



# INSTRUCTIONAL PACKAGE

DHG 243

Nutrition and Dental Health

201920

Spring /2020



# INSTRUCTIONAL PACKAGE

## Part I: Course Information

Effective Term: 201920

COURSE PREFIX: DHG 243

COURSE TITLE: Nutrition and Dental Health

CONTACT HOURS: 2

CREDIT HOURS: 2

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

DHG 243 introduces the Dental Hygiene student to the realm of nutrition and how nutrition pertains to oral health and the role the dental hygienist plays in this aspect of dentistry. This course will provide the student with the knowledge and skills to utilize nutrition as a tool in assessment of their patients' health and wellbeing as it relates to oral health and whole body health.

### **COURSE DESCRIPTION:**

This course provides a study of nutrients, their nature, source and utilization. Emphasis is placed on the relationship between diet and oral health. Oral manifestations of nutritional deficiencies are also studied.

### **PRE-REQUISITES:**

3-3-4	BIO	211	Anatomy & Physiology I
3-3-4	BIO	225	General Microbiology
1-0-1	AHS	113	Head & Neck Anatomy
3-6-5	DHG	151	Dental Hygiene Principles
1-3-2	DHG	125	Tooth Morphology

### **CO-REQUISITES:**

2-0-2	DHG	141	Periodontology
2-9-5	DHG	165	Clinical Dental Hygiene I
2-3-5	DHG	121	Dental Radiography
3-0-3	DHG	205	Public Speaking

### **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

**TECHNICAL REQUIREMENTS:**

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

**CLASSROOM ETIQUETTE:**

Please refer to the HGTC Dental Sciences Policies and Procedure's Manual for additional information.

**Part II: Student Learning Outcomes:**

**COURSE LEARNING OUTCOMES and ASSESSMENTS:**

Dental hygienists must recognize their role as health professionals in regard to supportive duties in oral health. They often are the first to identify nutritional issues through oral inspections, medical history assessments and patient interaction. It is therefore extremely important that the Dental Hygienist be knowledgeable and able to counsel their patients on their nutritional habits and make informed recommendations to improve their patients' health and wellbeing as it pertains to their oral health and overall health.

- 1.) Discuss the basic classes of nutrients and their relationship to health and disease
- 2.) Explain how dietary/ nutritional practices affect health
- 3.) Discuss oral implications specific to certain nutrients
- 4.) Analyze daily dietary/ nutritional practices
- 5.) Discuss nutritional considerations for:
  - \* Pregnancy and lactation
  - \* infants through aging population
  - \* eating disorders
  - \* wound healing
  - \* dental and periodontal patients
  - \* diabetic patients
  - \* special patient groups

## **Unit Lecture Learning Outcomes and Assessments**

### **Module 1:**

Materials Covered: Chapter 1 Eating 101 and Chapter 2 Carbohydrates

Assessments: Quizzes, Tests, Projects

1. Discuss the evolution of modern food industry
2. Describe the difference between a food habit and a food craving
3. Explain the relationship between portion distortion and obesity
4. Outline the journey of food as it makes its way through the body
5. Conclude how our bodies receive needed nutrients for optimal functioning
6. Name both Chemical and nutritive classifications of carbohydrates
7. Explain digestion of carbohydrates in the body
8. Explain what happens in the body when carbohydrates are restricted from the diet
9. Give examples of foods that are rich in fiber and discuss their importance in the diet
10. Counsel patients about the benefits of carbohydrates in the diet and guide them to choose those that are complex versus simple

### **Module 2:**

Materials Covered: Chapter 3 Protein and Chapter 4 Lipids

Assessments: Quizzes, Tests, Projects

1. Discuss the benefits of protein in the diet
2. Outline the digestion of proteins
3. Discuss disadvantages of both protein deficiency and excess and explain their effect on the body
4. Differentiate between complete and incomplete protein, complimentary and supplementary protein
5. Counsel patients on consuming the recommended amount of protein for their weight
6. List the primary role of lipids in the diet and give examples of benefits to the body
7. Differentiate between unsaturated fatty acid and saturated fatty acid and choose which is healthier for the body
8. Identify two essential fatty acids and list foods in which they are found
9. Explain the process of hydrogenation and its relationship to trans fats
10. Outline the process of lipid digestion and explain the participation of chylomicrons in the digestive process

