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

DEPARTMENT: RESTORATIVE DENTISTRY

COURSE CODE/INSTRUCTOR: RESD 2409 Prof. Nicholas Manos

COURSE TITLE: LAB OPERATIONS, ETHICS AND JURISPRUDENCE

Instructor: Prof. Nicholas Manos
Office: P 409
Phone: (718) 260-5137
Office hours: Monday and Thursday 11am - 12pm
e-mail: nmanos@citytech.cuny.edu

COURSE DESCRIPTION: This course is designed to provide the student with the legal obligations of the dental technician under State Dental Practice Acts; the ethical responsibilities of the technician towards the dental profession, the public and other dental technicians; and the historical aspects of dentistry and dental technology. The fundamental of laboratory operation will also be examined. A review for the Recognized Graduate Examination will be provided in all areas of Dental Technology.

NUMBER OF WEEKS: 15 Weeks

CLASS HOURS AND CREDITS: 2 Lecture hours per week; 2 credits

CURRICULUM LEVEL: Fourth Semester

PREREQUISITE: Completion of all third semester courses, or permission of the chairperson


<table>
<thead>
<tr>
<th>COURSE REQUIREMENTS:</th>
<th>Standard College and department attendance and grade regulations</th>
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<tbody>
<tr>
<td>ACADEMIC INTEGRITY:</td>
<td>New York City College of Technology Policy on 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. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.</td>
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<tr>
<td>ATTENDANCE POLICY:</td>
<td>&quot;Any student who has exceeded the 10% absence/lateness policy will receive a grade reduction equal to the number of absences.&quot;</td>
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LEARNING OUTCOMES FOR RESD 2409:
Upon successful completion of this course the student will be able to:

1. **Define** the legal and ethical obligations of the dental technician to the dental profession, to the public and to other dental technicians and dental laboratories
2. **Explain** the historical roots of professional/technician relationships
3. **Explain** current trends in dental technology and what the impact may be on dentistry and dental technology
4. **Define** the types of dental laboratories and the process of starting a dental laboratory, including floor plans, equipment and workers
5. **Define** the problems involved in staying solvent and maintaining good relationships with dentists and other laboratories
6. **Describe** the various dental technology associations, their history and their function
7. **Review** all areas of Dental Technology in preparation for the Recognized Graduate exam

GENERAL EDUCATION LEARNING OUTCOMES:
1. **Knowledge**: incorporate broad based knowledge from a range of sources and reinforce continued learning
2. **Skill**: integrate understanding and proficiency needed to converse, inquire, explore and utilize information presented in the program
3. **Values, Ethics and Relationships**:
   - Professional/Personal development: demonstrate intellectual honesty and personal responsibility
   - Ethics/Values: transform information into knowledge, and knowledge into judgment and action

ASSESSMENT:
To evaluate student achievement of the learning outcomes the professor will do the following:
1. **Assess** students use of professional vocabulary through testing
2. **Create, design, and submit** a business plan which reflects a proposal for a chosen specialty dental laboratory
3. **Conduct** multiple choice exams
4. **Evaluate** all exams and projects with emphasis on student’s ability to communicate, use professional vocabulary, and successful completion of Recognized Graduate Exam.

OUTCOMES ASSESSMENT:

<table>
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<tr>
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<th>Weight</th>
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<tbody>
<tr>
<td>Quiz</td>
<td>15%</td>
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<tr>
<td>Midterm</td>
<td>25%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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<tr>
<td>Group Project: Business Plan</td>
<td>35%</td>
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**Letter Grade**

