



NEW YORK CITY COLLEGE OF TECHNOLOGY
THE CITY UNIVERSITY OF NEW YORK

RESTORATIVE DENTISTRY DEPARTMENT
285 Jay Street, Room 601, NY, 11021-2983
Telephone: (718) 260-5137; Fax: (718) 254-8557

Date: May 2022

Writing Intensive Portfolio

WAC Co-coordinators:

Samar El Hitti , Associate Professor (Mathematics)

Nina Barnett, Professor (English)

Cover Letter

According to the college course catalog, the Dental Implant Prosthetics-RESA 2416 is listed as a Writing Intensive (WI) course, therefore, I developed the course curriculum to meet the WI requirements. Even though, previously this course contained different types of writing assignments, it was incomplete in achieving this goal. NYCCT requires all associate degree students to pass two WI courses (one in the core curriculum and one in the major), and all baccalaureate degree students to pass four WI courses (two in the core curriculum and two in the major, with two of these passes prior to the completion of 45 credits), therefore making the Dental Implant Prosthetics-RESA 2416 a writing intensive course will fulfil the college requirements.

Students must complete twelve written laboratory informal assignments, based on laboratory procedures and techniques, including the use of different dental implant components and dental materials. They will use the informal written assignments to complete the written laboratory report (essay form) to describe the difference between the screw-retained and cement-retained fixed protheses using dental implants.

The purpose of the laboratory assignments and the written report is to improve students' writing abilities, in addition to the reading and oral communication skills. The written laboratory informal assignments and the written laboratory report represents 5% of the final grade for the laboratory section of this course, as described in the grading rubric for the written laboratory report.

The course goals are to familiarize students with the theoretical clinical and restorative laboratory procedures applied to fabricate different types of dental implant protheses. In addition, the written assignments and written laboratory report will help students to better understand the course materials by using the scaffolding assignments method, where the informal assignments are used to create the written laboratory report.

By participating in the Writing Intensive certification program, I learned the pedagogical strategies which I will apply to enhance students learning experience and improve their lifelong learning abilities.

Thank you for very helpful information and workshops.

Sincerely,

Laura Andreescu, Assistant Professor

Restorative Dentistry Department

Landreescu@citytech.cuny.edu

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Example of Laboratory Informal Assignments

Written Laboratory Report – Formal Assignment

COURSE CODE & TITLE: **RESD 2416 – DENTAL IMPLANT PROSTHETICS**
HYBRID COURSE – SPRING TERM

LECTURE INSTRUCTOR: LAURA ANDREESCU – Assistant Professor
Phone: (718) 260-5137 Email: Landreescu@citytech.cuny.edu
Office hours: A 601
Day: Mondays Hours: 2:00 to 4:00 pm

LAB INSTRUCTOR/S: LAURA ANDREESCU – Assistant Professor
Phone: (718) 260-5137 Email: Landreescu@citytech.cuny.edu
Office hours:
Day: Mondays Hours: 2:00 to 4:00 pm

* RESD 2416 Syllabus Revised 2022 by: L. Andreescu

Office Hours. Students are encouraged to come by or log in, either individually or in groups, to discuss assignments, clarify class topics or problems, share ideas and concerns, review tests, or address any other matters that might be helpful. Office hours held by faculty are specifically offered for student use and are an important part of student's education.

COURSE DESCRIPTION:

RESD 2416 is an introduction to the theory and practices of fabricating dental implant prosthetics. The course explores the diverse implant systems that are currently available as it pertains to fabrication, implant system considerations, osseointegration, material selection and final dental restoration(s). The student will gain an understanding behind the necessary preliminary dental procedures/appliances (before the implants are inserted), the selection between screw-retained vs. custom implant abutments and implant bars vs. attachments, different types of implants systems and their components, materials used for restoration(s) and their properties, CAD/CAM systems and their applications to fabricate dental implant prostheses, such as: for fixed restorations or for removable restorations.

This course meets the standards of a WI (Writing Intensive) course as specified by CUNY. NYCCT requires all associate degree students to pass two WI courses (one in the core curriculum and one in the major), and all baccalaureate degree students to pass four WI courses (two in the core curriculum and two in the major, with two of these passes prior to the completion of 45 credits). The Writing Intensive requirements includes 12 non-graded informal assignments leading to 1 formal graded assignment, for the purpose of developing students' writing skills including using technical vocabulary and term definitions related to the fabrication of different types of dental implant prosthesis.

CLASS CREDITS: 3 credits

CLASS HOURS: 1-hour synchronous online lecture per week; minimum of 2 visits in Blackboard/week
6-hours in-class laboratory per week

NUMBER OF WEEKS: 15 Weeks

CURRICULUM LEVEL: Fourth Semester

PREREQUISITES: Completion of RESD 2307, RESD 2310, RESD 2314

COURSE REQUIREMENTS: Standard department and college regulations

Proper uniform and conformity to safety regulations

<http://www.citytech.cuny.edu/academics/academic-catalog.aspx>

Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live.

QUIZZES AND EXAMINATIONS:

Students are responsible for knowing all lecture and laboratory sections material covered in reading assignments, handouts, and other instructional materials.

HYBRID/ONLINE COURSES:

Information related to City Tech hybrid and online education, and student workshops can be found directly on course Blackboard.

HYBRID/ONLINE PARTICIPATION:

Academic

The lecture sessions will be conducted virtually in Blackboard.

Laboratory sessions will be conducted in-class, every week, as per City Tech calendar

Students are expected to contribute regularly and complete all assigned work before or on the due date. Questions should be directed to the instructor.

ASSIGNMENT/ASSESSMENTS/POSTS SUBMITTED PAST DUE DATES WILL RECEIVE FAILING GRADE

TEXTBOOK(S):

1. *Dental laboratory technology: basic sciences, removable prosthodontics, and orthodontics. (2005). Air Force Pamphlet 47-103, Vol. 1.*
2. *Dental laboratory technology: fixed and special prosthodontics. (2005). Air Force Pamphlet 47-103, Vol. 2.*
3. *Dental Implant Prosthetics: 2nd edition. Carl E Misch. 2014 Elsevier Publishing. (THIS BOOK IS AVAILABLE IN HARD COPY IN THE LIBRARY)*
4. *References are available on each presentation posted on the blackboard.*

ADDITIONAL READING MATERIALS:

1. *Philips Science of Dental Materials, (2012), 12th edition, Anusavice, K., Shen, C., Rawls, H., Phillip's. Elsevier Publishing, St Louis, Mo.*

WEB REFERENCES:

<http://www.ada.org/index.asp>

<http://www.dentaladvisor.com/>

<http://www.lmtcommunications.com/>

<http://www.dentalaegis.com/idt/>

<http://www.nadl.org/jdtunbound/archives.htm>

Electronic Journals in NYCCT Library. <http://library.citytech.cuny.edu/>

VIDEOS: Instructional videos or video links posted on Blackboard

POLICIES

ACADEMIC INTEGRITY

CUNY Policy on Academic Integrity

Academic dishonesty is prohibited in The City University of New York. Penalties for academic dishonesty include academic sanctions, such as failing or otherwise reduced grades, and/or disciplinary sanctions, including suspension, or expulsion.

Source: NYCCT College Catalog: <http://www.citytech.cuny.edu/academics/academic-catalog.aspx>

NYCCT Academic Integrity

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity.

