



SCHOOL OF DENTAL HYGIENE

COURSE NUMBER & TITLE: DNTH 402; The Etiology and Understanding of Diabetes Mellitus

CURRICULUM LEVEL: Undergraduate Senior Level

COURSE CREDIT HOURS: Three (3) hours

CLASS LOCATION: ODU main campus, Health Sciences Bldg, Room 300

CLASS DAY & TIME: Wednesday, 8:00am to 9:00am (EST)

COURSE DESCRIPTION & PURPOSE: The study of diabetes mellitus and oral health. Emphasis is on dental considerations, dental pain management, and diabetes mellitus patient with periodontal disease and treatment. The purpose of this course is preparing dental hygiene students with intellectual knowledge and preparedness of how to treat a patient with known or unknown diabetes mellitus.

PREREQUISITES: DNTH 305, DNTH 306, and DNTH 316.

INSTRUCTOR: Assistant Professor Fawn Jones, CDHC, RDH, BS

Office Location: ODU Main Campus, Health Sciences Building, Room 3102

Office Hours: Tuesdays from 0900-1200 (EST)

Office Phone: (913) 375-5207

Email Address: fjones@odu.edu

INSTRUCTOR EMAIL POLICY: Please contact me using the Blackboard course messaging system or by email. Messages will be checked daily between 0700- 0800 in the morning and 1600-1700. Please be patient with responses during weekends and holidays. Email: Blackboard

Course Messaging System fjones@odu.edu. I will periodically send out course messages to the class and you are expected to regularly check for messages by using the "Email/Messages" tab in Blackboard.

METHODS OF DELIVERY: This is an on-campus face-to-face course that will utilize lectures, class participation, audio-visual aids, individual and collaborative group work, written assignments, reading assignments, videos, Internet activities, and handouts will be utilized as needed. The Blackboard learning management system provided to you by ODU is where course content will be housed.

REQUIRED TEXTBOOK:

The following required textbook is available for purchase or rent at the ODU university bookstore.:

Author: Ira B. Lamster Publisher: John Wiley & Sons, Incorporated, Published Date: 05/27/2014.
Diabetes Mellitus and Oral Health. Print ISBN: 9781118377802 EBOOK ISBN: 9781118864166

SUPPLEMENTAL READINGS: All supplemental readings will be provided as PDFs on Canvas.

RECOMMENDED TEXTS: Some assignments for this course require the use of APA style referencing. It is strongly recommended that you obtain the book: Publication Manual of the American Psychological Association (latest edition).:

American Psychological Association. (2009). Publication manual of the American Psychological Association (6th ed.). Washington, D.C. ISBN 978143380561

METHODS OF EVALUATION: Throughout the semester, students will be assessed for achievement of course goals and objectives by a variety of methods including tests, group and individual projects and assignments, homework, discussion board assignments, oral presentation, written work, tests, and an exam. Some of these will be graded and some will not be graded. Regardless, completion of all is expected. A list of graded requirements is below:

	List of Graded Assessments:
	The following is a list of graded assessments. Due dates can be found in the schedule and will be discussed in class.
1.	Research Paper – Research information on and write a 3-page paper about Type I or Type II Diabetes Mellitus (you choose).
2.	Case Project & Presentation- In your groups, answer the questions for your case and develop an appropriate treatment plan for your assigned case study, (you will find your groups and case number on Blackboard). Be prepared to present it orally to the class. This will be a collaborative group activity.
3.	Three (3) tests -Each will be multiple-choice
4.	Final Examination (comprehensive)

TESTING PROTOCOL: Tests may cover lecture materials, assigned readings, PowerPoints, and handouts. The final exam will be comprehensive. Tests and exams will be administered using Canvas.

Respondus Lockdown Browser and recorded by Zoom proctoring (cell phone with a camera) to ensure testing integrity.

- **Hardware Requirements:** Desktop computer or fully charged laptop, a webcam, a microphone (built-in or external), and a fully charged smartphone (iPhone or Android) with camera. NOTE: tablets and Chromebooks are not compatible with some Blackboard testing options. You will also need a reliable internet connection (preferably a wired connection).

