



INSTRUCTIONAL PACKAGE

DHG 243

Nutrition and Dental Health

Effective Term

Fall 2024/Spring 2025/Summer 2025

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: Fall 2024/Spring 2025/Summer 2025

COURSE PREFIX: DHG243

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.

PREREQUISITES/CO-REQUISITES:

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.

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 learning management system (LMS) used for course materials.

Access to myHGTC portal for student self-services.

College email access – this is the college's primary official form of communication.

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 HGTC Dental Sciences Program Manual for additional polices on classroom etiquette.

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 council 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

LECTURE LEARNING OUTCOMES

Module 1:

Materials Covered: Chapter 1 Eating 101 and Chapter 2 Carbohydrates

Assessments: Various assessments, 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 verses simple

Module 2:

Materials Covered: Chapter 3 Protein and Chapter 4 Lipids

Assessments: Various assessments, 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: Various assessments, 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

- 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: Various assessments, Projects

- List important ways that water benefits the body
- Explain how we meet our daily need for water and the importance of meeting that need
- State the recommended daily intake of water and list sources
- List symptoms of water dehydration
- Explain which water is best for drinking- tap, bottled, spring, or distilled
- Define dietary supplement and herbal supplement
- Discuss challenges that health care providers face when collecting health information history on patients
- Discuss FDA role in evaluation of herbal supplements
- Identify good sources of information about herbal supplements that patients can use
- Discuss the implications of herbal supplement and drug interactions
- Discuss implications of interactions between herbal supplements
- 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: Various assessments, Projects

- Understand the relationship between food and dental caries
- Give examples of sugar alcohols and synthetic sweeteners and explain the difference between the two
- Discuss the benefits of having ample saliva and understand the concerns of xerostomia
- Name the bacteria most responsible for metabolizing carbohydrates and identify various acids created in the process
- Identify groups most at risk for dental caries
- Counsel patients on making diet changes to prevent or mitigate damage to teeth
- Describe the proposed roles of micronutrients and macronutrients in periodontal disease
- Discuss the link between obesity and periodontal disease
- List some oral symptoms associated with ascorbic acid deficiency gingivitis
- Explain the role of dental healthcare providers in addressing nutrition in the management of periodontal disease
- 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: Various assessments, Projects

- Explain why the typical American diet is called S.A.D.
- Explain the U.S. Department of Agriculture's (USDA) MyPlate graphic and discuss key points in using it as a resource for healthy eating
- Identify four types of vegetarians and their food eliminations
- Counsel patients on how to locate guidelines for making healthy food selections and using MyPlate
- Demonstrate four steps in keeping food safe
- Outline the major points of the Nutrition Labeling and Education Act
- 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: Various assessments, 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 post-eruptively 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: Various assessments, 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: Various assessments, 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

****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*

Quizzes	20%
Tests	40%
Final Exam	20%
Vitamin Project	10%
Nutritional Packet	10%
	<hr/> 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. 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, and 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 tutors** for most subject areas, **Writing Center support**, and **college success skills**.
2. Online **tutoring** and academic support resources.
3. Professional and interpersonal communication **coaching** in the EPIC Labs.

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring, contact the SSTC at ssc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email ssc@hgtc.edu or 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.



STUDENT INFORMATION CENTER: TECH Central

TECH Central offers to all students the following free resources:

1. **Getting around HGTC:** General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. Use the [Online Resource Center \(ORC\)](#) including Office 365 support, password resets, and username information.
3. **In-person workshops, online tutorials and more services** are available in Desire2Learn, Student Portal, Degree Works, and Office 365.
4. **Chat with our staff on TECH Talk**, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-8552.



HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries are equipped with computers to support academic research and related school work; printing is available as well. Visit the [Library](#) website for more information or call (843) 349-5268.

STUDENT TESTING:

Testing in an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L.
- Test administered in writing on paper.
- Test administered through Publisher Platforms (which may have a fee associated with the usage)

Furthermore, 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 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 HGTC's [Accessibility and Disability Service webpage](#). The Accessibility and Disability Services staff will review documentation of the student's disability and, in a confidential setting with the student, engage in an interactive process to 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. Students will need to reach out to the Accessibility and Disability Services staff each semester to renew their accommodations.

COUNSELING SERVICES:

HGTC Counseling Services strives to optimize student success through managing personal and academic concerns that may interfere with achieving educational goals. Staff are available to every student for assistance and guidance on personal matters, academic concerns and other areas of concern. HGTC offers free in-person and telehealth counseling services to students. For more information about counseling services, please reach out to counseling@hgtc.edu or visit the website the [Counseling Services webpage](#).

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Horry-Georgetown Technical College shall not discriminate in employment or personnel decisions or in student admissions or in student decisions, or in all other segments of the College community 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 the educational programs and activities which it operates, and the college is prohibited from discrimination in such manner by applicable laws. Practices and requirements for nondiscrimination extend to the enrollment of students in programs and activities of the College and employment by the College.

All inquiries regarding the federal laws as they relate to discrimination on the basis of sex may be directed to Tamatha Sells, Title IX Coordinator, Horry-Georgetown Technical College, Building 1100C, Room 107B, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5218, tamatha.sells@hgtc.edu or to the US Department of Education Office of Civil Rights. (Telephone: 800-421-3481/Email: OCR@ed.gov).

Other employee and applicant inquiries concerning the federal laws and their application to the College may be directed to Jacquelyne Snyder, Vice President, Human Resources and Employee Relations & the College's Affirmative Action/Equal

Opportunity Officer, Horry-Georgetown Technical College, Building 200C, Room 205B, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5212, jacquelyne.snyder@hgtc.edu.

Other student and prospective student inquiries concerning the federal laws and their application to the College or any student decision may be directed to Dr. Melissa Batten, Vice President, Student Affairs, Section 504 & Title II Coordinator Horry-Georgetown Technical College, Building 1100C, Room 107A, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5228, melissa.batten@hgtc.edu.

TITLE IX REQUIREMENTS:

Title IX of the Education Amendments of 1972 protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination.

HGTC prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking and will provide students, faculty, and staff with necessary information regarding prevention, policies, procedures, and resources.

Any student, or other member of the college community, who believes that they have been a victim of sexual harassment, domestic violence, dating violence, sexual assault, or stalking may file a report with the college's Title IX Coordinator or campus law enforcement*.

*Faculty and Staff are required to report these incidents to the Title IX Coordinator 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).

For more information, contact Tamatha Sells, Title IX Coordinator, Conway Campus, Building 1100C, Room 107B, 843-349-5218, tamatha.sells@hgtc.edu.

PREGNANCY ACCOMMODATIONS

Under Title IX, colleges must not exclude a pregnant student from participating in any part of an educational program. Horry-Georgetown Technical College is committed to ensuring that pregnant students receive reasonable accommodations to ensure access to our educational programs.

Students should advise the Title IX Coordinator of a potential need for accommodations as soon as they know they are pregnant. It is extremely important that communication between student, instructors, and the Title IX Coordinator begin as soon as possible. Each situation is unique and will be addressed individually.

Title IX accommodations DO NOT apply to Financial Aid. Financial Aid regulations do not give the College any discretion in terms of Financial Aid eligibility.

Certain educational programs may have strict certification requirements or requirements mandated by outside regulatory agencies. Therefore, in some programs, the application of Title IX accommodations may be limited.

To request pregnancy accommodations, please complete the [**Pregnancy Intake Form**](#).