General and Dental Nutrition DHYG 1207.1A1

CREDIT

2 Semester Credit Hours (2 hours lecture)

MODE OF INSTRUCTION

This course will be taught face to face

PREREQUISITE/CO-REQUISITE:

Pre-Requisite: DHYG 1301, 1431, 1304, & 1227.

Co-Requisite: DHYG 1219, 1235, 1260, & 2301.

COURSE DESCRIPTION

A study of general nutrition and nutritional biochemistry emphasizing the effect nutrition has on oral health.

COURSE OBJECTIVES

Upon completion of this course, the student will be able to

1. Demonstrate knowledge of basic concepts in nutritional biochemistry,
2. Understand the concept of RDA's, nutrient density, choosemyplate.gov, and food labeling.
3. Demonstrate competency in utilizing a table of the nutrient value of common foods.
4. Identify and explain the six classes of nutrients.
5. Demonstrate the digestion, transport and absorption of nutrients in the human.
6. Recognize the nutritional variations during the life cycle and state their importance in the prevention of disease.
7. Apply dental nutrition concepts through the preparation and presentation of a nutrition counseling session for the management of diet related dental problems.

INSTRUCTOR CONTACT INFORMATION

Instructor: Renee Sandusky

Email: rssandusky@lit.edu

Office Phone: TBD

Office Location: MPC 211

Office Hours: Monday 1:00-4:00, Wednesday 8:00-12:00, Thursday 8:00-8:30, 10:15-12:00, Friday 8:00-9:00

REQUIRED TEXTBOOK AND MATERIALS

Lisa F. Mallonee, Linda D. Boyd, Cynthia A. Stegeman. (2025) The Dental Hygienist's Guide to Nutritional Care, 6th edition, Elsevier ISBN: ISBN: 9780323826587

Approved: Initials/date

REFERENCE MATERIALS

Collene, A., Smith, A.M. & Spees, C. (2022) Wardlaw's Contemporary Nutrition, 12th edition, McGraw-Hill: New York, NY.
McIntosh, S.N. (2022) Williams' Basic Nutrition & Diet Therapy, 16th edition, Elsevier Mosby: St. Louis, Missouri. Palmer, G.A., Boyd, L.D. (2017) Diet and Nutrition in Oral Health, 3rd edition, Pearson: New York, NY. http://www.choosemyplate.gov/

ATTENDANCE POLICY

Absenteeism

In order to ensure the students in the dental hygiene program achieve the necessary didactic and clinical competencies outlined in the curriculum, it is necessary that the student complete all assigned lecture classes, clinical and laboratory hours. It is the responsibility of the student to attend class, clinic or lab. The instructor expects each student to be present at each session. It is expected that students will appear to take their exams at the regularly scheduled examination time. Make-up examinations will be given **only** if the absence is due to illness (confirmed by a physicians' excuse), a death in the immediate family, or at the discretion of the instructor.

If students are unable to attend lecture class, clinic or lab, it is **mandatory that you call the appropriate instructor prior to the scheduled class, clinic or lab time**. **An absence will be considered unexcused if the student fails to notify the course faculty prior to the start of class, clinic, or lab. Attendance through Blackboard Collaborate is considered an absence. The course instructor must be notified at least one hour prior to the beginning of class/lab if the student plans to attend through Blackboard Collaborate.** The student is responsible for all material missed at the time of absence. Extenuating circumstances will be taken into account to determine if the absence is excused. Extenuating circumstances might include but are not limited to funeral of immediate family member, maternity, hospitalization, etc. If the student has surgery, a debilitating injury, or an extended illness, a doctor's release will be required before returning to clinic.

a. **Fall/Spring Semesters:**
   Dental hygiene students will be allowed **two excused absences** in any lecture, clinic or lab. Absences must be accompanied by a written excuse on the next class day. In the event that a student misses class, clinic or lab beyond the allowed absences, the following policy will be enforced:
   2 absences = notification in Starfish
   Beginning with the third absence, **2 points** will be deducted from the final course grade for each absence thereafter.
   Two (2) points will be deducted from the final course grade for each unexcused absence.

Tardiness

Tardiness is disruptive to the instructor and the students in the classroom. A student is considered tardy if not present at the start of class, clinic or lab. It is expected that students will arrive on time for class, clinic or lab, and remain until dismissed by the instructor. If tardiness becomes an issue, the following policy will be enforced:

Tardy 1 time = notification in Starfish

Tardy 2 times = is considered an unexcused absence. (See the definition of an unexcused absence)

If a student is more than 15 minutes late to any class period, it will be considered an unexcused absence.

Students should plan on attending classes, labs and clinic sessions as assigned throughout the semester. Family outings, vacations and personal business should be scheduled when school is not in session and will not be considered excuses for missing assignments, examinations, classes, labs or clinic time.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified date as listed in the College Calendar on the Student Success web page. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

COURSE CALENDAR

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
1/22/26	Review Syllabus Chapter 1	Chapter 1	Chapter 1 & 2 Assignment due Jan 31
1/29/26	Chapter 3 Chapter 19	Chapter 3 Chapter 19	Chapter 3 and 19 Assignment due Feb 1
2/5/26	Exam 1	Chapters 1,2,3,19	
2/8/26			Chapter 4 and 18 Assignment Due Feb 8
2/12/26	Chapter 4 Chapter 18	Chapter 4 Chapter 8	
2/19/26	Personal Dietary Project	I will provide your packet of materials.	

2/22/26			Chapter 5 and 20 Assignment due on Feb 22
2/26/25	Chapter 5 Chapter 20	Chapter 5 Chapter 20	
3/5/26	Exam 2 Chapter 6	Chapters 4,8,5,20 Chapter 6	Chapter 6 Assignment due March 8
3/9-3/13	SPRING BREAK	SPRING BREAK	SPRING BREAK
3/19/26	Chapter 17 Chapter 7/8		Chapter 17 and 7/8 Assignment due March 22
3/26/26	Exam 3 Chapter 13	Chapters 6,7/8,17 Chapter 13	Chapter 13 Assignment Due 3/29
4/2/26	Chapter 10/11 Chapter 9	Chapter 10/11 Chapter 9	Chapter 10/11 Assignment Due April 5
4/9/26	Exam 4	Chapters 13, 9, 10/11	
4/16/26	Chapter 12 Chapter 14	Chapter 12 Chapter 14	Chapter 12,14,5,21 Assignments Due April 26
4/23/26	Chapter 15 Chapter 21	Chapter 15 Chapter 21	
4/30/26	Exam 5	Chapters 12,14,15,21	
5/7/26	Final		

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

Student must earn a grade of "C" or better to progress in the curriculum.

