LAMAR STATE COLLEGE- ORANGE
ALLIED HEALTH DIVISION
DENTAL ASSISTING PROGRAM

Syllabus for

DNTA 1241 - DENTAL LABORATORY PROCEDURES
(Two Credit Hours)

SUMMER I, II

Instructor:  Dr. Jim Flippen
Program Director:  Carolyn Flippen, Director
Office:  GAB 108
Office phone:  409-882-3094
Office hours:  To be announced
Course:  Thursday  Lecture 9:00-10:00
         Thursday  Lab  10:00-12:00
E-mail:  James.Flippen@lsco.edu

Course Description

Catalog
The study of dental laboratory procedures including skills associated with chairside assisting; pouring, trimming, and polishing study casts; preliminary impressions; and fabricating provisional restorations.

Transferability
This course is transferable to any other Texas College that has the same Workforce Education Course Manual (WECM) course number.

Prerequisites

Required Text:  Phinney, Donna J. and Halstead, Judy H. Delmar’s Dental Assisting-A Comprehensive Approach 3rd Edition

Course Objectives
The student will organize armamentarium necessary to perform laboratory procedures, manipulate dental materials to perform various laboratory procedures, and differentiate laboratory materials and relate each to its specific application. In accordance with the mission of Lamar State College- Orange, this course develops in the student the particular skills, knowledge, and attitudes needed for success in the field of Dental Assisting.

Upon completion of DNTA 1241, the student will have had the opportunity to:
1. Organize armamentarium necessary to perform laboratory procedures.
2. Manipulate dental materials to perform various laboratory procedures.
3. Differentiate laboratory materials and equipment and relate each to its specific application.
4. Demonstrate knowledge in choosing appropriate dental materials.
5. Select and manipulate dental materials for specific procedures.
6. Demonstrate the basic principles of laboratory safety.
7. Utilize universal infection control precautions.

**DENTAL ASSISTING PROGRAM GOALS/OBJECTIVES**
At the completion of the Dental Assisting Program, the student will have been given the opportunity to:

I. Demonstrate appropriate knowledge and understanding of the dental care team’s role in the health-care industry, including quality improvement processes that may be used to monitor the dental health team’s ability to fulfill its responsibilities within a given health-care system.

II. Demonstrate a thorough knowledge and understanding of the duties and responsibilities of the certified dental assistant, including standards of ethics and jurisprudence governing dental practice.

III. Have a working knowledge of the pharmaceutical-medical terms, abbreviations, and symbols commonly used in the prescribing, dispensing, and charting of medications in the dental office.

IV. Have a working knowledge of the skill required to systematically collect and document diagnostic data in the dental office.

V. Demonstrate knowledge and skill required to perform a various clinical supportive skills in the dental office.

VI. Demonstrate the ability to perform the essential functions relating to purchasing and inventory control of dental office supplies and equipment.

VII. Demonstrate knowledge and skill required for management of business office procedures for the dental office.

VIII. Demonstrate the ability to use therapeutic communication in the dental office in both verbal and written form.

IX. Have a working knowledge biomedical science and the procedures and techniques related to bloodborne pathogens and hazard communications standards.

X. Demonstrate knowledge of radiation safety measures and the production of diagnostic radiographs.

XI. Demonstrate an understanding of materials used in intra-oral and laboratory procedures.
ANDRAGOGICAL METHODOLOGY

This course meets weekly, for lecture and laboratory experiences. Each session consists of one hour of lecture and two hours of laboratory experiences.

The student is responsible for self-directed learning and must be an active, continual learner. Students are responsible for all information outlined in the course syllabus whether or not presented in class. The student is expected to attend class, read assignments, answer objectives, and completes other learning assignments and laboratory activities in pursuit of the program’s aims and objectives of the individual units of study.

Assignments must meet deadlines established by the faculty or they will be regarded as unsatisfactory. As a self-reliant, autonomous, and independent learner, the student will interact in the teaching/learning process with the faculty in class.

ACADEMIC DISHONESTY

Academic dishonesty WILL NOT be tolerated. Academic dishonesty includes but is not limited to the following:

1. Cheating - the act of looking on another person’s paper or computer to obtain an answer during an examination. Any talking during an exam will be considered an attempt to get an answer from another student.

2. Plagiarism - to take and use as one’s own, the ideas or writings of another, without giving that person credit.

3. The submission for credit, someone’s work as your own.

4. Making written notes or taping examination questions during test review.

According to the Lamar State College-Orange Handbook, ANY of these methods of academic dishonesty are grounds for dismissal from the institution.

