SYLLABUS

COURSE:	DEPF 1602 Dental Anatomy Lab I: Introduction to Waxing
SEMESTER:	Fall
CREDIT HOURS:	1.0
REVISED:	2009
REPRINTED:	2009
COURSE DIRECTOR:	Ryan Quock, D.D.S.

GOAL

The student will begin to learn the psychomotor skills and develop the judgment required in the restoration of teeth. Dental inlay wax will be manipulated to restore missing tooth structure to prepared teeth, so that the restored teeth meet morphological and functional requirements. The student will learn to evaluate a wax-up in four aspects: marginal integrity, surface finish, anatomic form and occlusal relationship.

The student will learn how the Whip Mix Articulator functions and how to set the anterior guide table to match the anterior guidance of models mounted on the articulator. The student will acquire basic concepts of dynamic and static occlusal relationships. The student will learn to apply these concepts in the fabrication and evaluation of restorations.

OUTLINE

I. Introduction to Waxing (Monograph)

- A. Armamentarium for waxing
- B. Principles of waxing
- C. Marginal integrity
- D. Surface finish
- E. Anatomic form
- F. Sequences for waxing Viade cavity preparations

II. The Use of the Boley Gauge (Monograph)

- A. Description
- B. Method of measurement
- C. Laboratory exercise

III. Functional Waxing of Permanent Premolars and Molars (Monograph)

- A. Armamentarium
- B. Articulator settings prior to mounting models
- C. Mountings of the functional waxing models
- D. Model preparation
- E. Procedure for occlusal wax-ups

OBJECTIVES

I. INTRODUCTION TO WAXING

1. Demonstrate knowledge of the principles of waxing during laboratory projects.

2. Duplicate in wax the anatomic characteristics of a selected inset prepared molars.

II. THE USE OF THE BOLEY GAUGE

1. Given a Boley Gauge and a tooth, the student shall be able to measure each of the following dimensions:

   1.1 length of crown (facial)
   1.2 length of root (facial)
   1.3 mesiodistal diameter of crown
   1.4 mesiodistal diameter of crown at the cervix
   1.5 faciolingual diameter of crown
   1.6 faciolingual diameter of crown at the cervix
   1.7 curvature of cemento-enamel junction on mesial
   1.8 curvature of cemento-enamel junction on distal

III. FUNCTIONAL WAXING OF PERMANENT PREMOLARS AND MOLARS

1. Fabricate in wax the occlusal surfaces of designated permanent premolars and molars to correct anatomical and functional form.

2. Complete satisfactorily an occlusal wax-up of an assigned premolar in a timed practical examination.

3. Complete satisfactorily an occlusal wax-up of an assigned molar in a timed practical examination.

4. Describe the inter-arch and intra-arch relationships of the posterior permanent teeth.

5. Describe the permanent premolars and molars with respect to general anatomical, functional, positional, and identifying characteristics.

6. List specific coronal and radicular morphological characteristics of the permanent premolars and molars that can be used for purposes of differentiation within tooth groups.

RESOURCES

I. Media Resources

A. Printed media

1. Monograph

Ryan Quock, D.D.S.
Rod Dosch, D.D.S.
DENF 1602 Dental Anatomy Laboratory
UT-Houston Dental Branch, 2002

B. Non-printed media

1. Supplies

STUDENTS ARE REQUIRED TO PURCHASE THE FIRST YEAR INSTRUMENT AND SUPPLY KIT BEFORE THEY WILL BE ALLOWED TO BEGIN THIS LABORATORY COURSE.

II. Human Resources

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STUDY PLAN AND REQUIREMENTS

STUDENTS ARE REQUIRED TO PURCHASE THE FIRST YEAR INSTRUMENT AND SUPPLY KIT BEFORE THEY WILL BE ALLOWED TO BEGIN THIS LABORATORY COURSE.