EXAMS (5)……50
FINAL……15
PERSONAL DIETARY ASSESSMENT PROJECT……20
ONLINE CHAPTER ASSIGNMENT……15
CANVA……COMPLETION

COURSE REQUIREMENTS

1. Students complete in a face to face manner. Class meets only once per week.
2. Requirements for this course include five (5) tests, 11 Blackboard assignments, class discussion of assignments, and one Personal Dietary Assessment Project. The student must pass the course with a 75% or higher to receive credit for DHYG 1207.

3. No credit will be given for late Blackboard Assignments. All assignments should be completed individually. They are not meant to be a group assignment.
4. Personal Dietary Assessment Project. The purpose of the counseling project is to afford the dental hygiene student the opportunity to apply the learned nutritional principles on themselves before applying them to a patient. Complete instructions can be found at the end of the syllabus
A. Documentation. Each student must complete all clinical forms.
B. Written Report. The students will provide a written summary using the information from www.MyPlate.gov, www.myfitnesspal.com, and Dietary Guidelines. The student will compare food intake to the nutrients on the dietary assessment form. The students will discuss oral health issues that could affect their diet. C. Computer Usage. Students must be familiar with current computer programs utilized in contemporary dental office settings. Therefore, students must utilize the on-line site of www.MyPlate.gov and www.myfitnesspal.com to complete the diet analysis. These sites can be accessed on any computer with internet capabilities.

COURSE EVALUATION
Final grades will be calculated according to the following criteria:
Student must earn a grade of "C" or better to progress in the curriculum.
EXAMS (5) 50%
Weekly Assignments
PERSONAL DIETARY PROJECT 20%

GRADING SCALE
A = 92 - 100
B = 83 - 91
C = 75 – 82
D = 60 - 74
F = 59 and below
LIT does not use +/- grading scales

STUDENT EXPECTED TIME REQUIREMENT
For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16- week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

TECHNICAL REQUIREMENTS

For the latest technical requirements, including hardware, compatible browsers, operating systems, etc., review the Minimum Computer and Equipment Requirements on the LIT Online Experience page. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

ACADEMIC DISHONESTY

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty.

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and reso

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

ARTIFICIAL INTELLIGENCE STATEMENT

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

Examination and Quiz Policy

Examinations will be based on objectives, lecture notes, handouts, assigned readings, audiovisual material and class discussions. Major examinations will consist of multiple choice**,** true/false, matching, short answer, and case study questions. No questions will be allowed during exams.

Students are expected to complete examinations as scheduled. Make-up examinations will be given ONLY if the absence is due to illness (confirmed by a physicians' excuse), a death in the immediate family, or at the discretion of the Instructor. All make-up examinations must be taken within two (2) weeks from the scheduled exam date. All examinations will be kept on file by the Instructor. Students may have access to the examination by appointment during the Instructor's office hours. Exams may be reviewed up to two (2) weeks following the exam date. You may not copy, reproduce, distribute or publish any exam questions. This action may result to dismissal from the program. A grade of "0" will be recorded for all assignments due on the day of absences unless prior arrangements have been made with the Instructor. Students must use their person equipment, such as computer, MacBook, laptop, iPad, to take their exams and must not use their classmates. School computers may be used if personal equipment is not available.

Respondus Lockdown Browser and Respondus Monitor will be used for examinations off campus, therefore, a webcam is required to take the test. The student is required to show the testing environment at the beginning of the exam to assure the instructor that it is clear of any study materials. Failure to do so will result in a 10-point exam grade deduction.

If you need online assistance while taking the test, please call Online Support Desk at 409-

951-5701 or send an email to lit-bbsupport@lit.edu.
Respondus Lockdown Browser will be used for examinations administered on campus. The student is required to bring their own portable electronic device for any scheduled on-campus exams. Approved devices include a personal laptop, tablet, or iPad.
It shall be considered a breach of academic integrity (cheating) to use or possess on your body any of the following devices during any examination unless it is required for that examination and approved by the instructor: cell phone, smart watch/watch phone, electronic communication devices (including optical), and earphones connected to or used as electronic communication devices. It may also include the following: plagiarism, falsification and fabrication, abuse of academic materials, complicity in academic dishonesty, and personal misrepresentation.
Use of such devices during an examination will be considered academic dishonesty. The examination will be considered over, and the student will receive a zero for the exam.
Students with special needs and/or medical emergencies or situations should communicate with their instructor regarding individual exceptions/provisions. It is the student's responsibility to communicate such needs to the instructor.

Mandatory Tutoring

If a student receives a failing grade on any major exam, the student will be required to meet with the course instructor within 2 weeks of the failed exam. One on one concept review by appointment with the course instructor will be provided and/or written academic warning when a student is failing to meet minimal requirements in the classroom setting.

Electronic devices are a part of many individuals lives today. Students must receive the instructor's permission to operate electronic devices in the classroom and lab. Texting on cell phones will not be allowed during class or clinic.

Late coursework
Assignments, Quizzes and Tests must be completed by the due date. Late submissions or completion will not be accepted and will result in a zero for that assignment/quiz/test.

Remediation
Remediation is available by appointment.
See Student Handbook for more information about remediation policies.
* Faculty has the authority to modify the above policies if unusual circumstances mandate a change. Please refer to the Student Handbook for a complete listing of program policies.

COURSE OUTLINE

Overview of Healthy Eating Habits
a. Nutrients
1. essential nutrients
2. function
3. energy value (Kcalorie)
b. Energy Needs of the Body
1. basal metabolism
2. basal metabolic rate
3. energy expenditure factors
c. Food Choice Guidance
d. Dietary Standards
e. Food Labeling
1. Daily Reference Values
2. Reference Daily Intakes

Concepts in Biochemistry
a. Fundamentals of biochemistry
b. Principles of biomolecules in nutrition

The Alimentary Canal: Digestion and Absorption
a. Functions of each digestive organ
b. Chemical secretions necessary for digestion of nutrients
c. Where the chemical secretions are secreted
d. How digestion and absorption affect nutritional status

Carbohydrates
a. Introduction
b. Classification
1. Monosaccharides
a. glucose
b. fructose
c. galactose
2. Disaccharides
a. sucrose
b. lactose
c. maltose
3. Polysaccharides
a. starch
b. glycogen
c. dietary fiber
1. soluble
2. insoluble
3. Relationship between dietary fiber and health
c. Physiologic Role

d. Requirements
e. Sources
f. Hyper and Hypo States
1. Carbohydrate excess
2. Carbohydrate deficiency
3. Dental caries
4. Obesity
g. Sugar Substitutes
1. sugar alcohols
2. flavonoid sweeteners
3. saccharin
4. aspartame
5. acesulfame K
6. cyclamates
7. xylitol
8. stevia plant

