



Course Syllabus
SEMESTER
School of Health and Human Services

<i>Course Name:</i>	Dental Materials
<i>Course & Section Number:</i>	DHY 150-XXX Lecture/Lab
<i>Meeting Day(s) & Time(s):</i>	Lecture: Lab:
<i>Credits:</i>	2
<i>Contact Hours:</i>	4 (Lecture 1, Lab 3)
<i>Text:</i>	Dental Materials 5th Edition
<i>Instructors Name:</i>	
<i>Office Hours & Location:</i>	By appointment only
<i>OCC Phone:</i>	
<i>OCC Email:</i>	
<i>Additional Contact Information:</i>	N/A

*Please call me (name); it is my preferred name. If you have a preferred name, please let me know so I can use it.

**Please use only Owens email for course communications.

Catalog description:

This course covers the physical and chemical properties, structures, formulas, and uses of materials commonly used in contemporary dental practice. Introduce the student to the use and manipulation of dental materials. Laboratory sessions give the student skill development for correctly using dental materials with an emphasis on safety and infection control. Concepts of four handed dentistry are introduced.

Prerequisite/Corequisites:

CHM 115/DHY102

Course Materials:

Book: DENTAL MATERIALS: CLINICAL APPLICATION FOR DENTAL ASSISTANTS AND DENTAL HYGIENISTS, 5TH ED. (PAKLE, W. STEPHAN; BASTIN, KIMBERLY G.)

978-0-443-11449-6

Other: Laptop, internet with connectivity /service

If a print book, e-book, or access code is required for class, you can access the Owens Community College e-Campus Bookstore by accessing the online link, called "Find Books" on the course schedule for each course section. See the example below.

[https://owens.ecampus.com/course
list.asp?autocourselist=1&c=15408271&s=145589&missing=](https://owens.ecampus.com/course/list.asp?autocourselist=1&c=15408271&s=145589&missing=)

OER and Owens Community College Library Resources (Open Educational Resources are free online materials for instructor and student use. Some OER material may be available in print in the Owens Community College Library.

<https://www.dentalcare.com/en-us/student-resources>

***Inclusive Access (I.A.) Materials** are included in the cost of the course to save students money through lower negotiated rates with publishers. Courses containing I.A. materials will have it noted on the online class schedule. **If** your course includes I.A. digital materials, you will receive an email with subject line, "Your inclusive Access Materials, " and it will include any codes or digital links.*

*The email will come to your Owens Community College email from the Owens e-Campus Bookstore on the first day of class, **if** not before. Be sure to check your spam (junk email) **if** you do not find it in your inbox. **If** the email is not in your inbox or spam folder, contact your instructor immediately. You may also see a folder at the top of your course labelled "Course Materials by eCampus. " This folder will contain any needed codes or links to needed materials.*

***If** the I.A. materials also include a printed book or are in print form, the item will be shipped to your address of record automatically based on your enrollment in the course. Please note that some courses do not include printed materials in I.A and those materials would need to be purchased separately using the link on the course schedule. When you access the Find Books link you will see which items in a course are included in I.A.*

What You Will Learn in the Course

Course Objectives:

This course will cover the physical and chemical properties, structures, formulas, and uses of materials commonly used in contemporary dental practice. Introduce the student to the use and manipulation of dental materials. Laboratory sessions give the student skill development for correctly using dental materials with an emphasis on safety and infection control. Concepts of four handed dentistry are introduced.

Student Learning Outcomes:

Students will:

Outcome	Where Assessed
Differentiate advantages and disadvantages between dental materials, and professional standards of care for selection of dental materials	Quiz/Exam material
Identify infection control and disinfection regulations when handling dental materials	Quiz/Exam material
Demonstrate and Evaluate: Dental dam application and removal, sealant placement, take impressions with alginate impression material, fabricate gypsum/plaster study models, mouthguard fabrication, whitening tray fabrication, mixing of cements and temporary restoration materials.	Individual Skill Evaluations
Determine dental materials on radiographic images	Quiz/Exam material

Program Outcomes:

The following program outcomes are assessed in this course

Outcome	Where Assessed
Introduce professional decision making based on the properties of dental materials.	Quizzes, exams, skill evaluations
Demonstrating current, acceptable aseptic and safety procedures in both laboratory and clinical settings when using a given material, instrument or equipment or providing therapeutic or preventive services.	Quizzes, exams, skill evaluations
Introduce and demonstrate the implementation and evaluation of dental materials (impressions, models, prosthetics, amalgam-lecture only, composite, sealants, oral appliances, cements, whitening materials, custom mouth guards/sealant trays, specialty material,	Quizzes, exams, skill evaluations
Student will observe live restorative restoration, chairside, within a dental practice	Restorative Observation Paper

Institutional General Education Competencies:

As a student at Owens Community College, you will take General Education courses as part of your degree program. While specific to the General Education courses, will be reinforced in many of your degree program major courses and may be measured in your capstone course(s) and others as identified.

Competency	Where Assessed
Communicate effectively.	Daily Grade, Skill Evaluations
Act with professional responsibility.	Daily Grade, Skill Evaluations
Demonstrate sensitivity to others' beliefs and values.	Daily Grade
Think analytically, critically, and creatively.	Daily Grade, Skill Evaluations, Clinical Observation Paper

Technology, Lab, and File Requirements:

Laptop computer, internet, PPE (when necessary)

Academic Support

Disability Services Resource Center: If you have a disability or acquire one, you may be entitled to receive reasonable accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email disability@owens.edu, visit <https://www.owens.edu/disability/>, or stop by College Hall 124.

Tutoring Services: Owens Community College offers academic tutoring and assistance in a variety of subjects including: accounting, computing, economics, mathematics, science, and writing. For more information go to: <https://www.owens.edu/successcenters/>.

Counseling Services: Counseling Services provides assistance to students experiencing personal, educational, interpersonal/relationship, family, social, or psychological difficulties. If you feel you may benefit from this service, please contact them at counselingservices@owens.edu. More information is at <https://www.owens.edu/counseling/>.

Campus and Community Connections: The Center for Campus and Community Connections (College Hall 123) is a walk-in office created to provide retention support through resource stability initiatives and community connections. Go here for more information: <https://www.owens.edu/connection/> or contact connections@owens.edu

Owens Library: The Owens Library offers two locations (Toledo and Findlay) as well as online resources. For more information visit <https://www.owens.edu/library/>.

Students can find more information on campus resources, student support, student life, and security at this [link](#).

General Information

Student Code of Conduct: All students are expected to follow Owens Community College's Student Code of Conduct, which includes academic honesty, encompassing plagiarism. See the Board Policy for more information.

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct: All students, faculty, and staff are expected to follow Owens Community College's Anti-Discrimination and Harassment Policy and the College's Title IX Policy/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

Religious Accommodations: A student seeking an accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a written email notice with the specific dates for an absence, and must do so not later than fourteen (14) days after the first day of instruction. Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy*. The request for an alternative accommodation will be kept confidential. Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: provost@owens.edu The policy may be found on the Owens website: [3358:11-2-63 Accommodation](#) for a Student Absence for the Observance of Religious Beliefs and Practices Policy

Document Collection: Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of institutional general education competencies or program assessment. Please save all your class materials until the end of the semester.

Classroom Admittance: OCC classes shall only be attended by the officially registered OCC students or prospective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See FERPA regulations for more information.

Use of AI Tools: This course requires you to complete various assignments that assess your understanding and application of the course content. You are expected to do your own work and cite any sources you use properly. You are not allowed to use any artificial intelligence (AI) tools, such as chatbots, text generators, paraphrasers, summarizers, or solvers, to complete any part of your assignments. Any attempt to use these tools will be considered academic misconduct and will be dealt with according to the Owens Community College academic integrity policy. Students are expected to complete all work independently and without the assistance of AI generated content. If you have any questions about what constitutes acceptable use of AI tools, please consult with the instructor *before* submitting your work.

Student Responsibilities & Instructor Expectations

You are required to be present at EVERY lecture and your appropriately scheduled lab session. Inappropriate and rude behavior between class members will not be tolerated. This class will be held to the highest standard of respect, both for class members and instructors.