- **Software Requirements:** Chrome, Firefox, Edge, or Safari. You will also need to download the Zoom application for Windows or Mac. Make sure to update your Zoom application.

How to take tests: **1)** Put your smartphone in airplane mode. **2)** On the day of a test and during our regularly scheduled class period, log into Blackboard with your smart phone and click on the zoom session link for that day. **3)** Enable your camera and adjust it so that I can see you. **4)** Use your desktop/laptop computer to log into Blackboard and access the “Tests & Exam” tab. **5)** Within that tab, you will open the appropriate test/exam once I verbally announce that it is time to begin.

Tests are not released. For questions regarding tests, please make a Zoom appointment. Tests may only be reviewed until the next test date. Grades will not be changed for student errors on tests.

Below are links for the Zoom app for iPhone and Android and these applications work in the same manner as your computer. There is also a link to test your audio and video on your phone. There will be a practice session to check devices and also talk about how we will use Zoom for tests and exams.

<https://apps.apple.com/us/app/zoom-cloud-meetings/id546505307>

https://play.google.com/store/apps/details?id=us.zoom.videomeetings&hl=en_US

<https://zoom.us/test>

GRADING CRITERIA:**ASSIGNMENT WEIGHTS:**

Assignment	Undergraduate DNTH 400
Research Paper (Individual activity)	25%
Case Project & Presentation (group activity)	20%
Test #1	10%
Test #2	10%
Test #3	10%
Final Examination	25%
Total Grade	100%

Grading Scale:

93-100	A
85-92	B
77-84	C
70-76	D
69 and below	F

ATTENDANCE POLICY: You are required to attend class and be on time for class. In the case of an emergency, please call my office phone 913-375-5207 and leave a message. You will need to provide documentation as to why you were absent. Excused absences will be if you provide documentation, and unexcused absences will be without documentation. If you do not have an excused absence you will have an automatic 10% deduction from any assignments that were due the day of your absence.

MISSED TESTS & EXAMS: If you are absent on a test or exam day, the same rules apply as mentioned above. That means if you have an unexcused absence, you will automatically have a 10% deduction. It will be your responsibility to arrange the make up test or exam.

SUBMITTING ASSIGNMENTS: All assignments are due by midnight on their due date. Assignments will be submitted through Canvas, under the Assignments tab. All assignments will have specific directions under the Assignment tab if the assignment requires specifications for submission. If you have any technical issues during the submission of an assignment, please contact the Canvas support team.

LATE ASSIGNMENTS: Late assignments can be submitted; however, you will receive 5 points off your overall score. All work needs to be completed. You have two opportunities to complete each assignment, this gives you an opportunity to make corrections to your mistakes, or any misunderstanding you may have had for the assignment.

STUDENT EXPECTATIONS: As a dental hygienist, it is important to effectively communicate to your patients, and express the importance of the patient's role in the diagnosis and treatment of their diabetes mellitus. Therefore, you will need to be knowledgeable in diabetes mellitus and be prepared to assist your patients. To have a plan for your known or unknown diabetes mellitus patient your role in staying informed on diabetes mellitus is ultimately your responsibility. All students are expected to:

- Read assigned course material in each module.
- Entirely contribute during group assignments.
- Respect student teaching site supervisors by being on time for all planned meetings.
- Turn in complete assignments on time.
- Respect others and their diversity.
- Ask for help when needed.
- Regularly check ODU student email.
- Remain in contact with the course director throughout the course. This is especially critical if you encounter personal challenges which may affect your performance in the course.
- Take a stand in your learning and continued learning regarding diabetes mellitus.

COMPUTER AND CELL PHONE USE IN CLASS: Cell phones should be stored away during class lecture, group activity, and collaboration. Your phone should also be silenced while you are in the classroom. If your phone is out during the above-mentioned times, I will keep your phone until class is dismissed.

GENERAL COMPUTER AND TECHNICAL REQUIREMENTS: You will need to have access to a computer or laptop with internet. This computer should allow you to have access to download applications that are used within the course. You will be accessing Canvas, Zoom, and need Respondus Lockdown Browser during your tests.

