



**Summer Semester 2017
Course Syllabus**

Course Title & Number: DHYG 2110 Biochemistry & Nutrition Fundamentals for the Dental Hygienist
Credit Hours/Minutes: 2 Semester Credit Hours and 1500 minutes
Course Schedule: Tuesday 1:30-4:30 pm, Room # 906, Health Science Annex
CRN: 60188

Course Director: Melanie Bryson, RDH, BS
Office Hours: Monday 7:30am-12:00pm; Tuesday 4:30-5:30pm; Wednesday 11:00am-4:00pm
Office Location: Room #910, Health Science Annex
Email Address: mbryson@southeasterntech.edu
Phone: 912-538-3250
Fax Number: 912-538-3278

REQUIRED TEXT:

Dental Hygienist's Guide to Nutritional Care. 4th ed. Stegeman, Davis. 2015. Saunders.

EQUIPMENT/SUPPLIES: pen, pencil, paper, highlighter, USB jump drive

COURSE DESCRIPTION: Provides a basic introduction to organic chemistry and biochemistry. Familiarizes students with the role of nutrition in the human body with an emphasis on the dental hygienist's role as a nutritional educator. Topics include: molecular structure, carbohydrates, proteins, nutrition and digestion, bioenergetics, nutritional aspects, nutritional disorders, and diet assessment.

MAJOR COURSE COMPETENCIES (CC):

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|----------------------------|--------------------------|
| 1. Molecular structure | 5. Bioenergetics |
| 2. Carbohydrates | 6. Nutritional aspects |
| 3. Proteins | 7. Nutritional disorders |
| 4. Nutrition and Digestion | 8. Diet Assessment |

PREREQUISITES: None

COREQUISITES: None

GENERAL EDUCATION CORE COMPETENCIES (GC):

Southeastern Technical College has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

STUDENT REQUIREMENTS: Students are responsible for policies and procedures in the STC Catalog, Dental Hygiene Handbook, and Dental Hygiene Clinic Manual. Students are expected to exhibit professional

behavior at all times. Each student must show respect and concern for fellow students and for the course director. Insubordination will not be tolerated, and disciplinary measures will be enacted.

During an examination, students are required to place all textbooks and personal property on the counter located in the back of the classroom. Students are to rotate seats prior to testing and to be seated with an empty seat between each student. Computer monitors should be facing the front of the classroom during the exam. No talking is allowed once the exam begins. Students found with their cell phone or any other personal communication device during the exam will be considered cheating and given a zero for the exam. Once a student completes his/her exam, he/she will turn the exam paper over and remain at his/her desk quietly until everyone has finished with the exam. This will prevent other students from being distracted as students exit. Then, the proctor will take up all exam papers and class will begin. Once the exam begins, tardy students may not enter the classroom. The time limit for an exam is one hour. At the 50 minute mark, the proctor will announce to the students that they have 10 minutes left to complete the exam. Failure to complete assignments will result in one point being deducted from the final course grade for each assignment not completed by the deadline specified.

Students are advised to check their e-mails regularly for any additional information that is related to the class or to the Dental Hygiene Program.

Prior to the discussion of each chapter in class, the student is expected to complete the following:

1. Activate/access the online resources for the textbook.
2. Read the assigned chapter.
3. Learn the key terms at the beginning of the chapters.
4. Complete any assignments given by the course director.
5. Know the objectives related to the chapter.
6. Obtain all applicable forms from the Course Material Drive: **M\Dental Hygiene\DHYG 2110**. These should be retrieved prior to class time! Print them to be used in this class.

The dental hygiene curriculum requires that students utilize individualized learning styles to fully prepare for all course material. Active and engaged learning is expected of each student. Students must be prepared to discuss any material covered in class by preparing for the material in advance. Critical thinking is a key ingredient in the dental hygiene curriculum. The text has various resources to aid students with comprehension of the material to include online activities, practice quizzes, and case studies. Success is something that is not given to a student, but earned. Students are held accountable for their actions. Put in what you expect to get out of the dental hygiene program.

Homework and assignments must be completed by the due date. This is an integral part of the learning process. Any homework or assignment that has not been completed in its entirety will result in a 1 point deduction from the final course grade. In addition, the student will need to report to remediation on the assigned time to complete the homework/assignment as well as any additional work that may be required. This is designed to encourage full preparation on the part of the student.

