ACADEMISCH CENTRUM TANDHEELKUNDE AMSTERDAM

Post graduate course in Prosthodontics and Implantology

2022-2023

NOTE: This curriculum overview is intended to give the prospective student an overview of what he/she can expect from the study program. The document is still under development. Minor adjustments will be made during the three-year course.

Department of Reconstructive Oral Care

Gustav Mahlerlaan 3004

1081 LA Amsterdam,

Staff

Albert J. Feilzer, DDS PhD
Chairman ad interim, department of Reconstructive Oral Care
Room 12N69
a.feilzer@acta,nl

Johan H.P. Cossé, DDS
Co-Program Director of Postgraduate Prosthodontics and Oral Implantology
Room 3N-51
j.cosse@acta.nl

J. Muris, DDS, PhD
Co-Program Director of Postgraduate Prosthodontics and Oral Implantology
Room …
j.muris@acta.nl

Erik J. Blom DDS, PhD
Room 3N-51
e.blom@acta.nl

Pieter van Elsas, DDS
Room 3N-51
elsas000@kpnmail.nl

Enrique Rikken, DDS
Room 3N-51
dr.rik@live.com

Sander van der Linden, DDS, MSD
Room 3N-51
sander_van_der_Linden@hotmail.com

Sander C. Maclaine Pont, DDS
Room 3N-69
s.c.maclainepont@acta.nl

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Introduction

ACTA has developed a post graduate master course in Oral Health Sciences with five different graduation profiles. The department of Reconstructive Oral Care of ACTA takes care of the graduation profile in Oral Prosthodontics and Implantology. In the departments' opinion the prosthetic problem and its possible treatment is leading for the choice of any implant treatment. The principles of Top Down Planning or also known as Backward Treatment Planning will therefore govern this course. The MSc students who complete this course will have the knowledge and ability to treat the widest variety of patients in this field. General and specialized dentists can trust fully on the competence of the MSc-Oral Health Sciences, profile Prosthodontics and Implantology dentist when referring patients.

This three year master course will comply with the conditions stated by the NVOI (Dutch Association for Oral Implantology) for registration as a dentist specialized in Oral Implantology (Tandarts Implantoloog) in the Netherlands. Application for registration as such is the responsibility of the candidate and will be judged by the Concilium Implantologicum of the NVOI.

To stimulate the MSc students in their attitudes and skills necessary for independent lifelong learning we have combined clinical and research related aspects in this course. In doing this we hope to stimulate the candidates to continue acquiring new knowledge and skills so that they can keep on functioning as top treatment providers throughout their professional lives.

Course Regulations for the Degree of Master of Science In Oral Health Science – profile Prosthodontics and Implantology

Admission

a) Admission to the course shall be subject to the approval the Department of Recontructive Oral Care and the dean of ACTA.
b) Every candidate shall have fulfilled one of the following conditions:
   (i) Have been admitted to the degree of Master of Dental Surgery of a European University
   (ii) Have been admitted with the status of one who is entitled to proceed to that degree.
   (iii) Preferably have at least 3 years of clinical experience in dental practice.

Structure of the Course

The course of study shall consist of:

a) Appropriate papers, which will include clinical practice, together with a thesis embodying the results of supervised research relating to the field of study.
b) The candidate shall, before commencing the investigation to be described in the thesis or research report, secure the approval of the Head of the Department concerned and the Faculty for the topic chosen, the supervisor(s) and the proposed course of the investigation and the Ethical Commission of ACTA.
c) A candidate will be required to keep terms in each year of the program.
d) Terms may be withheld from students whose performance or achievement is unsatisfactory.

Terms requirements

(a) No candidate shall be eligible to sit a paper in a final examination without having gained Terms in that paper.
(b) A candidate gains Terms in a paper by satisfactorily demonstrating the acquisition of sufficient knowledge and skills, by attendance at classes, and by performance in a professional manner of such clinical and other work as the Faculty may require.
(c) A candidate who fails to gain Terms in any paper will, if readmitted, be required to repeat the whole of that paper.
(d) Terms granted in any paper shall normally be for the year only.