Source: NYCCT College Catalog: <http://www.citytech.cuny.edu/academics/academic-catalog.aspx>

RESTORATIVE DENTISTRY

All Restorative Dentistry students must submit completed assignments or projects (in lab or theory) by the assigned due date as stated in the course outline. Plagiarism in lecture or laboratory assignments, exams or projects will not be accepted. Student will not receive a grade if papers or assignments were done by someone else. The department will adhere and follow the Academic Integrity Policy and Procedures as per NYCCT & CUNY Policies. Students are responsible for knowing all material covered in reading assignments and handouts for both lecture and laboratory. Students are responsible for knowing information from reading assignments regardless of whether it has been covered during class sessions or not. RESD students are responsible for being in class on time and for participation in laboratory demonstrations. Failure to observe laboratory demonstrations may affect student's performance and contribute to the failure of the course.

REASONABLE ACCOMMODATIONS:

Qualified students with disabilities, under applicable federal, state and city laws, seeking reasonable accommodations or academic adjustments must contact the Center for Student Accessibility for information on City Tech's policies and procedures to obtain such services. Students with questions on eligibility or need for temporary disability services should also contact the Center at:

The Center for Student Accessibility, 300 Jay Street room L-237, 718 260-5143,

<http://www.citytech.cuny.edu/accessibility>

ATTENDANCE

NYCCT Attendance & Lateness

Attendance and class participation are essential and excessive absences may affect the final grade. Courses with laboratory, clinical or field work may have specific attendance policies.

Source: NYCCT College Catalog: <http://www.citytech.cuny.edu/academics/academic-catalog.aspx>

RESTORATIVE DENTISTRY PROFESSIONALISM & PARTICIPATION

The Department of Restorative Dentistry follows NYCCT, CUNY and Dental Laboratory Technology industry standards in order to educate, develop, advance and guide future dental technology professionals, preparing graduates for workplace readiness. In order to successfully complete Restorative Dentistry courses, students must consistently participate in classes and meet deadlines as stated in course syllabus.

To successfully complete Restorative Dentistry curriculum the students are required to observe course instructor's demonstrations and complete all fabrication tasks under course instructor's supervision. Classes will begin promptly at the scheduled time. Laboratory demonstrations are usually conducted at the beginning of the session and cannot be redone for the convenience of a student who arrives late or is absent. When student is given instructor's permission to leave the class, the student will return to class in a reasonable time.

Students enrolled in RESD course must meet all course requirements as stated in course syllabus in order to pass it. RESD students must complete required assignments, tasks, projects and exams by specified due dates. Failure to submit or complete the assignment, tasks, projects or exam by specified due dates will result in a zero (0) grade and possible failure of the course. It is strongly advised that students are present for all classes during the semester including 30 laboratories and 15 lectures.

GRADING

Restorative Dentistry courses include didactic or didactic and laboratory sections which are graded accordingly. In didactic and laboratory sessions, the final grades will be computed based on grading included in course syllabus. Most courses are graded based on 60% of the laboratory and 40% of the lecture grades. Student must achieve a passing grade of at least 70% in the laboratory and at least 70% in the lecture sections of the course in order to receive the minimum passing grade of "C" for the entire course. Failure to meet the minimum of 70% average in either component of the course confirms that the student has not met the minimum requirements for successful completion of the course and a grade of "D" or "F" will be given based on student's performance in the failing section of the course. RESD student is required to repeat any RESD course for which he/she receives a grade below minimum of "C". For courses with laboratory and lecture components, the student needs to repeat both, the lecture and the laboratory sections, even though

the score in one of the sections may have been greater than 70%. RESD students will participate in the end of semester clean-up of the Restorative Dentistry dental laboratories. The date of final cleanup will be announced in advance. For students who are absent during final clean up, 5% of final grade will be deducted.

COLLEGE GRADING SCALE

A	=	93- 100%
A-	=	90-92.9%
B+	=	87-89.9%
B	=	83-86.9%
B-	=	80-82.9%
C+	=	77-79.9%
C	=	70-76.9%
C-	=	60-69.9%
F	=	59.9% and below

SATISFACTORY PROGRESS

Students are expected to maintain 2.0 G.P.A. or higher in all classes. Students who's cumulative G.P.A. fall below the minimum 2.0 G.P.A. will be placed on academic alert or academic probation by the College. Students on academic probation may be subject to attempted credit restrictions which can affect progress in taking all courses needed for a semester. Failure to raise cumulative G.P.A. to the appropriate level could result in dismissal from the College. Any students receiving a grade of "D" or "F" in a RESD courses will be required to repeat that course. RESD course may only be repeated once. Failure to satisfactorily complete a repeated RESD course will be considered failure to maintain satisfactory progress in the major and will result in dismissal from the major.

PROFESSIONALISM & ETHICS

1. Since practice of dentistry carries with it a high degree of responsibility, a mature, professional, and ethical conduct is expected of all students at all times (lecture & laboratory sessions, hybrid & online sessions, externship sites, professional events/seminars, etc.). Unprofessional behavior that shows inattentiveness and disrespect for others will be taken into consideration during the grading process. Points may be deducted at the discretion of any faculty member regardless of what course is in session. This includes incidents in the hallways, by lockers, or anywhere on NYCCT campus. Students will conduct themselves in a professional manner. No horseplay, offensive language, shouting or any other misconduct will be allowed.
2. Netiquette: Online Etiquette-Students will conduct their online posts and replies with respect for others, which include courtesy, dignity, and appropriate language at all times. Inappropriate behavior of any kind in online settings will not be tolerated and will negatively affect student's grade.
3. All faculty members will be addressed by their proper title.
4. Students are required to use proper dental terminology when discussing dental prosthesis.
5. Students are to have all required instruments and supplies when attending laboratory sessions.
6. Students are not permitted to do other students' work although assistance and teamwork are strongly encouraged.
7. All electronic devices must be turned off during all RESD classes unless otherwise specified by the instructor.
8. Each RESD student will be assigned a locker in the beginning of each semester and will vacate the locker by the last day of the semester. If the locker is not returned back in clean condition by the end of the semester, the locker will be broken by CLT. The student will not receive another locker the next semester.
9. Students should make arrangements to attend all department events and professional development seminars in which an invitation is extended. Students are strongly encouraged to attend events, professional development seminars and meetings sponsored by the department to elevate their knowledge, skills and understanding of the field of study.
10. Department offices and stock rooms contain sensitive and personal information, classroom materials, supplies and equipment, and should be used for official use only. Students and unofficial personnel should not be allowed in the department offices unless to fulfill official business.

DRESS, SUPPLIES & TEXTBOOKS

1. Laboratory smocks (lab coats) with Restorative Dentistry Department emblem must be worn at all times in the laboratory. Emblems are to be attached to the left breast pocket. Smocks must be clean and kept completely

buttoned or tied when worn. Failure to wear smocks will necessitate students being barred from laboratory and marked absent.

2. Closed-toe shoes are required while working in the laboratory.
3. No hats/caps of any type are to be worn in the laboratories. (*Except for religious reasons*)
4. Students must purchase and have in their possession the required tools, supplies, PPE and textbooks by the 2nd week of scheduled classes. A list of all course materials will be available in the department's main office or in CLT's office. All personal tools should be clearly labeled with student's name.
5. Students should acquire required textbooks for each course and are expected to read assigned pages and review procedures *prior* to attending lecture and laboratory classes. The list of required textbooks will be listed in all course syllabi.
6. RESD students are responsible for their belongings at all times. Restorative Dentistry Department does not take responsibility for left over items.