CRITICAL THINKING

Critical thinking is a process involving higher thinking skills. These skills include, but are not limited to, application, analysis, synthesis, and evaluation of factual information. Lamar State College-Orange advances critical thinking Skills (LSC-O ACTS) through assignments of varying natures within the course that are designed to challenge and improve the student’s critical thinking processes.

In this course, DNTA 1241, Dental Laboratory Procedures students will be given the opportunity to learn skills associated with chairside assisting; pouring, trimming and polishing study casts, preliminary impressions, and fabrication of provisional restorations. Students will be challenged with at least one question per exam that will demonstrate the student’s mastery of analysis, synthesis, and evaluation of a particular question.

A well cultivated critical thinker:
- Raises vital questions and problems, formulating them clearly and precisely;
- Gathers and assesses relevant information, using abstract ideas to interpret it
effectively;
- Comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards;
- Think open-mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences; and
- Communicates effectively with others figuring out solutions to complex problems.

Dillon Beach: The Foundation for Critical Thinking

**Evaluation methods**

1. Examinations will be based on course and unit objectives.

2. There will be three unit exams, a final, and a laboratory/daily grade all of which will be averaged together. Laboratory/daily grades are determined by averaging procedural evaluations, class participation and daily quizzes. All five grades will have equal value. A final course grade of 75% is necessary for the student to pass this course and progress in the program.

3. Students are strongly encouraged to take exams as scheduled. However, in the event that an exam is missed, the student is required to notify the instructor BEFORE the exam and give the reason for the absence. A make-up exam may be scheduled at the discretion of the instructor. The make-up exam must be taken within one week after the original examination. In the event of a make-up exam there will be an automatic ten point reduction on exam. There will be no make-up for a practical exam. Exams are given at the LSC-O Testing Center and are scheduled by the student. Results of exam grades will be withheld until all students have taken the exam. The final examination must be taken, with no provision for make-up. It is the student’s responsibility to obtain all missed material and make-up any missed daily (lab) work.

4. If a student fails a unit examination, he/she is expected to make an appointment within one week after the examination with the course instructor. At that time, the student will review the examination and, with the assistance of the instructor, identify strategies to improve examination performance. Any student can review the examination with the course instructor within two weeks after the examination.

5. Exams will be given on scheduled dates (refer to course calendar). Dates are subject to change upon instructor’s discretion.

6. Letter grades will be assigned as follows:

   A - 90 - 100
   B - 80 - 89
   C - 75 - 79
   D - 60 - 74
   F - 0 - 59
Policy on a Grade Incomplete

The grade of “I” may be given when any requirement of the course, including the final examination is not completed with instructor approval. Arrangements to complete deficiencies in a course must be made with the instructor. Incomplete work must be finished within the next long semester. If not, the Admissions and Records Office must change an “I” grade to the grade of “F”. The course must then be repeated, if credit is desired. An “I” grade also automatically becomes an “F” if the student registers for the course before removing the deficiencies and receiving a grade change. The instructor may record the grade of “F” for a student who is absent from the final examination and/or is not passing the course.

Make-up Policy

Make-up exams are allowed at the discretion of the instructor; see # 3 above. There is no provision for make-up of the final examination. Make-up exams will automatically receive a deduction of ten (10) points from the exam grade.

ATTENDANCE

Students who are absent from lecture or lab jeopardize their ability to meet the objectives of the Dental Assistant Program and requirements of the American Dental Association. The student is expected to be present and on time for lecture and lab at all times.

1. If a student is not present for any lecture or lab they will be counted absent for that day. This absence will result in a “0” for the daily grade. If a student must leave lecture or lab early, it will count as an absence.

2. If a student is late for lecture or lab the instructor has the authority to refuse entry to that lecture or lab and it will be counted as an absence. If a student leaves early and misses a quiz a “0” will be recorded as a daily grade and there will be no provision for make-up.

3. All medical, dental, and personal appointments must be scheduled for times when the student is not in lecture or lab.

PROFESSIONAL BEHAVIOR

1. A positive attitude is essential in all healthcare professions.

2. To be pleasant and agreeable is essential.

3. Cooperation and loyalty with and to fellow classmates and faculty is necessary for harmony in the class.

4. The character and conduct in Dental Assisting students must be without question. You are representing a professional health team and LSC-O.

5. Students should show respect and courtesy to all faculty and staff. This applies whether in the classroom, laboratory, or on campus.
6. Cell phones or pagers will not be allowed in classroom or dental lab. In case of an emergency you may be contacted at 882-3022. If a cell phone is seen, the student will be asked to leave the lecture room or dental lab and it will be counted as an absence. You are given periodic breaks and, you may check your voicemail at that time.