The media for this course consists of a monograph and various handouts. It is important that the student learns and applies this material as soon as possible. Material will be presented in lectures which will apply directly to this laboratory course. Attendance at these lectures will be necessary to ensure satisfactory completion of this course in a timely manner.

Requirements

Satisfactory completion of the Viade prepped waxups is not required, but they must have been turned in and graded prior to starting the occlusal wax-ups. **The maxillary and mandibular premolar projects must have been turned in and graded prior to taking the premolar practical examination. Prior to taking the molar practical examination, the premolar practical examination must have been completed satisfactorily and the maxillary and mandibular molar projects must have been turned in and graded. Satisfactory completion of the molar practical examination is a prerequisite for taking the premolar full crown practical examination in DEPS 1603 Dental Anatomy Lab II.**

DEPF 1602 DENTAL ANATOMY LABORATORY I
2009 Fall Semester Schedule

Labs: Mondays, 9-11:50 am
Lectures: Lab lectures may be presented in addition to the DENF 1601 lecture time.
They will begin at 9:00 am in Room B81 (Aug 17 only) or 340.

DATE	LECTURE	LABORATORY
Aug 17	Armamentarium Intro to Waxing/Inset Anatomy **Rm B81**	Number Viade Inset Anatomy #'s 3 and 30, begin waxing #30
Aug 24	Mount Dentoforms **Rm 340**	Continue Viade Inset Anatomy: tooth #30 Begin mounting Dentoforms on articulator
Aug 31		Turn in Viade #30; begin Viade #3 Continue mounting Dentoforms
Sep 7	***Labor Day Holiday***	
Sep 14		Turn in Viade #3 Finish mounting Dentoforms
Sep 21	Intro to Occlusal Wax-ups: #12	Begin occlusal wax-up: tooth #12
Sep 28		Continue occlusal wax-up: tooth #12
Oct 5	Finishing Tips	Turn in occlusal wax-up: tooth #12
Oct 12	What to look for Practical Instruction	Remediate premolar #12 project or practice for practical
Oct 19		**PREMOLAR PRACTICAL EXAMINATION**
Oct 26	Occlusal Wax-up: #15	Start occlusal wax-up: tooth #15
Nov 2	Lost Wax Technique	Continue occlusal wax-up: tooth #15
Nov 9		Turn in occlusal wax-up: tooth #15
Nov 16	Occlusal wax-up: #18	Begin occlusal wax-up: tooth #18
Nov 23	***Course Evaluation***	Continue occlusal wax-up: tooth #18
Nov 30	Waxing Tips Practice Advice	Turn in occlusal wax-up: tooth #18
		Remediate molar projects or practice for practical
Dec 11 **9-11:50 am**		**MOLAR PRACTICAL EXAMINATION**

EVALUATION METHODS

Students will be evaluated in laboratory projects and practical examinations. The grading scale for these projects will be based on the following:

Grade	Letter Grade	UT Descriptor	Definition
90-100	A	Excellent	Meets stated criteria at highest level.
80-90	B	Above Average	Meets essential criteria.
70-80	C	Average	Meets essential criteria but would benefit from modifications.
0-69	F	Failure	Does not meet essential criteria.
	IU or IS	Incomplete	

Note: When a graded project is returned, you should review the critical errors sheet(s) and project together. If you do not understand a critique or have questions about a grade, you are expected to contact your assigned faculty immediately.

Laboratory: Phase I

This phase of laboratory consists of two inset prepared molars. For this section, each wax-up must be turned in for grading with the student's unprepared model. Each wax-up is weighted 5% of the course grade. The inset prepared molar section will be graded using the following categories and essential criteria:

1. **Marginal integrity (M):** refers to the quality of the tooth-wax interface. Margins must terminate precisely at the margin of the preparation and possess an angle of emergence in harmony with the uncut tooth surface beyond the margin.

2. **Surface finish (F):** smooth, polished and free of all surface irregularities.