HEALTH & SAFETY

1. No eating, drinking or smoking is permitted in laboratories or classrooms.
2. No electronic devices (i.e. phones, headphones, computers or tablets) will be permitted in the laboratories or classrooms unless requested for classroom use by the instructor.
3. No outerwear, shopping bags, attaché cases, luggage etc., are permitted in laboratories.
4. Bunsen burners when lit are a potential danger. Bunsen burners must be turned off when you leave your bench. Long hair and hair spray are flammable items. Pay particular attention to any Bunsen burner flame. Do not lean over the open flame.
5. Chucks must be securely placed onto bench engine shaft to avoid chuck flying off when engine is turned on.
6. Boiling water can result in serious burns. Extra caution should be taken when boiling out or using boiling water.
7. Burnout furnaces and porcelain furnaces are potentially dangerous. Tongs should be used when picking up hot casting rings or ceramic work.
8. Students with long hair must wear a hairnet or tie back their long hair to prevent accidental burning from Bunsen burners or other serious accidents. Hair can easily get caught in hand piece or lathe.
9. Safety eyeglasses must be worn by all occupants of the laboratory while any procedures are being conducted that produce dust or airborne particles. Safety eyeglasses with side shields may be obtained from a hardware store. They are essential to the students' safety.
10. Eye protection measures should be taken when working with curing lights, lasers, and heating or melting metal.
11. Proper mask (N95) should be worn when grinding metals, ceramics, and acrylics or when using materials creating dust.
12. Students not enrolled in a RESD course, from this and other departments, will not be permitted to visit during laboratory sessions.
13. Students will not use any equipment until demonstrated by the instructor.

CLEANLINESS

1. Students must have a plastic place mat to protect bench top during laboratory sessions.
2. Students are required to clean-up working areas and equipment at the conclusion of any procedure. Timely clean-up is important to prepare the area for the next student and ensure equipment remains in working order. Especially important is that stone or investment is not allowed to harden in the sinks, in the mixing bowls or in contact with the equipment.
3. Each student is required to leave workstation spotless by removing all debris, papers, wax, plaster, etc. from drawers, workstation tops and floors in the immediate vicinity of the seat before leaving.
4. Each student is assigned responsibility for maintaining the cleanliness of an area used in common by all members of the class.
5. Equipment such as duplicating flasks, articulators or any other equipment that belongs to the department and is used by the student during the laboratory session or during the entire semester must be returned clean and in good working condition otherwise the student is financially responsible for repaying broken or missing equipment, and hold may be placed throughout CUNY system for registration to any courses until the payment is made.

ELECTRONIC DEVICES: Cell phones, pagers, iPods, and all other electronic devices must be turned off during all DLT classes.

ONLINE CLASS TECHNOLOGY PREREQUISITES

Below are the suggested minimum prerequisites for taking part in an online course:

1. You should have access to and be able to use the internet browser
2. You will need an email account and should be comfortable using it. The college provides an email account to all students.
3. You need access to a computer with Internet connection; computers with internet access are available in numerous locations throughout the college (i.e. Library, Computer Lab G600, etc.)

HELPFUL INFORMATION ON HOW TO ACCESS & NAVIGATE BLACKBOARD:

1. Visit Student Welcome Center in the Library Building on the first floor to seek assistance with Blackboard set up, password and access issues, etc.
2. Visit the student computer lab in the General Building, sixth floor, room G600.
The phone number for the lab is (718) 254-8565.
3. Refer to Websupport 1 for a “Beginners Guide to Blackboard.” To enter this site:
 - a. Access link: <http://websupport1.citytech.cuny.edu/studentbb.html>
 - OR**
 - b. City Tech Home Page - Quick Links - Helpful Links - Websupport 1 - Tutorials and Handouts - Beginners Guide to Blackboard Course Info
4. College provides numerous student Blackboard training sessions throughout the semester
5. Use the description of the navigation of the RESD course located on the Blackboard site:

ANNOUNCEMENTS - Entry point. Announcements will allow communication between instructor and student. The student should have clear instruction posted here about each lecture or lab, project, exam, emergency, etc. Students need to check announcements regularly. In asynchronous class (one that is not offered in real time) students need to check announcements regularly and complete assignments in timely manner to comply with set deadlines.

FACULTY CONTACT INFO AND OFFICE HOURS - information about course coordinator, lecture instructors and lab instructors for all sections of the course (i.e. phone, email, office location and so on). Online classroom is open 24 hours a day, 7 days a week. So, if student wants to ask the coordinator/instructor a question, he/she can email or post it in discussion board it at any time. To discuss matter with the entire class, the student should post the question in designated Forum in Lecture/Lab Discussion section.

COURSE DOCUMENTS - includes syllabus, calendars with deadlines to complete the projects in lab or lecture portion of the course.

WEEKLY LEARNING MODULES: includes lecture materials for each one of 15 lectures, i.e., power point presentations, articles, handouts, and videos related to specific to each lecture topics, recorded lecture materials, assessments, and exams, etc.

LABORATORY MATERIALS– includes laboratory documentation to be fulfilled in each of 15 lab sessions i.e., instructions related to laboratory procedures and equipment, videos, lab notes, handouts, grading sheets, recorded laboratory materials, assessments, and exams, etc.

*JOIN COLLABORATE ULTRA: platform on Blackboard to meet for live sessions

DISCUSSIONS– location of questions/comments, replies to questions /comments, assignments, essays, etc.

BOOKS – location of electronic books and handouts available for students use i.e., AFP

TOOLS - tools for updating personal information, checking your grades, and exchanging word processing files with classmates and instructor via the Digital Drop Box

HELP - tips about how to work online in Blackboard environment and beyond.

COURSE LEARNING OBJECTIVE:

Upon successful completion of the course each student should be able to:

1. Infection control protocols in handling and processing implant cases
2. Clinical and ethical considerations for potential dental implant restorations patients
3. Fabricate the implant soft tissue model and mount the case using semi-adjustable articulator
4. Learn difference between ARCON and NON-ARCON articulators and their use

5. Identify different types of implant systems, based on the implant positioning into the bone
6. Wax and process provisional anterior multi-unit restoration
7. Fabricating surgical guide using preliminary model (wax anterior missing teeth and single posterior missing teeth)
8. Duplicate complete denture, using duplicating jig and fabricate radiographic stent used in preliminary work to determine the quality of bone during the CAT scan
9. Wax, sprue, and press ceramics for single screw-retained restorations
10. Design and establish parallelism and path of insertion for individual custom abutments, which will be used to fabricate multiple unit provisional anterior restoration using a surveyor
11. Identify and purpose of verification jig for fixed restorations
12. Identify the physical properties of dental implants and dental implants prostheses
13. Learn difference between fixed and removable restorations and how the dental implants are used in both cases
14. Identify different types of dental implant components, such as: (1) for fixed restorations impression copings, guide pins, UCLA abutments, prefabricated and custom abutments; Titanium-bases (engaging, non-engaging, multi-unit, angulated, angulated screw channel; (2) for removable: impression copings, position locators, different types of abutments, such as: ball, multi-unit, angulated, etc., retention O-rings and their use
15. Learn the function and design of bar substructure for retention element for complete dentures, including verification jigs and soldering the bar substructure
16. Identify the CAD/CAM components in fabricating the dental implant restorations, such as: hardware, software, licensing, different applications, establish the correct order, scanning, designing, and manufacturing using milling and 3D printing
17. Identify digital implant components, such as: scan bodies/position locators for each implant systems and their sizes and applications
18. Identify the dental materials and their properties used to fabricate dental implant restorations using the analog and digital methods
19. Learn the social and environmental responsibility in using dental implants fabrication and applications

GENERAL EDUCATION LEARNING GOALS:

Writing – Students will write 12 informal laboratory assignments, based on the laboratory procedures and techniques, including the use of different dental implant components and dental materials. Students will use the informal written assignments to complete the Written Laboratory Report (essay form) to describe the difference between the screw-retained and cement-retained fixed prostheses using dental implants.