ATTENDANCE GUIDELINES: Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and also interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Students who stop attending class, but do not formally withdraw, may receive a grade of F and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an F in a course.

ADDITIONAL ATTENDANCE PROVISIONS:

Health Sciences

Requirements for instructional hours within Health Science programs reflect the rules of respective licensure boards and/or accrediting agencies. Therefore, these programs have stringent attendance policies. Each program's attendance policy is published in the program's handbook and/or syllabus which specify the number of allowable absences. All provisions for required make-up work in the classroom or clinical experiences are at the discretion of the instructor.

Class begins promptly at the scheduled time. Any clinical time missed must be made up. Make up time is limited this semester. A student with an excused absence may have to take an incomplete in the course. The student will not be able to progress to the next semester until the clinical time is made up. If a student is more than 30 minutes late or leaves more than 30 minutes early, that clinical time must be made up.

Attendance is counted from the first scheduled class meeting of each semester. To receive credit for a course, a student must attend at least 90% of the scheduled instructional time. Time and/or work missed due to tardiness or absences must be made up at the convenience of the instructor. Any student attending less than the required scheduled instructional time (90%) may be dropped from the course as stated below in the Withdrawal Procedure.

Tardy means arriving after the scheduled time for instruction to begin. Early departure means leaving before the end of the scheduled time. Three (3) tardies or early departures equal one (1) absence for the course.

For this class, which meets 1 day a week for 9 weeks, the maximum number of days a student may miss is 1 day (1 class session) during the semester.

SPECIAL NEEDS: Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact Helen Thomas, 912-538-3126, hthomas@southeasterntech.edu, to coordinate reasonable accommodations.

SPECIFIC ABSENCES: Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

PREGNANCY: Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please advise me and make appropriate arrangements with Helen Thomas, (912) 538-3126, hthomas@southeasterntech.edu.

WITHDRAWAL PROCEDURE: Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% portion of the semester (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A

grade of “W” is assigned when the student completes the withdrawal form from the course.

Students who are dropped from courses due to attendance (see your course syllabus for attendance policy) after drop/add until the 65% point of the semester will receive a “W” for the course. Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of 'F' being assigned.

After the 65% portion of the semester, the student will receive a grade for the course. (Please note: A zero will be given for all missed assignments.)

There is no refund for partial reduction of hours. Withdrawals may affect students’ eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. All grades, including grades of ‘W’, will count in attempted hour calculations for the purpose of Financial Aid.

Remember - Informing your instructor that you will not return to his/her course does not satisfy the approved withdrawal procedure outlined above.

MAKEUP GUIDELINES: Students will be allowed to make-up **one** examination, **excluding the final examination**, due to an excused absence approved by the course director. The student will be penalized for missing the exam, and 10 points will be deducted from the make-up examination grade. All other missed exams will result in a grade of zero. If you enter the classroom late, you will not be allowed to take any exam, and you will be issued a zero for the exam. PLEASE be on time! The comprehensive final examination will be given at the end of the semester, and no make-up exam will be allowed for the final examination. **Failure to take the final examination on the specified date will result in a grade of zero.**

ACADEMIC DISHONESTY POLICY: The STC Academic Dishonesty Policy states *All forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline.* The policy can also be found in the *STC Catalog and Student Handbook*.

Procedure for Academic Misconduct

The procedure for dealing with academic misconduct and dishonesty is as follows:

--First Offense--

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

--Second Offense--

Student is given a grade of "WF" for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

--Third Offense--

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

STATEMENT OF NON-DISCRIMINATION: The Technical College System of Georgia and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, sex, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member or citizenship status (except in those special circumstances permitted or mandated by law). This school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

ADA/Section 504 - Equity- Title IX (Students) - OCR Compliance Officer	Title VI - Title IX (Employees) - EEOC Officer
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 st Street, Vidalia Office 108 Phone: 912-538-3126 hthomas@southeasterntech.edu	Blythe Wilcox, Director of Human Resources Vidalia Campus 3001 East 1 st Street, Vidalia Office 138B Phone: 912-538-3147 bwilcox@southeasterntech.edu

GRIEVANCE PROCEDURES: Grievance procedures can be found in the Catalog and Handbook located on STC's website.

