of each dental cement.
4. Describe how these components affect the properties of the cement.
5. Compare the advantages and disadvantages of each cement.
6. Describe the manipulation considerations for mixing cements.
7. Describe the procedure for filling a crown with luting cement.
8. Describe the procedure for removing excess cement after cementation.
9. Apply the mixing technique for each type of cement

Face to Face

Students will be required to complete laboratory assignments/competencies. These will include, alginate impressions, gypsum pour-ups, trimming, mixing cements and liners and bases, fabricating provisional crowns/bridges, fabricating bleach trays and occlusal guards, packing and removal of gingival cord, polishing and cleaning appliances such as partials and dentures, preparing and placing and removing matrix bands and wedges, mixing and loading and disposing of amalgam restoration material, and bite registrations.

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

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.

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

Methods of Evaluation Grading

Categories	Percentage
Tests	20%
Behavior / Attendance / Final Exam	25%
Laboratory Techniques & Skills	40%
Assignments/ Quizzes	15%
	100%

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

Grades will be posted via Canvas

Late Work Policy

NO LATE WORK ACCEPTED. This includes laboratory projects.

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

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 check-offs assignments.

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.
3. REFER to the Student Handbook for complete quiz and test policies.

Exam scores will be expressed in whole numbers. The length of time allowed for testing is based on

Revised: August 2018

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.

Classroom Quizzes (cognitive domain) are 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.*

Skills Competency (psychomotor domain) in all of the following:

Safety Data Sheet and Labeling
Enamel and Dentin Bonding Using the total etch technique
Surface treatment for Bonding Ceramic Restorations
Applying Topical Fluoride
Applying Dental Sealants
In office Whitening
Clinical Procedures for Home Whitening
Fabrication of Custom Whitening Trays
Placing and Carving Class II Amalgam
Finishing and Polishing a Preexisting Amalgam Restoration
Finishing and Polishing a Preexisting Composite Restoration
Zinc Oxide Eugenol Cement Primary and Secondary Consistency
Zinc Phosphate Cement
Zinc Polycarboxylate Cement
Glass Ionomer Cement
Resin-Based Cement
Making an Alginate Impression
Making a Double Bite Impression for a Crown
Bite Registration with elastomeric material and Wax
Disinfection of Impression Material or Bite Registration
Mixing Gypsum Products
Pouring the Cast (Anatomic and Art/Base Portions)
Separating the Impression from the Cast
Trimming Diagnostic Casts
Fabrication of Custom Acrylic Impression Tray
Fabrication of Mouth Guards
Fabrication of Custom Trays
Metal Provisional Crowns
Custom Provisional Coverage

Dress Code

The dress code will be strictly enforced. If not followed, it can affect your behavior grade. REFER to the Student Handbook for complete Dress Code Policy.

Homework

1. Homework will be due one week from the date it was assigned.
2. In Class assignments, Quizzes and behavior grades all fall into the Homework category which makes up 15 % of your grade in this class.

Competencies/ Laboratory Projects

1. Skill Check-offs are graded on a Pass/Fail basis with the student having the opportunity to repeat the competency three (3) times. The maximum numerical score on a second attempt to pass the check off is 89. The maximum score on a 3rd attempt is a 75. After 3 times and the skill is not completed it will be a zero for that skill. The student will be counseled by the instructor &/ or program director.
2. Competencies, Models, Bleach Trays and Occlusal/ Mouth Guards all fall under the Laboratory Techniques.
3. This category makes up 40% of your grade.
4. Several models will be made to insure student technique and competence. Some will be for a grade.
5. Bleach Trays and Occlusal Guards will be fabricated for learning purposes and as skill check off. All fabrications made will be destroyed by instructor after grading is complete. Fabrications that are not deliverable will receive a grade of a zero. For this reason, please ask questions if unsure.
6. REFER to the Student Handbook for complete Competency Policy.

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

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

Methods of Instruction

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

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 Blackboard, 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 clinic.

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

Course & Instructor Policies

IT IS IMPORTANT THAT YOU, THE STUDENT, NOTIFY THE PROGRAM DIRECTOR BY 9:00 AM IF YOU WILL NOT BE ABLE TO ATTEND CLASS ON A PARTICULAR DAY OR TIME.

Tonya Hance 903-463-8780

hancet@grayson.edu

Class Attendance

Academic success is closely associated with regular classroom attendance and course participation. All successful students, whether on campus or online, are expected to be highly self-motivated.

All students are required to participate in courses regularly and are obliged to participate in class activities and complete and submit assignments following their professors' instructions. Students taking courses during compressed semester time frames such as mini-mester, summer sessions, and mid-semester should plan to spend significantly more time per week on the course. Responsibility for work missed because of illness or school business is placed upon the student. **More than two (2) absences are considered to be excessive**. In addition, students' eligibility to receive financial aid or live in a College dormitory can be affected by withdrawal from courses. When withdrawal occurs, any tuition refund would be made in accordance with state regulations.

Student Conduct & Discipline

Students are expected 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.

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 check-offs 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 check-offs 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.

Class Attendance

Academic success is closely associated with regular classroom attendance and course participation. All successful students, whether on campus or online, are expected to be highly self-motivated.

All students are required to participate in courses regularly and are obliged to participate in class activities and complete and submit assignments following their professors' instructions. Students taking courses during compressed semester time frames such as mini-master, summer sessions, and mid-semester should plan to spend significantly more time per week on the course. Responsibility for work missed because of illness or school business is placed upon the student. More than two (2) absences are considered to be

Excessive. In addition, students' eligibility to receive financial aid or live in a College dormitory can be affected by withdrawal from courses. When withdrawal occurs, any tuition refund would be made in accordance with state regulations.

Academic Integrity

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

Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and the 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.

Student Responsibility

You have already made the decision to go to college; now the follow-up decisions on whether to commit to doing the work could very well determine whether you end up working at a good paying job in a field you enjoy or working at minimum wage for the rest of your life. Education involves a partnership that requires both students and instructors to do their parts. By entering into this partnership, you have a responsibility to show up for class, do the assignments and reading, be engaged and pay attention in class, follow directions, and put your best effort into it. You will get out of your experience here exactly what you put into it – nothing more and nothing less.

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 veteran's 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)
- Dr. Dava Washburn, Title IX Coordinator (903-463-8634)
- Dr. Kim Williams, Title IX Deputy Coordinator- South Campus (903) 415-2506
- Mr. Mike McBrayer, Title IX Deputy Coordinator (903) 463-8753
- Website: <http://www.grayson.edu/campus-life/campus-police/title-ix-policies.html>
- GC Police Department: (903) 463-8777- Main Campus) (903) 415-2501 - South Campus)
- GC Counseling Center: (903) 463-8730
- For Any On-campus Emergencies: 911

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>



