

NEW YORK CITY COLLEGE OF TECHNOLOGY DEPARTMENT OF
THE CITY UNIVERSITY OF NEW YORK RESTORATIVE DENTISTRY

DEPARTMENT: RESTORATIVE DENTISTRY

COURSE CODE: RESD-1110

COURSE TITLE: TOOTH MORPHOLOGY

COURSE DESCRIPTION: This course is designed to provide the student with a theoretical and practical study of dentition. Included is a detailed study of tooth development, form, structure and function; sculpting the crowns of the maxillary and mandibular teeth are anatomically carved in ivory wax. Tooth drawings to scale will also be stressed.

CLASS HOURS & CREDITS: 2 laboratory sessions; 1 lecture hour per week; 3 credits.

NUMBER OF WEEKS: 15 Weeks.

CURRICULUM LEVEL: First semester.

PREREQUISITE: CUNY Certification in reading, writing and math.

TEXTBOOKS: Anatomy of Orofacial Structures,
Brand & Isselhard, C.V. Mosby Co.,
St. Louis, Mo. Seventh Edition

REFERENCE: Dental Anatomy, Physiology and
Occlusion, R.C. Wheeler, W.B. Saunders
& Co., Phila., Pa. Sixth Edition.

Air Force Manual (afpam 47-103)

COURSE WEB-SITE <http://openlab.citytech.cuny.edu/resd1110/>

COURSE REQUIREMENTS: Standard College and department attendance and grade regulations.

OUTCOMES ASSESSMENT:**Laboratory: Laboratory Projects - 60%**

Drawings	20%
Carvings	60%
Final	20%

Lecture - 40%

Quiz	8%
General ed. Paper	7%
Midterm	10%
Final	15%

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

ATTENDANCE POLICY:

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

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 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 during an academic exercise. 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 a question during an examination quietly raise your hand and the instructor will come to your desk. There may be more than one version of an examination; the questions of the examinations will be the same but in different order.

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 work.

COORDINATOR: Revised August 2011, Daniel Alter, C.D.T.,M.D.T.
Office – room P-409, Telephone (718) 260-5154 dalter@citytech.cuny.edu

OFFICE HOURS:
Mon 11:00 – 1:00 or by appointment

QUIZES, ASSIGNMENTS

AND EXAMINATIONS: 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. There will be two examinations that will account for the majority of the lecture score (midterm and final). There will be one major quiz that will be scheduled for one lecture session. There will be a general education assignment which consist of three graded parts. A researched and written portion, a post of an abstract for that portion and a participation portion in response to other posts. This will take place on the City Tech Open Lab under the course web-site.

RESD 1110 TOOTH MORPHOLOGY
EVALUATION SHEET

OUTCOMES ASSESSMENT

LABORATORY EXERCISES (60% of the total grade)

Tooth Drawings (20% of final grade) _____

Tooth carvings, ten individual
teeth (60 % of final grade) _____

Final examination
(tooth carving) (20% of final grade) _____

Tooth Carving - Eleven individual teeth:
Incisors

Tooth alignment (20 pts)

Cervical line (length and fit) (10 pts)

Location of the contact areas (20 pts)

Height of contour (location) (20 pts)

Embrasures (location and size) (20 pts)

Correct placement of the cingulum,
line angles and marginal ridges (10 pts)

Canines:

Tooth alignment (20 pts)

Cervical line (length and fit) (10 pts)

Location of the contact areas (20 pts)

Height of contour (location) (20 pts)

Embrasure (location and size) (20 pts)

Correct placement of line
angles tip of the cusp,
marginal, buccal, and
lingual ridges (10 pts)

Premolars and molars:

Tooth alignment (20 pts)

Margin (length and fit) (10 pts)

Location of the contact areas (20 pts)

Height of contour (location) (20 pts)

Embrasures (location and size) (20 pts)

Correct placement of the buccal
and lingual cusps, line angle
ridges, and developmental grooves(10 pts)

LECTURE EXAMS (40% of the total grade)

LECTURE SESSIONS

Quiz	20%
Gen. Ed. Assignment	15%
Midterm	25%
Final	<u>40%</u>
	100%

Final grade will be an average of grades in lecture and laboratory.
A passing grade of 70% in lecture as well as laboratory must be achieved.

