



University of Jordan
Faculty of Dentistry
Dept. of Prosthetic Dentistry
Third Year, 2009-2010
Removable Prosthodontics Laboratory 1

Course Title: Removable Prosthodontics Laboratory (1)

Course Code: 1304344

Prerequisite: None

Lab Venue: Prosthodontic lab, 1st floor, Faculty of Dentistry

Lab Times: Wednesday & Thursday, 8.00 -12.00 am & 12.30 am - 4.30 pm

Day	8.00 -12.00 am	12.30 am - 4.30 pm
Wednesday	Group	Group
Thursday	Group	

If the lab day is a Holiday; the lab will be automatically transferred to the next week.

Course Description:

This is a laboratory based preclinical Prosthodontics course where students are trained on the various steps involved in the construction of complete dentures and removable partial dentures. The practical sessions are given on weekly basis. Theoretical background is given in the form of short talks and presentations before the start of the related practical session. Demonstrations of the work to be done are carried out for each practical step with strict supervision to ensure that all students acquire the skills necessary to do the practical work of complete dentures taking into account the variations in the level of understanding between students. The faulty procedures are used as an education tool to construct critical assessment skills and relate them to clinical complaints and patient management.

The clinical work of relation to the laboratory work is given in form of theory and slide show to ensure that the students understand each practical step.

Objectives and Goals:

- ❖ This is preclinical course designed to develop skills and provide information for utilizing removable prosthodontics (conventional complete and partial dentures) for the management of completely/partially edentulous patients.

1. Provide the students with basic, current, evidence based and updated information and sufficient practical and laboratory background to assist them in managing completely/partially edentulous patients using removable complete or partial dentures. This is in the form of laboratory sessions.
2. Provide hands-on training on the various steps involved in fabrication of complete and removable partial dentures.
3. Prepare the students for the clinics to be familiar with all clinical and laboratory steps in complete denture and Transitional/Definitive removable partial denture construction and how to manage edentulous patients.
4. Learn how to communicate with other professionals especially dental technicians by the work authorization.
5. Finish complete and partial dentures going through the entire laboratory and some clinical steps.

Learning Outcomes:

1. Understand and get familiarized with the consequences of edentulousness, complete and partial denture components and terminology.
2. Be familiar with the anatomy of the denture bearing areas in the mandible and maxilla. Understand the classification of edentulous arches.
3. Be familiar with the principles and theories of impression for complete and partial dentures and know different materials used throughout denture construction.
4. Be familiar with required jaw relationships for edentulous patients.
5. Understand the principles of tooth selection, occlusion and setting of teeth for partial and complete dentures.
6. Understand the principles of waxing and festooning removable dentures.
7. Be familiar with the principles and techniques of providing postdams for complete dentures.
8. Practice the principles of making primary impressions for teeth and edentulous ridges.
9. Practice the principles of making special trays for completely/partially edentulous cases.
10. Practice the principles of making record blocks for edentulous cases.
11. Practice the principles of mounting for completely/partially edentulous cases.
12. Practice the principles of setting teeth for completely/partially edentulous cases.
13. Be familiar with the clinical techniques that are used in our daily practice.
14. Know the functions, shape, form and location of different components of RPD.
15. Understand the basic principles of Removable partial denture (RPD) design.
16. Understand the basic procedure of cast surveying and know the necessary tooth preparation procedures for RPDs.
17. Perform or watch a demonstration on all the laboratory procedures and steps involved in the fabrication of an RPD: Drawing design, surveying, blocking out of undercuts, duplication, hardening, waxing, casting, divesting, finishing and polishing of metal frameworks.
18. Know how to authorize work to dental technicians.

Teaching and Learning Methods:

- Laboratory sessions, handouts and presentations are designed to achieve the course objectives.
- The acquired skills during this course will prepare the student for working on real patients and their models.
- Demonstrations performed by the teaching assistant are main component of the teaching methods.
- The students are responsible of the material covered during the course.
- Any difficulty or concern during the course should be passed to the instructors and course coordinator immediately.

Lab Work:

- The working models should be marked with the students name and university number.
- The Lab work should be finished during the lab sessions, not allowed to finish your work at home.
- There will be four stations for marking your lab work and this will be for your special tray, record blocks, mounting and setting of teeth.
- All the instruments you need should be brought as soon as possible. A list of that will be provided.
- You should leave your worktop as clean as possible.
- Each student should set at the designated area. The names will be mounted on each bench.
- Cooperation and professionalism in the lab time are very helpful and encouraged to facilitate your progress in the course.
- Dress code using lab coat should be adhered to during all lab sessions and the coat should be on before entering the lab and only removed outside the lab after the end of the lab session.

Participation:

- All students are highly encouraged to participate in the classes and laboratory session. Being a positive party during this course will be helpful.
- Quizzes and brain storming questions will be essential part of the course.
- All Students are highly encouraged to finish all the requirements of this course in due time.
- No student should relay on the supervisor to do the work for them. Supervisors are to help you not to do your job. The supervisor should interfere whenever required to do so. Never be shy to participate & ask where you get it wrong.