- **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

3 6/6/2012
# RESD 2409 LABORATORY OPERATIONS, ETHICS AND JURISPRUDENCE

Course Outline (Tentative Schedule, subject to change)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Readings and Assignment due dates</th>
<th>Ses</th>
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<tbody>
<tr>
<td>The Business Plan/First Class</td>
<td>Chapter 12, Stein</td>
<td>1</td>
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<tr>
<td>History of Dentistry and Dental Technology</td>
<td>Section 1, Sowter handout</td>
<td>2</td>
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<tr>
<td>Peter Pizzi - Laboratory Operation</td>
<td>Section 4,5,6,7 pp.35-65 Writing assignment 1 Due</td>
<td>3</td>
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<tr>
<td>Before You Open a Laboratory – Chicago Mid-Winter Meeting/No Class</td>
<td>pp15-23, pp.165-174</td>
<td>4</td>
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<tr>
<td>Dr. Kroll Lecture – “Being Successful”</td>
<td>pp. 71-76 Business Plan Intro Due</td>
<td>5</td>
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<tr>
<td>Peter Pizzi – “Aesthetics in a Dental Lab”</td>
<td>Section 9</td>
<td>6</td>
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<tr>
<td>Midterm Exam</td>
<td></td>
<td>7</td>
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<tr>
<td>Dr. Kobren Lecture “Dentist/Technician Relations”</td>
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<tr>
<td>Lenny Marotta “Implants”</td>
<td>Writing Assignment 2 Due</td>
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<tr>
<td>Dentsply Lecture/Bill Yacola “Marketing &amp; Sales”</td>
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<td>10</td>
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<tr>
<td>Crown and Bridge Reviews</td>
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<tr>
<td>Spring Recess – No classes</td>
<td>No classes</td>
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<tr>
<td>Ceramics Review</td>
<td>Completed Business Plan Due</td>
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<tr>
<td>Orthodontics Review</td>
<td>Subject questions Due</td>
<td>13</td>
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<tr>
<td>Dental Anatomy and Physiology Review</td>
<td>Group Project Due</td>
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<tr>
<td>RG Review</td>
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<td>14</td>
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<td>Final Exam &amp; Clean-up</td>
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<td>15</td>
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COORDINATOR: Revised January 2013, Nicholas Manos, C.D.T.
NEW YORK CITY COLLEGE OF TECHNOLOGY
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RESD 2409 - ETHICS AND JURISPRUDENCE - COURSE OUTLINE

I. HISTORY OF DENTISTRY AND DENTAL TECHNOLOGY - THREE LECTURE HOURS

A. DENTISTRY AND DENTAL TECHNOLOGY IN THE MIDDLE AGES - Sowter - pp. 3, 4.
   1. the practitioners
   2. the patients
   d. the nature of dentistry during that period

B. DENTISTRY FROM 1600 TO 1700 - Sowter, pp. 5, 7.
   1. the practitioners
   2. medicine and dentistry
   3. Pierre Fouchard
   4. changing society and changing medicine
   5. the new world and early dental practice

C. DENTISTRY IN THE 1800'S - Sowter, pp. 5-7.
   1. dentistry in flux
   2. the expanding frontier and dentistry
   3. the early schools: Baltimore, Massachusetts, Pennsylvania
   4. the beginnings of a profession
   5. the role of dental technology
   6. the clinical dentist
   7. the division of dentistry into two distinct groups

D. THE BEGINNINGS OF DENTAL TECHNOLOGY
   1. dental materials, casting techniques, the licensing of techniques

II. ETHICS AND JURISPRUDENCE - THREE LECTURE HOURS

A. LAWS AND REGULATIONS GOVERNING CONDUCT - NADL Booklet, Sowter, Sect. 7, pp. 61-65.
   1. dental practice acts
   2. the Federal Trade Commission
   3. the Department of Health and Human Services
   4. other governmental rules and regulations
B. LEGAL RELATIONS
   1. with the public
   2. with other laboratories
   3. with the profession

C. ETHICAL RELATIONS - Sowter, Sect. 6, pp. 55-61.
   1. with the profession
   2. with the public
   3. with other technicians
   4. with other employees

D. NATIONAL ASSOCIATION OF DENTAL LABORATORIES (NADL)
   Sowter, Sect. 4, 5, pp. 35-55.
   1. history
   2. function
      a. what it can do
      b. what it cannot do

E. NATIONAL BOARD FOR CERTIFICATION (NBC)
   1. history
   2. what it can and cannot do
   3. Recognized Graduate Examination

F. OTHER TECHNICIANS ASSOCIATIONS
   1. Association of Master Technologists
   2. unions; pro and con
   3. professionalization
   4. O.S.H.A.

III. THE LABORATORY INDUSTRY - TWO LECTURE HOURS
   1. who works in a dental office
   2. the role of each worker
   3. the role of the technician
   4. limitations of dental technology

B. SO YOU WANT TO OPEN YOUR OWN LAB?
   1. who can open a laboratory
   2. the amount of experience required
   3. capitalization required
4. professional "Following"
5. the "Break Even" point

C. KINDS OF LABORATORIES - Martinelli, Chapt. 23, pp. 441-443.
   1. general
   2. specialized
   3. joint operation (two specialties)

D. WHO OWNS THE DENTAL LABORATORY - Martinelli, pp. 441,442
   Sowter, pp. 165-174.
   1. conglomerate ownership
   2. the laboratory in the dental office
   3. the independent owner
   4. trends in laboratory ownership