GOALS AND OBJECTIVES

FOR RESD 1110: Upon successful completion of the course
each student will be able to:

1. Recognize each tooth form and locate each in its correct position in the oral cavity.
2. Describe the composition of each tooth tissue.
3. Describe the geometric concept of crown outline.
4. Describe the composition and function of the periodontium.
5. Describe the salient features of occlusal anatomy of the posterior teeth.
6. Carve selected maxillary and mandibular teeth with anatomical landmarks.
7. Describe the anatomy and physiology of the temporo-mandibular joint.
8. Draw and label the anatomical landmarks of each tooth.
9. Recognize esthetic differences in teeth cross-culturally.

COURSE OUTLINE

RESD 1110 TOOTH MORPHOLOGY - LABORATORY SESSIONS

1. Introduction and technique for pouring maxillary and mandibular stone models and dies.
2. Begin to control and manipulate wax.
3. Waxing of maxillary central.
4. Continuation.
5. Continue, complete, and assess.
6. Waxing of maxillary cuspid.
7. Continue.
8. Continue, complete and assess.
9. Waxing of mandibular lateral.
10. Continue, complete, and assess.
11. Waxing of mandibular cuspid.
12. Continue, complete, and assess.
13. Waxing of maxillary 1st premolar.
14. Continue, complete and assess.
15. Waxing of mandibular 1st premolar.
16. Continue, complete and assess.
17. Waxing of mandibular 2nd premolar.
18. Continue, complete and assess.
19. Waxing of maxillary 1st molar.
20. Continue.
21. Continue, complete and assess.
22. Waxing of maxillary 2nd premolar.
23. Continue, complete and assess.
24. Waxing of mandibular 1st molar.
25. Continue.
26. Continue, complete and assess
27. Waxing of mandibular second molar.
28. Continue.
29. Continue and complete.
30. Practical examination on mandibular teeth and maxillary teeth.

***COMPLETED MAXILLARY AND MANDIBULAR WAX-UPS DUE FOR
EVALUATION AT THE END OF XXVIII SESSION**

RESD 1110 TOOTH MORPHOLOGY - COURSE OUTLINE - LECTURE

I. INTRODUCTION TO TOOTH MORPHOLOGY (ONE LECTURE HOUR) Air Force

Manual pgs 123-126

A. GROUP OF TEETH

1. Maxillary
2. Mandibular
3. Anterior
4. Posterior

B. TYPE OF TEETH

1. Deciduous teeth
2. Permanent teeth

C. TYPES OF SUBSTITUTE SYSTEMS

1. Universal
2. Palmer

II. NAMES OF TEETH AND THEIR SURFACES (ONE LECTURE HOUR)

Air Force Manual, Vol. I, pp. 123-130

A. NAMES OF TEETH

1. Central
2. Lateral
3. Cuspid
4. Pre-molar/Bi-cuspid
5. Molars

B. SURFACES OF TEETH

1. Mesial
2. Distal
3. Buccal
4. Lingual
5. Cervical
6. Incisal

III. DAY IN THE LIBRARY (ONE LECTURE HOUR)

A. PROPER RESEARCH TECHNIQUES

1. A Professor from the library will show how to research and annotate properly.
2. We will speak about the assignment for this course, Esthetic dental values across cultures. It has three portions; one is a researched and written portion about esthetic dental values across cultural diversity. The second portion will be creating an abstract that will be posted on the open lab for all to read. The third will be a series of comments and dialogue with fellow students on their abstract as well as your own.