Reading – Students will be required to read literature on the theory and practice of fabricating dental prosthesis. Assignments will be given to aid in the comprehension and retention of information from assigned readings. Utilizing resources on critical reading strategies, students will accomplish a critical reading assignment stated in the previous goal.

Oral communication – Students will be required to develop a professional vocabulary utilizing appropriate dental terms in communicating with fellow students and instructors.

COURSE ASSESSMENT OF GENERAL EDUCATION STUDENT LEARNING OUTCOMES:

The instructor will evaluate the students' achievement of the learning outcome by:

1. Review – students' abilities to follow instructions for completing all laboratory projects by regularly evaluating various stages of their projects
2. Written and online examinations – quiz, midterm, online assignments, and final examinations containing multiple choice, and informal laboratory assignments leading to the completion of the written laboratory report (formal graded assignment).

COURSE EXAMINATIONS and ASSIGNMENTS:

Lecture section(s): The exams and quizzes will account for 40% of the final grade of RESD 2416. Students are responsible for knowing all material covered in reading assignments, handouts, lecture, and laboratory. Students are responsible for knowing information from reading assignments regardless of whether it has been covered during class sessions or not.

Laboratory section(s): Students are responsible for completing all the laboratory’s projects and the Laboratory Report to earn the 60% portion of the overall grade. There are 12 Informal Assignments (one page/assignment) that will be carried in-person and they are non-graded. The purpose of these informal assignments is to prepare students for developing and completing the Written Laboratory Report (at least 3 pages), which is due at the end of the semester, and it is 5 points.

The purpose of the Laboratory Report is to teach students the different types of dental restorations using dental implants, including: the design and methods of fabrication, including indications and contra-indications, and to prepare students for the Recognized Graduate Examination, which is the first step in obtaining their certification as Certified Dental Technician, organized and administered by the National Board of Certification for Dental Laboratory Technology.

LECTURE ONLINE ASSIGNMENTS CRITERIA: Lecture 40% of total course grade

Quiz # 1 Online _____	20 points
Midterm Online Examination _____	30points
Quiz # 2 Online _____	20 points
Final Online Examination: _____	30 points
TOTAL LECTURE _____	100 points

Students must achieve a passing grade of at least 70% in the Lecture section to pass the class.

LABORATORY IN-PERSON ASSIGNEMENTS CRITARIA: Laboratory 60% of total course grade

1. Fabrication of provisional bridge (# 9-# 11) _____	10 points
2. Fabrication of surgical guide for # 9 & # 11 _____	10 points
3. Fabrication of final casts & mounting the case _____	15 points
4. Fabrication of custom abutments # 9 & # 11 & adaptation of provisional bridge restoration _____	30 points
5. Fabrication of screw retained # 14 _____	20 points
6. Computer Assisted Design # 14 – 3 Shape system _____	10 points
7. Written Informal Assignments _____	0 points
8. Written Laboratory Project (formal assignment) _____	5 points
TOTAL LABORATORY _____	100 points

Students must achieve a passing grade of at least 70% in the Laboratory section to pass the class.

STUDENTS EVALUATIONS include:

Evaluating students’ ability to communicate at professional level using dental technology vocabulary and terminology.

Evaluating students’ class participation and extra-credit assignments (if available).

Each student’s performance will be assigned a conventional letter grade, as follows:

- A = 93- 100%
- A- = 90-92.9%
- B+ = 87-89.9%
- B = 83-86.9%
- B- = 80-82.9%
- C+ = 77-79.9%
- C = 70-76.9%
- D = 60-69.9%
- F = 59.9% and below

LABORATORY PORTION _____	60%
LECTURE PORTION _____	40%
TOTAL FINAL GRADE FOR RESD 2416 _____	100%

*** Final grade will be computed on the basis of 60% of laboratory grade, 40% of lecture examination grades.**

Each student’s performance will be assigned a conventional letter grade. The student must pass all 2 parts of the course in order to complete the course.

RESD 2416 - DENTAL IMPLANT PROSTHETICS COURSE - SPRING 2022
TENTATIVE SCHEDULE – SUBJECT TO CHANGES

*Please log in to your blackboard regularly and check for announcements and assignments
 **students are responsible to log in on time for all assessment and examinations.
 ***students must complete their written examinations and online assignments on time and follow the RESD 2416 - dental implants course calendar for receiving full credit. furthermore, the students should follow the required readings mentioned schedule calendar, as follows:

LECTURE SESSIONS	LECTURE ASSIGNMENTS	LECTURE READING MATERIAL
ONLINE SESSION 1	PART I – Preliminary work Lecture 1: Introduction to Dental Implant Prosthetics and History of Dental Implants	Reading assignments: 1. Air Force Pamphlet, Vol 2, pg. 196 - 198 2. Dental Implant Prosthesis-Carl E. Misch, Chapter 1 3. Phillips Science of Dental Materials – Chapter 20 pg. 499-501
ONLINE SESSION 2	Lecture 2: Clinical Aspects and Dental Implants Classifications	Reading assignments: 1. Air Force Pamphlet, Vol 2, pg. 197-199 2. Dental Implant Prosthesis-Carl E. Misch, Chapter 11, 16 3. Phillips Science of Dental Materials – Chapter 20, pg. 501-505
ONLINE SESSION 3	Lecture 3: Dental Clinical Implant Components and Restorative Implant Components	Reading assignments: 1. Air Force Pamphlet, Vol 2, pg. 196 2. Dental Implant Prosthesis-Carl E. Misch, Chapter 3, 11 3. Phillips Science of Dental Materials – Chapter 20, pg. 505-507
ONLINE SESSION 4	Lecture 4: Diagnostic models, surgical guides, and radiographic template * Review for Quiz # 1	Reading assignments: 1. Air Force Pamphlet, Vol 2, pg. 196, 199 2. Air Force Pamphlet, Vol 1, Chapter 5, Chapter 7, Section 7AK. 3. Dental Implant Prosthesis-Carl E. Misch, Chapter 3, 5, 11
ONLINE SESSION 5	QUIZ # 1 – 20 points	Online – Blackboard Quiz #1
ONLINE SESSION 6	Lecture 5: Provisional Restorations	Reading assignments: 1. Air Force Pamphlet Vol.2 Chapter 1 Section 1E, and pg. 206 -208 2. Dental Implant Prosthetics, Carl E. Misch Chapter 26
ONLINE SESSION 7	PART II – Final Prosthesis Lecture 6: Fabricating the Master Cast and Articulating the case * Review for Midterm Exam	Reading assignments: 1. Air Force Pamphlet Vol.1 Section 6A 2. Air Force Pamphlet Vol.2 Section 1G, and pg. 206 3. Dental Implant Prosthetics, Carl E. Misch – Chapter 24, and pg. 463-466
ONLINE SESSION 8	ONLINE MIDTERM EXAMINATION – 30 points	Online – Blackboard Midterm Exam
ONLINE SESSION 9	Lecture 7: Fixed Prosthesis – Cement-retained prosthesis	Reading assignments: 1. Air Force Pamphlet Vol.2, pg. 208-210 2. Dental Implant Prosthetics, Carl E. Misch, Chapter 16, 18, 23
ONLINE SESSION 10	Lecture 8: Fixed Prosthesis - Screw-retained prosthesis	Reading assignments: 1. Air Force Pamphlet Vol.2, pg. 209 – 213 2. Dental Implant Prosthetics, Carl E. Misch Chapter 24
SPRING RECESS		