Protein
a. Classification
1. Essential
2. Nonessential
3. Conditionally essential
b. Measures of Protein Quality
1. Complete and incomplete
2. Biologic Value
3. Nitrogen Balance
c. Physiologic Roles
d. Requirements
e. Digestion and Metabolism
f. Sources
1. Bioavailability
g. Under-consumption and Health-Related Problems
1. Marasmus
2. Kwashikor
h. Over-consumption and Health-Related Problems

Lipids
a. Overview
b. Functions
c. Types
1. triglycerides
2. other dietary lipids
a. phospholipids
b. sterols

c. essential fatty acids
d. other
d. Digestion and absorption
e. Metabolism and storage
f. Current Patterns of Consumption
g. Dietary Requirements
h. Sources
i. Role in health
1. Obesity
2. Fats and coronary Heart Disease
3. Cancer
4. Hyperlipidemia
j. Fats and Oral Health
1. Dental caries
2. Parotid enlargement
Use of Energy Nutrients: Metabolism and Balance
a. Metabolism
1. Catabolism
2. Anabolism
b. Krebs Cycle
c. Carbohydrate Metabolism
d. Protein Metabolism
a. Alcohol Metabolism
b. Metabolic Interrelationships
c. Metabolic energy
d. Basal Metabolic Rate (BMR)
1. Factors affecting BMR
e. Total Energy Requirements
1. Basal energy expenditure (BEE)
a. Factors affecting BEE
f. Energy Balance
1. Factors affecting energy balance

Vitamins Required for Calcified Structures (A,D,E,K,C)
a. Vitamin A
1. Functions
a. Visual purple
b. Relationship between vitamin A deficiency and cancer
c. Maintenance of epithelial cells and tissues
d. Promotion of bone remodeling
e. Activation of cell membranes
2. Function in oral structures
a. Periodontium
b. Teeth

c. Salivary glands
d. Oral mucous membranes
e. Cleft lip and palate
3. RDA
4. Sources
5. Therapy
6. Toxicity
b. Vitamin D
1. Absorption, transport, and storage
2. Metabolism
3. Function
4. RDA
5. Sources
6. Therapy
7. Deficiency
c. Vitamin E
1. Absorption and metabolism
2. Function
3. Therapy
4. RDA
5. Sources
6. Myths and facts
7. Toxicity
d. Vitamin K
1. Absorption
2. Function
3. Deficiency
4. Vitamin K and Periodontal disease
5. Therapy
6. RDA
7. Sources
e. Vitamin C
1. Absorption, transport, and storage
2. Function
3. RDA
4. Sources
5. Therapy
6. Deficiency

Vitamins Required for Oral Soft Tissues and Salivary Glands
a. The B Vitamins
1. Function
2. Sources
3. Requirements

4. Deficiency
5. Toxicity
6. Effect on general and oral health
b. Folic Acid
1. Function
2. Sources
3. Requirements
4. Deficiency
5. Toxicity
6. Effect on general and oral health
c. Vitamin B12 (Cobalamin)
1. Function
2. Sources
3. Requirements
4. Deficiency
5. Toxicity
6. Effect on general and oral health
d. Vitamin B6 (Pyridoxine)
1. Function
2. Sources
3. Requirements
4. Deficiency
5. Toxicity
6. Effect on general and oral health
e. Vitamin B1 (Thiamin)
1. Function
2. Sources
3. Requirements
4. Deficiency
5. Toxicity
6. Effect on general and oral health
f. Vitamin B2 (Riboflavin)
1. Function
2. Sources
3. Requirements
4. Deficiency
5. Toxicity
6. Effect on general and oral health
g. Vitamin B3 (Niacin)
1. Function
2. Sources
3. Requirements
4. Deficiency
5. Toxicity

6. Effect on general and oral health
h. Pantothenic Acid
1. Function
2. Sources
3. Requirements
4. Deficiency
5. Toxicity
6. Effect on general and oral health
i. Biotin
1. Function
2. Sources
3. Requirements
4. Deficiency
5. Toxicity
6. Effect on general and oral health
j. Vitamin-like Substance and Other Claimed Nutrients

Minerals Essential for Calcified Structures & Nutrients Present in Calcified Structures

a. Macro minerals
1. Distribution
2. Function
3. Absorptions
4. Storage
5. Excretion
6. Fluid & electrolyte balance
7. Acid-base balance
8. Dietary sources
9. RDA
10. Deficiency
11. Toxicity
12. Hypertension
13. Effect on general and oral health
b. Trace Minerals
1. Activators of enzyme systems
2. Function
3. RDA
4. Dietary sources
5. Deficiency
6. Toxicity
7. Effect on general and oral health

Water and Minerals Required for Oral Soft Tissues and Salivary Glands

a. Distribution
1. Factors which affect distribution
b. Functions
c. Sources
d. Requirements
e. Regulation
1. Disturbances in water balance
f. Sodium
1. Function
2. Daily requirements
3. Sources
4. Deficiency
5. Dietary restriction
g. Acid-base balance

Hypertension Nutritional Requirements Affecting Oral Health in Women, During Growth & Development, in Older Adults

a. Terms
b. Growth
c. Newborns
1. Requirements
2. Feeding Practices
3. Oral Problems in infants
d. Toddler & Preschool Children
1. Toddlers
2. Preschool Children
3. Oral Problems of Toddlers and Preschool Children
e. Adolescents
1. Requirements
2. Influential Factors on Eating Habits
3. Counseling
f. Maturity in the Life Cycle
1. Physiologic Factors Influencing Nutritional Needs and Status
2. Physiologic Changes in the Oral Cavity
3. Socioeconomic and Psychological Factors
4. Other Factors
5. Nutrient Requirements

Other Considerations Affecting Nutrient Intake

a. Food patterns
b. Cultural Influences

c. Working with patients of different cultures
d. Factors affecting nutrient intake
1. Budget
2. Food preparation
3. Food fads and misinformation

Effects of Systemic Disease on Nutritional Status

a. Effects of chronic disease
b. Mental health problems
1. anorexia
2. bulimia
a. Symptoms
b. Medical complications
c. Oral manifestations
d. Nutritional requirements
c. Gustatory and olfactory functions
d. Xerostomia
e. The anemias
1. Iron deficient anemia
2. Plummer-Vinson Syndrome
3. Megablastic anemia
4. Folic acid deficiency
5. Thalassemia
6. Aplastic anemia
h. Gastrointestinal Problems
i. Cardiovascular Conditions
j. Cerebrovascular Accidents
k. Skeletal System
l. Metabolic Problems
m. Neuromuscular Problems
n. Neoplasia
h. AIDS