REHABILITATION ACT OF 1973

Section 504 of the Rehabilitation Act of 1973 states that: “No otherwise qualified person with a disability in the United States.....shall, solely by reason of .....Disability, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”

It is not necessary for a student to disclose the nature of his/her disability. However, it may be necessary to provide appropriate documentation to the office of Advising and Counseling. Should the student need special accommodations or modifications while attending classes at Lamar State College-Orange they may be seen in the Advising and Counseling office located on the third floor of the Library Building or contacting the office at 882-3340.

Any information regarding a disability gained from medical examinations or appropriate post-admissions inquiry shall be confidential and shall be shared with others within the institution on a need-to-know basis only.

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION NOTICE

Lamar State College-Orange is an equal opportunity/affirmative action institution that does not discriminate based on race, color, sex, religion, handicap, or ethnic origin.

Withdrawals and Drops
Refer to calendar to be distributed
Never attending or ceasing to attend classes DOES NOT constitute a withdrawal or drop. You remain registered until you file a Drop/Withdrawal Form at the Registrar’s Office by the appropriate deadlines. Failure to act in a timely manner will result in an “F” grade for the course. It is the student’s responsibility to turn in all Drop/Withdrawal Forms and follow up to assure that they were processed as desired.

Instructor-Initiated Drop
Excessive absences, disruptive behavior, dishonesty, violating uniform policy, will result in a drop.

Student with Disabilities
A request for special accommodations must be made through the ADA Counselor and the appropriate form submitted to the instructor two weeks in advance of need.
Any student with a verifiable learning or physical disability who requires special accommodations is encouraged to speak to the instructor in private regarding his/her accommodations need.
Children in the Classroom
The LSCO student handbook specifies that no children under the age of 15 are allowed in the classroom or hallways.

Syllabus Content
The instructor reserves the right to make changes to this syllabus if deemed necessary. All changes will be provided to the students orally or in writing before the implementation of the change.
DNTA1241
DENTAL LABORATORY PROCEDURES

LECTURE: Thursday 9:00-10:00
LAB: Thursday 10:00-12:00

Lecture: 1 Hour
Lab: 2 Hours

Chapter 30

Lecture 1 Hour
Lab 2 Hours

Fixed Prosthodontics and Gingival Retraction

The student should strive to meet the following objectives and demonstrate an understanding of the facts and principles presented in this chapter:

1. Define the scope of fixed prosthodontic.
2. Explain considerations the dentist must make when recommending various prostheses to a patient.
3. Cosmetic/esthetic dentistry.
4. Describe various types of fixed prostheses and their functions.
5. Describe dental materials used in fixed prostheses.
6. Explain the involvement of the laboratory technician in the fabrication of fixed prostheses.
7. Describe the role of the dental assistant in all phases of fixed prosthodontic treatment.
8. Explain techniques for retaining the prostheses when there is little or no crown on the tooth.
9. Describe implant retainer prostheses.
10. Explain techniques for maintaining fixed prostheses.

Chapter 32

Lecture: 1 Hour
Lab: 2 Hours

Removable Prosthodontics

The student should strive to meet the following objectives and demonstrate an understanding of the facts and principles presented in this chapter.

1. Define removable prostheses and list the reasons for using them.
2. Describe the patient considerations related to removable prosthetic treatment.
3. Explain the dental assistant’s role in removable prosthetic treatment.
4. Outline the steps of the diagnostic appointment and list the materials needed.
5. Describe the consultation appointment and the materials required for the case presentation.
6. Describe the advantages and disadvantages of the partial denture, the components, and the appointment schedule.
7. Describe the complete denture, the patient considerations, and the appointment schedule.
8. Explain the types and steps of denture reline procedures.
9. Describe the procedure for a denture repair.
10. List the steps to polish a removable prosthetic appliance.
11. Explain the over denture and the advantages and disadvantages related to it.