Duration of the Program

(a) A full-time candidate should normally satisfy the requirements of the degree within three years on a five days per week basis (1530 hrs per year). One day per week is not scheduled so the candidate is free to plan these hours in his or her own time either in the department or elsewhere.

Examination

a) Examinations shall be taken at times appropriate to the structure of the programme.
b) The research report shall be submitted for examination in a form suitable for submission to an appropriate peer reviewed journal.
c) The final examination will be carried out by external examiners to be appointed by the department of Oral Implantology and Fixed Prosthodontics.
d) A candidate who fails an examination may, on the recommendation of the examiners, be permitted by the Faculty to be re-examined at another time.

Notes

1. Applications for admission to the course must reach the Registrar by January the 1st in the year preceding the one in which the applicant wishes to commence the course. Applications after this date will be considered if places are available.
2. Before being admitted to the course, overseas applicants may be required to undertake and satisfactorily complete at the School of Dentistry such work as the Faculty may require.
3. The research report shall normally be submitted before the end of the third trimester of the candidate's last year of study for the degree.

Course fees and instruments

The course fees for 2014 have been set at 19000 euros per year. Course fees may alter and prospective candidates should inquire about current tuition fees before making an application.

The Department will ensure that funds are available for the research project.

The Course

Defining Oral Prosthodontics and Implantology

Oral Prosthodontics and Implantology is the dental specialty responsible for diagnosis, treatment planning, rehabilitation and maintenance of patients with a range of clinical conditions involving missing or deficient teeth using dental implants and biocompatible substitutes.

Implant Dentistry

Planning, development, placement and maintenance of restoration(s) using dental implants.

Prosthodontics

The phase of prosthodontics concerning the recovery of oral function by the replacement of missing teeth and / or associated structures with appliances / medical devices that are eventually attached to teeth or dental implants.

Aims of the course

The graduate program in Oral Prosthodontics and Implantology aims

- To prepare candidates for specialist practice
- To provide education and training in scientific investigation
- To develop a sense of inquiry and intellectual independence so that graduates will be able both to advance their personal professional skills and the discipline of Oral Prosthodontics and Implantology

Objectives of the course

At the end of the course the graduate student will

- Have a detailed knowledge of the biological foundations of Oral Prosthodontics and Implantology and learned how to apply this knowledge clinically
- Be able to diagnose and treat a wide variety oral diseases and functional problems and will be able to design Implant and Prosthodontic related treatment options to a high standard
- Have detailed knowledge of the digital tools available in the diagnoses, treatment planning and prosthodontic as well as implantologic treatment of patients
- Has detailed knowledge of the treatment of failing dental implants
- Be able to critically evaluate current research literature and determine any potential application to the principles or procedures of Oral Prosthodontics and Implantology

- Have completed a research report containing the results of an investigation related to Oral Implantology and/or Prosthodontics
- Have further developed the acquired attitudes and skills essential for independent and life-long learning
- Be able to run his/ her own practice specialized in Oral Prosthodontics and Implantology

Methods available for achieving this objective

- Personal study, discussion, seminars/tutorials, and assignments along with selected undergraduate lectures
- Research protocol, project and report
- Clinical practice, including case presentations, and laboratory exercises
- Attendance at Continuing Education courses and meetings

Course content

The course has three components:

- Course work organized as a series of modules and assignments
- Clinical practice
- Research report

Prerequisited areas of knowledge

It is expected that candidates are knowledgeable in all the areas listed below. Formal instruction is not necessarily given in all these areas, the responsibility for learning lying principally with the candidate.

The extent and depth of knowledge expected of the candidate in specific areas will be explained to the candidate by the MSc supervisor and tutors.