Nutritional Aspects of Periodontal Disease

a. Physical effects of food on periodontal health
b. Nutrient composition
c. Food consistency
d. Nutritional considerations for periodontal patients
e. NUG
f. Gingivitis
g. Periodontitis
h. Nutritional management

i. Dietary recommendations
j. Periodontal surgery
k. Post operative care

Nutritional Aspects of Alterations in the Oral Cavity

a. Conditions that interfere with food intake
b. Xerostomia
c. Root caries
d. Dentition status
e. Alveolar osteoporosis
f. Glossitis

Nutritional Assessment and Counseling for Dental Hygiene Patients

a. Diet counseling
b. Evaluation of the Patient
c. Assessment of Nutritional Status
d. Formation of Nutrition Treatment Plan
e. Facilitative Communication Skills
f. General Principles for Caries Prevention
g. Food Diaries
h. Evaluation of Food Diaries

Learner Objectives

OVERVIEW OF HEALTHTY EATING HABITS

1. Discuss why dental hygienists and registered dietitian nutritionists (RDNs) need to be competent in assessing and providing basic nutritional education to patients.
2. List and describe the general physiologic functions of the six nutrient classifications of foods.
3. Describe factors that influence patients' food habits.
4. Explain government concerns with nutrition, as well as the purpose and objectives of Healthy People 2030.

5. Explain the Dietary Reference Intakes (DRIs) and its components (EAR, RDA, AI, EER, CCDR, and AMDR).
6. Describe the purpose of the 2020-2025 Dietary Guidelines for Americans, and identify the four (4) guidelines.
7. Discuss food components to reduce as recommended in the Dietary Guidelines.
8. Describe the purpose of MyPlate and the key components.
9. Identify the major food groups in MyPlate and recommended portions for average adult.
10. Describe why physical activity is an important factor for an individual's overall health.
11. Practice assessment using the MyPlate system and demonstrate the ability to recommend improvements based on individual preferences and nutritional needs.
12. Understand and interpret the information provided on a nutritional label.

CONCEPTS IN BIOCHEMISTRY

1. Explain the role of biochemistry in dental hygiene and nutrition.
2. Discuss the fundamentals of biochemistry, including assigning biomolecules according to functional group.
3. Discuss concepts related to principal biomolecules in nutrition:
   - Compare and contrast the structure, function, and properties of the four major classes of biomolecules (carbohydrates, proteins, nucleic acids, and lipids).
   - Outline the structure, function, and properties of monosaccharides, disaccharides, and polysaccharides.
   - Outline the structure, function, and properties of amino acids and proteins.
   - Compare and contrast the roles of enzymes, coenzymes, and vitamins in nutrition.
   - Outline the structure, function, and property of nucleotides and nucleic acids.
   - Outline the structure, function, and property of fatty acids, triglycerides, and steroids.
4. Summarize metabolism, as well as differentiate catabolism from anabolism. In addition, explain connections between metabolic pathways in carbohydrate, protein, and lipid metabolism.

DIGESTION AND ABORPTION

1. Discuss the physiology of the gastrointestinal tract, including the two basic types of actions on food.
2. Related to the oral cavity:
   - Identify oral factors that influence food intake.
   - Explain to patients why saliva flow is important for oral health and overall well-being.
   - Describe the role that teeth play in digestion.
3. Related to the esophagus and gastric digestion:
   - Describe how the esophagus works.

- Diagram the process of gastric digestion, including the two major enzymes found in gastric juice.

4. Related to the small intestine:
   - Identify the nutrients requiring digestion and the absorbable products.
   - Illustrate the process of osmosis.
   - Discuss with patients how digestion and absorption may affect nutritional status and oral health.
5. Related to the large intestine:
   - Differentiate the function of the large intestine from the small intestine.
   - Indicate the side effects of undigested residue.
   - Define the purpose of microflora.
   - Explain the role of gastrointestinal motility in digestion and absorption.
   - State the purpose of peristalsis.

CARBOHYDRATE: THE EFFICIENT FUEL

1. Discuss various concepts related to the classification of carbohydrates, including:
   - Identify major carbohydrates in foods and in the body.
   - Differentiate among monosaccharides, disaccharides, and polysaccharides.
   - Describe ways glucose can be used by the body.
   - Summarize the functions of dietary carbohydrates.
   - Explain the importance of dietary carbohydrates.
   - Recognize dietary sources of lactose, other sugars, and starches.
   - Summarize the role and sources of dietary fiber.
2. Discuss the physiologic role of carbohydrates.
3. Discuss the acceptable macronutrient distribution range (AMDR) as related to carbohydrates, as well as sources of various types of carbohydrates.
4. Compare and contrast concepts related to hyperstates and hypostates, such as carbohydrate excess, obesity, cardiovascular disease (CVD), carbohydrate deficiency, and dental caries. In addition, formulate recommendations for patients concerning carbohydrate consumption to reduce risk for dental caries.
5. Discuss the use of nonnutritive sweeteners and sugar substitutes.

PROTEIN: THE CELLULAR FOUNDATION

1. Explain the role of amino acids.
2. Categorize amino acids as indispensable or dispensable and foods as sources of high-quality or low-quality proteins.
3. Describe the physiologic functions of proteins.
4. Discuss recommended intake of protein for health and function.
5. Describe protein needs for individuals who consume a vegetarian or vegan diet.
6. Organize the following related to underconsumption and overconsumption of protein:
   - List the problems associated with protein deficiency or excess.

- Appraise a patient's protein consumption to determine protein deficiency or excess.
- Summarize how protein foods can be used to complement one another.
- Identify how protein energy malnutrition affects oral health in children.
- Articulate how nutrition principles regarding food intake prevents a patient consuming excessive or inadequate protein.

LIPIDS: THE CONDENSED ENERGY

1. Related to the classification, chemical structure, and characteristics of lipids:
   - Describe how fatty acids affect the properties of fat.
   - Explain the function of fat in the body.
   - Discuss the chemical structure of lipids.
   - Describe the characteristics of lipids.
2. Describe the function of various compound lipids, and identify foods that contain each. Also, discuss the function and sources of cholesterol.
3. List and describe the physiologic roles of lipids in the body.
4. Discuss the effects of dietary fats on oral health.
5. Related to dietary requirements of lipids:
   - Calculate the recommendation for a person's consumption of dietary fat.
   - Evaluate a patient's food intake for appropriate amounts of saturated fats.
   - Suggest appropriate foods when dietary modification of fat intake has been recommended to a patient.
   - Compare the types of fatty acids in various fats and oils.
6. Discuss nutrition recommendations for various patient health conditions related excess consumption and inadequate consumption of dietary fat.