### **Module 3:**

Materials Covered: Chapter 5 Vitamins and Chapter 6 Minerals

Assessments: Quizzes, Tests, Projects

1. Identify factors that distinguish between fat-soluble and water-soluble vitamins and list vitamins in each category
2. Explain how individuals can have a vitamin toxicity or imbalance
3. Discuss the impact that food preparation and processing have on nutrients available for use by the body
4. Using tables and charts, identify source, recommended daily allowance, and excess and deficiency states of 13 vitamins
5. Discuss the impact that medical conditions and medications can have on the absorption and effectiveness of vitamins
6. Define the difference between a major and trace mineral
7. State five functions of minerals in the body
8. Discuss the function of a sodium pump and name the minerals involved in the process
9. Outline the digestive process of minerals
10. Using a chart, identify mineral excess and deficiency as well as roles, recommended dietary allowance, and sources

#### **Module 4:**

Materials Covered: Chapter 7 Water and Chapter 8 Dietary and Herbal supplements

Assessments: Quizzes, Tests, Projects

1. List important ways that water benefits the body
2. Explain how we meet our daily need for water and the importance of meeting that need
3. State the recommended daily intake of water and list sources
4. List symptoms of water dehydration
5. Explain which water is best for drinking- tap, bottled, spring, or distilled
6. Define dietary supplement and herbal supplement
7. Discuss challenges that health care providers face when collecting health information history on patients
8. Discuss FDA role in evaluation of herbal supplements
9. Identify good sources of information about herbal supplements that patients can use
10. Discuss the implications of herbal supplement and drug interactions
11. Discuss implications of interactions between herbal supplements
12. Describe current trends in herbal supplementation and how lack of sufficient information can lead the public to conclusions that may not be accurate

#### **Module 5:**

Materials Covered: Chapter 9 Diet and Dental Caries; and Chapter 10 Nutrition and Periodontal Disease

Assessments: Quizzes, Tests, Projects

1. Understand the relationship between food and dental caries
2. Give examples of sugar alcohols and synthetic sweeteners and explain the difference between the two
3. Discuss the benefits of having ample saliva and understand the concerns of xerostomia
4. Name the bacteria most responsible for metabolizing carbohydrates and identify various acids created in the process
5. Identify groups most at risk for dental caries
6. Counsel patients on making diet changes to prevent or mitigate damage to teeth
7. Describe the proposed roles of micronutrients and macronutrients in periodontal disease
8. Discuss the link between obesity and periodontal disease
9. List some oral symptoms associated with ascorbic acid deficiency gingivitis
10. Explain the role of dental healthcare providers in addressing nutrition in the management of periodontal disease
11. Suggest healthy food choices for patients with periodontal disease

### **Module 6:**

Materials Covered: Chapter 11 Choosing Foods for Health and Fitness; and chapter 12 Reading Labels

Assessments: Quizzes, Tests, Projects

1. Explain why the typical American diet is called S.A.D.
2. Explain the U.S. Department of Agriculture's (USDA) MyPlate graphic and discuss key points in using it as a resource for healthy eating
3. Identify four types of vegetarians and their food eliminations
4. Counsel patients on how to locate guidelines for making healthy food selections and using MyPlate
5. Demonstrate four steps in keeping food safe
6. Outline the major points of the Nutrition Labeling and Education Act
7. List nutrients that must be included on a food label
8. Give examples of FDA approved health claims
9. State five common mistakes when reading a food label
10. Identify the number of calories per gram for carbohydrates, protein, fat, and alcohol
11. Calculate the percentage of major nutrients in a food product and the amount of calories in one serving size

