Complete Dentures I

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COURSE DESCRIPTION: An introduction to basic techniques of full denture construction. This course will include anatomical terminology as it relates to full denture construction, fabricating of custom impression trays, constructing baseplates and occlusal rims, articulating casts, set-up of maxillary and mandibular opposing wax trial dentures using anatomical artificial teeth, festooning and contouring of full wax trial denture bases.

CLASS HOURS & CREDITS: 6 Laboratory hours per week.
1 Lecture hour per week; 3 credits

NUMBER OF WEEKS: 15 Weeks

CURRICULUM LEVEL: First Semester

PREREQUISIT: CUNY Certification in reading, writing and math.


2. Dental Laboratory Procedures - Complete
5. All previous Air Force Manuals including 162-6.

AUDIO/VISUAL TECHNICAL TAPES:

1. Complete Dentures Part II & III – Library
2. Complete Dentures Part IV (Refitting and Relining) – Library
3. Semi-adjustable Articulators in Dentistry – Library
4. Denture Base Esthetics – Library
5. Final Impressions - Complete Dentures - H.S.R.C.
6. Preliminary Impressions - Complete Dentures – Library
7. Denture Base Esthetics - H.S.R.C.
8. Lab Procedures - Complete Dentures 1 - H.S.R.C.
10. Recording Centric Relation - H.S.R.C.
12. Complete Dentures, University of Iowa College of Dentistry, n.d. 4 Videocassettes (Videocassette 1135).
14. Quick Mount Face-Bow and Model 8500
15. Articulator. Whip Mix, 11987 (Videocassettes 1153).
16. Mechanics of Dentures. Linden Street Prosthetics, n.d. 3 Videocassettes (Videocassette 1156)

COURSE REQUIREMENTS: Standard College and department attendance grade regulations.

ACADEMIC INTEGRITY:

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.

ACADEMIC DISHONESTY INCLUDING PLAGIARISM:

Academic dishonesty is prohibited in the City University of New York and is punishable by penalties, including failing grades, suspension and expulsion.

Cheating is the unauthorized use or attempted use of material, information, notes, study aids, devices or communication with other students during an academic exercise, such as testing. Copying from another student during an examination or allowing another to copy your work.

❖ Cheating will not be tolerated during quizzes or exams, communication with anyone other than the instructor will be considered cheating. If you have questions during an examination quietly raise your hand and the instructor will come to your desk, or ask you to come up to their desk. There may be more than one version of an examination; if so the process will be the same.

❖ Plagiarism includes intentionally misrepresenting another person’s work, words, ideas, copying or stealing another person’s work and trying to pass it on as your own without giving proper credit to the originator.

Students are responsible for completing their own laboratory projects, allowing others to complete your laboratory project is not permitted. Each student should clearly identify all of their work.

GOALS AND OBJECTIVES FOR RESD 1111:

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

1. List and describe all of the clinical and laboratory procedures for complete denture construction, including handling and treatment of impressions as related to blood borne infectious diseases, infection control.

2. List and describe the anatomical landmarks of the maxillae and mandible as they relate to full denture construction.

3. Fabricate custom trays for full denture impressions.

4. Bead, box, and pour final impression.
5. Construct occlusal rims according to prescribed measurements.
6. Articulate master casts on a simplex articulator.

7. Set-up a maxillary and mandibular opposing trial base dentures.

8. Festoon a maxillary and mandibular trial base denture for try-in.

NOTE: A listing of laboratory supplies needed for this course can be obtained in the department office.

ATTENDANCE POLICY:

Any student who has exceeded (more than three total absences), the 10% absence/lateness policy will receive a grade reduction for that portion of the course (lecture &/or lab).

Coordinator: Avis J. Smith, CDT, MS, EMBA
Revised: Natalie Pires 8/17

NEW YORK CITY COLLEGE OF TECHNOLOGY

RESTORATIVE DENTISTRY DEPARTMENT

OUTCOMES ASSESSMENT:

EVALUATION CRITERIA FOR FULL DENTURES CONSTRUCTION

(Please note that the following criteria are a guideline and may slightly change depending on instructor. Pre-laboratory assignments may be assigned and graded as a percentage of students’ final grade. Pre-laboratory assignments are completely at the lab instructor’s discretion.)