IV. TOOTH STRUCTURE AND TISSUE (ONE LECTURE HOUR)

A. Define the following terms:

- a. dentin.
- b. enamel.
- c. cementum.
- d. pulp.
- e. cemento-enamel junction.
- f. cervical.
- g. anatomical crown.
- h. clinical crown.
- i. ridges.
- j. cingulum.
- k. developmental grooves.
- l. sulcus.
- m. fossa.
- n. fissure.
- o. pit.
- p. cusps.
- s. contact areas.
- t. embrasure areas.
- u. alveolus.

V. QUIZ (During the 5th Lecture Session)

VI. TOOTH FORM AND FUNCTION (ONE LECTURE HOUR)

A. FORM

1. Describe how tooth form and function can be expressed in geometric outline.
2. Match geometric shapes with tooth form.
3. Define, differentiate and locate:
 - a. proximal contact areas.
 - b. interproximal spaces.
 - c. embrasure areas.

B. FUNCTION

- a. Sheer
- b. Tear
- c. Grind

VII. THE CENTRAL AND LATERAL INCISORS (ONE LECTURE HOUR) Chapter 6 and 7 Metal Ceramic Technology

1. Eruption
2. Form
 - a. Height of contour
 - b. Length to width
 - c. Grid
3. Function
 - a. Incisal
 - b. Cingulum

VIII. MIDTERM – (ONE LECTURE HOUR)

IX. THE CUSPID (ONE LECTURE HOUR) Air Force Manual, Vol I, pp. 122-135,

1. Form
2. function

X. POSTERIOR TEETH; THE PREMOLAR(ONE LECTURE HOUR) Air Force Manual Vol I, pp. 137-143,

1. Mandibular Premolar
 - a. Form
 - b. Function
2. Maxillary Premolar
 - a. Form
 - b. function

XI. POSTERIOR TEETH; THE 1ST MOLAR

1. Mandibular Molar
 - a. Form
 - b. Function
2. Maxillary Molar
 - a. Form
 - b. Function

XII. POSTERIOR TEETH; THE 2nd MOLAR

1. Mandibular 2nd & 3rd Molar
 - a. Form
 - b. Function
2. Maxillary 2nd & 3rd Molar
 - a. Form
 - b. Function

XIII. DEVELOPMENT OF TEETH – (TWO LECTURE HOUR)

& XIV ABNORMALITIES, ANOMALIES & GENETICS.

- 1 Describe the development of teeth from "bud" or "lobe" form.
- 2 List the normal sequence for appearance of permanent dentition.
3. Describe the differences in form and number between primary and secondary dentition.
4. List problems which arise from loss of teeth.
5. Describe anomalies and abnormalities in human dentition and how the dentist may elect to solve them.
6. Describe the technician's role in the dentist's treatment of such problems

XV. FINAL EXAMINATION

PASS EXTENT & CRITERIA: With at least 70% accuracy at the end of all lecture hour

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Topic	Reading	Dates
INTRODUCTION TO TOOTH MORPHOLOGY	AFP 47-103 Vol I p123-126 Anatomy of Oral Structure (unit 1)	8/30
NAMES OF TEETH AND THEIR SURFACES	AFP 47-103 Vol I p123-126 Anatomy of Oral Structure (unit 2; 4)	7/6
DAY IN THE LIBRARY	TBD	7/13
TOOTH STRUCTURE AND TISSUE	AFP 47-103 Vol I 123-139 Anatomy of Oral Structure (unit 2; 2,5)	
QUIZ		7/20
TOOTH FORM AND FUNCTION	AFP 47-103 Vol I 123-139 Anatomy of Oral Structure (unit 2; 2)	10/11
THE CENTRAL AND LATERAL INCISORS	AFP 47-103 Vol I 140 Anatomy of Oral Structure (unit 2;12)	10/18
MIDTERM		10/25
THE CUSPID	AFP 47-103 Vol I 144;149 Anatomy of Oral Structure (unit 2;13)	11/1
POSTERIOR TEETH; THE PREMOLAR	AFP 47-103 Vol I 145,146;150,151 Anatomy of Oral Structure (unit 2;14)	11/8
POSTERIOR TEETH; THE 1 ST MOLAR	AFP 47-103 Vol I 147,152 Anatomy of Oral Structure (unit 2;15)	11/15
POSTERIOR TEETH; THE 2 nd MOLAR	AFP 47-103 Vol I 147,152 Anatomy of Oral Structure (unit 2;15)	11/29
DEVELOPMENT OF TEETH	Anatomy of Oral Structure (unit 3;)	12/6
DEVELOPMENT OF TEETH	Anatomy of Oral Structure (unit 3;)	12/13
FINAL EXAM		12/20