Instructor Expectations:

Your attendance is expected at every scheduled class and lab respectively. Inappropriate behaviors such as cheating, rudeness, and group disruptions will not be tolerated. This class will have several TEAM efforts, and my expectation is that it will be just that...a TEAM EFFORT! While I do not have scheduled office hours, I am willing to meet with students as necessary. I will do my best to respond to emails within 24 hours and expect the same from students.

Classroom Environment:

Students in this class are encouraged to speak up and participate during class meetings and discussion boards. Respect toward every classmate and instructor is mandatory, without compromise. See below for details regarding consequences.

Dental Hygiene Program Technology & Academic Integrity Policy:

Cell Phone & Electronic Device Policy:

To promote a professional learning environment and ensure patient safety, **cell phones and personal electronic devices are not permitted** during **preclinical labs or clinical sessions**.

Policy Details:

Cell phones, smart watches, tablets, earbuds, and similar personal devices **must be silenced and stored out of sight** at all times.

Devices may **not** be used during lectures, labs, or clinic sessions unless **explicitly authorized by faculty** for instructional purposes.

Phones may not be kept on desks, laps, pockets, or clinical countertops.

Photography, video, or audio recording is strictly prohibited in lab and clinical areas unless prior written approval is granted by faculty.

In clinical settings, personal devices pose **HIPAA, infection control, and professionalism concerns** and are therefore prohibited.

Violations:

Violations could result in an informal resolution, coaching & formal written warning, corrective action assignment, or immediate permanent dismissal from all health programs (see Academic/Professional Standards Student Incident Report).

Examination & Quiz Technology Policy:

To ensure academic integrity, **no personal electronic devices are permitted during exams or quizzes.**

Policy Details:

Cell phones, smart watches, fitness trackers, earbuds, and any other electronic devices must be:

- o Powered off
- o Stored in a designated area away from the testing space

Devices may not be on the student's person during testing.

Only program-approved materials explicitly authorized by faculty may be used.

Faculty may require students to place phones face-down at the front of the room or in secured storage.

Violation of this policy will be treated as academic misconduct, regardless of whether the device is actively used.

Academic Integrity & Cheating Policy:

The Dental Hygiene Program maintains a **zero-tolerance policy for cheating.**

Cheating includes, but is not limited to:

- Possession or use of unauthorized materials during exams or quizzes
- Use of electronic devices or smart technology during testing
- Sharing or receiving test questions or answers
- Copying from another student or allowing another student to copy
- Using artificial intelligence, online resources, or stored information during assessments unless explicitly permitted
- Attempting to alter grades or exam records

Consequences:

- Immediate failure of the exam or quiz
- Possible failure of the course
- Referral for disciplinary action per institutional and program policies
- Repeated or severe violations may result in **dismissal from the program**
- Violations could result in an informal resolution, coaching & formal written warning, corrective action assignment, or immediate permanent dismissal from all health programs (see Academic/Professional Standards Student Incident Report).

Professional Expectations:

As future healthcare professionals, students are expected to demonstrate behavior consistent with the ethical and professional standards of the dental hygiene profession. Failure to comply with program policies reflects unprofessional conduct and may impact academic standing and clinical eligibility.

How Grades are Determined and Major Assignments

The final course grade is to be computed using the following weights.

Evaluation Measure The grade points for the areas of work are as follows.	Student Learning Outcomes Assessed
Test(3)	1-4
Quiz (12)	1-4
Daily Grade	
Homework/Assignments (22)	1-4
Skill Evaluations (7)	2-3
Restorative Observation Paper (1)	1-4
Final Exam (1)	1-4

Skill Evaluations: Rubber Dam Placement/Removal, Sealant application, Alginate Impressions, Casts; trimming and finishing, Athletic Mouthguard fabrication, Bleach Tray fabrication, Zinc Oxide Eugenol Temporary Restoration.

Evaluation Measure Value Student Learning Outcome Assessed
Daily Grade: 5%
Tests: 25%
Homework: 10%
SE (7-8 SE's): 10%
Restorative Observation Paper: 10%
Quizzes (6 quizzes): 20%
Final Exam: 20%

Grading Procedure:

Grades will be calculated on the following scale.