ONLINE SESSION 11	Lecture 9: Removable prostheses - Bar and clip overdenture * Review for Quiz # 2	Reading assignments: 1. Air Force Pamphlet Vol.1, Section 7 E, 7 H, 7 I 2. Air Force Pamphlet Vol.2, pg. 214 – 217 3. Dental Implant Prosthetics Carl E. Misch Chapter 14, 15, 17, 18
ONLINE SESSION 12	QUIZ # 2 – 20 points	Online – Blackboard Quiz #2
ONLINE SESSION 13	Lecture 10: Removable prostheses – attachments supported overdenture	Reading assignments: Dental Implant Prosthesis-Carl E. Misch, Chapters 3, 14, 15
ONLINE SESSION 14	Lecture 11: a. Clinical and Restorative Biomechanics in Implant Dentistry b. Biomaterials Used in Implant Dentistry * Review for Final Exam	Reading assignments: 1. Dental Implant Prosthetics Carl E. Misch Chapter 19 2. Philips’ Science of Dental Materials – Chapter 20 pg. 510-515, 515-517
ONLINE SESSION 15	ONLINE FINAL EXAMINATION – 30 points	ONLINE FINAL EXAM

* Instructors strongly encourages the students to ask or email questions and make comments, as well as discuss their own ideas.

RESD 2416 – TOPICS FOR EXAMS

ONLINE QUIZ #1 – 20 points

1. Dental Implants definitions, key terms
2. History of Dental Implants
3. Clinical Aspects and Dental Implants Classifications
4. Dental Clinical Implant Components and Restorative Implant Components
5. Diagnostic models, surgical guides, and radiographic templates

ONLINE MIDTERM – 25 points

1. Provisional Restorations
2. Master cast types and fabrication
3. Case articulation, including the face bow

ONLINE QUIZ # 2 – 20 points

1. Fixed Prostheses - Cement-retained prosthesis
2. Fixed Prostheses - Screw-retained prostheses
3. Removable prostheses - Bar and clip overdenture

ONLINE FINAL: 25 points

1. Removable prostheses – attachments supported overdenture
2. Biomechanics of dental implants and prostheses
3. Biomaterials for dental implants and protheses

RESD 2416 – DENTAL IMPLANT PROSTHESES - LECTURE OUTLINE

LECTURE 1 – Blackboard - Introduction to Dental Implant Prosthetics and History of Dental Implants - 1 LECTURE HOUR

1. Air Force Pamphlet, Vol 2, pg. 196
2. Dental Implant Prosthesis-Carl E. Misch, Chapter 1
3. Phillips Science of Dental Materials – Chapter 20

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments, on the definition of dental implants, key terms, and history

Performance: Students should be able to describe:

1. Dental Implants definitions, key terms
2. History of Dental Implants

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE 2 – Blackboard - Clinical Aspects and Dental Implants Classifications - 1 LECTURE HOUR

1. Air Force Pamphlet, Vol 2, pg. 196
2. Dental Implant Prosthesis-Carl E. Misch, Chapter 11, 16
3. Phillips Science of Dental Materials – Chapter 20

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments, on the clinical aspect of dental implants, the treatment plans and dental implant classification

Performance: Students should be able to describe:

1. Preimplant clinical considerations
2. Types of implant surgeries
3. Classification and Treatment Plans for Partially and Completely Edentulous Arches
4. Dental implant classification

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE 3 – Blackboard - Dental Clinical Implant Components and Restorative Implant Components - 1 LECTURE HOUR

1. Air Force Pamphlet, Vol 2, pg. 196
2. Dental Implant Prosthesis-Carl E. Misch, Chapter 3, 11
3. Phillips Science of Dental Materials – Chapter 20

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments on the dental clinical implant components and restorative implant components

Performance: Students should be able to describe:

1. Define the different components and types of the implants: fixture (body), platform, abutments
2. Explain the different types of abutments and the abutments' parts
3. Define the different types of dental implant prostheses
4. Define the restorative implant components, such as: impression copings, analogs, screws, guide pins, etc.

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE 4 – Blackboard - Quiz #1 Online 20 points - 1 LECTURE HOUR

LECTURE 5 – Blackboard – Fabrication of Diagnostic casts, Radiographic Templates and Surgical Guides -1 LECTURE HOUR

1. Air Force Pamphlet, Vol 2, pg. 196, 199
2. Air Force Pamphlet, Vol 1, Chapter 5, Chapter 7, Section 7AK.
3. Dental Implant Prosthesis-Carl E. Misch, Chapter 3, 5, 11

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments on fabricating diagnostic casts

radiographic templates and surgical guides

Performance: Students should be able to describe:

1. Describe the purpose and the process of fabricating diagnostic casts
2. Describe the purpose and the process of fabricating radiographic templates
3. Describe the purpose and the process of fabricating surgical guides

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE 6 – Blackboard – Types and fabrication of provisional restorations - **1 LECTURE HOUR**

1. Air Force Pamphlet Vol.2 Chapter 1 Section 1E, and pg. 206 -208
2. Dental Implant Prosthetics, Carl E. Misch Chapter 26

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments on different types and fabrication of provisional restorations

Performance: Students should be able to describe:

1. Describe the process of fabricating provisional restoration for a single-tooth, cement-retained implant
2. Explain the direct and indirect methods of fabricating provisional restorations
3. Describe the process of fabricating provisional restoration for screw-retained implant
4. Describe the Vacuum-Forming Methods
5. Describe the Alginate Impression Template Method
6. Describe the Silicone Template Method
7. Explain the different types of provisional restorations for fixed and removable prosthesis

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE 7 - Blackboard - Fabricating the soft-tissue master cast and articulating the case - **1 LECTURE HOUR**

1. Air Force Pamphlet Vol.1 Section 6A
2. Air Force Pamphlet Vol.2 Section 1G, and pg. 206
3. Dental Implant Prosthetics, Carl E. Misch – Chapter 24, and pg. 463-466

Condition: Given a lecture and discussion using slides, visual aids, and reading assignments on different types of master casts for dental implant cases, fabrication and articulating the case, using face bow and bite registration

Performance: Students should be able to describe:

1. Describe different types of master casts based on the fixed or removable type of prostheses
2. Describe the fabrication of soft-tissue master cast, including closed and open tray impressions and the role of impression copings and analogs
3. Describe different types of articulators and how they work, including arcon and non-arcon
4. Describe the articulation process

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE # 8 – Blackboard - MIDTERM EXAMINATION -ONLINE – 30 points - 1 LECTURE HOUR

LECTURE # 9: Blackboard - Fixed Prosthesis - Cement-retained restorations – **1 LECTURE HOUR**

1. Air Force Pamphlet Vol.2, pg. 208-210
2. Dental Implant Prosthetics, Carl E. Misch, Chapter 16, 18, 23

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments on different types of fixed prosthesis for cement-retained restorations, purpose, indications, advantages, and disadvantages