MASTER CASTS - DENSE AND BUBBLE FREE 5 PTS.
CUSTOM TRAYS - THREE MILLIMETERS SHORT 10 PTS.
BASE PLATES - ADAPTATION AND SMOOTHNESS 10 PTS.
OCCLUSAL RIMS - HEIGHT AND CONTOUR 10 PTS.
ARTICULATION/OCLUSION 10 PTS.
TOOTH ALIGNMENT 30 PTS.
WAXING AND CONTOURING FOR TRY-IN 20 PTS.

NEATNESS AND CLEANLINESS OF WORK AND WORK AREA 5 PTS.

100% (60% of final grade)

EVALUATION CRITERIA - LECTURE SESSION

QUIZ 10%

MIDTERM EXAM 15%

FINAL EXAM 15%

Total: 40%

Letter Grade: There will be NO extra credit project or assignments included in the course.

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

NOTE: There is no C-grade.

The final grade will be computed on the basis of 60% of the total laboratory grades and 40% of the lecture examination grades. Each individual's performance will be assigned a conventional letter grade at the end of the course. The student must achieve a passing grade in theory as well as laboratory work, which is a minimum of 70% for each course.

Note: All reading assignments listed are from the Air Force Pamphlet text. Additional reading assignments, and class oral presentations may be assigned by the instructor.

EVALUATION CRITERIA/GRADING CHECKLIST – LABORATORY
(All points are based on minimum to maximum range). Example 3pts: Min. 1 - Max. 3

Master Cast: 5 PTS
1. Density (not easily scratched): 1 pt
2. Without air bubbles (each bubble -1 point 2 points maximum): 2 pts
3. Smooth surface: 2 pts
   TOTAL: 5 Points

Custom Tray: 10 PTS
1. Trays trimmed approximately 3mm short: 2 pts
2. No sharp edges: 2 pts
3. All muscle areas completely free: 2pts
4. Tray handle in suitable position without adverse interference: 2 pts
5. Neat & clean appearance: 2pts

**TOTAL: 10 Points**

**Base Plates:** 10 PTS
1. Rolled or Straight edge with no sharp edges: 2 pts
2. Well adapted according to the materials used (some materials are more stable than other): 2 pts
3. All muscle areas free: 2 pts
4. Proper boarders (followed the established anatomical working & non-working area of the casts: 2 pts
5. Neat & clean appearance: 2 pts

**TOTAL: 10 POINTS**

**Occlusal Rims:** 10 PTS
1. Maxillary height 22 mm: 3 pts
2. Mandibular height 18 mm: 3 pts
3. Width of maxillary & mandibular between 6 & 10mm accepted: 2 pts
4. Neat & clean appearance: 2pts

**TOTAL: 10 POINTS**

**Articulation:** 10 PTS.

**TOTAL: 10 Points**

**Set-Up/ Tooth Alignment:** 30 PTS.
1. Anterior teeth set in correct relationship
   a. Maxillary anterior to follow the arch form contour with centrals approximately 7 mm anterior to the incisal papilla of maxillary cast.
      The mandibular anterior teeth to be set lingual to the maxillary teeth following the contours of the arch form relationship C/C: 10 pts.
   b. horizontal/vertical overlap (positioned to establish proper cuspid guidance): 10 pts
2. Posterior maxillary teeth set in centric occlusion (no open bite areas): 5 pts
3. Posterior mandibular teeth set on or slightly lingual to crest of the ridge: 5 pts

**TOTAL: 30 points**

**CONTOURING (festooning) Denture Base:** 20 PTS
1. Anterior region festooned correctly (proper root eminence design following the long axis of teeth, with attention to each tooth length): 10 pts
2. Posterior region festooned correctly (same consideration as #1): 10 pts

**TOTAL: 20 Points**

**TOTAL: 100 POINTS**
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COURSE OUTLINE
RESD 1111 - COMPLETE DENTURES I