IMPORTANT ADDITIONAL UNIVERSITY & SCHOOL OF DENTAL HYGIENE STATEMENTS:

STATEMENT OF STUDENT RESPONSIBILITIES AND ACCOUNTABILITIES:

Attendance. Due to the unique responsibilities and accountabilities associated with becoming a competent professional provider of health care, the progressive nature of the curriculum, the legal issues associated with providing patient/client care, the provision of quality health services and future employability, attendance and class participation are required. Should an absence be necessary, the student must contact the course instructor immediately via email and call the School of Dental Hygiene at 757-683-3338.

- A note on official stationery from a physician or other appropriate healthcare provider must be submitted to your instructor(s) the day you return verifying the need to be excused from class, lab and/or clinic, and date(s) for the required absence.
- Each unexcused absence will result in a grade penalty of one percentage point reduction from the final grade in the course(s) missed.
 - Make up quizzes, tests and exams will not be given for unexcused absences.
 - Late arrivals to class are considered unexcused absences.
 - Students who miss a regularly scheduled test are to follow the steps below:
 1. For an unexcused absence, a grade of zero (0) will be recorded for the quizzes, tests, exams, practicals, and for attendance.

2. For an excused absence, make-up quizzes, tests, exams, and practical's must be taken within two days of returning from a documented excused absence. Failure to do so will result in a zero (0) for that quiz, test, exam or practical. Make-up test format will be decided by instructor. Possible formats will include but not be limited to:

- a. oral exam
- b. essay
- c. short answer
- d. listing
- e. demonstration/performance
- f. combination of these

Meeting Established Deadlines. All course related assignments are to be submitted to the course instructor on the established due dates. Work submitted after the established deadlines will be penalized by the grade. Students are encouraged to keep a duplicate copy of all assignments submitted.

Honor Code. By attending Old Dominion University, you have signed a pledge accepting the responsibility to abide by the following Honor Code: "We the students of Old Dominion University, aspire to be honest and forthright in our academic endeavors. Therefore, we will practice honesty and integrity and be guided by the tenets of the Monarch Creed. We will meet the challenge to be beyond reproach in our actions and our words. We will conduct ourselves in a manner that commands the dignity and respect that we also give to others." This is an institutional policy approved by the Board of Visitors. The University Honor Code applies to all assignments.

Plagiarism. All academic work submitted to fulfill a course requirement is expected to be result of each student's own thought, research and self-expression. A student will have committed plagiarism if he or she reproduces someone else's work without acknowledging its source; or if a source is cited which the student has not cited or used. Examples of plagiarism include: submitting a research paper obtained from a commercial research service, the Internet, or from another student as if it were original work; making simple changes to borrowed materials while leaving the organization, content, or phraseology intact; or copying material from a source, supplying proper documentation but leaving out quotation marks. Plagiarism also occurs in a group project if one or more of the members of the group does none of the group's work and participates in none of the group's activities but attempts to take credit for the work of the group.

Code of Student Conduct. All students are expected to abide by the Student Code of Conduct as found in the Old Dominion University Student Handbook and University Catalog. The School of Dental Hygiene undertakes to provide persons treated in the Dental Hygiene Care Facility with safe, ethical, and evidence-based oral healthcare. Endangering health and welfare by use of unsafe and unethical practices and /or not following standard dental hygiene treatment protocols is grounds for the removal of students from the dental hygiene program. Students' papers and projects may be used anonymously for necessary review without notification.

Accommodations. Students are encouraged to self-disclose disabilities that have been verified by the Office of Educational Accessibility by providing Accommodation Letters to their instructors early in the semester in order to start receiving accommodations. Accommodations

will not be made until the Accommodation Letters are provided to instructors each semester.

School of Dental Hygiene Policy on Professionalism in the Use of Social Media:

The Internet has created the ability for dental hygiene students and oral health professionals (dental hygienists and dentists) to communicate and share information quickly to reach millions of people easily. Participating in social networking and other similar Internet opportunities can support students' and dental hygienists' personal expression, enable individuals to have a professional presence online, foster collegiality and camaraderie within the profession, provide opportunity to disseminate public health and other health messages. Social networks, blogs, and other forms of communication online also create new challenges to the patient-oral health provider relationship. Oral health professionals and students must weigh a number of considerations when maintaining a presence online.