Performance: Students should understand and be able to:

1. Describe three methods to fabricate a cement-retained, single-tooth implant: (1) a ceramic cap restoration, (2) a gold cylinder restoration, and (3) a burnout cap restoration
2. Explain the purpose of one-piece and two-piece abutment for cement-retained restorations

3. Describe the factors affecting the abutments' retention
4. Describe the process of abutment preparation
5. Describe the fixed prosthesis design
6. Explain the options for partially edentulous anterior maxilla
7. Explain the options for partially edentulous mandibula

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE 10: Blackboard - Fixed Prosthesis - Screw-retained restorations– 1 LECTURE HOUR

1. Air Force Pamphlet Vol.2, pg. 209 – 213
2. Dental Implant Prosthetics, Carl E. Misch Chapter 24

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments on different types of fixed prosthesis for screw-retained restorations, purpose, indications, advantages, and disadvantages

Performance: Students should understand and be able to describe:

1. Explain the procedures for screw-retained restoration fabrication methods, such as: Screw-Retained - Cast-To Substructure, and Screw-Retained - Castable Substructure
2. Describe the indications, advantages, and disadvantages of screw-retained restorations
3. Describe the factors that influences screw loosening

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

SPRING RECESS

LECTURE 11- Blackboard – Removable prosthesis - Bar and clip overdenture -1 LECTURE HOUR

1. Air Force Pamphlet Vol.1, Section 7 E, 7 H, 7 I
2. Air Force Pamphlet Vol.2, pg. 214 – 217
3. Dental Implant Prosthetics Carl E. Misch Chapter 14, 15, 17, 18

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments on the Removable Prosthesis using Bar and Clip retention for Overdentures

Performance: Students should understand and be able to:

1. Describe the need for the bar substructure and its elements
2. Explain different cases, based on implant location and number when this procedure is used
3. Describe the bar fabrication
4. Describe the different types of clips, their elements, and their retention
5. Explain the measurement requirement for fabricating bar with clip overdentures
6. Describe the different treatment options

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE 12- Blackboard – Quiz # 2 Online – 20 points - 1 LECTURE HOUR

LECTURE 13 – Blackboard –Removable prosthesis – attachments supported overdenture – 1 LECTURE HOUR

1. Dental Implant Prosthesis-Carl E. Misch, Chapters 3, 14, 15

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments on the Removable Prosthesis using Attachments (“O” ring) retention for Overdentures

Performance: Students should understand and be able to:

1. Describe the need for the locator attachments and its elements for overdenture retention
2. Explain different types of design, based on implant location and number when this procedure is used
3. Describe the advantages and disadvantages of the “O” ring system
4. Describe the different materials used for “O” rings
5. Explain the measurement requirement for using the overdenture attachments for retention
6. Describe the different treatment options and the procedural overview

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

LECTURE 14 – Blackboard - Clinical and Restorative Biomechanics in Implant Dentistry and Biomaterials Used in Implant Dentistry - 1 LECTURE HOUR

1. Dental Implant Prosthetics Carl E. Misch Chapter 19
2. Philips’ Science of Dental Materials – Chapter 20 pg. 510-515, 515-517 - 1 LECTURE HOUR

HOURLY

Conditions: Given a lecture and discussion using slides, visual aids, and reading assignments on Clinical and Restorative Biomechanics in Implant Dentistry and Biomaterials Used in Implant Dentistry

Performance: Students should understand and be able to describe:

- a. Describe the oral forces and how they are influencing the implant osteointegration process (clinical)
- b. Describe the oral forces and how they are influencing the design and function of the prosthesis (restorative)
- c. Describe the properties of biomaterials used in dental implantology and restorative aspect

Extent & Criteria: With at least 70% accuracy at the end of one lecture hour

Lecture 15: Blackboard- Final Examination Online – 30 points - 1 LECTURE HOUR

RESD 2416 LAB SESSION SCHEDULE:
(Tentative Schedule, subject to change)

LAB SESSIONS	TOPIC	GRADING
1-4	1. Fabrication of provisional bridge (# 9-# 11) 2. Grading the Provisional Bridge 3. Informal assignments in-person non-graded (one page/assignment)	10 points
5-8	1. Fabrication of surgical guide for # 9 & # 11 2. Grading the Surgical Guide 3. Informal assignments in-person non-graded (one page/assignment) 4. Review student’s progress for the Laboratory Report	10 points
8-13	1. Fabrication of final casts & mounting the case 2. Grading Model Work and Mounting the Case 3. Informal assignments in-person non-graded (one page/assignment) 4. Review student’s progress for the Laboratory Report	15 points
14-20	1. Fabrication of custom abutments # 9 & # 11 and adaptation of provisional bridge restoration 2. Grading the Custom Abutments and Adaptation of Provisional Bridge 3. Informal assignments in-person non-graded (one page/assignment) 4. Review student’s progress for the Laboratory Report	30 points
21-24	1. Fabrication of screw retained # 14 2. Grading the Screw-retained Restoration 3. Informal assignments in-person non-graded (one page/assignment) 4. Review student’s progress for the Laboratory Report	20 points
25-29	1. CAD/CAM design for screw-retained restoration for # 3 2. Grading the Design of the Screw-retained Restoration (CAD/CAM) 3. Informal assignments in-person non-graded (one page/assignment) 4. Review student’s progress for the Laboratory Report	10 points
30	1. Grading written laboratory report (minimum 3 pages) 2. Grading laboratory projects 3. Returning equipment and clean up	5 points

RESD 2614-DENTAL IMPLANT PROSTHETICS

LABORATORY OUTLINE

1, 2, 3, 4. FABRICATION OF PROVISIONAL BRIDGE (# 9-# 11)

4 laboratory sessions (in-person) and Weekly Informal Assignments non-graded

Conditions: Blackboard instructional videos and laboratory materials on fabrication of provisional bridge for teeth # 9,10,11, using the following equipment and supplies:

- provided maxillary cast for provisional restoration and surgical guide
- sculpturing wax
- no flame electric waxer
- lab putty
- tooth shaded acrylic
- pressure pot
- pumice
- polishing paste
- polishing unit
- steamer
- stain and glaze
- light curing unit

Informal Assignments for Fabrication of Provisional bridge:

- # 1 Informal Assignment - What are the steps in fabricating the wax patterns for provisional restoration(s)?
- # 2 Informal Assignment - What are the steps of achieving high esthetics?
- # 3 Informal Assignment - What laboratory method is used to transfer the wax patterns into tooth shade acrylic?

Performance: Students should be able to fabricate provisional bridge for # 9, 10, 11, with at least 70% accuracy at the end of four sessions

5, 6, 7. FABRICATION OF SURGICAL GUIDE FOR # 9 & # 11

3 laboratory sessions (in-person) and Weekly Informal Assignments non-graded

Conditions: Blackboard instructional videos and laboratory materials on fabrication of surgical guide for anterior # 9 and # 11, using the following equipment and supplies:

- provided maxillary cast for provisional restoration and surgical guide
- lab putty
- clear acrylic
- pressure pot
- handpiece
- cutting discs, grinding carbide burs, silicone polishing burs
- pumice
- polishing paste

Informal Assignments for Fabrication of Surgical Guide:

- # 4 Informal Assignment - What type of design for the surgical guide for teeth # 9 and # 11 is best to achieve appliance stability during the surgical procedure?
- # 5 Informal Assignment - What type of laboratory procedure is used to transfer the wax pattern into clear acrylic material?