Attendance:

- It is mandatory for all laboratory sessions.
- Every student will be allocated to a seat according to the serial number.
- UJ regulations will be applied when you exceed 10% of an excused absence.
- Course drop date is according the UJ regulations.

- Cooperation and professionalism during the lab time are very helpful and encouraged to facilitate your progress in the course.
- Miss Alia will review the attendance in labs each time.

Students with special needs:

- Any student who feels that s/he may need accommodation for any type of disability is encouraged to contact the course coordinator who will be happy to help in any way.
- Accommodations to the course plan can be tailored to the needs of specific individuals after consultations with the dean.

Assessment and Exams policy:

Exams' Format: Lab exams are practical exams. However, they might be in other formats like spot exams and viva.

Make up Exams: It is applicable when an acceptable and valid excuse is presented at the applicable time.

Cheating:

- It is unethical and illegal by any means
- UJ regulations will be applicable
- The work should be your own, otherwise it will be scored zero

Dates: According to Registration Unit and the Examination committees.

Continuous assessment, Quizzes and Participation form portion of the assessment

The following is a suggestion of exams, assessment dates and grade distribution:

Assessment policy		
Assessment Type	Expected Due Date	Weight
Continuous Assessment	Throughout the Module	60
Final Practical Exam	2010	40
Total		100

Work Load:

The average work load is 3 hours/student/week.

Instruments:

You need to bring the following armamentarium during each laboratory session:

- Wax knife, Lacron carver and Plaster Knife
- Loop forming pliers Wire cutter (1/pench is acceptable)
- Rubber bowel Plaster spatula
- Protective glasses, Lighter and Pencil
- Clean and Tidy Laboratory white coat available every session. Name badge mounted all the time during the laboratory sessions

This list will be checked during the introductory laboratory session

Professionalism:

- Professions tend to be autonomous and self-sufficient i.e having a high degree of control of own affairs while having freedom to exercise professional judgment.
- As it is a trait, which can be easily enhanced, it is thus subject to self-interest and a continuous process of critical evaluation of ethics and procedure.
- As the students have been part of the university for some considerable time, they would be familiar with general principles about it's beliefs on matters such as quality studentship within this environment. We thus expect our students to develop their professionalism even further together with a high Morality. And Dentistry is one of these professions based on such Ethical codes.
- Gross violations of these formal codes are governed by University laws, which delineate the procedures to determine whether a violation of the code of ethics occurred and, if so, what remedies should be imposed.
- This does not mean the list is complete. We encourage students to abide with the more sensitive approach to this by allowing the practice of a high Morality (or proper behavior), which defines right and wrong by the society, philosophy, religion, and individual conscience.
- Students and their instructors often make ethical choices reflexively. But ethically sensitive situations, where time, emotions and marks are pressured, it becomes all too easy to be blind-sided by temptation. The best antidote to ethical lapses is to commit in advance to a set of ethical principles - your personal ethical code that follows or grows to it
- The course coordinator is always available to talk with the student when problems arise. If a student must talk with the course coordinator after office hours, an appointment can be made for that time
- If you have any problems that require the attention of an instructor, do not wait until the problem is insurmountable. Do not allow tension to build-up to unsolvable proportions.

Course changes:

- Information contained in this course outline is correct at the time of publication.
- Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment needs.
- The course coordinator reserves the right to add or delete material from courses and will endeavor to provide notice of changes to students as soon as possible.
- The timetable may be revised accommodating to holidays & unexpected off days.

University of Jordan, Faculty of Dentistry
Third year Students, Prosthodontics 1, 1st Semester, 2009/2010
Lab sessions series

Lab sessions include:

1. Full explanation of the theoretical background of the procedure need to be accomplished during the session.
2. Demonstration of the laboratory procedure by instructors/technician.
3. Practical application of the procedure by students under direct supervision.

Date	Laboratory session
1	<p>○Acquaintance Regulations Overview of the steps of the CD construction. Impression trays, types of stock trays. Plaster and stone, importance of mixing ratios. Demo: making the upper and lower compound primary impressions for and edentulous manikin. Pouring of the impression with plaster.</p>
2	<p>Laboratory exercise: Making an upper & Lower primary compound impression for edentulous manikin by the students. Pouring the impression to fabricate a study models. Their work will be marked.</p>
3	<p>Pre-Lab talk (15 -20 minutes): Types of special trays. The use of spacers. Requirements of ST: rigidity, dimensional stability, adjustability, tissue coverage material used in construction of individual trays. Demo: Construction of special trays (upper and lower) using light-cure acrylic resin. Laboratory exercise: Making the upper and lower special trays on the primary models fabricated by students. Their work will be marked.</p>
4	<p>Pre-lab talk (15 -20 minutes): Talk about the steps of the final impression. Display of the various secondary impression materials: Elastomeric, hydrocolloid, Zn/O Eugenol and plaster of paris imp. Beading and boxing the impressions and pouring with stone with appropriate ratio. Material. Laboratory exercise: Finish construction of the upper and lower special trays. Their work will be marked.</p>
5	<p>Pre-lab talk (15 -20 minutes): jaw relationship registration “horizontal and vertical planes” (Bite). Demo: Construction of an upper and lower record blocks. (wax-rims).</p>
6	<p>Laboratory exercise: Making upper and lower wax rims by the students. Their work will be marked. Sealing the rims together, using registration medium and locating grooves.</p>
7	<p>Pre-lab talk (15 -20 minutes): Table show of the various types of articulators and face bows. Demo: Sealing the rims together, using registration medium and locating grooves. Split-cast technique (indices, grooves, notches) and mounting the upper and the lower cast on the average value articulator.</p>