- (a) Standards of patient and colleague privacy and confidentiality must be maintained in all environments, including online, and oral health professionals and students must refrain from posting identifiable person information online.
- (b) When using the Internet for social networking, oral health professionals and students must use privacy settings to safeguard personal information and content to the extent possible but realize that privacy settings are not absolute and that once on the Internet, content is likely there permanently. Thus, oral health professionals and students should routinely monitor their own Internet presence to ensure that the personal and professional information on their own sites and, to the extent possible, content posted about them by others, is accurate and appropriate.
- (c) If interacting with patients on the Internet, oral health professionals and students must maintain appropriate boundaries of the patient-oral health provider relationship in accordance with professional ethical guidelines just as they would in any other context.
- (d) To maintain appropriate professional boundaries oral health professionals and students should consider separating personal and professional content online.
- (e) When oral health professionals or students see content posted by colleagues that appear unprofessional or a violation of the Code of Ethics of the American Dental Hygienists' Association, they have a responsibility to bring that content to the attention of the individual, so that he or she can remove it and/or take other appropriate actions. If the behavior significantly violates professional norms and the individual does not take appropriate action to resolve the situation, the dental hygienist and or students should report the matter to appropriate authorities, e.g., the State Board of Dentistry, the University Honor Council.
- (f) Oral health professionals and students must recognize that actions online and content posted may negatively affect their reputations among patients, colleagues, employers and potential employers and may have consequences for their careers now and in the future and can undermine public trust in the dental hygiene profession.

Adapted heavily from the AMA Policy: Professionalism in the Use of Social Media Approved - May 17, 2012.

ODU reign responsibly/commitment to adhering to coronavirus safety guidelines: The

university will work to create a campus environment that supports safe behaviors and reduces the spread of COVID-19 (Coronavirus). A healthy environment will only be supported if everyone – students, faculty, staff, and visitors - takes responsibility for their own health and safety and the health and safety of those around them. We all must make a commitment to following current Center for Disease Control and Prevention (CDC) and the Virginia Department of Health guidance and best practices. While Old Dominion University cannot guarantee immunity from sickness, we will do our best to provide a healthy environment. We will be directed by the Governor's guidelines as well as the guidance of health officials. As a Monarch citizen, you are encouraged to reign responsibly by demonstrating such care for protecting yourself and others through your compliance. By adhering to safety guidelines, you are helping to keep your family and friends safe along with other students, faculty and staff and their families—Monarch.

Nation is everywhere! COMMITMENT STATEMENT: As a Monarch, I commit to taking the following actions to Reign Responsibly in reducing the spread of the Coronavirus:

1. Staying Informed
 - o I commit to completing any Coronavirus related training provided by the University.
 - o I commit to visiting the ODU Coronavirus page to stay informed on University guidelines and updates.
2. Following Guidelines
 - o I commit to following guidelines set forth by the University and the Commonwealth of Virginia.
 - Wearing face coverings and practicing physical distancing.
 - Cleaning my hands frequently with soap and water for at least 20 seconds or using hand sanitizer that contains at least 60% alcohol.
3. Caring for Yourself
 - o I commit to self-monitor for Coronavirus symptoms daily.
 - o I commit to avoiding close contact with people.
 - o I commit to staying home and contacting my health provider if I am exhibiting any symptoms of the Coronavirus.
4. Caring for others
 - o I commit to maintaining a clean space by disinfecting or cleaning frequently touched surfaces daily.
 - o I commit to participating in screening and testing to help reduce the spread of the Coronavirus.

Course Disclaimer: Every attempt is made to provide a syllabus that is complete and that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs, and experiences of the students.

