



# INSTRUCTIONAL PACKAGE

DHG 239

Dental Assisting for Dental Hygienist

201830  
Summer/2019

# INSTRUCTIONAL PACKAGE

## Part I: Course Information

Effective Term: 201830

COURSE PREFIX: DHG 239

COURSE TITLE: Dental Assisting for Dental Hygienist

CONTACT HOURS: 4

CREDIT HOURS: 2

### **RATIONALE FOR THE COURSE:**

Upon completion of the content presented in this course, the student will be able to:

1. Discuss and define various types of restorative methods and materials utilized in dentistry.
2. Describe the general properties of metal alloy, abrasives, glass and plastic utilized in dentistry.
3. Discuss the general handling and safety of dental materials in the dental office
4. Discuss tooth whitening products, mechanism of action, and efficacy.
5. Discuss the composition, uses and clinical concerns of alginate material.
6. Discuss the composition, uses, construction procedures and actions of models and die materials.
7. Perform four-handed dentistry.
8. Identify basic instruments utilized in restorative dentistry.
9. Discuss and manipulate the various types of cements
10. Discuss and utilized various impression materials.
11. Describe and identify various plastics utilized in prosthetic dentistry.
12. Identify the various qualities of the oral environment that make it challenging for long-term clinical performance of dental materials.

### **COURSE DESCRIPTION:**

This course introduces the dental assisting role and responsibilities. Emphasis is on four-handed dentistry, the use and manipulations of dental materials, and office management.

**PREREQUISITES/CO-REQUISITES:**

Admittance to the program  
AHS 113 Head and Neck Anatomy  
DHG 125 Tooth Morphology and Histology  
DHG 151 Dental Hygiene Principles  
DHG 121 Dental Radiography  
DHG 141 Periodontology  
DHG 165 Clinical Dental Hygiene I  
DHG 243 Nutrition

**CO-REQUISITES:**

DHG 175 Clinical Dental Hygiene II

**REQUIRED MATERIALS:**

Please visit the Bookstore online site for most current textbook information. Use the direct link below to find textbooks.

[BOOKSTORE](#).

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

**TECHNICAL REQUIREMENTS:**

Access to Desire2Learn (D2L), HGTC's student portal for course materials.  
WaveNet and D2L email access.

**STUDENT IDENTIFICATION VERIFICATION**

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

**CLASSROOM ETIQUETTE:**

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

Please refer to the Dental Sciences Program Manual for additional policies and procedures relating to classroom etiquette.

**NETIQUETTE:** is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit [Online Netiquette](#).

## Part II: Student Learning Outcomes

### COURSE LEARNING OUTCOMES and ASSESSMENTS\*:

**Module: 1:** Ch. 2 Oral Environment and Patient Considerations, Ch. 3 Physical and Mechanical Properties of Dental Materials, & Ch. 4 General Handling and Safety of Dental Materials in the Dental Office.

#### **Assessments: Test, Competencies, and Final Exam**

1. Discuss the qualities of the oral environment that make it challenging for long-term clinical performance of dental materials.
2. List and give examples of the four types of biting forces and the tooth structures most ideally suited to them.
3. Define stress, strain, ultimate strength, thermal conductivity, thermal expansion, and biocompatibility.
4. Describe the effects of moisture and acidity on dental materials.
5. Describe the clinical significance of galvanism, chemical adhesion, bonding retention, wettability, viscosity, film thickness, and microleakage.
6. Describe tooth color in terms of hue, value, and chroma.
7. Define primary and secondary bonds, ductility, malleability, density, volume, crystalline structure, hardness, elasticity, brittleness, thixotropic materials, and reaction stages of dental materials.
8. Differentiate between therapeutic, preventive, and restorative materials.
9. Explain the components of the Occupational Safety and Health Administration Hazard Communication Standard.
10. Describe the basic infection control methods for the handling of dental materials in the treatment area.