**INSTRUCTIONAL OBJECTIVES: TOOTH MORPHOLOGY - RESD 1110
LABORATORY**

In all wax-added laboratory sessions the student will be required to be prepared with:

1. #7 wax spatula.
2. Bunsen burner.
3. Roach carver.
4. Murphy knife.
5. flexible m.m. ruler.

**I. STUDENTS WILL BECOME FAMILIAR WITH THEIR INSTRUMENTS AND THE
MANIPULATION OF MOLTEN WAX. (TWO LABORATORY SESSIONS)**

CONDITIONS:

- A. Given a demonstration utilizing instruments, source of heat and molten wax.

PERFORMANCE: The student should be able to attempt to control molten wax.

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II. MAXILLARY CENTRAL INCISOR – (THREE LABORATORY SESSIONS)

A. **CONDITIONS:** Given a demonstration on waxing a maxillary central incisor.

B. **PERFORMANCE:** The student should be able to draw and wax a maxillary central incisor and place and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should also be able to demonstrate his skill in drawing and waxing the maxillary central incisor.

C. **EXTENT & CRITERIA:** The following points will be evaluated in drawing and waxing the maxillary central incisor:

1. The tooth drawn to scale and the anatomical landmarks properly located on the drawing.
2. Emphasis on the widest labial lingual diameter.

With at least 70% accuracy at the end of two sessions.

III. MAXILLARY CANINE – (THREE LABORATORY SESSIONS).

- A. CONDITIONS: Given a demonstration on waxing a maxillary canine.
- B. PERFORMANCE: The student should be able to draw and wax a maxillary canine and place and identify its respective anatomical landmarks. Through home- work assignments and repetitive practice the student should also be able to demonstrate his skill in drawing and waxing the maxillary left canine.

C. EXTENT & CRITERIA: The following points will be evaluated in drawing and waxing the maxillary canine:

1. The tooth drawn to scale and the anatomical landmarks properly located on the drawing.
2. Emphasis on the widest labial lingual diameter.
3. Mesio-distal diameter of crown cervical third.
4. Incisal third, lingual anatomy and marginal ridges properly placed.

With at least 70% accuracy at the end of two sessions.

IV. MANDIBULAR LATERAL INCISOR - Two laboratory sessions.

- A. CONDITIONS: Given a demonstration on waxing a mandibular lateral incisor.
- B. PERFORMANCE: The student should be able to draw and wax-up a mandibular lateral incisor and place and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should also be able to demonstrate his skill in drawing and waxing the mandibular left lateral incisor.

C. EXTENT & CRITERIA: The following points will be evaluated in drawing and waxing the mandibular lateral incisor:

1. The tooth drawn to scale and the anatomical landmarks properly located on the drawing.
2. Emphasis on the widest labial lingual diameter.
3. Mesio-distal diameter of crown and cervical third.
4. Incisal third, cingulum, and marginal ridges properly placed.

With at least 70% accuracy at the end of two sessions.

V. MANDIBULAR CUSPID – (TWO LABORATORY SESSIONS)

- A. CONDITIONS: Given a demonstration on waxing a mandibular cuspid.
- B. PERFORMANCE: The student should be able to draw and wax a mandibular cuspid and place and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should be able to demonstrate his skill in drawing and waxing the mandibular cuspid.
- C. EXTENT & CRITERIA: The following points will be evaluated in drawing and waxing the mandibular cuspid:
1. The tooth drawn to scale and the anatomical landmarks properly located on the drawing.
 2. Emphasis on the widest labial lingual diameter.
 3. Mesio-distal diameter of crown and cervical third.
 4. Incisal third, cingulum, and marginal ridges properly placed.