GENERAL COURSE OBJECTIVES:

At the completion of this course, the student should be able to:

1. Explain the etiology of diabetes mellitus.
2. Discuss the classification, diagnosis, and risk factors of diabetes.
3. Internalize the medical complications of diabetes mellitus.
4. Examine glycemic treatment of diabetes mellitus.
5. Evaluate the management of the patient with diabetes mellitus in the dental office.
6. Identify periodontal disease as a complication of diabetes mellitus.
7. Discuss the influence of periodontal disease on glycemic control in diabetes.
8. Examine non-periodontal oral complications of diabetes mellitus.
9. Identify dental patients with undiagnosed diabetes.
10. Internalize the case study

SPECIFIC OBJECTIVES BY CHAPTER & TOPIC:

Upon completion of each instructional unit, the student should be able to:

1. Chapter 1; "Etiology of Diabetes":
 - a. Define diabetes mellitus.
 - b. Identify the pathogenesis of type 1 diabetes mellitus.
 - c. Explore Type I diabetes: microbiome, vitamin D and insulin resistance.
 - d. Analyze on the genetics of Type II diabetes.
 - e. Reflect on Type II diabetes and obesity, microbiome, vitamin D and environmental pollution.
2. Chapter 2; "Classification of diabetes, diagnosis and risk factors of diabetes":
 - a. Discuss the classification of Type I and Type II diabetes.
 - b. Explore the epidemiology of diabetes mellitus.
 - c. Identify the classification, diagnosis, and risk factors, of diabetes mellitus.
 - d. Perform the tasks for screening of diabetes mellitus.
 - e. Support the prevention of diabetes mellitus.
3. Chapter 3; "Internalize the medical complications of diabetes mellitus":
 - a. Explain the acute complications associated with diabetes mellitus.
 - b. Explore the chronic complications associated with diabetes mellitus.
 - c. Discuss glycemic control.
 - d. Identify cardiomyopathy in diabetes mellitus.

e. Indicate other conditions frequently associated with diabetes.4. Chapter 4; “Examine glycemic treatment of diabetes mellitus.”:

4. Chapter 4; “Examine glycemic treatment of diabetes mellitus.”:

- a. Identify team approach, glycemic goals, and setting glycemic goals.
- b. Analyze glycemic management of Type I & Type II diabetes.
- c. Identify the treatment of hypoglycemia, medications that raise glucose levels, and surgeries.
- d. Discuss prevention of Type I & II diabetes.
- e. Have awareness of the future direction of diabetes.

5. Chapter 5 “Evaluate the management of the patient with diabetes mellitus in the dental office.”:

- a. Explain the outcomes of periodontal implant therapy in patients with diabetes mellitus.
- b. Communicate the characteristics of the evaluation and management of patients with diabetes.
- c. Depict the patient with a diagnosis of diabetes.
- d. Explore the evaluation and management of diabetes emergencies.
- e. Propose how your dental office will address pain management.

6. Chapter 6; “Identify periodontal disease as a complication of diabetes mellitus.”:

- a. Discover the overview of periodontal disease as a complication for a patient with diabetes mellitus.
- b. Identify the biological mechanisms that contribute to adverse effects of diabetes on periodontal health.
- c. Describe the altered types of subgingival microflora.
- d. Discuss lipids dysregulation and impaired wound healing.
- e. Indicate other metabolic pathways.

7. Chapter 7; “Discuss the influence of periodontal disease on glycemic control in diabetes.”:

- a. Describe the influence of periodontal disease on glycemic control in diabetes.
- b. Compare and contrast longitudinal observational studies and treatment studies.
- c. Explore how obesity is a contributor to diabetes mellitus.
- d. Distinguish how glycemic control can have an impact on periodontal disease.
- e. Propose how elevated protein Kinase C affects diabetes mellitus.

8. Chapter 8; "Examine non-periodontal oral complications of diabetes mellitus.":

- a. Explain dental caries in patients with diabetes mellitus.
- b. Discuss xerostomia.
- c. Identify candida infection.
- d. Analyze access to dental services for patients with diabetes mellitus.
- e. Demonstrate a commitment to be able to identify other mucosal lesions with patients who have diabetes mellitus.

9. Chapter 9; "Identify dental patients with undiagnosed diabetes":

- a. Discuss how to identify patients with undiagnosed diabetes.
- b. Explore medical models for diabetes screening.
- c. Explain the acceptance of diabetes mellitus patients in your dental settings, or what you would implement in your dental office.
- d. Plan how you and your team will identify undiagnosed diabetes.
- e. Create a step-by-step guide on how your office will identify these undiagnosed diabetics.