USE OF THE ENERGY NUTRINETS: METABOLISM AND BALANCE

1. Discuss the roles of the liver and the kidneys in metabolism. In addition, describe carbohydrate metabolism.
2. Discuss protein metabolism.
3. Discuss lipid metabolism, alcohol metabolism, metabolic relationships, and metabolic energy.
4. Identify factors affecting the basal metabolic rate.
5. Calculate energy needs according to a patient's weight and activities.
6. Discuss physiological and psychological factors affecting energy balance.
7. Discuss the following related to inadequate energy intake:
   - Summarize the effects of inadequate energy intake.
   - Explain the principles for and importance of regulating energy balance to a patient.
   - Individualize dental hygiene considerations to patients regarding energy metabolism.

   Relate nutritional directions to meet patients' needs regarding energy metabolism.

VITAMINS REQUIRED FOR CALCIFIED STRUCTURES

1. Discuss the following related to vitamins:
   - Discuss requirements and deficiencies of vitamins.
   - List the fat-soluble vitamins, as well as the water-soluble vitamins.
   - Compare the characteristics of water-soluble vitamins with those of fat-soluble vitamins.
2. For vitamins A, C, D, E, and K:
   - Identify functions, deficiency, toxicity, and oral symptoms associated with each vitamin.
   - Identify foods that are good sources of each vitamin.
   - Customize nutrition recommendations for these vitamins to meet patient needs.
   - Counsel a patient on individual nutrition recommendations to meet patients' needs for these vitamins.
   -

MINERALS ESSENTIAL FOR CALCIFIED STRUCTURES

1. Discuss the following related to bone mineralization and growth, formation of teeth, and the mineral elements of the body:
   - List the minerals found in collagen, bones, and teeth, and describe their main physiologic roles and sources.
   - List the three calcified tissues of which teeth are composed.
   - List and discuss major minerals and trace elements of the body.
2. For calcium, phosphorus, magnesium, and fluoride:
   - Describe the physiologic roles of each mineral involved in calcified structures.
   - Discuss the RDA (or AI), Tolerable Upper Intake level, and estimated average requirement for each mineral.
   - Discuss the importance of calcium and phosphorus balance in the body, and name common sources of the minerals (calcium, phosphorus, magnesium, and fluoride).
   - Discuss clinical conditions associated with excesses and deficiencies of these minerals
   - Customize nutrition recommendations for these minerals to meet patient needs.
   - Discuss the role of water fluoridation in the prevention of dental caries.
   -

NUTRIENTS PRESENT IN CALCIFIED STRUCTURES

1. For copper, selenium, chromium, manganese, and molybdenum:
   - Describe the physiologic roles of each micromineral involved in oral health and calcified structures.
   - Discuss the RDA (or AI), Tolerable Upper Intake Level (UL), and estimated average requirement (EAR) for each mineral.
   - Explain the importance and name common sources of microminerals.
   - Discuss clinical conditions associated with excesses and deficiencies of microminerals.
   - Customize nutrition recommendations for these microminerals to meet patient needs.
   - Counsel a patient on nutrition recommendations to meet the patients' needs for these microminerals.
   - List ultratrace elements present in the body

VITAMINS REQUIRED FOR ORAL SOFT TISSUES AND SALIVARY GLANDS

1. Describe the physiology of soft tissues.
2. Discuss the following related to thiamin (vitamin B1):
   - Describe the physiological roles of thiamin, as well as list the Recommended Dietary Allowance (RDA) and sources of thiamin.
   - Identify dental considerations and nutritional directions for hypo states related to thiamin.
3. Discuss the following related to riboflavin (vitamin B_2):
   - Describe the physiological roles of riboflavin, as well as list the Recommended Dietary Allowance (RDA) and sources of riboflavin.
   - Identify dental considerations and nutritional directions for hypo states related to riboflavin.
4. Discuss the following related to niacin (vitamin B_3), pantothenic acid (vitamin B_5), and vitamin B_6 (Pyridoxine):
   - Describe the physiological roles of each vitamin, as well as list the Recommended Dietary Allowance (RDA) and sources of each.
   - Identify dental considerations and nutritional directions for hyper and hypo states related to each vitamin.
5. Discuss the following related to folate/folic acid, vitamin B_{12} (Cobalamin), and biotin (vitamin B_7):
   - Describe the physiological roles of each vitamin, as well as list the Recommended Dietary Allowance (RDA) and sources of each.
   - Explain to a patient who is vegan why vitamin B_{12} is important.
   - Identify dental considerations and nutritional directions for hyper and hypo states related to each vitamin.
6. Discuss the importance of vitamins C, A, and E in oral soft tissues and salivary glands.

FLUIDS AND MINERALS REQUIRED FOR ORAL SOFT TISSUES AND SALVARY GLANDS

1. In relation to fluids:
   - Describe the physiologic roles of fluid and list the fluid requirements for both men and women. Also, identify factors that may affect those requirements.
   - List and discuss the various sources of fluid.
   - Discuss hyper and hypo states related to fluid imbalances in the body, identify oral signs and symptoms of fluid imbalances, and discuss areas of nutritional concern with patients who have fluid imbalances.
   - Differentiate popular beverages for their benefits and/or detrimental oral health effects.
2. Explain how electrolytes affect hydration status.
3. In relation to sodium and chloride:
   - Describe the physiologic roles of sodium and chloride and list the requirements for both men and women.

- List and discuss the various sources of sodium and chloride and discuss with patients how to decrease dietary sources of sodium.
- Discuss hyper and hypo states related to sodium and chloride imbalances in the body, identify oral signs and symptoms of sodium imbalances.
- Identify diseases and medications associated with restriction of sodium intake.

4. In relation to potassium:
- Describe the physiologic roles of potassium and list the potassium requirements for both men and women.
- List and discuss the various sources of potassium and discuss with patients how to increase dietary sources of potassium.
- Discuss hyper and hypo states related to potassium imbalances in the body, identify oral signs and symptoms of potassium imbalances, and discuss areas of nutritional concern with patients who have potassium imbalances.

5. Related to iron:
- Describe the physiologic roles of iron and list the iron requirements for both men and women.
- List and discuss the various sources of iron.
- Discuss hyper and hypo states related to iron imbalances in the body, identify oral signs and symptoms of iron imbalances, and discuss areas of nutritional concern with patients who have iron imbalances.