With at least 70% accuracy at the end of one session.

VI. MAXILLARY 1ST PREMOLAR – (TWO LABORATORY SESSIONS).

A. CONDITIONS: Given a demonstration on waxing a maxillary 1st premolar.

B. PERFORMANCE: The student should be able to draw and wax-up a maxillary left first premolar and place and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should be able to demonstrate his skill in drawing and waxing the maxillary 1st premolar.

C. EXTENT & CRITERIA: The following points will be evaluated in drawing and waxing the maxillary 1st premolar:

1. The tooth drawn to scale and the anatomical landmarks properly located on the drawing.
2. Emphasis on the widest labial lingual diameter.
3. Mesio-distal diameter of crown and cervical third marginal ridges.
4. Occlusal surfaces, marginal and triangular ridges.
5. Developmental grooves, fossae and sulci.

With at least 70% accuracy at the end of two sessions.

VII. MANDIBULAR 1ST PREMOLAR – (TWO LABORATORY SESSIONS).

A. CONDITIONS: Given a demonstration on waxing a mandibular first premolar.

B. PERFORMANCE: The student should be able to draw and wax-up a mandibular left first premolar and place and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should be able to demonstrate his skill in drawing and waxing the mandibular first premolar.

C. EXTENT & CRITERIA: The following points will be evaluated in drawing and waxing the mandibular 1st premolar:

1. The tooth drawn to scale and the anatomical landmarks properly located on the drawing.
2. Emphasis on the widest labial lingual diameter.
3. Mesio-distal diameter of crown and cervical third.
4. Occlusal surfaces, marginal and triangular ridges.
5. Developmental grooves, fossae, and sulci.

With at least 70% accuracy at the end of two sessions.

VII. MANDIBULAR SECOND PREMOLAR – (TWO LABORATORY SESSIONS).

- A. CONDITIONS: Given a demonstration on waxing a mandibular right second bicuspid.
- B. PERFORMANCE: The student should be able to draw and wax-up the mandibular right second premolars and place and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should be able to demonstrate his skill in drawing and waxing the mandibular left second bicuspid
- C. EXTENT & CRITERIA: The following points will be evaluated in drawing and waxing the mandibular second bicuspid:
1. The teeth drawn to scale and the anatomical landmarks properly located on the drawing.
 2. Emphasis on their differences in cusp formation.
 3. Widest buccal lingual diameter and mesio-distal diameter of crown and cervical third.
 4. Occlusal surfaces, marginal and triangular ridges.
 5. Developmental grooves, fossae, and sulci.

With at least 70% accuracy at the end of two sessions.

VIII. MAXILLARY FIRST MOLAR – (THREE LABORATORY SESSIONS).

- A. CONDITIONS: Given a demonstration on drawing and waxing the maxillary first molar.
- B. PERFORMANCE: The student should be able to draw and wax-up the maxillary right first molar and place and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should also be able to demonstrate his skill in drawing and waxing the maxillary first molar.
- C. EXTENT & CRITERIA: The following points will be evaluated in drawing and waxing the maxillary right first molar:
1. The teeth drawn to scale and the anatomical landmarks properly located on the drawing.
 2. Emphasis on their differences in cusp formation.
 3. The widest buccal lingual diameter and mesio-distal diameter of crown and cervical third.
 4. Occlusal surfaces, marginal and triangular ridges.
 5. Developmental grooves, fossae, and sulci.