Chapter 35

Lecture 1 Hour
Lab 2 Hours

**Laboratory Materials and Techniques**

The student should strive to meet the following objectives and demonstrate an understanding of the facts and principles presented in this chapter:

1. Identify the materials used in the dental laboratory needed to perform the associated procedures.
2. Demonstrate the knowledge and skills needed to prepare, take, and remove alginate impressions and wax bites.
3. Demonstrate the knowledge and skills needed to prepare reversible hydrocolloid impression material for the dentist.
4. Demonstrate the knowledge and skills necessary to prepare elastomeric impression materials such as polysulfide, silicone, and polyether for the dentist.
5. Demonstrate the knowledge and skills necessary to use gypsum products such as Type I: Impression plaster; Type II: Laboratory or model plaster; Type III: Laboratory stone; Type VI: Die Stone; and Type V: High-strength stone.
6. Demonstrate the knowledge and skills necessary to pour and trim a patient’s alginate impression.
7. Identify the use of a dental articulator for dental casts or study models.
8. Identify the different classifications and uses of waxes used in dentistry.
9. Demonstrate the knowledge and skills necessary to fabricate acrylic tray resin self-curing and light-curing custom trays, vacuum-formed, and thermoplastic custom trays.
10. Demonstrate the knowledge and skills necessary to contour prefabricated temporary crowns and to fabricate and fit custom temporary restorations.
## Schedule

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<tr>
<th>Week</th>
<th>Lecture</th>
<th>Laboratory</th>
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| **Week 1** | Chapter 30  
Fixed Prosthodontics and Gingival Retraction  
1. Introduction  
2. Patient Considerations  
3. Types of Fixed Prosthesis | 1. Students examine various fixed prosthesis  
2. Students role model and consider patients considerations  
3. Examine crowns, inlay, onlay, bridges, Maryland bridge, veneers  
4. Evaluation – various types of fixed prosthesis |
| **Week 2** | Chapter 30 (Continued)  
4. Types of Materials Used for Fixed Prosthesis  
5. Role of the Laboratory Technician  
6. Role of the Dental Assistant | 1. Demonstrate porcelain veneer procedure  
2. Porcelain to metal crown procedure  
3. Cementation of porcelain to metal crown procedure  
4. Evaluations |
| **Week 3** | Chapter 30 (Continued)  
7. Retention Techniques  
8. Implant Retained Prostheses  
9. Maintenance of Fixed Prosthodontics  
Review for Exam 1 (Chapter 24) | 1. Complete evaluations from Week 2 |
| **Week 4** | Exam 1 (Chapter 30) | Review test results for Exam I |
| **Week 5** | Chapter 32  
Removable Prosthodontics  
1. Introduction  
2. Patient Considerations  
3. The Dental Assistants Role  
4. The Diagnosis and Treatment Planning | 1. Examine various removable prosthesis  
2. Complete evaluation on components on a removable partial denture  
3. Final impression procedure for partials  
4. Evaluation of all procedures |
| **Week 6** | Chapter 32 (Continued)  
5. The Consultation Appointments  
6. The Removable Partial Dentures  
7. The Complete Denture | 1. Examine components of complete dentures  
2. Construct base plates  
3. Construct bite rims  
5. Review final impression material  
6. Evaluate all procedures |
| **Week 7** | Chapter 32 (Continued)  
8. Denture Reline  
9. Denture Repair  
10. Polishing of the Removable Prosthesis  
2. Delivery appointment procedure.  
3. Students border molded and took final edentulous impression with rubber bases with a model |
| **Week 8** | Review for Exam 2 (Chapter 25) | 1. Denture repair  
2. Evaluation |
| **Week 9** | Exam 2 (Chapter 32) | Review results of Exam 2  
1. Continue to Evaluate |
<p>| <strong>Week 10</strong> | Chapter 35 | 1. Students take impressions (hydrocolloid) |</p>
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<th>Laboratory Materials and Techniques</th>
<th>and disinfect and Evaluate</th>
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<tbody>
<tr>
<td>1. Introduction</td>
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<tr>
<td>2. Hydrocolloid Impression Materials</td>
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<td>2. Evaluate</td>
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### Week 11
**Chapter 35 (Continued)**
3. Elastomeric Impression Materials
4. Gypsum Materials
5. Articulating Casts or Study Models

1. Students take bite registration
2. Construct custom trays
3. Students take ploysifoxine/polysulfide impressions/disinfect and pour
4. Evaluate

### Week 12
**Chapter 35 (Continued)**
6. Dental Waxes
7. Custom Trays
8. Constructing a Custom Tray
9. Vacuum – Formed Tray
10. Temporary Restorations

1. Examine various dental waxes
2. Students trim study models
3. Evaluate

### Week 13
**Review for Exam 3**
(Chapter 35)

1. Size aluminum shell crowns
2. Construct custom temporary crowns
3. Cement temporary crowns
4. Evaluate

### Week 14
**Exam 3 (Chapter 35)**

Review for Final Exam
Review test results for Exam 3
Review for Final Exam