I. INTRODUCTION TO COMPLETE DENTURES - THREE LABORATORY SESSIONS - FOUR LECTURE HOURS:
NOTE: The sequence may be altered to suit the needs of students’ general understanding of the subject matter.
1. course requirements
2. criteria for evaluation
3. safety rules and regulations
4. anatomical changes associated with loss of teeth
5. basic oral anatomy and terminology for complete dentures
6. outline of complete denture construction, clinical and laboratory procedures
7. work authorizations
8. pouring preliminary casts
9. stock trays and custom trays
10. clinical impression materials
11. separating, trimming and evaluating preliminary casts
12. occlusal rims
13. arch forms, tooth forms and face forms
14. articulators

II. CUSTOM IMPRESSION TRAYS - FOUR LABORATORY SESSIONS -- ONE LECTURE HOUR:
1. outline of cast for custom impression trays
2. shellac base plate tray
3. acrylic tray
4. vacuum formed base plates and custom trays
5. infection control
6. variations in occlusal angles of denture teeth and related theory

* 8TH LABORATORY SESSION - PRELIMINARY CAST AND CUSTOM TRAYS DUE FOR EVALUATION

III. MASTER CASTS - TWO LABORATORY SESSIONS - ONE LECTURE HOUR:
1. final impression materials
2. beading and boxing
3. pouring, final impressions
4. separating, trimming and evaluating master casts
IV. BASE PLATES - THREE LABORATORY SESSIONS - ONE LECTURE HOUR:
1. shellac base plates
2. stabilized base plates

* 13TH LABORATORY SESSION - TRAYS AND FINAL CASTS DUE FOR EVALUATION

V. CONSTRUCTION OF OCCLUSAL RIMS - TWO LABORATORY SESSIONS -
ONE LECTURE HOUR:
1. measurements and contour (vertical dimension)
2. procedures for recording maxillo mandibular relations
3. face bow application

VI. ARTICULATORS, ARTICULATOR MOVEMENT AND MOUNTING CASTS - TWO
LABORATORY SESSIONS - ONE LECTURE HOUR:
1. straight line (hinge type non-adjustable)
2. semi-adjustable
3. fully adjustable
4. procedure for mounting casts
5. centric bearing devices

* 17TH LABORATORY SESSION - OCCLUSAL RIMS AND MOUNTED
MODELS DUE FOR EVALUATION

VII. ARTIFICIAL TOOTH ARRANGEMENT - EIGHT LABORATORY SESSIONS -
FOUR LECTURE HOURS:
1. selection of anterior teeth
   a. size, shape, color
   b. esthetics, phonetics function

2. selection of posterior teeth
   a. anatomical - 33 degrees
   b. non-anatomical - 0 degrees
   c. semi-anatomical - 20 degrees

3. factors of occlusion
   a. condular guidance
   b. cusp height
   c. incisal guidance (overbite, overjet)
   d. compensating curve (curve of spee)
   e. occlusal plane
   f. arranging the anterior teeth
   g. arranging the posterior teeth
   h. balanced occlusion
• 24TH LABORATORY SESSION - BALANCED SET-UP DUE FOR EVALUATION

VIII. WAXING AND CONTOURING FOR TRY-IN - FIVE LABORATORY SESSIONS - ONE LECTURE HOUR

Simulation of Natural Gingival Contours

• 30TH LABORATORY SESSION - WAXING AND CONTOURING FOR TRY-IN DUE FOR EVALUATION

GENERAL EDUCATION LEARNING OUTCOMES:

1) Independent quality assessment: develop independent ability to determine the quality of work performed with respect to patient needs as needed in overall healthcare administration process.
2) Manual dexterity: develop manual dexterity suitable for improving the quality of work required of dental auxiliary support services.
3) Attention to detail: to focus on the details of future extended work integrated into the overall healthcare process.
4) Ethical consideration: to develop sincere ethical considerations for the treatment of patients with the elimination of discriminatory practices, which short change many of quality treatment.