ACCESS TO TECHNOLOGY: Students can now access [Blackboard](#), [Remote Lab Access](#), [Student Email](#), [Library Databases \(Galileo\)](#), and [BannerWeb](#) via the mySTC portal or by clicking the [Current Students](#) link on the STC website at www.southeasterntech.edu.

TCSG GUARANTEE/WARRANTY STATEMENT: *The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.*

GRADES WILL BE ASSIGNED BY THE FOLLOWING GRADING SCALE:

A= 90-100 Excellent
B= 80-89 Good
C= 70-79 Satisfactory
D= 60-69 Poor
F= below 60 Failing

GRADING COMPONENTS:

Exam 1 20%
Exam 2 20%
Exam 3 40%
Nutritional Assessment 20%

EVALUATION PROCEDURES:**Exam 1:** Chapters 1-11**Exam 2:** Chapters 12-21**Exam 3:** Comprehensive Final to include all chapters covered in lesson plan

Nutritional Assessment Project: Each student will complete a nutritional assessment on an assigned classmate. In your future as a dental health care professional, you will be committed to prevention of oral disease along with the promotion of health and wellness. This health and wellness begins first with you as the dental hygiene student. All necessary handouts for this project may be obtained on the M: drive under DHYG 2110. The project will include a power point presentation in addition to the nutritional assessment forms. The deadline is at the beginning of the class session listed on the lesson plan. Failure to submit the project by the deadline will result in a zero. If you are going to be absent on the date of the deadline, please deliver the project to the instructor prior to the deadline. **NO EXCEPTIONS!!!** Submit all assessment forms, power point presentation and nutritional assessment rubric on the deadline. The nutritional assessment project evaluation contains a grading rubric. Please use this to check your progress during the project and before submission of the project. Students must utilize the nutritional assessment rubric to self-assess their project. This will eliminate the likelihood of any omissions from the project.

Additional homework assignments may be assigned throughout the semester. Failure to complete homework assignments will result in one point being deducted from the final course grade for each assignment not completed by the deadline specified.

REMINDER: All projects and assignment deadlines will be strictly enforced. **Each assignment/project must be completed in its entirety and submitted in the specified timeframe. Failure to do so will result in a one point deduction from the final course grade. No exceptions!!** Late or incomplete assignments/projects will still need to be completed and turned in for instructor review and feedback. If you are going to be absent, you should deliver your assignment/project to your instructor prior to the deadline to ensure credit.

Each student's final course grade will be determined as follows:

Exam 1 Grade	X 0.20	=	+_____
Exam 2 Grade	X 0.20	=	+_____
Exam 3 Grade (Comprehensive Final)	X 0.40	=	+_____
Nutritional Assessment Project	X 0.20	=	+_____
Point Deductions for Incomplete Assignments		=	-_____
Numeric Course Grade		=	_____



Dental Hygiene Program Goals

- A. To provide comprehensive preparation of competent individuals in the arts and sciences pertinent to the discipline of dental hygiene.
- B. To provide comprehensive preparation of competent individuals in the clinical and laboratory experiences, which are necessary to develop skills in rendering professional dental hygiene patient care to the public.
- C. To provide an environment that will foster respect for the Dental Hygiene Professional Code of Ethics and Conduct and assure recognition and acceptance of the responsibilities of the profession of dental hygiene.
- D. To prepare the graduates of the basic two-year curriculum in dental hygiene to fulfill the dental hygienist's role in community oral health services.
- E. To teach students to conduct critical reviews of current literature as a means of research and life-long learning.
- F. To teach students to seek life-long learning through continuing education courses on the latest products and developments in dentistry and medicine.

Learning Objectives

Chapter 1 Overview of Healthy Eating Habits

1. Describe the general physiological functions of the six nutrient classifications of foods. (A,B,C,D)
2. Identify factors that influence patients' food habits. (A,B,C,D)
3. Name the food groups on *MyPlate*. (A,B,C,D)
4. Determine the amounts needed from each of the food groups on *MyPlate* for a well-balanced 2000 kilocalorie diet. (A,B,C,D)
5. Identify significant nutrient contributions of each food group, and assess their implications for a patient's oral health. (A,B,C,D)
6. Describe the *Dietary Guidelines for Americans* and their purpose. (A,B,C,D)
7. Assess dietary intake of a patient, using the *Dietary Guidelines for Americans* and *MyPlate*. (A,B,C,D)
8. Motivate a patient to improve food choices. (A,B,C,D)
9. Explain the different purposes of dietary reference intakes (DRIs), *MyPlate*, and reference daily intakes (RDIs). (A,B,C,D)
10. Apply basic nutritional concepts to help patients with nutrition-related problems. (A,B,C,D)