### **Module 7:**

Materials Covered: Chapter 13 Nutrient needs for development and maintenance of oral structures; and chapter 14 Dietary considerations for the life cycle

## Assessments: Quizzes, Tests, Projects

1. Define critical period of development and explain the need for good maternal nutrition
2. Give examples of oral manifestations caused by nutrient deficiencies during critical periods of development
3. List nutrients necessary for proper tooth calcification
4. Identify the nutrient necessary for development of healthy epithelial tissue and salivary gland function
5. List nutrients that assist with wound healing
6. Discuss the role fluoride plays pre-eruptively and posteruptively and explain the significance of ingestion of too much fluoride during the critical period of development
7. Discuss the importance of balanced weight during pregnancy and the outcomes for either extreme; obesity or underweight
8. Define neural tube defects and identify foods rich in folic acid
9. List the reasons for failure to thrive in infants and explain how it affects physical, mental and social growth
10. Explain the media's influence on a child's diet
11. List healthy after school snacks
12. Discuss the teenage culture and how it affects eating patterns
13. Describe the differences in nutrient needs between males and females during the teenage years
14. Identify oral needs of the young adult and older adult due to physiologic changes
15. Discuss specific nutritional concerns of the older adult
16. Discuss how healthy eating throughout the life cycles can stave off chronic disease

## **Module 8:**

Materials Covered: Chapter 15 Eating Disorders and Chapter 16 Nutritional Counseling

Assessments: Quizzes, Tests, Projects

1. List the most commonly diagnosed eating disorders
2. Advise individuals with eating disorders on good dental self care practices
3. Identify physical and oral signs of eating disorders
4. Understand what constitutes the best dental treatment plan to repair oral destruction
5. Use effective communication techniques when treating individuals with eating disorders
6. Understand the limitations of dental nutritional counseling



7. Discuss ways to incorporate nutritional counseling into a dental appointment
8. Identify assessment findings that would indicate the need for nutritional counseling
9. Choose the best inventory for the patient's situation
10. Offer well thought out suggestions to improve diet to keep the oral environment healthy

### **Module 9:**

Materials covered: Chapter 17 Nutritional Considerations for special population groups  
 Assessments: Quizzes, Tests, Projects

1. Identify special patient groups that may present for dental nutritional counseling
2. Identify challenges in eating when xerostomia is present
3. List foods to avoid for patients with orthodontic appliances
4. Describe a diet that assists with healthy immunity
5. Identify oral concerns for HIV+ patients that impact eating
6. Discuss interventions to make eating more palatable for patients receiving cancer therapy

## **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.

#### **GRADING SYSTEM:**

A=90-100

B=80-89

C=77-79

D=70-76

F=69 and below

\*A passing grade in both the laboratory and lecture portion of the course is 77%.

#### **Evaluation:**

Quizzes	20%
written tests	40%
Final Exam	20%
Vitamin Project	10%
Nutritional Packet	10%

## **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.**

**Please refer to the HGTC Dental Sciences Program Manual for additional policies on attendance.**

## **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.

### **TECH Central – Student Information Center**



TECH Central provides quality enrollment and collegiate guidance for students, faculty, and staff. Services include phone, walk-in, and online technical support for technology training and troubleshooting. Additionally, we offer support in Office 365, Outlook E-mail setup, and ID cards.

**Phone:** 843-349-5340

**Email:** [techcentral@hgtc.edu](mailto:techcentral@hgtc.edu)

**Text:** 843-357-8552

**TECH Talk (Live Chat):** Located on the "Home" tab in WaveNet.

**Website:** [www.hgtc.edu/techcentral](http://www.hgtc.edu/techcentral)

**Locations:**

Conway Building 1100, Room 132D  
Grand Strand Building 200, Room 136

**Student Testing:** (If course is offered in multiple format include this section, delete if only F2F sections are offered.)

Testing in an **online/hybrid** course may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms

Further more tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through RPNOW, our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.

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. 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>