6. Related to zinc and iodine:
- Describe the physiologic roles of zinc and iodine and list the zinc and iodine requirements for both men and women.
- List and discuss the various sources of zinc and iodine and discuss with patients how to increase dietary sources of zinc and iodine.
- Discuss hyper and hypo states related to zinc and iodine imbalances in the body, identify oral signs and symptoms of zinc and iodine imbalances, and discuss areas of nutritional concern with patients who have zinc and iodine imbalances.

NUTRITIONAL REQUIREMENTS DURING GROWTH AND DEVELOPMENT AND EATING HABITS AFFECTING ORAL HEALTH

1. The following are related to the growth and development of infants:
   - Discuss the growth and nutritional requirements of infants.
   - Describe how breast milk and infant formula affect the oral health of infants.
   - Outline the timetable for introducing complementary foods and list reasons for their introduction.
   - Discuss ways to handle typical feeding problems that occur in infants.
   - Discuss oral health concerns and physiologic changes that alter the nutritional status of infants.
2. Discuss dietary recommendations for children older than 2 years of age as described in the *Dietary Guidelines, Healthy People 2030,* and *MyPlate.*
3. With regard to growth and development of toddlers and preschool children:
   - Discuss the growth and nutritional requirements of toddlers and preschool children.
   - Describe feeding patterns of toddlers and preschool children and how they relate to oral health.
4. Describe the nutrition and oral health implications of children with special needs. Discuss the food habits and associated dental care in school-aged children.
5. Discuss growth and nutrient requirements of adolescents, as well as influential factors that may affect food choices.
6. Identify effective approaches to nutritional counseling of the adolescent patient.

NUTRITIONAL REQUIREMENTS FOR OLDER ADULTS AND EATING HABITS AFFECTING ORAL HEALTH

1. Identify oral nutritional problems typically observed in older adults.
2. Predict physiological changes that may alter an older individual's nutritional status.
3. Name socioeconomic and psychological factors influencing food intake of older patients.
4. Explain why nutrient requirements of older patients differ from younger patients.
5. Describe typical eating patterns of older adults, relate Dietary Guidelines and MyPlate to the diet of an older adult, and suggest implementation of dietary changes to provide optimum nutrient intake for older patients.

FOOD FACTORS AFFECTING HEALTH

1. Discuss health care disparities and how they relate to oral health.
2. Regarding (or with regard to) food patterns:
   - Explain how a patient can obtain adequate nutrients from different cultural food patterns.
   - Identify reasons for food patterns.
   - Respect cultural and religious food patterns while providing nutritional recommendations for patients.

3. Pertaining to food budgets:
   - Explain to a patient how to prepare and store food to retain nutrient value.
   - Inform patients of ways to make economical food purchases.
   - Explain to a patient how food processing, convenience foods, and fast foods affect overall intake.
   - Discuss reasons why food additives are used.
4. Describe food fads, and list reasons why health quackery can be dangerous. Also, identify common themes of health fraud or scams and why they are inconsistent with evidence-based research.
5. Provide referrals for nutritional resources and describe the role of dental hygienists in combating nutrition fads and misinformation.

EFFECTS OF SYSTEMIC DISEASAE ON NUTRITIONAL STATUS AND ORAL HEALTH

1. Examine the impact of anorexia, taste/smell disorders, and xerostomia on oral health, evaluate their consequences, and devise tailored interventions for affected patients.
2. Describe the effects of various types of anemia, as well as neutropenia, on nutritional status and oral health and identify nutrition education for patients with anemia.
3. Analyze the impact of gastrointestinal and cardiovascular conditions on oral health and nutrition. Develop a plan for nutrition education for patients with these conditions.
4. Examine the impact of systemic bone and metabolic disorders on oral health and nutrition status and formulate tailored interventions for affected patients.

NUTRITIONAL ASPECTS OF DENTAL CARIES: CAUSES, PREVENTION, AND TREATMENT

1. Explain the role each of the following plays in the caries process: tooth, saliva, food, and plaque biofilm.
2. Discuss the following related to cariogenic foods, as well as cariostatic and noncariogenic properties of food:
   - List cariogenic food and beverages.
   - List examples of fermentable carbohydrates potentially increasing risk to dental health.
   - Identify foods that stimulate salivary flow.
   - Suggest food and beverage choices and their timing to reduce the carcinogenicity of a patient's diet.
   - Describe characteristics of foods that have noncariogenic or cariostatic properties.
3. Provide nutritional education to a patient at risk for dental caries.

NUTRITIONAL ASPECTS OF GINGIVITIS AND PERIODONTAL DISEASE

1. Describe the role that nutrition plays in periodontal health and disease to a patient.
2. List the effects of food consistency and composition in periodontal disease.
3. Describe nutritional factors associated with gingivitis and periodontitis.
4. Discuss the following related to periodontal surgery and necrotizing periodontal disease:

- Discuss components of nutritional education for a periodontal patient.
- List of major differences between full liquid, mechanically altered, bland, and regular diets.
- Discuss nutrient deficiencies and oral health issues related to necrotizing periodontal disease.

NUTRITIONAL ASPECTS OF ALTERATIONS IN THE ORAL CAVITY

- Describe the common signs and symptoms of xerostomia. Also, synthesize appropriate dietary and oral hygiene recommendations for a patient with orthodontics, xerostomia, root caries, or dentin hypersensitivity.
- Discuss normal dentition and identify *Dietary Guidelines* appropriate for a patient undergoing oral surgery and a patient with a new denture, before and after insertion.
- Describe the common signs and symptoms of glossitis. Also, synthesize appropriate dietary and oral hygiene recommendations for a patient with a loss of alveolar bone, glossitis, or temporomandibular disorder.

NUTRITIONAL ASSESSMENT AND EDUCATION FOR DENTAL PATIENTS

1. Discuss the importance of a thorough health, social, and dental history in relation to assessment of nutritional status.
2. Explain the types of methods to obtain diet history and determine situations in which each may be used effectively: 24-hour recall, food frequency questionnaire, food diary/food record.
3. Discuss the following related to dietary treatment plans and nutrition education sessions:
   - Formulate a dietary treatment plan for a dental problem influenced by nutrition.
   - Identify steps and considerations in implementing a dietary treatment plan.
   - Assimilate the steps of a nutrition education session.
   - Discuss motivational interviewing techniques that can be incorporated when providing nutrition education in relation to oral health in the clinical setting.
4. Practice several communication skills that the dental professional should employ when educating a patient.