Performance: Students should be able to fabricate surgical guide for anterior teeth # 9 and # 11 with at least 70% accuracy at the end of three sessions

8, 9, 10, 11, 12, 13. FABRICATION OF FINAL CASTS & MOUNTING THE CASE

6 laboratory sessions (in-person) and Weekly Informal Assignments non-graded

Conditions: Blackboard instructional videos and laboratory materials on fabricating soft tissue maxillary cast and mandibular cast; mounting the case on semi-adjustable articulator, using the following equipment and supplies:

- provided maxillary impression with transfer copings and analogs
- provided mandibular mold

- soft tissue material
- die stone
- plaster stone for mounting
- vacuum mixer
- debubblizer
- vibrator
- provided semi-adjustable articulator

Informal Assignments for Final Casts and Mounting:

- # 6 Informal Assignment – How the impression copings are inserted into the tray for closed and open impressions?
- # 7 Informal Assignment – What are the steps of applying the soft-tissue moulage?
- # 8 Informal Assignment - What are the steps of mounting the case on a semi-adjustable NON ARCON articulator?

Performance: Students should be able fabricate the maxillary and mandibular casts and mounting the case on semi-adjustable articulator, with at least 70% accuracy at the end of six sessions

14, 15, 16, 17, 18, 19, 20. FABRICATION OF CUSTOM ABUTMENTS # 9 & # 11 and ADAPTATION OF PROVISIONAL BRIDGE RESTORATION

7 laboratory sessions (in-person) and Weekly Informal Assignments non-graded

Conditions: Blackboard instructional videos and laboratory materials on fabricating custom abutments for # 9 and # 11 and adapting (relining) the provisional bridge for # 9, 10, 11, using the following equipment and materials:

- provided Titanium bases, abutment screws and guide pins
- sculpturing wax
- no flame electric waxer
- sprues
- investment and investing rings
- vacuum mixing unit
- vacuum pressure unit
- burnout oven
- pressing oven
- pressed ceramics (emax) ingots
- divesting, sandblasting, and acid cleaning
- tooth shaded acrylic for relining provisional bridge
- polishing materials for provisional bridge
- hand piece and stone burs to finish the abutments after casting

Informal Assessments for Custom Abutments:

- # 9 Informal Assignment: What are the steps in designing and fabricating the wax patterns for custom abutments for teeth # 9 and # 11?
- # 10 Informal Assignment – What are the procedures to transfer the wax patterns into pressable material?

Performance: Students should be able to fabricate the custom abutments for # 9 and # 11 and adapt or rile the provisional bridge over the custom abutments, with at least 70% accuracy at the end of seven sessions

21, 22, 23, 24. FABRICATION OF SCREW RETAINED # 14

4 laboratory sessions (in-person) and Weekly Informal Assignments non-graded

Conditions: Blackboard instructional videos and laboratory materials on fabrication of the screw-retained restoration for tooth # 14, using the following equipment and materials:

- provided Titanium base, abutment screw and guide pin
- sculpturing wax
- no flame electric waxer
- sprues
- investment and investing rings
- vacuum mixing unit

- vacuum pressure unit
- burnout oven
- pressing oven
- pressed ceramics (emax) ingots
- divesting, sandblasting, and acid cleaning
- porcelain oven
- stain and glaze for emax material

Informal Assignments for Fabrication of Screw-retained restoration for tooth # 14:

- # 11 Informal Assignment – What are the steps of fabricating the wax pattern for screw-retained restorations?
- # 12 Informal Assignment - What are the steps of staining and glazing the screw-retained restoration?

Performance: Students should understand and be able to fabricate screw retained restoration for tooth # 14, with at least 70% accuracy at the end of four sessions

25, 26, 27, 28, 29. COMPUTER ASSISTED DESIGN SCREW-RETAINED RESTORATION # 15 – 3 Shape system

5 laboratory sessions (in-person) and Weekly Informal Assignments non-graded

Conditions: Blackboard instructional videos and laboratory materials on Computer Assisted Design using 3 Shape program for tooth #15, using the following equipment and materials:

- provided mounted case with scan body
- 3 Shape program Dental Implant Studio
- 3 Shape scanner

Formal Assignment due during session # 29 – Written Laboratory Report (in-person 5 points)

Performance: Students should understand and be able to design using the 3 Shape program Dental Implant Studio for tooth # 15, with at least 70% accuracy at the end of five sessions

30 – GRADING WRITEN LABORATORY REPORT, LABORATORY PROJECTS & RETURNING EQUIPMENT AND CLEAN UP – 1 laboratory session (in-person)

RESD 2416 - GRADING SHEET FOR LABORATORY PROJECTS

INSTRUCTOR: _____

LABORATORY SECTION_(meeting day, time, and room): _____

STUDENT'S NAME: _____

The maximum amounts of points obtainable for the Laboratory section of the Dental Implant Prosthetics Course – RESD 2614 is 100 points. The Laboratory grade percentage is 60% of the final grade of the course. The final grade is affected by not completing any or all laboratory projects.

PROJECT	Grading Points	DESCRIPTION	Student Grade
1. Fabrication of Provisional Bridge (# 9-# 11)	10 points	- contacts: proximal & incisal – 2 pts - bridge esthetics (matching natural dentition) – 2 pts. - embrasures – 1 pt. - accuracy of application of tooth shaded acrylic – 1 pt. - finishing & polishing – 2 pts. - stain & glaze – 1 pt. Follow instructions – 1 pt. Informal Assignments # 1, 2 3 non-graded	
Grading provisional bridge 10 points			
2. Fabrication of Surgical Guide For # 9 & # 11	10 points	- accuracy & design - 4 pts. - acrylic free of bubbles or voids – 2 pts. - placement of drill holes – 2pts. - polishing 1 pt. Follow instructions – 1 pt. Informal Assignments # 4, 5 non-graded	
Grading the Surgical Guide 10 points			
3. Fabrication of Final Casts & Mounting the Case	15 points	Maxillary soft tissue cast – 7 pts. - accuracy of the soft tissue (2 pts.) - accuracy of analogs (3 pt.) - accuracy of the cast (no voids & bubbles) (2 pts.) Mandibular cast – 2 pts. - accuracy of the cast (no voids & bubbles) (2 pts.) Mounting the case – 5 pts. - articulator setting (condylar guidance, incisal guide pin, centric relation) (1 pt.) - articulator's pin touches the table (1 pt.) - Curve of Spee alignment (1 pts.) - maxillary cast removable (1 pt.) - case mounted in the mid-section of articulator (1 pt.) Follow instructions – 1 pt. Informal Assignments # 6,7,8 non-graded	
Grading the Model Work and Mounting the Case 15 points			
4. (a) Fabrication of Custom Abutments # 9 & # 11	30 points	(a) Fabrication of custom abutments: Custom abutment's design: 10 pts. - wax pattern # 9 (abutment's margin subgingival, access hole & abutment's height) – 4 pts. - wax pattern # 11 (abutment's margin subgingival, access hole & abutment's height) – 4 pts. - parallelism between # 9 & # 11 – 2 pts. Custom abutments' fabrication: 10 pts. - spruing & investing – 2 pts. - burnout, pressing & divesting – 2 pts. - finishing EMAX abutment # 9 - 3 pts. - finishing EMAX abutment # 11 – 3 pts. (b) Adaptation of Provisional bridge: 10 pts. - relining the bridge – 4 pts. - closed margins – 2 pts. - fit of bridge over the custom abutments – 2 pts.	