**Module 2:** Ch. 15 Impression Materials & Ch. 16 Gypsum and Wax Products

#### **Assessments: Test, Competencies, and Final Exam**

1. Describe the three types of impressions and impression materials.
2. Troubleshoot problems experienced with alginate impressions.
3. Explain the difference between a hydrophobic and hydrophilic impression material.
4. Discuss the use of gingival retraction cord.
5. Differentiate between negative and positive reproduction, diagnostic cast, working cast, and dies.
6. Describe the chemical and physical nature of gypsum products.
7. Compare the strength, dimensional accuracy, solubility, and reproduction of gypsum products.
8. Explain initial and final set of gypsum and the factors that affect the setting time, setting expansion, and strength.

**Module 3:** Ch. 12 Dental Implants, Ch.13 Abrasion, Finishing, and Polishing, Ch. 14 Dental cement

**Assessments:** Test, Competencies, and Final Exam

1. Describe the components and common materials of a various dental implant.
2. Explain oseointegration and different types of bone grafting associated with implants.
3. Discuss the indications and contraindications for dental implants.
4. Compare the one-stage, two-stage, and immediate surgical procedures.
5. Describe the assessments for dental implants, appropriate instrumentation, and appropriate home care instructions for patients with implants.
6. Discuss the purpose of finishing, polishing, and cleaning of dental restoration and tooth surfaces.
7. Compare the relative ranking of abrasives on restorations and tooth structures.
8. Discuss the contraindications to the use of abrasives on tooth structure and restorations.
9. Compare the various types, and properties, advantages, and disadvantages of cements and the uses of cements in dentistry.

**Module 4:** CE/dentalcare.com Four Handed Dentistry, An overview of the Concept & Prosthesis Retention and Effective Use of Denture Adhesive in complete Denture Therapy

**Assessments:** Test, Competencies, and Final Exam

1. Identify the basic tenets of true four-handed dentistry.
2. Describe motion economy.
3. Identify the basic zones of activity.
4. Explain why the concepts of true four-handed dentistry can increase productivity.
5. Identify dental team responsibilities to ensure effective four-handed dentistry.
6. Examine equipment to increase visibility.
7. Understand the most ergonomic ways to deliver dentistry.
8. Appreciate the impact of a growth elderly edentulous population on the day-to-day practice of dentistry.
9. Understand objectives of complete denture therapy for patients affected by progressive resorption of edentulous ridges.
10. Better understand expected changes in edentulous soft and hard tissues over time.
11. Appreciate the complex biophysical processes involved in complete denture retention and stability.
12. Gain basic comprehension of improved complete denture retention and stability associated with the proper use of denture adhesives. Understand appropriate methods for conservatively applying adhesive and placing complete dentures to achieve optimal adhesive performance.
13. Comprehend recommended methods for cleaning adhesive from complete denture upon removal from the mouth.
14. Comprehend appropriate methods for accomplishing personal oral hygiene following removal of adhesive assisted complete dentures.

**Module 5:** Ch. 5 Principles of Bonding, Ch. 6 Composites, Glass Ionomers, and Compomers, Ch. 7 Preventive and Desensitizing Materials

**Assessments:** Test, Competencies, and Final Exam

1. Describe the basic steps of bonding, wet bonding, and bonding of ceramic veneers.
2. Discuss the effects of acid etching on enamel and dentin, significance of the smear layer, adverse effects of microleakage, and factors that interfere with good bonding.
3. Explain the differences in bonding to enamel, dentin, metal, and ceramic.
4. Discuss the various types of composite resin materials and the advantages and disadvantages of each type of resin.
5. Describe how fillers affect the properties of composites and why incremental placement is recommended.
6. Discuss the procedural differences between direct and indirect composite restorations.
7. Explain the effects of fluoride-releasing, resin-modified glass ionomer restorations in the prevention of recurrent caries.
8. Describe and explain how fluoride protects teeth from caries.
9. Discuss the various methods of fluoride delivery
10. Describe how sealant protect pits and fissures from dental caries.
11. List the components and recite the steps for applying sealants.
12. List and explain how desensitizing agents work.
13. Explain the process of remineralization of enamel.