10. Chapter 10; "Case Studies":

- a. Discuss all Case studies with your classmates.
- b. Compare and contrast the case studies within your groups assigned in Blackboard.
- c. Identify your role in at least one case study.
- d. Compare your role with another classmate of your choice.
- e. Propose your assigned case study with your group to the class.

SYLLABUS COURSE SCHEDULE:

This schedule is based on the Spring semester of 2021 for a 16-weeks long course. The schedule is subject to change due to unforeseen events.

SEMESTER WEEK NUMBER:	DAY/DATES/TIMES OF THE WEEK:	CHAPTERS, TOPICS:	Have items in this column completed. BEFORE class. For assignment details, look in "Assignments & Submissions." tab. Complete any additional reading, assignments and activities listed within each module.
WEEK 1	Wed., 1-17-24 8am-9am	Chapter 1 "Explain the etiology of diabetes mellitus." Teacher Lecture	Ice Breaker: Name Game Read: pages 3-26 Discussion Board #1 (due 1/20)
WEEK 2	Wed., 1-24-24 8am – 9am	Chapters 2 "Discuss the classification, diagnosis, and risk factors of diabetes." Teacher Lecture	READ: pages 27-44 Homework: Focused Listing (due 1/27)
WEEK 3	Wed., 1-31-24 8am – 9am	Chapter 3 "Internalize the medical complications of diabetes mellitus." Teacher Lecture	READ: pages 45-68 In-class Partner Activity: Think-Pair- Share Discussion Board Post #2 (due 02/03)
WEEK 4	Wed., 2-7-24 8am – 9am	Chapter 4 "Examine glycemic treatment of diabetes mellitus." Teacher Lecture	READ: pages 69-98 In-class Group Activity: Gallery Walk

WEEK 5	Wed., 2-14-24 8am – 9am	TEST #1	
WEEK 6	Wed., 2-21-24 8am – 9am	Chapters 5 “Evaluate the management of the patient with diabetes mellitus in the dental office” Teacher Lecture	READ: pages 99-120 Socratic Questioning Discussion Board Post #3 (due 02/23)
WEEK 7	Wed., 2-28-24 8am – 9am	Chapter 6 “Identify periodontal disease as a complication of diabetes mellitus.” Teacher Lecture	READ: pages 121-142 Video: https://youtu.be/ZnnVUq1P5Yo?si=by0bH324xt-due8c DUE: Research Paper
WEEK 8	Wed., 3-6-24 8am – 9am	SPRING BREAK No assignments; No class	SPRING BREAK No assignments; No class
WEEK 9	Wed., 3-27-24 8am – 9am	Chapter 8 “Examine non-periodontal oral complications of diabetes mellitus.” Teacher Lecture	READ: pages 157-190- World Cloud Guessing
WEEK 10	Wed., 3-20-24 8am – 9am	Chapter 7 “Discuss the influence of periodontal disease on glycemic control in diabetes” Teacher Lecture	READ: pages 143-156 Course-Related Self-Confidence Surveys (due 3/22) Discussion Board Post #4 (due 03/22)
WEEK 11	Wed., 3-27-24 8am – 9am	Chapter 8 “Examine non-periodontal oral complications of diabetes mellitus.” Teacher Lecture	READ: pages 157-190- World Cloud Guessing

WEEK 12	Wed., 4-3-24 8am – 9am	Chapter 9 “Identify dental patients with undiagnosed diabetes” Teacher Lecture	Discussion Board #5
WEEK 13	Wed., 4-10-24 8am – 9am	TEST #3	
WEEK 14	Wed., 4-17-24 8am – 9am	Chapters 10 “Case Reports” Teacher Lecture	READ: page-203-220 Brainstorming in a Circle (in assigned groups)
WEEK 15	Wed., 4-24-24 8am – 9am	Chapters 10 “Case Reports”	READ: pages 221-237 DUE: Case Report & Group Presentation
WEEK 16	Wed., 5-1-24 8am – 10am	FINAL EXAM	