Preclinical Dentistry

- Fixed prosthodontics: ideal intra-coronal and extra-coronal preparations
- Endodontics: ideal root canal preparation and obturation
- Partial Removable Prosthodontics: design and preparation for metal partial dentures
- Occlusion: records, facebow and articulator use, occlusal analysis and adjustment, wax additive technique
- Radiography: posterior bite wing and periapical radiograph techniques
- Clinical photography

Care and treatment planning

- The needs, demands and availability of prosthodontic care
- Treatment planning for prosthodontics
- Problem orientated approach to treatment

Biology and pathology of dental tissues

- Anatomy of the stomatognathic system
- Biology and physiology of the periodontium
- Pathology of the periodontal, pulpal and periapical tissues
- Oral function and Mastication
- Sensory perception and pain
- Periodontal diseases
- Peri-implantitis
- Adverse reactions to medical devices

Cast metal and porcelain restorations

- Preparation design
- Biomaterials: casting alloys, porcelains, impression materials, lutes
- Impressions, die materials and lutes
- Temporary coverage
- Cementation
- Maintenance of restorations

Endodontics

- Post core systems
- Restoration of endodontically treated teeth

Gerodontics

- Consequences and management of age changes in the dentition
- Medical conditions and medications affecting dental treatment

Oral function

- Concepts and theories of occlusion
- The significance of occlusal interferences
- Occlusal analysis and adjustment
- Physiology of the neuromusculature
- Parafunction
- Articulators — selection and limitations
- Mandibular movements and their recording

Fixed prosthodontics

- Treatment planning
- Preparation of the mouth
- Materials and selection
- Principles of tooth preparation
- Pontics and connectors in bridgework
- Resin bonded bridges
- Longevity of crown and bridgework
- Cementation and adjustment
- Maintenance

Partial removable prosthodontics

- Treatment planning
- Design of removable partial dentures
- Mouth preparation
- Impression techniques
- Casting alloys for partial denture frameworks
- Laboratory procedures
- Fitting and completion
- Maintenance
- Precision attachments
- Clinical techniques
- Overdentures

Complete removable prosthodontics

- Treatment planning
- Alveolar resorption
- Impression techniques
- The role of saliva and the tongue
- Clinical techniques
- Speech and aesthetics
- Occlusal schemes
- Success and failure
- Pre-prosthetic surgery
- Single complete denture
- Immediate dentures
- Root-Mucosa supported Overdentures
- Jaw relationships - principles and methods for determining vertical and horizontal jaw relations
- Pathological conditions associated with wearing complete dentures

Oral Rehabilitation

- Principles of oral rehabilitation
- Treatment plan wax-up for oral rehabilitation
- Phasing of treatment
- Temporary coverage

Periodontology

- Periodontal – prosthodontic considerations
- Crown lengthening and biological width

Orthodontics

- Orthodontic – prosthodontic considerations
- Implant considerations in Orthodontic planning

Maxillo-facial surgery

- General surgical indications for osteotomies
- General knowledge of oral pathology
- Interactions between the Stomatognatic system en systemic illnesses

Temporomandibular disorders

- Diagnosis and management of orofacial pain
- Anatomy and physiology of the TMJ and muscles of mastication
- Imaging of the TMJ
- Pathological conditions affecting the temporomandibular joint
- Role of the occlusion in TMD
- Prosthodontic management of TMD

Research

- Library and services available
- Personal filing and computer based retrieval systems
- Scientific writing
- Biostatistics including use of computer statistical packages
- Research methods in dentistry
- An approach for the evaluation of scientific literature
- Requirements of a research protocol

Radiography

- Radiography for prosthodontics
- Radiography for Oral Implantology

The knowledge of the subjects, as outlined above, may be different for individual students. Much of the content will have been covered by dental training and postgraduate courses, research, and/or clinical practice. Candidates should be familiar with the above list and notify the MS Co-coordinator where they feel there are deficiencies which cannot be made up by private study.

End terms of the Specialist Course Oral Prosthodontics and Implantology.