*  QUIZ – ONE LECTURE HOUR

IV. BEFORE YOU OPEN A LABORATORY - TWO LECTURE HOURS

A. PLANNING FOR OPENING A LABORATORY
   1. determining the area
   2. a survey of the area including the number of dentists
   3. needs of area (amount of competition)

B. THE SOCIO-ECONOMICS OF PLANNING
   1. your specialty and the area
   2. your quality and the area
   3. you price and the area

C. CITY VS. RURAL LOCATIONS
   1. availability of delivery services
   2. availability of supply depots
   3. availability of labor
   4. mail-order laboratory services

D. FINDING A LOCATION
   1. professional buildings
   2. store fronts
   3. office buildings
   4. your own home
   5. advantages and disadvantages of each
   6. commercial vs. residential zoning
   7. kinds of utilities required
   8. city codes and dental laboratories
E. PLANNING THE LABORATORY

1. floor plans
2. getting help, advice and information on floor plans
3. getting someone else to do the work for you
4. benches - kinds and quality
5. equipment - kinds and quality
6. when to use new, when to use used, benches and equipment
7. getting help, advice and information on equipment and benches
8. flow plans for large and small laboratories
9. determining the need for other space such as
   private office, shipping and receiving rooms, and waiting room
10. ordering and placing phones
11. allowing room for expansion
12. setting prices
13. some criteria to use in setting prices
14. the effects of setting a price schedule too high or too low

V. OPENING THE LABORATORY - TWO LECTURE HOURS - Martinelli, pp. 443, 444. Sowter, pp. 71-76.

1. determining an advertising budget
2. when to start advertising
3. where to advertise
4. what kind of advertising can be done legally and ethically
5. personal solicitation
6. trying to get past the dentist's receptionist
7. "lobbying" at Conventions and meetings
8. meeting your competition
9. county and local study groups
10. joining you local NADL state component
11. joining ADA lab component

VI. STAYING IN BUSINESS - TWO LECTURE HOURS

A. SETTING LABORATORY STANDARDS

1. what standards to establish realistically
2. the relationships between standards and price
3. how does the dentist see this relationship
4. how competitive should you be?
5. the dentist's work-authorization and the standards of the laboratory
6. do you really need standards?
B. LABOR RELATIONS - Sowter, Sect. 18, pp. 199-204.
   1. when do you need to hire other technicians, overtime, extra shifts, (night)
   2. what kinds of help to hire
   3. setting salary scales
   4. are you better off with a partner
   5. how to figure labor costs
   6. pension plans, employee benefits
   7. state and federal regulations

C. KEEPING ACCOUNTS
   1. what the dentist means by "Service"?
   2. what the dentist means by "Quality"?
   3. what service and quality mean to a laboratory
   4. analyzing "remakes"?
   5. analyzing a dentist's account
   6. who pays for remakes
   7. accepting or rejecting impressions
   8. what to say and to when a dentist complains
   9. saying "No" to a dentist whom you want to keep as an account
  10. time table for work

   5 videocassettes. (VIDEOCASSETTE 767)
   1. getting paid
   2. costs of not getting paid
   3. acting as a "banker"
   4. paying bills and discounting
   5. fixed costs
   6. borrowing money
   7. setting up reserves
   8. collection system
   9. curbing your buying impulses
  10. keeping up with new techniques
  11. why do labs go out of business?
* MIDTERM EXAM - TWO LECTURE HOURS

VII. REVIEW FOR RECOGNIZED GRADUATE EXAMINATION – ELEVEN LECTURE HOURS
   1. dental materials
   2. complete dentures
   3. partial dentures
   4. crown and bridgework
   5. ceramics
   6. orthodontics
   7. ethics and jurisprudence

* FINAL EXAMINATION - TWO LECTURE HOURS
INSTRUCTIONAL OBJECTIVES
RESD 2409 - LECTURE

ETHICS AND JURISPRUDENCE

I. HISTORY OF DENTISTRY AND DENTAL TECHNOLOGY - THREE LECTURE HOURS

A. CONDITIONS: Given a series of lectures and assigned readings

B. PERFORMANCE: The student should be able to:

1. Describe dentistry in the Middle Ages
2. Describe the changes that occurred in the 1600's & 1700's
3. Identify Pierre Fouchard and list his contributions
4. List the successive changes that occurred in the new world and in the expanding frontier of the U.S.
5. Name and locate the first 3 important dental schools in the U.S. and describe how they differed
6. Discuss the role of:
   a. dental technology
   b. the clinical dentist
   c. the mechanical dentist in the period of 1850 to 1900
7. List the reasons for the disappearance of the mechanical dentist
8. List and describe the contributions of:
   a. Supplee e. Gysi
   b. Weinstein f. Ash
   c. Taggart g. and others
d. White