Chapter 2 Concepts in Biochemistry

1. Explain the role of biochemistry in dental hygiene and nutrition. (A,B,C,D)
2. Assign biomolecules according to functional group. (A,B,C,D)
3. Compare and contrast the structure, function, and properties of the four major classes of biomolecules (carbohydrates, proteins, nucleic acids, and lipids). (A,B,C,D)
4. Outline the structure, function, and property of monosaccharides, disaccharides, and polysaccharides. (A,B,C,D)
5. Outline the structure, function, and property of amino acids and proteins. (A,B,C,D)
6. Compare and contrast the roles of enzymes, coenzymes, and vitamins in nutrition. (A,B,C,D)
7. Outline the structure, function, and property of nucleotides and nucleic acids. (A,B,C,D)
8. Outline the structure, function, and property of fatty acids, triglycerides, and steroids. (A,B,C,D)
9. Differentiate catabolism from anabolism. Explain connections between metabolic pathways in carbohydrate, protein, and lipid metabolism. (A,B,C,D)

Chapter 3 The Alimentary Canal: Digestion and Absorption

1. Discuss factors that influence food intake. (A,B,C,D)
2. Describe general functions of each digestive organ. (A,B,C,D)
3. Identify chemical secretions necessary for digestion of energy-containing nutrients and in what parts of the gastrointestinal tract they are secreted. (A,B,C,D)
4. Point out the nutrients that require digestion and the digested products that can be absorbed. (A,B,C,D)
5. Explain the role of gastrointestinal motility in digestion and absorption. (A,B,C,D)
6. Choose points in Nutritional Directions for educating dental patients. (A,B,C,D)
7. Describe how digestion and absorption may affect nutritional status and oral health. (A,B,C,D)

Chapter 4 Carbohydrate: The Efficient Fuel

1. Identify major carbohydrates in foods and in the body. (A,B,C,D)
2. Outline ways glucose can be used by the body. (A,B,C,D)
3. Summarize the functions of dietary carbohydrates. (A,B,C,D)
4. Explain the importance of dietary carbohydrates. (A,B,C,D)
5. Identify dietary sources of lactose, other sugars, and starches. (A,B,C,D)
6. Summarize the role and sources of dietary fiber. (A,B,C,D)
7. Describe the role of carbohydrates in the caries process. (A,B,C,D)

- Formulate recommendations for patients concerning carbohydrate consumption to reduce risk for dental caries. (A,B,C,D)

Chapter 5 Protein: The Cellular Foundation

- List the possible fates of amino acids. (A,B,C,D)
- Classify foods as sources of high-quality or lower-quality proteins. (A,B,C,D)
- Explain how protein foods can be used to complement one another. (A,B,C,D)
- Plan individualized menus to meet the recommended protein level for a diet containing animal foods, a vegetarian diet, and a vegan diet containing only plant proteins. (A,B,C,D)
- Explain why various physiological states require different amounts of protein. (A,B,C,D)
- Categorize the problems associated with protein deficiency or excess. (A,B,C,D)
- Assess a patient's protein consumption in terms of deficiency or excess. (A,B,C,D)
- Apply nutrition principles regarding food intake to prevent protein deficiency and protein excess into patient education. (A,B,C,D)

Chapter 6 Lipids: The Condensed Energy

- Describe how fatty acids affect the properties of fat. (A,B,C,D)
- Explain the functions of fats in the body and how these affect oral health. (A,B,C,D)
- Identify dietary sources for saturated, monounsaturated, polyunsaturated, omega-3 and trans fatty acids, and cholesterol. (A,B,C,D)
- Calculate the recommended amount of dietary fat. (A,B,C,D)
- Plan appropriate interventions when dietary modification of fat intake has been recommended to a patient. (A,B,C,D)
- Select nutritional directions for various patient issues. (A,B,C,D)