4. (b) Adaptation of Provisional Bridge Restoration		- bridge retention – 1pt. Follow instructions – 1 pt. Informal Assignments # 9,10 non-graded	
Grading the custom abutments and adaptation of provisional bridge 30 points			
5. Fabrication of Screw Retained # 14	20 points	Screw-retained restoration design: 10 pts. - wax-up full contour # 14 – 4 pts. - proximal and occlusal contacts – 3 pts. - embrasures - 2 pts. - access hole – 1 pt. Screw-retained restoration fabrication: 10 pts. - spruing & investing – 2 pts. - burnout, pressing & divesting – 2 pts. - recontouring, finishing and polishing EMAX # 14 – 3 pts. - staining & glazing EMAX # 14 – 2 pts. Follow instructions – 1 pt. Informal Assignments # 11,12 non-graded	
Grading the screw-retained restoration 20 points			
6. Computer Assisted Design Screw-Retained For # 15 3 Shape Program Dental Implant Studio	10 points	- correct order set-up – 1 pt. - quality of scan (max., mand., & mounting) – 1 pt. Screw-retained design: 8 pts. - full contour molar design – 3 pts. - correct placement of access hole – 1 pt. - correct selection of path of insertion – 1 pt. - contacts: proximal and occlusal – 1 pt. - embrasures – 1 pt. Follow instructions – 1 pt.	
Grading the design of the screw-retained restoration 10 points			
7. Grading Laboratory Written Report & Laboratory Projects	5 points		
	95 points		
TOTAL:	100 POINTS		

*Instructors strongly encourages the students to ask or email questions and make comments, as well as discuss their own ideas.

GRADING RUBRIC FOR – RESD 2416 WRITTEN LABORATORY REPORT

CRITERIA	EXCELLENT 4-5 points	SATISFACTORY 3-4 points	MEDIOCRE 2-3 points	UNSATISFACTORY 1-2 points
Organization	The report’s introduction is inviting, states the main topic, and provides an overview of the report. Information is relevant and detailed. The conclusion is strong.	The report is well structured, presenting some details regarding the main topic.	The report is missing structure and details regarding the main topic.	There is no structure in the report and is missing important detailed information regarding the main topic.
Content	The report is well- written presenting facts and useful information. The student exhibits good understanding of the topic.	The report was concise, and the information presented was related to the topic. The student shows understanding of the topic.	The report is missing important information related to the topic. The student shows partially understanding of the topic.	The report is poorly written and missing important information about the topic. The student shows little understanding of the topic.
Spelling/Grammar	Excellent written skills, correct spelling, and grammar.	Good written skills, minimal spelling, and grammar errors.	Needs writing skills improvement, few spelling and grammar errors.	Poor writing skills, numerous spelling, and grammar errors.
Work cited/ references	Work is correctly cited and formatted in MLA style with no errors in formatting, style, or information.	Work is correctly cited and formatted in MLA style with only one or two minor errors in formatting or style, or information.	Work is not correctly cited in MLA style. There are several errors and/or important information is omitted, or the wrong style is used.	There is no citation, or it is completely incorrect.

Dental Implant Prosthetics course - RESD 2416
Laboratory Informal Assessment #1- Provisional Restoration
(non-graded assessment)

Date: _____

Student's Name: _____

1. What are the steps in fabricating the wax patterns for provisional restoration(s)?

2. What is the purpose of the provisional restorations?

3. What are some types of provisional restorations?

Dental Implant Prosthetics course - RESD 2416
Laboratory Informal Assessment # 8 – Final Casts and Mounting the case (non-graded assessment)

Date: _____

Student's Name: _____

1. What are the steps of pouring the impressions to fabricate the final casts?

2. What is the purpose of the bite registration or face bow records?

3. What are the steps of mounting the case on a semi-adjustable NON ARCON articulator?

DENTAL IMPLANT PROSTHETICS COURSE - RESD 2416
WRITTEN LABORATORY REPORT
5% of the final laboratory grade

Student's Name: _____

Instructions for writing your Laboratory Report (MLA Style):

- The Report should be typed and printed
- The Report should be at least three (3) pages long
- One-inch margins on sides, top and bottom
- Use Times or Times New Roman 12 pt. font
- Double-space the text of the paper
- Use left-justified text, which will have a ragged right edge
- Indent the first word of each paragraph 1/2"
- Indent block quotes 1"
- Last page should contain the Works Cited lists, use a 1/2" indent for all lines after the first line of each source
- Check for spelling and grammar
- The due date for submitting your Written Laboratory Report is during the last session before the final examination, and it should be submitted in-person.

Report's topic: (Please use your informal assignments to help you write your laboratory report).

Please describe the difference between the screw-retained and cement-retained fixed prostheses using dental implants.

Please include in your report the following:

- What is the preliminary work? (Hint: provisional restorations, surgical guides, etc.)
- What are the differences between closed and open tray impressions and what types of impression or transfer copings are used for both?
- How the application of the soft-tissue material into the impression for cement retained prosthesis must be to allow for the correct position of the abutments' margins?
- What is the main difference between the screw-retained abutment and the custom or stock abutment for cement retained prostheses?
- How are the screw-retained and abutment for cement-retained prosthesis retained over the Titanium base?
- What are the advantages and disadvantages of screw-retained prosthesis, clinical and esthetic aspects?
- What are the advantages and disadvantages of cement-retained prosthesis, clinical and esthetic aspects?
- What types of dental materials can be used for both types of restorations?

- What are the manufacturing methods for screw-retained and cement-retained prostheses?
- What are the types of prostheses which can be fabricated using either screw-retained or cement-retained restorations?
- Who decide what type of prostheses should be fabricated?

GRADING RUBRIC FOR – RESD 2416 LABORATORY WRITTEN REPORT

CRITERIA	EXCELLENT 4-5 points	SATISFACTORY 3-4 points	MEDIOCRE 2-3 points	UNSATISFACTORY 1-2 points
Organization	The report's introduction is inviting, states the main topic, and provides an overview of the report. Information is relevant and detailed. The conclusion is strong.	The report is well structured, presenting some details regarding the main topic.	The report is missing structure and details regarding the main topic.	There is no structure in the report and is missing important detailed information regarding the main topic.
Content	The report is well- written presenting facts and useful information. The student exhibits good understanding of the topic.	The report was concise, and the information presented was related to the topic. The student shows understanding of the topic.	The report is missing important information related to the topic. The student shows partially understanding of the topic.	The report is poorly written and missing important information about the topic. The student shows little understanding of the topic.
Spelling/Grammar	Excellent written skills, correct spelling, and grammar.	Good written skills, minimal spelling, and grammar errors.	Needs writing skills improvement, few spelling and grammar errors.	Poor writing skills, numerous spelling, and grammar errors.
Work cited/ references	Work is correctly cited and formatted in MLA style with no errors in formatting, style, or information.	Work is correctly cited and formatted in MLA style with only one or two minor errors in formatting or style, or information.	Work is not correctly cited in MLA style. There are several errors and/or important information is omitted, or the wrong style is used.	There is no citation, or it is completely incorrect.

Hello Jian,

Please find attached your externship assignment letter, which contains the externship participant and the contact information.

Please contact them and make arrangements to complete your 24 hours of externship and please email me the dates/times and the person you contacted.

Please contact me if you have any questions.

Enjoy this great opportunity!

Thank you,

Laura Andreescu