Dietary Project

Mallonee: The Dental Hygienist's Guide to Nutritional Care, 6th Edition

Personal Assessment Project Instructions

NUTRITION FOR DENTAL HYGIENE
PERSONAL ASSESSMENT PROJECT

Objectives

Upon completion of this project, student will be able to:

1. Objectively assess one's own personal dietary patterns using the *Dietary Guidelines for Americans, 2010*, ChooseMyPlate.gov, and Cronometer.
2. Practice the process of recording and analyzing food intake for its nutritive and cariogenic value.
3. Use one's nutritional and dental knowledge in contributing to better general and oral health for self and patients.

Procedure

- Complete forms (either hard copy with pencil or electronically)
- Type report

1. Food Record/Dietary Analysis (20 points)

A. Record everything you eat for 3 consecutive days. A Food Diary Form (shown in your textbook, p. 375 [Figure 18.9]) is available for download from Evolve (Student Resources/Analysis Forms). Use two weekdays and one weekend day (Thursday, Friday, Saturday or Sunday, Monday, Tuesday).

- *Do not choose days when you are dieting, fasting, or ill*.
- Be accurate in determining the amounts eaten.
- Remember to include extras such as mayonnaise on your sandwich, butter on your toast, salad dressing, chewing gum, and fluids (e.g., water, alcohol).
- Use brand names whenever possible (e.g., Cheerios, McDonald's).
- Record food preparation methods, when applicable (e.g., baked, fried, grilled).
- Do not include supplements.

B. Enter data into an analysis program:

Create a Personal Profile:

- Go to https://cronometer.com/
- Click on Sign Up, set up a username and password, and fill in the Your Body Type information

Food Recording

- Near the top of the page, click on the Diary tab, select the correct date, and click on Add Food to enter your food intake for that day.

- Enter your food intake for 3 days (*Hint:* If you eat the same items for any meal day to day, use the *Copy* functionality available as an option in the three vertical dots menu for faster and easier data entry.)
-

Overall Report

- Once the 3 days have been entered, click on the Trends tab and then the Nutrition Report tab.
- Select "Last 7 Days" for the Daily Average and "Non-Empty Days" from the drop-downs.
- Print the report page from your browser to save a hardcopy or save electronically as a PDF. Note the following:
    - How do your total kilocalories compare to the recommended amount?
    - In which nutrients has your intake been inadequate?
    - In which nutrients has your intake exceeded the recommendations?

  Think of some ways in which you could ensure that your total average daily kilocalories and nutrient intake more closely align with recommended amounts. This information will be used in your Written Assessment and Analysis (Section 3 below).

Day-to-Day Report

- Go back to the Diary tab and select the first day of the 3-day food intake.
- Print the page from your browser to save a hardcopy or save electronically as a PDF. Do this for each of the 3 days.

Dietary Analysis

- Using each *Day-to-Day Report*, transfer the values for each listed nutrient onto the Dietary Assessment Form (available for download on the Evolve site – Student Resources/Analysis Forms).
- Average the values for each row and enter those amounts in the *Average of 3 days* column.
- Use the Dietary Reference Intake tables on pages ii-v in the front of your textbook to find the recommended amount of each nutrient for your gender and age group. Mark these in the *Daily Allowance* column.
- Complete the *Comparison* section on the far right of the form to indicate whether your intake for each particular nutrient is adequate, inadequate, or high.

2. Carbohydrate Analysis (20 points)

A. On each of the three Food Diary Forms completed from Section 1, circle each fermentable CHO in red or highlight.

B. For each food circled/highlighted, comment on why it is cariogenic or not cariogenic. A sample Carbohydrate Intake Analysis Worksheet is in your textbook, p. 376 (Figure 18.10). This form is available for download on the Evolve site (Student Resources/Analysis Forms.)

C. Total the number of minutes of acid exposure each day. Consider that one exposure may include several fermentable CHOs, and that not every meal is cariogenic. Average the 3 days; 2 hours/day is considered high.

D. Comment on findings; give specific and realistic recommendations for modifications. Comment on your findings in relation to dental health.

E. The CHO Analysis is to be typed.

3. Written Assessment and Analysis (75 points)

- Obtain and include a copy of your medical and dental history, intraoral and extraoral examinations, dental chart, and periodontal assessment. Highlight pertinent information on all clinic forms.
- Summarize all of your information in a typed report following this guide. Add other pertinent comments.

A. Social history (5 points): Discuss reasons why you choose the foods you consume. Use classroom notes and the textbook to get other ideas for food choices. Examples:

- Exercise?
- How often eat away from home?
- Who does cooking/shopping?
- Who lives at home?
- Number meal/snacks per day?
- Working? Number of hours/week? Regular hours?
- Number of credit hours?

B. Medical history (5 points): List all pertinent information as it appears on your medical history form from the clinic, including family history of disease, any surgeries, medications, smoking, supplements, and OTC and prescription drugs. Determine your BMI. Comment on findings. Include relationship of medication, alcohol, or smoking to your nutritional status. Which nutrients are affected? What are some suggestions for improvement?

C. Dental history (5 points): List all pertinent information from your dental/oral history form from the clinic, including:

- Oral hygiene status (i.e., amount of plaque)
- Periodontal problems—includes description of gingival condition
- Orthodontics
- Number of restorations
- Does your dental health affect nutritional intake? Does your nutritional intake have an impact on your oral health?

D. Special dietary considerations (5 points) (e.g., cultural, lactose intolerant, low fat, low calorie, allergies, intolerances, vegetarian, religious, or do you follow no special guidelines): Include foods you like and foods you dislike.

E. Compare your intake with the *Dietary Guidelines for Americans, 2010* (20 points) http://www.health.gov/dietaryguidelines/2010.asp):

- What dietary guidelines do you follow?
- Where can you improve?

- Provide specific and realistic recommendations.
- Comment on the comparison of your intake with the ChooseMyPlate.gov recommendations.

F. Dietary assessment (20 points): Using the information recorded on the Dietary Assessment Form, comment on the following for each nutrient:

- How do you compare with the recommendation?
- How can you improve?
- What specific foods or beverages did you consume that helped you meet the recommendations?
- What specific foods or beverages can you modify?
- Explain items from your medical or dental history that require modification in your intake.

G. From the findings in your report, construct a list of foods you could add to meet all or most nutrient needs. Comment on the possibility of adding these foods to your diet. Identify foods from your diet that are in excess. Comment on the possibility of reducing these foods.

H. Conclusions and expected success of the program (15 points): What have you started to change, or what do you anticipate changing in your diet while in school? List at least three specific and measurable goals/objectives you plan to make this year. What did you do well? Summarize all of your comments on improving our dietary intake. Create a realistic menu for 1 day.

4. Professionalism (5 points)

Edit your paper.