Chapter 7 Use of the Energy Nutrients: Metabolism and Balance

- Calculate energy needs according to the patient's weight and activities. (A,B,C,D)
- Explain physiological sources of energy. (A,B,C,D)
- Identify factors affecting the basal metabolic rate. (A,B,C,D)
- Assess factors affecting energy balance. (A,B,C,D)
- Summarize the effects of inadequate energy intake. (A,B,C,D)
- Explain the principles for and importance of regulating energy balance to a patient. (A,B,C,D)
- Individualize dental hygiene considerations to patients regarding energy metabolism. (A,B,C,D)
- Relate nutritional directions to meet patients' needs regarding energy metabolism. (A,B,C,D)

Chapter 8 Vitamins Required for Calcified Structures

- List the fat-soluble vitamins. (A,B,C,D)
- Compare the characteristics of water-soluble vitamins with those of fat-soluble vitamins. (A,B,C,D)
- Identify functions, deficiencies, surpluses, toxicities, and oral symptoms for vitamins A, D, E, K, and C. (A,B,C,D)
- Select food sources for vitamins A, D, E, K, and C. (A,B,C,D)
- Individualize dental hygiene considerations for patients regarding vitamins A, D, E, K, and C. (A,B,C,D)
- Relate nutritional directions to meet patients' needs regarding vitamins A, D, E, K, and C. (A,B,C,D)

Chapter 9 Minerals Essential for Calcified Structures

- List the minerals found in collagen, bones, and teeth, and describe their main physiological roles and sources. (A,B,C,D)
- Describe causes and symptoms of mineral excesses or deficits. (A,B,C,D)
- Discuss the role of water fluoridation in the prevention of dental caries. (A,B,C,D)

4. Describe advantages and disadvantages of mineral supplementation. (A,B,C,D)
5. Individualize dental hygiene considerations to patients regarding calcium, phosphorus, magnesium, and fluoride. (A,B,C,D)
6. Utilize nutritional directions to provide patient education regarding calcium, phosphorus, magnesium, and fluoride. (A,B,C,D)

Chapter 10 Nutrients Present in Calcified Structures

1. Describe the physiological roles of specific minerals and how these apply to oral health, along with sources of copper, selenium, chromium, and manganese. (A,B,C,D)
2. List ultratrace elements present in the body. (A,B,C,D)
3. Identify reasons why large amounts of one mineral may cause nutritional deficiencies of another. (A,B,C,D)
4. Apply dental hygiene considerations for trace elements present in calcified structures. (A,B,C,D)
5. Discuss nutritional directions for patients regarding the role of trace elements present in calcified structures. (A,B,C,D)

Chapter 11 Vitamins Required for Oral Soft Tissues and Salivary Glands

1. Educate the patient on oral soft tissue changes that occur in a B-complex deficiency. (A,B,C,D)
2. Differentiate between scientifically-based evidence versus food fads concerning vitamins. (A,B,C,D)
3. Explain to a patient who is a vegan why vitamin B₁₂ is important and identify appropriate sources. (A,B,C,D)
4. Compare and contrast the functions and sources of vitamins and minerals important for healthy oral soft tissues, as well as deficiencies, toxicities, and associated symptoms. (A,B,C,D)
5. Identify dental considerations for vitamins closely involved in maintaining healthy oral soft tissues. (A,B,C,D)
6. Discuss nutritional directions for vitamins closely involved in maintaining healthy oral soft tissues. (A,B,C,D)
7. Describe the association between beriberi and alcoholism. (A,B,C,D)

Chapter 12 Fluids and Minerals Required for Oral Soft Tissues and Salivary Glands

1. Describe the process of osmosis. (A,B,C,D)
2. Explain how electrolytes affect hydration status. (A,B,C,D)
3. List normal fluid requirements and identify factors that may affect these requirements. (A,B,C,D)
4. Discuss the roles, imbalances, and sources of water, sodium, potassium, iron, zinc, and iodine. (A,B,C,D)
5. Discuss with patients how to decrease dietary sources of sodium and increase potassium intake and state why these are important. (A,B,C,D)
6. Identify oral signs and symptoms of fluid and electrolyte imbalances. (A,B,C,D)
7. Discuss areas of nutritional concern with patients who have fluid and electrolyte imbalances. (A,B,C,D)
8. Determine which diseases and medications may require patients to restrict sodium intake. (A,B,C,D)
9. Identify the most prominent oral symptoms or signs of iron, zinc, and iodine deficiency. (A,B,C,D)