8	Pre-lab talk (15 -20 minutes): Mandibular and maxillary casts mounting through the record blocks and the presumed CJR record by the students. Their work will be marked.
9	Demo: Setting the upper anterior teeth. Laboratory exercise: Setting the upper anterior teeth.
10	Demo: Setting the lower anterior teeth. Laboratory exercise: Setting the lower anterior teeth.
11	Demo: Setting the lower posterior teeth. Laboratory exercise: Setting the lower posterior teeth.
12	Demo: Complete wax-up and festooning of the trial denture
13	Demo: Flasking of the denture and boil-out, packing and curing.
14	Demo: Laboratory remount. Finishing and polishing of complete dentures.

Second semester

Date	Laboratory session
1	Acquaintance, orientation to the course Instructions, rules and regulations Materials and instruments needed from the students
2	Demo: Alginate Primary impression to a partially edentulous phantom head jaw. Pouring with the single and double pouring techniques to produce the master cast. Students will carryout the exercise.
3	Demo: Surveyor and tools. Surveying of a diagnostic cast on zero tilt and relative to path of insertion. Surveying a primary cast by the students on the zero tilt and on a tilt relative to path of insertion, using a different color marker for this purpose.
4	Demo surveying of posterior jumbo teeth after construction of a base. Students will construct bases for the jumbo teeth and survey them. Students will also be required to construct bases for anterior jumbo teeth
5	Students will prepare guide planes and rest seats on posterior jumbo teeth.
6	Survey and prepare guide planes and rest seats on anterior jumbo teeth.
7	Student work: Surveying of models prepared with the imbedding of ivory plastic teeth. The drawing of preliminary RPB designs under the supervision of the instructor. Preparation of guide planes and posterior rest seats on those models.
8	Preparation of guide planes and anterior rest seats on student's models.
9	Preparation of guide planes and anterior rest seats on student's models.
10	Completion of the rest seats preparation and polishing.
11	Preparation of spaced special trays form shellac for the cases treated.
12	Final impression of the case.

	Pouring with stone. Survey master cast Draw the final partial denture design and wax block out.
13	Demo: duplication of the master model, production of the refractory cast, wax up, spruing of the waxed up, investing the cast, wax burn out, and casting of the metal.
14	Wax block out of the master model by the students.

Please note that lab series as well as the grade distribution might be modified and changed according to certain circumstances and this will be announced to the students in advance.

References:

Textbooks:

Complete Denture Prosthodontics:

- Essentials of Complete Denture Prosthodontics by Sheldon Winkler (1994)
- Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Protheses by George A. Zarb, Charles L. Bolender, Steven E. Eckert, and Aaron H. Fenton (2003)
- Prosthetic Treatment of the Edentulous Patient, 4th Edition. RM Basker and JC Davenport; 2002, Blackwell Munksgaard Publishers
- The Complete Denture: A Clinical Pathway. Michael MacEntee; 1999. Quintessence Publishing Co, Inc
- Clinical dental Prosthetics, 4th edition. Roy MacGregor
- Complete denture Prosthetics, 3rd Edition. RJ Neill and RI Nairn; 1990

Partial Denture prosthodontics:

- McCracken's Removable Partial Prosthodontics (Carr, McCracken's Removable Partial Prosthodontics) by Alan B. Carr, Glen P. McGivney, David T. Brown. Elsevier, 2005, 11th ed.
- A color Atlas of Removable Partial Dentures by Basker R.M., Heath J.R., Ralph, J.P. Wolfe Medical Publications Ltd, 1988.
- Stewart's Clinical Removable Partial Prosthodontics by Rodney D. Phoenix, David R. Cagna, Charles F. Defreest. Quintessence Publishing (IL); 4 edition (October 2008)
- Dental Laboratory Procedures. Removable Partial Dentures, Volume 3 (v. 3) (Hardcover) by Kenneth D. Rudd, Robert M. Morrow, Harold F. Eissmann
- Removable Partial Denture Design. Outline Syllabus.5th edition Krol et al: 1999

Handouts: According to the lecturer