- Have in-depth knowledge of the scientific base of dentistry and specifically oral Prosthodontics and Implantology
- Have in-depth knowledge of clinical dentistry and specifically of the clinical oral Prosthodontics and Implantology.
- Have in-depth knowledge of the current status of research on implants
- Have in-depth knowledge of the scientific base necessary for the considerations involved in the diagnosis, indication and planning of patient cases involving oral Prosthodontics and Implantology.
- Have the in-depth knowledge and the proficient ability to apply a structural approach in patient treatment planning.
- Have the in-depth knowledge and specialist ability to work with multiple dental implant Systems
- Have in-depth knowledge and the specialist ability to perform the surgical techniques involved in the pre implant surgery.
- Have in-depth knowledge and the specialist ability to perform the surgical techniques involved in the inserting of oral implants.
- Have in-depth knowledge and the proficient ability to perform the prosthodontic techniques involved in restoring patients treated with oral implants.

- Have in-depth knowledge of oral microbiology and the effects of dental hygiene protocols on inflammation of peri-implant tissues.
- Have adequate knowledge of the pharmaceuticals indicated in dentistry and specifically in oral implantology as well as their effects on the oral tissues.
- Have the in-depth knowledge and specialist ability to differentiate between the various types of radiological analysis that can be used in oral implantology and to choose the appropriate analysis in each specific case.
- Have in-depth knowledge and the specialist ability to perform maintenance of oral implants and implant prostheses.
- Have adequate knowledge of occlusal planning, occlusal adjustment and various occlusal schemes recognized in dentistry.
- Have competent knowledge of all aspects of bone and in-depth knowledge of the dynamic aspects of the implant bone interface.
- Have competent knowledge of the biomechanical aspects of implants and prosthodontics.
- Have in-depth knowledge of the materials used in oral Prosthodontics and Implantology.
- Have the in-depth knowledge and the specialist ability to treat patients where peri-implant problems are evident.
- Have the adequate knowledge and specialist ability to perform GBR and sinus lift procedures
- Have adequate knowledge of and the competent ability to evaluate the limitations of general dental treatment.
- Have the adequate knowledge of the use of implants in orthodontic treatment.
- Have adequate knowledge of the limitations of orthodontic treatment when restoring oral function.
- In-depth knowledge of the limitations and implementations of the various tools in digital implant treatment planning and the execution thereof.
- Have in-depth knowledge of the analysis and treatment implant and implant prosthetics related problems.
- Have specialist ability in trouble shooting (both implant as well as superstructure related problems).
- Have adequate knowledge of and the competent ability to the treat the medically compromised patient.
- Have the specialist ability to evaluate patients treated by one self.
- Have the specialist ability to communicate with patients as well as referring dentists.

Year 1: Study modules and seminars in the first year

Theoretical Modules

Principles of Oral Implantology

The goal of this course module is to provide the students enrolled in the specialist course Oral Prosthodontics and Implantology with the appropriate knowledge and skills to plan a complete implant treatment. He/She must recognize the prosthetic problems involved with loss of teeth and periodontal structures and must be able to provide an adequate solution for the treatment there of. He/she must recognize the limitations of Oral Implants and prosthodontics and be able to provide alternative treatment plans if indicated. Al necessary pre implant treatment skills must be achieved and the student must have the ability to provide the planned Implant supported superstructure. Furthermore he/she must be able to communicate with referring dentists.

Wound healing and the healing of bone around a dental implant is a well organized repair mechanism of the human body. Implant specialists penetrate both the bone and soft tissues of patients' oral cavity on a regular base. It is paramount that they understand the organized repair mechanisms of the body with special emphasis on bone.

Learning aims and competences

- In-depth knowledge of treatment strategies for patients with a reduced dentition
- Competent knowledge of the limitations of crown and bridgework, partial and complete denture prosthodontics, orthodontics and maxillofacial surgery when restoring oral function.
- In-depth Knowledge of the role of Oral implants in restoring Oral Function
- In-depth Knowledge of different implant systems and their indication
- Being able to communicate at a specialist level with patients as well as referring dentists
- Indepth knowledge of bone osteogenesis and osseointegration

Teaching methods

- Self-study of textbooks and articles
- Assignments
- Seminars
- Pico (Primary problem (patient problem or population), Intervention, Comparison, Outcome)

Contact hours Total

- Weekly seminars of 4 hours

Literature

A choice of chapters from the following books depending on topics.