Chapter 13 Nutritional Requirements Affecting Oral Health in Women

1. Assess nutrients commonly supplemented during pregnancy and lactation. (A,B,C,D)
2. Use recommended guidelines to assess food intake of pregnant and lactating women for adequate nutrients. (A,B,C,D)
3. Discuss each factor affecting fetal development. (A,B,C,D)
4. Implement nutrition and oral health considerations for patients who are pregnant or breastfeeding. (A,B,C,D)
5. Apply nutritional directions for patients who are pregnant or breastfeeding. (A,B,C,D)

Chapter 14 Nutritional Requirements During Growth and Development and Eating Habits Affecting Oral Health

1. Describe the procedure for introducing solid foods after the initial stage of feeding by bottle or breast. (A,B,C,D)
2. Discuss ways to handle typical nutritional problems that occur in infants, young children, school-age children, and adolescents. (A,B,C,D)
3. Apply dental aspects related to nutritional needs during infancy, early childhood, elementary school years, and adolescence to patient care. (A,B,C,D)
4. Assess nutrition education needs for patients during infancy, early childhood, elementary school years, and adolescence. (A,B,C,D)
5. Discuss physiological changes that alter the nutritional status of infants and adolescents. (A,B,C,D)

Chapter 15 Nutritional Requirements for Older Adults and Eating Habits Affecting Oral Health

1. Discuss ways to handle typical nutritional problems occurring in older adults. (A,B,C,D)
2. Examine dental considerations of nutritional needs that occur in older patients. (A,B,C,D)
3. Identify nutrition education needs for older patients. (A,B,C,D)
4. Discuss physiological changes altering an older individual's nutritional status. (A,B,C,D)
5. Discuss differences in amounts of nutrients needed by older patients compared with younger patients. (A,B,C,D)
6. Describe factors influencing food intake of older patients. (A,B,C,D)
7. Suggest dietary changes that could be implemented to provide optimum nutrient intake for older patients. (A,B,C,D)

Chapter 16 Food Factors Affecting Health

1. Explain how a patient can obtain adequate nutrients from different cultural food patterns. (A,B,C,D)
2. Identify reasons for food patterns. (A,B,C,D)
3. Respect cultural and religious food patterns while providing nutritional recommendations for patients. (A,B,C,D)
4. Explain to a patient how to prepare and store food to retain nutrient value. (A,B,C,D)
5. Provide referrals for nutritional resources. (A,B,C,D)
6. Inform patients of ways to make economical food purchases. (A,B,C,D)
7. Explain to a patient how food processing, convenience foods, and fast foods affect overall intake. (A,B,C,D)
8. Discuss reasons why food additives are used. (A,B,C,D)
9. List reasons why health quackery can be dangerous. (A,B,C,D)
10. Identify common themes of health quackery and why they are contrary to evidence-based research. (A,B,C,D)

Chapter 17 Effects of Systemic Disease on Nutritional Status and Oral Health

1. Discuss the various diseases, conditions, and treatments that commonly have oral signs and symptoms. (A,B,C,D)
2. Discuss disease states, conditions, and accompanying treatments likely to affect nutritional intake. (A,B,C,D)
3. Critically assess the implications of a patient's systemic diseases or conditions for optimal oral health. (A,B,C,D)
4. Plan appropriate dental interventions for patients with systemic diseases or conditions with oral manifestations based on dietary guidelines. (A,B,C,D)

Chapter 18 Nutritional Aspects of Dental Caries: Causes, Prevention, and Treatment

1. Explain the role each of the following play in the caries process: tooth, saliva, food, and plaque biofilm. (A,B,C,D)
2. Identify foods that stimulate salivary flow. (A,B,C,D)
3. Suggest food and beverage choices and their timing to reduce the cariogenicity of a patient's diet. (A,B,C,D)
4. Describe characteristics of foods having noncariogenic or cariostatic properties. (A,B,C,D)
5. Provide nutrition education to a patient at risk for dental caries. (A,B,C,D)