- Grammar/spelling
- Completeness—did you turn in all parts of the assignment? Food Diary Forms, Nutrient Analysis Forms, Average Day Intake Form, Fermentable CHO Analysis, and written evaluation
- Neatness
- Accuracy—correct values and calculations, information presented, appropriate dental terms
- Logic of conclusions and appropriateness of recommendations—your conclusions must be consistent with the evidence, and your recommendations must be in line with current nutrition knowledge
- Place the completed project in a binder or folder

Evaluation

All of the forms and your written summary should be compiled and submitted to your instructor by or before the date specified. Include the evaluation sheet. *Two percent will be deducted from the total grade of the project for each day (except weekends) that it is late*.

If you are having trouble with the assignment, ,make an appointment with me before the assignment is due.

***Grading will be based on*:**

Recording of Food Record/Dietary Analysis	20 points
Carbohydrate Intake Analysis Worksheet	20 points
Written Assessment and Analysis	75 points
Professionalism	5 points
	120 possible points

Plagiarism will not be tolerated.

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Personal Assessment Project Evaluation

Personal Assessment Project Evaluation	Name:
	Score: /120

Recording of Food Diary/Dietary Analysis
20 points
- Correctly filled out Dietary Analysis
- Correctly identified food groups
- Included quantities of food
- Included personal analysis from computer for each day

15-19 points
- Inadequately covered 1-2 topics

10-14 points
- Inadequately covered 2-3 topics

0-9 points
- Inadequately covered 4 or more topics

Carbohydrate Analysis
20 points
- Correctly identified all fermentable CHOs
- Correctly identified cariogenic state
- Correctly and adequately stated reason
- Correctly determined number of minutes of acid exposure
- Provided 3-day average of acid exposure
- Adequately and accurately commented on findings
- Provided specific recommendations
- Correctly and adequately provided a relationship to the health of the oral cavity

15-19 points
- Inadequately covered 1-2 topics

10-14 points
- Inadequately covered 3-4 topics

5-9 points
- Inadequately covered 5-6 topics

0-4 points
- Inadequately covered 7 or more topics

Written Assessment and Analysis

Social History

5 points

- Detailed personal description of food choices

3-4 points

- Personal description of food choices limited to examples listed on handout or inadequately covered

1-2 points

- Limited personal description of food choices

0 points

- Omitted

Medical History

5 points

- All pertinent information is highlighted, extracted, and discussed

3-4 points

- Limited information is highlighted, extracted, or discussed

1-2 points

- Information is highlighted only

0 points

- Omitted

Dental History

5 points

- All pertinent information is highlighted, extracted, and discussed

3-4 points

- Limited information is highlighted, extracted, or discussed

1-2 points

- Information is highlighted only

0 points

- Omitted

Special Dietary Considerations

5 points

- Discussed all personal dietary considerations, included likes/dislikes

1-4 points

- Inadequate discussion of personal dietary considerations

0 points—

- Omitted

Dietary Guidelines

20 points

- Personally applied each of the *Dietary Guidelines for Americans 2010*
- Appropriately provided realistic modifications
- Personally compared dietary intake with MyPyramid Food Guidance System
- Appropriately provided realistic modifications

16-19 points

- Inadequately covered 1 topic

11-15 points

- Inadequately covered 2 topics

6-10 points

- Inadequately covered 3 topics

0-5 points

- Inadequately covered 4 or more topics

Dietary Assessment

20 points

- Commented on each item on the Dietary Assessment form
- Provided appropriate recommendations for modification
- Provided foods/beverages consumed for each nutrient
- Considered medical and dental history when making modifications
- Listed foods that could be added to meet nutrient needs
- Correctly and adequately commented on the possibility of adding these foods
- Listed foods that are in excess
- Correctly and adequately commented on the possibility of reducing these foods
- Correctly and adequately provided a relationship between nutrition and the health of the oral cavity
- Correct calculations for Daily Allowance

16-19 points

- Inadequately covered 1-2 topics

11-15 points

- Inadequately covered 3-4 topics

6-10 points

- Inadequately covered 5-6 topics

0-5 points

- Inadequately covered 7 or more topics

Conclusions

15 points

- Included expected success of program
- Included 3 specific, measurable, and realistic goals
- Included changes made or anticipated making
- Included a realistic menu for one day
- Provided an appropriate overall summary

.

11-14 points

- Inadequately covered 1-2 topics

8-10 points

- Inadequately covered 3 topics

4-7 points

- Inadequately covered 4 topics

0-3 points

- Inadequately covered all topics

Professionalism

5 points

- Grammar/spelling correct, use of appropriate dental terms, ideas clear, project typed when possible, included evaluation form, turned in on time

3-4 points

- Several errors in grammar/spelling, inconsistent use of appropriate dental terms, some question about thoughts, typed when possible, project in a folder, included evaluation form

0-2 points

- Grammar/spelling errors make thought incomprehensible, inconsistent use of appropriate dental term, typed when possible, excluded evaluation form

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Carbohydrate Intake Analysis Worksheet

Carbohydrate (CHO) Intake Analysis Worksheet			
Fermentable CHO	**Cariogenic?**	**Reason**	**Period of Exposure to Enamel**
		TOTAL EXPOSURE TIME:_____	

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Dietary Analysis Form

	Dietary Assessment					**Comparison**		
Nutrient	**Day 1**	**Day 2**	**Day 3**	**Average of 3 days**	**Daily Allowance**	**Adequate High**		**Inadequate**
Total Calories								
CHO* (45-65% of total Kcal)								
Protein* (10-35% of total Kcal)								
Fiber								
Total Fat* (20-35% of total Kcal)								
SFA* (≤7% of total Kcal)								
MUFA* (up to 15% of total Kcal)								
PUFA* (up to 10% of total Kcal)								
Alpha-Linolenic Acid (Omega 3)								
Cholesterol					≤300 mg/day			

Vitamins								
Vitamin A								
Vitamin B_6								
Vitamin B_{12}								
Vitamin C								
Vitamin D								
Vitamin E								
Vitamin K								
Thiamin								
Riboflavin								
Niacin								
Folate								
Minerals								
Calcium								
Potassium								
Sodium								
Phosphorus								
Copper								
Iron								
Selenium								
Magnesium								
Zinc								
Water					9c/d women. 13 c/d men			

*Calculate
ions are based on your average Kcal intake for

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Food Diary Form

FOOD DIARY Day_____				
TIME	**PLACE**	**FOOD EATEN**	**AMOUNT EATEN**	**HOW PREPARED**
Instructions: 1. List *everything* you eat or drink on 3 consecutive, typical days. 2. Use 2 weekdays and 1 weekend day. 3. Include extras such as chewing gum, sugar and cream in coffee, or mustard on a sandwich.				