C. EXTENT & CRITERIA: With at least 70% accuracy at the end of three lecture hours.
II. ETHICS AND JURISPRUDENCE - THREE LECTURE HOURS

A. CONDITIONS: Given a series of lectures and assigned readings

B. PERFORMANCE: The student should be able to:

1. List and describe the laws and regulations governing the conduct of the dental technician and the dental laboratory in:
   a. the Dental Practice Act
   b. the Federal Trade Commission
   c. the Department of Health, Education and Welfare
   d. other regulatory bodies

2. List and describe the ethical rules which should be followed by a laboratory or a dental technician dealing with:
   a. the dental profession
   b. other laboratories
   c. employees

3. List and describe the history, the functions and the limitations of:
   a. the National Association of Dental Laboratories
   b. the National Board for Certification
   c. other specified technicians' associations

4. The student should be able to:
   a. Cite who works in a dental office
   b. State the role of each worker
   c. State the role of the technician
   d. List the limitations of dental technology

C. EXTENT & CRITERIA: With at least 70% accuracy at the end of three lecture hours.

III. THE LABORATORY INDUSTRY - TWO LECTURE HOURS

A. CONDITIONS: Given a series of lectures and assigned readings

B. PERFORMANCE: The student should be able to:

1. List and describe the various kinds of laboratory Ownership
2. List and describe the various kinds of laboratories
3. List and describe the requirements for opening a laboratory and the conditions under which opening is most feasible

C. EXTENT & CRITERIA: With at least 70% accuracy at the end of two lecture hours.

* QUIZ - ONE LECTURE HOUR

IV. BEFORE YOU OPEN A LABORATORY - TWO LECTURE HOURS

A. CONDITIONS: Given a series of lectures and assigned readings

B. PERFORMANCE: The student should be able to:

1. List and describe the steps that must be taken to differentiate among the areas which may be suitable for a laboratory
2. List and describe the advantages and disadvantages of the various types of buildings in which a laboratory might be located
3. List and describe the socio-economic factors which influence planning for selection of an area and a building
4. Demonstrate the ability to rough-plan the layout for a small laboratory
5. List and describe the criteria used to determine the prices an opening laboratory might charge.

C. EXTENT & CRITERIA: With at least 70% accuracy at the end of two lecture hours.

V. OPENING THE LABORATORY - TWO LECTURE HOURS

A. CONDITIONS: Given a series of lectures

B. PERFORMANCE: The student should be able to:

1. List the methods used to solicit accounts
2. Describe the advantages and disadvantages of each method
3. List the types you might take to meet other technicians in your area

C. EXTENT & CRITERIA: With at least 70% accuracy at the end of two lecture hours.
VI. STAYING IN BUSINESS - TWO LECTURE HOURS

A. setting laboratory standards
B. labor relations
C. keeping accounts
D. staying solvents

A. CONDITIONS: Given a series of lectures

B. PERFORMANCE: The student should be able to:
    1. Define and distinguish between "standards" and "quality of finished products."
    2. Describe the relative importance of each to the Laboratory
    3. Define "work authorization" and describe its relation to laboratory operation
    4. List the conditions that usually require the hiring of additional labor
    5. List the disadvantages and disadvantages of hiring:
       a. experienced labor
       b. unskilled labor
    6. Define "step" worker and describe where and how such workers are used
    7. List the ways to determine a salary scale for old and new employees
    8. Describe in detail various pension plans and employee benefits which are optional features of employment
    9. List and describe State and Federal regulations covering employer-employee relationships
   10. Explain what the dentist means by "service" and by "quality"
   11. Define "service- and "quality" from the standpoint of the laboratory
   12. List and describe the various ways to keep "remakes" to a minimum
   13. List and describe the various ways to respond to a dentist who complains
   14. Describe the ways to say "no" to a dentist and still keep his/her good-will

C. EXTENT & CRITERIA: With at least 70% accuracy at the end of two lecture hours.

* MIDTERM EXAM - TWO LECTURE HOURS
VII. REVIEW FOR RECOGNIZED GRADUATE EXAMINATION - ELEVEN LECTURE HOURS

A. DENTAL MATERIALS  F. ORTHODONTICS
B. COMPLETE DENTURES  G. DENTAL ANATOMY AND PHYSIOLOGY
C. PARTIAL DENTURES  H. OCCLUSION
D. FIXED BRIDGEWORK  I. INFECTION CONTROL
E. CERAMICS  J. HISTORY, ETHICS AND JURISPRUDENCE

IX. FINAL EXAM - TWO LECTURE HOURS