Chapter 19 Nutritional Aspects of Gingivitis and Periodontal Disease

1. Describe the role nutrition plays in periodontal health and disease to a patient. (A,B,C,D)
2. List the effects of food consistency and composition in periodontal disease. (A,B,C,D)
3. Describe nutritional factors associated with gingivitis and periodontitis. (A,B,C,D)
4. Discuss components of nutritional education for a periodontal patient. (A,B,C,D)
5. List major differences between full liquid, mechanically altered, bland, and regular diets. (A,B,C,D)

Chapter 20 Nutritional Aspects of Alterations in the Oral Cavity

1. Describe the common signs and symptoms of xerostomia and glossitis. (A,B,C,D)
2. Synthesize appropriate dietary and oral hygiene recommendations for a patient with orthodontics, xerostomia, root caries, dentin hypersensitivity, glossitis, temporomandibular disorder, or removable prosthetic appliances. (A,B,C,D)
3. Identify dietary guidelines appropriate for a patient undergoing oral surgery and a patient with a new denture, before and after insertion. (A,B,C,D)

Chapter 21 Nutritional Assessment and Education for Dental Patients

1. Discuss the importance of a thorough health, social, and dental history in relation to assessment of nutrition status. (A,B,C,D)
2. Describe the components needed to assess the nutrition status of a patient. (A,B,C,D)
3. Explain the types of diet histories, and determine situations in which each is used effectively. (A,B,C,D)
4. Formulate a dietary treatment plan for a dental problem influenced by nutrition. (A,B,C,D)
5. Identify steps and considerations in implementing a dietary treatment plan. (A,B,C,D)
6. Assimilate the steps of a nutrition education session. (A,B,C,D)
7. Practice several communication skills the dental professional should employ when educating a patient. (A,B,C,D)
8. Integrate EXPLORE-GUIDE-CHOOSE techniques of motivational interviewing into a clinical setting. (A,B,C,D)

DHYG 2110- Biochemistry and Nutrition Fundamentals for the Dental Hygienist
Lesson Plan
Summer Semester 2017

Date	Chapter / Lesson	Content	Assignments/ Activities/Exams	*Competency Area	ADEA
Week 1					
Tues May 23	Chapters: 1, 2, 3	<p>First day of class/Introduction to Course—Syllabi, Outline, Rules, Regulations Coverage, M:drive</p> <p style="text-align: center;">Overview of Healthy Eating Habits</p> <p style="text-align: center;">Concepts in Biochemistry</p> <p style="text-align: center;">The Alimentary Canal</p>	<p>Access to M: drive</p> <p>Discuss resources available from textbook</p> <p>Overview of Healthy Eating Habits Discussion</p> <p>Concepts in Biochemistry PPT presentation</p> <p>Alimentary Canal Discussion</p> <p>Handout provided on Major Nutrients at a Glance</p> <p>Handout provided on Dental Hygiene Code of Ethics and Dental Hygiene Ethics Assignments</p> <p>Activities:</p> <ul style="list-style-type: none"> • Access & set up choosemyplate.gov • Behavior contract • Labels for analysis <p>Due Next Week:</p> <ul style="list-style-type: none"> • View videos assigned for next week's session (refer to M: drive) • Chapter 4 Test Your NQ Questions- provide rationales for 	CC 1,4,6 GC a,c	C 1-14 HP 1-6 PC 1-13


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			your answers for class discussion		
Week 2					
Tues May 30	Chapters: 4, 5, 6	<p style="text-align: center;">Carbohydrates</p> <p style="text-align: center;">Proteins</p> <p style="text-align: center;">Lipids</p> <p>Video to be reviewed prior to class:</p> <ul style="list-style-type: none"> • Carbohydrates • Proteins • Lipids 	<p>Chapter 4 Nutrition Quotient questions- class discussion</p> <p>Carbohydrates: Discussion & Handout Completion; Test My Knowledge Group Activity</p> <p>Diabetes Think-Pair-Share Group Activity</p> <p>Proteins PPT presentation</p> <p>Lipids: Meet the Lipid Family Discussion and Handout Completion</p>	CC 2,3,4 GC a,c	C 1-14 HP 1-6 PC 1-13
Week 3					
Tues Jun 6	Chapters: 7, 8	<p style="text-align: center;">Use of Energy Nutrients</p> <p style="text-align: center;">Vitamins Required for Calcified Structures</p>	<p>Use of Energy Nutrients: outline of metabolism handout provided for students to complete</p> <p>Vitamins Required for Calcified Structures: handout provided for students to complete</p> <p>Activity:</p> <ul style="list-style-type: none"> • Vitamin Test 	CC 4-8 GC a,c	C 1-14 HP 1-6 PC 1-13