92-100% = A
85-91% = B
77-84% = C
60-76% = D
59% and below = F

Note: Both a "D" and "F" are considered a failing grade, requiring the student to retake the course.

Quizzes (20%):

Quizzes will be taken on blackboard during the student's own time **using Respondus with camera**

The course calendar lists Quiz dates.

Quizzes will open the Monday after lecture at 8am and will be due Wednesday night, by 11:59pm, prior to the next class.

Quizzes will include multiple choice, T/F, matching, slide identification, and case study questions.

0 Any late Quiz will result in a zero

0 If a student fails a Quiz, the original failing grade is the recorded grade.

0 If a failing grade is recorded, students are required to pass the same quiz in order to remain in the course.

0 The retake must be successfully completed within ONE WEEK of receiving the failing grade. It is the **student's responsibility** to set up the retake with the instructor.

0 Any retakes are not recorded in the final grade.

0 After the second attempt, the student must have remediation with the Department Chair prior to the third attempt (within one week).

0 Failure of the third attempt will result in failure of the course.

Tests (25%):

Tests will be taken during class time using Respondus. Tests will include multiple choice, T/F, matching, slide identification, and case study questions.

0 If a student fails a Test, the original failing grade is the recorded grade.

0 If a failing grade is recorded, students are required to pass the same test in order to remain in the course.

0 The retake must be successfully completed within ONE WEEK of receiving the failing grade.

It is the student's responsibility to set up the retake with the instructor.

0 Any retakes are not recorded in the final grade.

0 After the second attempt, the student must have remediation with the Department Chair prior to the third attempt (within one week).

0 Failure of the third attempt will result in failure of the course.

Skill Evaluations (10%):

0 Students must pass all skill evaluations to pass the course.

0 Passing criteria for each skill evaluation is listed on each evaluation. A scale of:

Satisfactory, Improvable, and Unacceptable is used to measure proficiency.

0 If an Unacceptable (U) is given, the student must retake the skill evaluation, regardless of the earned grade.

0 Dental Materials Skill Evaluations: Passing requirements are on each skill evaluation / 3 attempts maximum. Retaken skill evaluations will be subjected to a retake deduction from the earned grade (second attempt-85%, third attempt-77%). Students must pass each skill evaluation by the third attempt in order to pass DHY 150. Students must meet with the course director for supervised practice sessions after failing a second attempt.

Homework (10%):

0 Any late assignment will result in a zero grade.

0 All assignments are required and must be submitted to pass DHY 150 regardless of the earned grade.

0 Assignments must be submitted on blackboard; no emailed assignments will be accepted unless otherwise discussed.

0 Most, if not all, assignments are due the Wednesday before the next class session at 11:59pm.

0 The course calendar will list each homework assignment.

Restorative Observation Paper (10%) is graded according to the attached rubric and handout.

Purpose: To gain a better understanding of restorative dentistry.

Student Instructions: Each student will need to contact a local dentist or their private dentist and schedule a 2-4 hour opportunity to observe clinical restorative dentistry.

The student should:

0 Arrive on time, wearing clean scrubs and name tag.

0 Bring: mask, gloves, gown, face shield, and scrub cap.

0 Be prepared to observe restorative procedures and ask questions of the dentist and/or staff.

0 Student may be asked to sit in on a procedure.

0 Student is NOT able to fabricate or apply dental materials. Students may suction, chart, or assist with other non-invasive procedures.

0 At the end of the observation: Complete the form provided and document/take notes about your observations. Write a report following the rubric and guidelines.