IX. MAXILLARY SECOND PREMOLAR – (TWO LABORATORY SESSIONS).

- A. CONDITIONS: Given a demonstration on waxing the maxillary left second premolar.
- B. PERFORMANCE: The student should be able to draw and wax-up the maxillary 2nd premolar and place and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should also be able to draw and wax-up the maxillary premolar.
- C. EXTENT & CRITERIA: The following points will be evaluated in waxing and carving the maxillary 2nd premolar:
1. Emphasis on the widest labial lingual diameter.
 2. Mesio-distal diameter of crown and cervical third.
 3. Occlusal surfaces, marginal and triangular ridges.
 4. Developmental grooves, fossae, and sulci.

With at least 70% accuracy at the end of two sessions.

X. MANDIBULAR 1ST MOLAR – (THREE LABORATORY SESSIONS).

- A. CONDITIONS: Given a demonstration on waxing-up the mandibular 1st molar.
- B. PERFORMANCE: The student should be able to wax-up and carve the mandibular first molar and identify its respective anatomical landmarks. Through homework assignments and repetitive practice the student should also be able to wax-up the mandibular 1st molar.
- C. EXTENT & CRITERIA: The following points will be evaluated in waxing and carving the mandibular first molar:
1. Emphasis on the widest labial lingual diameter.
 2. Mesio-distal diameter of crown and cervical third.
 3. Occlusal surfaces, marginal and triangular ridges.
 4. Developmental grooves, fossae, and sulci.

With at least 70% accuracy at the end of three sessions.

XI. MANDIBULAR SECOND MOLAR – (THREE LABORATORY SESSIONS).

A. CONDITIONS: Given a demonstration on waxing-up the mandibular second molar.

B. PERFORMANCE: The student should be able to wax-up the mandibular second molar and place and identify its respective anatomical landmarks through homework assignments and repetitive practice the student should also be able to wax-up the mandibular second molar.

C. EXTENT & CRITERIA:

1. Emphasis on the widest buccal lingual diameter.
2. Mesio-distal diameter of crown and cervical third.
3. Contact area, cusp form, occlusal surface, fossae, sulci, marginal and oblique ridges.

With at least 70% accuracy at the end of two sessions.

XII. PRACTICAL EXAMINATION – (TWO LABORATORY SESSIONS).

RESD-1110 Tooth Morphology

Grading of Final Wax-up

Student Name:_____

Margin:

Contacts:

Occlusal Relation:

Overall Contour:

Anatomy:

Neatness & Cleanliness:

RES-1110 Tooth Morphology

Grading Sheet

Name: _____

Date: _____

Incisors	Max Score	Your Score
Tooth alignment	(20 pts)	_____
Cervical line (length & fit)	(10 pts)	_____
Location of the contact areas	(20 pts)	_____
Height on contour (location)	(20 pts)	_____
Embrasures (location and size)	(20 pts)	_____
Correct placement of the cingulum, Line angles and marginal ridges	(10 pts)	_____
Canines:		
Tooth alignment	(20 pts)	_____
Cervical line (length and fit)	(10 pts)	_____
Location of the contact areas	(20 pts)	_____
Height on contour (location)	(20 pts)	_____
Embrasure (location and size)	(20 pts)	_____
Correct placement of line angles, Tip of the cusp, marginal, buccal and lingual ridges.	(10 pts)	_____

RESD-1110 Tooth Morphology

Molar Grading Sheet

Name: _____

Date: _____

Name of Tooth	Max Score	Your Score	Comments
Tooth alignment	(20 pts)	_____	_____
Margin (length & fit)	(10 pts)	_____	_____
Location of the contact areas	(20 pts)	_____	_____
Height on contour (location)	(20 pts)	_____	_____
Embrasures (location and size)	(20 pts)	_____	_____
Correct placement of the buccal and lingual cusps, line angle ridges and developmental grooves	(10 pts)	_____	_____

Mandibular Molars:

Tooth alignment	(20 pts)	_____	_____
Margin (length and fit)	(10 pts)	_____	_____
Location of the contact areas	(20 pts)	_____	_____
Height of contour (location)	(20 pts)	_____	_____
Embrasures (location and size)	(20 pts)	_____	_____
Correct placement of buccal and lingual cusps, line angle ridges and developmental grooves	(10 pts)	_____	_____