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Week 4					
Tues Jun 13	Chapters: 9, 10, 11	<p>Minerals Essential for Calcified Structures</p> <p>Nutrients Present in Calcified Structures</p> <p>Vitamins Required for Oral Soft Tissues and Salivary Glands</p>	<p>Minerals Essential and Nutrients Present in Calcified Structures PPT presentation and handout provided for students to complete</p> <p>Vitamins Required for Oral Soft Tissues and Salivary Glands: handout provided for students to complete</p>	CC 4-8 GC a,c	C 1-14 HP 1-6 PC 1-13
Week 5					
Tues Jun 20	Chapters: 12, 13, 14	<p>Fluids and Minerals Required for Oral Soft Tissues and Salivary Glands</p> <p>Nutritional Requirements Affecting Oral Health in Women</p> <p>Nutritional Requirements During Growth and Development and Eating Habits Affecting Oral Health</p>	<p>EXAM 1 Chapters 1-11</p> <p>Complete handout on minerals and nutrients</p> <p>Water PPT presentation</p> <p>Activity:</p> <ul style="list-style-type: none"> • Water Test <p>Nutritional Requirements Affecting Oral Health in Women PPT presentation</p> <p>Nutritional Requirements During Growth and Development and Eating Habits Affecting Oral Health PPT presentation</p> <p>Group Ethics Class Activity</p>	CC 2-8 GC a,c	C 1-14 HP 1-6 PC 1-13

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Week 6					
Tues Jun 27	Chapters: 15, 16, 17	Nutritional Requirements for Older Adults and Eating Habits Affecting Oral Health Food Factors Affecting Health Effects of Systemic Disease on Nutritional Status and Oral Health	Nutritional Requirements for Older Adults and Eating Habits Affecting Oral Health Discussion Food Factors Affecting Health Discussion Effects of Systemic Disease on Nutritional Status and Oral Health PPT presentation Case Study Activity	CC 2-8 GC a,c	C 1-14 HP 1-6 PC 1-13
 Happy 4th of July					
Week 7					
Tues Jul 11	Chapter: 21	Nutritional Assessment and Education for Dental Patients	Activities: <ul style="list-style-type: none"> • Sample Nutritional Assessment presented to students • Finding PAP • 7 day survey • Reliable Websites • Sugar Surprise Due Next Week: Teach and Test Assignment Chapters 18, 19, & 20	CC 2-8 GC a,c	C 1-14 HP 1-6 PC 1-13

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Week 8					
Tues Jul 18	Chapters: 18, 19, 20	<p>Nutritional Aspects of Dental Caries: Causes, Prevention, and Treatment</p> <p>Nutritional Aspects of Gingivitis and Periodontal Disease</p> <p>Nutritional Aspects of Alterations in Oral Cavity Disease</p>	<p>Students will present Teach & Test Assignment for Chapters 18-20</p>	CC 2-8 GC a,c	C 1-14 HP 1-6 PC 1-13
Week 9					
Tues Jul 25		Nutritional Assessment Counseling Presentations	<p>EXAM 2 Chapters 12-21</p> <p>Students will perform Nutritional Assessment Counseling Presentations in the Clinic</p> <p>Nutrition Review: Flashcards and PPT review game</p> <p>Activities:</p> <ul style="list-style-type: none"> • Behavior Contract 	CC 2-8 GC a,c	C 1-14 HP 1-6 PC 1-13
Tues Aug 1 1:30 pm	All Chapters	Comprehensive Final	EXAM 3 (All Chapters)	CC 1-8 GC a,c	C 1-14 HP 1-6 PC 1-13

***This lesson plan is subject to change at the discretion of the instructor.**

MAJOR COURSE COMPETENCIES (CC):

1. Molecular structure
2. Carbohydrates

3. Proteins
4. Nutrition and Digestion

5. Bioenergetics
6. Nutritional aspects

7. Nutritional disorders
8. Diet Assessment

GENERAL CORE COMPETENCIES (GC):

- a. The ability to utilize standard written English.
- b. The ability to solve practical mathematical problems.
- c. The ability to read, analyze, and interpret information.