3. **Anatomic form (A):** shape and form must conform to the unprepared Viade model.

Note: The section and unprepared model should be numbered on the base of the pedestal with the one or two digit student number. The height of the base of a section may be different from the height of the base of its unprepared model. Therefore, when measuring the height of an anatomic structure, the measurement should be taken from the top of the base rather than the bottom.
Each category of the essential criteria will be evaluated in a stepwise fashion using the evaluation sheets at the end of the syllabus. These evaluation sheets should serve as a guide for the student in developing an accurate self-evaluation technique.

For the each inset prepared molar project, the weight of each category is:

M = 20%
F = 20%
A = 60%

Laboratory: Phase II

This phase of laboratory consists of one premolar occlusal wax-up, the premolar practical examination, two molar occlusal wax-ups and the molar practical examination. The occlusal wax-up projects and the practical examinations will be graded using the following categories and essential criteria:

1. **Marginal integrity (M):** margins must terminate precisely at the margin of the preparation and possess an angle of emergence in harmony with the uncut tooth surface beyond the margin.

2. **Surface finish (F):** smooth, polished and free of all surface irregularities.

3. **Anatomic form (A):** anatomical form and contour are to meet all physiological requirements while matching the existing contours of adjacent teeth where applicable.

4. **Occlusal relationships (O):** occlusal stops must be properly located and established. Wax patterns must be free from any occlusal interference.

For the projects and practical examinations, the weight of each category is:

M = 15%
F = 15%
A = 35%
O = 35%

Each of the premolar and molar projects will be 10% of the course grade. Satisfactory completion of projects is not a requirement for taking a practical. ***However, the projects relating to each practical exam must have been turned in and graded prior to the practical examination.*** It is important that students perform at their best on the projects. There is a strong correlation between poor performance on the projects and poor performance on the practical examinations.

The practical examinations will be **two hours and forty-five minutes in length**. Each of the practical examinations is weighted 30% of the course grade.

Remediation

An acceptable level of performance is required on each of the practical examinations. If a practical exam is failed, the student must make an appointment with the assigned faculty within five working days of notification of the failing grade. At that appointment, the student's performance will be reviewed and a remediation process established. The remediation must be completed satisfactorily prior to taking a remake practical exam.

If a remake examination is needed, the recorded grade will be the average of the initial practical score and the remake. A failure of a practical examination must be remediated prior to taking the next scheduled practical exam.

Projects that receive failing grades can be remade, but must be re-graded by assigned faculty before corresponding practical is taken. In the case of the Viade inset anatomy projects, remakes must be graded before the due date for the premolar occlusal project. The recorded grade will be the average of the initial project score and the remake.

Excused Absences

The Office of Student Affairs must validate all requests for excused absences. If a student does not turn in a project or take a practical examination on the specified date and time, the student must contact the assigned faculty within five working days of returning to school. If the student does not produce acceptable documentation for their absence to the Office of Student Affairs, a grade of zero (0) will be recorded. Students producing adequate documentation may be granted an "excused absence" and a make-up exam administered by the assigned faculty. If a student with an "unexcused absence" is granted a make-up examination, a 10-point penalty will be applied to the examination. This penalty will not cause the examination grade to fall below 70.

Late Penalties

A 10-point penalty will be assessed when a student turns in a project late or takes a practical examination late for other reasons, i.e., a prior project has not been turned in for grading or the requirements for taking a practical exam have not been fulfilled. If the student has been actively remediating the failure of a practical examination to the satisfaction of the individual assigned faculty and the course coordinator, the 10-point late penalty on the next practical examination may be waived.

Course Completion

Each student is required to make a passing grade in the course. Eligibility for remediation and re-testing for a course failure will be determined by the First Year Student Evaluation and Promotion Committee. If a student is eligible for remediation and re-testing for a course failure, the student is required to contact the course director. Once a student successfully remediates the course, a grade of 70 will be recorded.

APPENDIX