**Module 6:** Ch. 8 Teeth Whitening Materials and Procedures, Ch. 9 Dental Ceramics, and Ch. 10 Dental Amalgam

**Assessments:** Test, Competencies, and Final Exam

1. Describe how whitening materials penetrate the tooth.
2. Explain the differences between professionally supervised home whitening and over-the-counter systems.
3. List the potential side effects of home whitening.
4. Describe the methods to whiten non-vital teeth
5. List the steps in the procedures for in-office power whitening
6. Demonstrate to a patient how home whitening products are used.
7. Discuss the attributes and shortcomings of dental porcelains
8. Present a rationale for the selection of ceramic materials for restoration used in the anterior and posterior part of the mouth.
9. Describe how porcelain bonds to metal for porcelain-fused-to-metal (PFM) crowns.
10. Describe common causes for failure of ceramic restoration.
11. Compare the relative strengths of feldspathic porcelain, lithium disilicated, and zirconium.
12. Explain how CAD/CAM technology is used to fabricate a ceramic crown.
13. Discuss the safety of amalgam as a restorative material
14. Describe the advantages of high-copper amalgams over low-copper amalgams.
15. Define creep, corrosion, and tarnish.
16. Compare the strength of amalgam with that of composite resin or glass ionomer cement.
17. Discuss the advantages and disadvantages of amalgam as a restorative material

**Module 7:** Ch. 18 Provisional Restorations & Ch. 19 Preventive and Corrective Oral Appliances.

1. Describe examples of circumstances that may require provisional coverage.
2. Describe the properties of provisional materials.
3. Summarize the advantages and disadvantages of preformed and custom crowns.
4. Describe the uses of mouth guards.
5. List the materials for the fabrication of mouth guards.
6. Discuss ART

## **Lab Objectives**

### **Lab 1:**

1. Handout lab equipment
2. Review basic infection control methods for handling dental materials
3. Demonstrate safe practices in the laboratory setting and demonstrate the emergency eyewash station.
4. Prepare model plaster for pouring.
5. Pour plaster in edentulous and dentulous molds free of defects.
6. Pour the base portion of maxillary and mandibular diagnostic casts.

### **Lab 2:**

1. Students will learn to take alginate impression on student partners
2. Select trays for alginate impressions for a patient
3. Mix alginate, load and seat the tray, and remove the set impression
4. Disinfect alginate impressions and prepare them gypsum
5. Prepare model plaster or stone for pouring
6. Pour the anatomic portion of maxillary and mandibular diagnostic casts
7. Trim maxillary and mandibular diagnostic casts

### **Lab 3:**

1. Identify basic instruments used in restorative dentistry, oral surgery, root canal therapy, and orthodontic procedures.
2. Learn aseptic procedures when handling a patient's dentures
3. Demonstrate proper technique for cleaning around a patient with orthodontics

### **Lab 4:**

1. Fabricate a temporary crown
2. Cement a temporary crown
3. Apply the mixing technique for 3 different types of cements
4. Demonstrate the proper procedure for removing excess cement around a crown

### **Lab 5:**

1. Demonstrate the proper technique of four-handed instrument transfer
2. Identify basic instruments as instructed for four-handed transfer
3. Apply Arestin on a typodont

**Lab 6:**

1. Recite the steps for applying sealants
2. Apply sealants on synthetic teeth
3. Apply sealants on student partner
4. Take impressions for whitening trays and mouth guards
5. Pour up stone for whitening trays (save model for your study models)

**Lab 7:**

1. Fabricate whitening trays
2. Fabricate a mouth guard
3. Learn to determine tooth colors utilizing a shade guide
4. Learn and demonstrate the proper home care instructions for a patient who are whitening their teeth.
5. Place a temporary filling

**Lab 8:**

1. Fabricate a study model
2. Place ART

***\*Students – please refer to the Instructor’s Course Information sheet for specific information on assessments and due dates.***

## **Part III: Grading and Assessment**

### **EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS\***

Students’ performance will be assessed and the weight associated with the various measures/artifacts are listed below.