Daily Grade (5%): Pass/fail involving student participation

Final Exam (20%): In-person CUMULATIVE Final Exam

Week	SLO	Topic
1 DATE	1	Topic: Intro to Dental Materials (Quiz 1 due DATE) Read: <u>Chapter 1</u> +homework Lab: Scavenger Hunt/Discussion, <u>Chapter 4</u> homework
2 DATE	2	Topic: Oral Environment and Patient Considerations (Quiz 2 due DATE) BRING TYPODONT TO LAB Readings: <u>Chapters 2 & 3</u> +homework Lab: Physical & Mechanical Properties of DM's, Rubber Dam placement and removal worksheet + typodont practice
3 DATE	1 & 2	Topic: Principles of Bonding, Preventive & Desensitizing Materials (Quiz 3 due DATE) BRING TYPODONT TO LAB Readings: <u>Chapters 7 & 18</u> +homework, SDF application review Lab: <u>SE#1-</u> rubber dam, practice sealant placement *on typodont
4 DATE ALL STUDENTS BOTH LABS!	1&2	Topic: TEST #1 in person at 8am Hydrophobic vs. Hydrophilic Dental Sealant Discussion board NO Quiz Lab: CHECK SCHEDULE!! Place sealants on student partners <u>SE#2-</u> sealants
5 ALL STUDENTS AM LAB ONLY	1&2	Topic: Composites, Glass Ionomers, Compomers & Bioactive Materials (Quiz 4 due DATE) Readings: <u>Chapters 8, 9 & 10</u> +homework Lab: CHECK SCHEDULE!! Place sealants on student partners <u>SE#2-</u> sealants continued (if not yet done)
6 DATE	3	Topic: Dental Amalgams, Metals & Alloys (Quizzes 5 AND 6 due DATE) BRING TYPODONT TO LAB Readings: <u>Chapters 11 & 12</u> +homework(s) Lab: <u>Chapter 5</u> + homework, begin taking impressions on typodonts, (fit partner trays?)
7 DATE	2 & 3	Topic: Dental Implants (Quiz 7 is due DATE) Two lab worksheets due DATE Readings: <u>Chapter 13</u> +homework Lab: <u>Chapters 14 & 17</u> +homework and 2 worksheets (done in lab)
8 DATE	3	Topic: TEST #2 in person at 8am (Quiz #8 (Ch 14/17) due DATE) (quiz will be opened on DATE) Lab: Begin taking alginate impressions on student partners IN CLINIC. Also, practice pouring stone models from these impressions (gypsum lecture is

		week 10) SE#3 begins. Alginate impressions
9 DATE		Restorative Observation Papers are DUE DATE at TIME
10 DATE ALL STUDENTS NEXT AM LAB!	3	Topic: Gypsum & Wax Products (Quiz #9 due DATE) Readings: <u>Chapter 6</u> +homework Lab: alginate impressions, pour up models SE#3 continued- alginate impressions
11 DATE ALL STUDENTS AM LAB TIME	4	Topic: Teeth Whitening- Materials & Procedures (Quiz 10 due DATE) Readings: <u>Chapter 19</u> +homework WHITENING WEBINAR ALL STUDENTS TIME (after lecture) Lab: SE#4 begins- gypsum models

Week	SLO	Topic
12 DATE	4	Topic: TEST #3 in person at 8am (Quiz #11 due DATE) Readings: Preventive & Corrective Oral Appliances <u>Chapter 20</u> +homework Lab: SE#4- gypsum models Begin SE#5 & 6 work
13 DATE	5	Topic: Dental Cements, Provisional Restorations (Quiz #12 due DATE) MUST review pre-read article in Week 14 on Biomimetics Readings: <u>Chapters 16 & 15</u> +homework Lab: SE#4, #5, #6- models, mouthguard, bleach tray *Begin working with cements, ZOE for SE#7
14 DATE	5	Topic: Non-surgical treatment of Oral Disease (biomimetics) & Debonding Orthodontic Resin Discussion/PDF **possible SE on guided enamel repair** Lab: SE#4, #5, #6, #7- models, mouthguard, bleach tray, ZOE Retake SEs if possible
15 DATE	5	Topic: TBD Lab: ALL SE retakes must be completed!
16 DATE	1-5	FINAL EXAM REVIEW

17 DATE		Final Exam: DATE at TIME
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Disclaimer: The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course. Please note that while unlikely, there is a possibility courses might need to change the delivery method due to external issues like public health concerns, weather issues, etc. If this happens, the college will communicate any changes via email and/or other communication methods.