#### **EVALUATION\***

Tests	60%
Competencies	10%
Final Exam	30%
	100%

***\*Students, for the specific number and type of evaluations, please refer to the Instructor’s Course Information Sheet.***

#### **GRADING SYSTEM:**

A=90-100

B=80-89

C=77-79

D=70-76

F=69 and below



Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the academic calendar for deadlines for add/drop ([ACADEMIC CALENDAR](#)). You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

## Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student and a student may not be permitted to reenroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

**For online and hybrid courses**, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

## Part V: Student Resources



### The Student Success and Tutoring Center (SSTC)

The SSTC offers to all students the following **free** resources:

- 1. Academic coaches** for most subject areas, **Writing Center Support**, and **college success skills**.
- 2. On-line student success and academic support resources.**

Visit the SSTC website: [Student Success & Tutoring Center](#) and visit the student services tab in your WaveNet account to schedule appointments using TutorTrac. For more information, call: SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455 or go to the [Online Resource Center](#) to access on-demand resources any time.



## Student Information Center: WaveNet Central (WNC)

WNC offers to all students the following **free** resources:

1. **Getting around HGTC:** General information and guidance for enrollment!
2. Use the **[Online Resource Center \(ORC\)](#)** for COMPASS support, technology education, and online tools.
3. **Drop-in technology support or scheduled training** in the Center or in class.
4. **In-person workshops, online tutorials and more services** are available.

Visit the WNC website: [Wavenet Central](#). Live Chat and Center locations are posted on the website. Or please call one of the following locations: WNC Conway, 349-5182; WNC Grand Strand, 477-2076; and WNC Georgetown, 520-1473.

The **Instructor Information Sheet** will have more details on test requirements for your course.

### Disability Services:

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to Beth Havens, Director of Student Development on the Conway Campus Jaime Davis, Counselor/Advisor on the Georgetown Campus or Kristin Griffin, Counselor on the Grand Strand Campus. These individuals will review documentation of the student's disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

### Statement of Equal Opportunity/Non-Discrimination Statement

Horry-Georgetown Technical College prohibits discrimination and harassment, including sexual harassment and abuse, on the basis of race, color, sex, national or ethnic origin, age, religion, disability, marital or family status, veteran status, political ideas, sexual orientation, gender identity, or pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation in educational programs and/or activities.

Inquiries regarding the non-discrimination policies: Students and prospective student inquiries concerning Section 504, Title II, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs, Dr. Melissa Batten, VP Student Affairs, Title IX Coordinator, Building 1100, Room 107A, Conway Campus, PO Box 261966, Conway, SC 29528-6066, 843-349-5228, [Melissa.Batten@hgtc.edu](mailto:Melissa.Batten@hgtc.edu). Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources, Jacquelyne Snyder, VP Human Resources, Section 504, Title II, and Title IX Coordinator, Building 200, Room 212A, Conway Campus, PO Box 261966, Conway, SC 29528-6066, 843-349-5212, [Jacquelyne.Snyder@hgtc.edu](mailto:Jacquelyne.Snyder@hgtc.edu).

**Title IX Requirements**

All students (as well as other persons) at Horry-Georgetown Technical College are protected by Title IX—regardless of their sex, sexual orientation, gender identity, part- or full-time status, disability, race, or national origin—in all aspects of educational programs and activities. Any student, or other member of the college community, who believes that he/she is or has been a victim of sexual harassment or sexual violence may file a report with the college’s Chief Student Services Officer, campus law enforcement, or with the college’s Title IX Coordinator, or designee.

\*Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

<b>Inquiries regarding the non-discrimination policies:</b>	
Student and prospective student inquiries concerning Section 504, Title II, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.	Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.
<b>Dr. Melissa Batten, VP Student Affairs</b> <i>Title IX Coordinator</i> Building 1100, Room 107A, Conway Campus PO Box 261966, Conway, SC 29528-6066 843-349-5228 <a href="mailto:Melissa.Batten@hgtc.edu">Melissa.Batten@hgtc.edu</a>	<b>Jacquelyne Snyder, VP Human Resources</b> <i>Section 504, Title II, and Title IX Coordinator</i> Building 200, Room 212A, Conway Campus PO Box 261966, Conway, SC 29528-6066 843-349-5212 <a href="mailto:Jacquelyne.Snyder@hgtc.edu">Jacquelyne.Snyder@hgtc.edu</a>