- Clinical periodontology and implant dentistry (Lindhe)
- Suprastructuren op implantaten (de Lange / Meijer)
- Sylabus of prothodontics for osseointegrated implants (Clepper)
- Osseointegration and dental implants. (Jokstad)
- Glossary of Oral And Maxillofacial Implants
- Atlas of tooth and implants supported Prosthodontics (Weinberg)
- ITI treatment guides 1-6
- Reader with selected research papers

- The osseointegration book (Branemark)
- Bone reformation (Lundgren)
- Glossary of Oral And Maxillofacial Implants Bone (Garg)
- Cell to Cell communication (Video)
- Reader with selected research papers

Learning assessment	**Grading**	**Final grading**
Assignments (summaries and Pico questions)	Pass or fail	
Participation in discussions	Pass or fail	
Written exam based on literature as discussed	Mark 1-10	
		All exams must be passed

Principles of Prosthodontics: The edentulous patient, occlusion and dental materials.

In this module topics concerning the edentulous patients and their specific problems and treatment strategies, will be presented. Principles of occlusion in dentistry will be covered but the effects of implant loading/overloading will be covered in the second year. Relevant knowledge of materials used in oral implantology will be covered as a basis for further detailed study when specific topics in this field will be covered in the later years of training.

Learning aims and competences

- In-depth knowledge of Complete denture prosthodontics
- In-depth knowledge of different occlusal schemes
- In-depth of the materials used in Oral Prosthodontics and Implantology.
- in-depth knowledge of restoring Oral Function
- in-depth knowledge of treatment strategies for patients with a reduced dentition
- knowledge of the limitations of crown and bridgework, partial and complete denture prosthodontics, orthodontics and maxillofacial surgery when restoring oral function.
- in-depth knowledge of treatment strategies for patients with a reduced dentition
- knowledge of the limitations of crown and bridgework, partial and complete denture prosthodontics, orthodontics and maxillofacial surgery when restoring oral function

Teaching methods

- Self-study of textbooks and articles
- Assignments
- Seminars
- Pico

Contact hours Total

- Weekly seminars of 4 hours

Literature

A choice of chapters from the following books depending on topics.

- Atlas of tooth and implants supported Prosthodontics (Weinberg)
- Glossary of Oral And Maxillofacial Implants
- Dental Implant restoration (Stuart) Implant Overdentures (Feine / Carlsson)
- ITI treatment guide 4
- Suprastructuren op implantaten (de Lange / Meijer) De volledige gebitsprothese in woord en beeld (Kalk)
- Reader with selected research papers

Learning assessment	**Grading**	**Final grading**
Assignments (summaries and Pico questions)	Pass or fail	
Participation in discussions	Pass or fail	
Written exam based on literature as discussed	Mark 1-10	
Oral presentation	Pass or Fail	
		All exams must be passed

Clinical modules, first year

Clinical Prosthodontics, year 1 & Clinical Oral Implantology, year 1

The goal of these course modules is to provide the students enrolled in the specialist course Oral Prosthodontics and Implantology with the appropriate skills to plan and execute a complete implant and/or prosthodontic treatment. He/She must recognize and diagnose the prosthetic problems involved with loss of teeth and periodontal structures, be able to provide an adequate treatment plan and be able to perform the proposed treatment. He/she must recognize the limitations of Oral Implants and Prosthodontics and be able to provide alternative treatment plans if indicated. Al necessary pre-implant treatment skills must be achieved and the student must have the ability to provide the planned Implant supported superstructure. Furthermore he/she must be able to communicate the plan, the executed treatment and the evaluation thereof results with the referring dentists.

The student must show proficient skills in the field of treatment planning, the execution of the treatment and be able to communicate the plan and the treatment results with the referring dentist. In the first year this is for the treatment of edentulous patients and patients needed simple crown and bridgework.

Teaching methods

- Practical work
- Training
- Supervision
- Intervision

Contact hours

Participation in practical work 12 hrs a week.

Supervision / Intervision

All treatment plans are discussed with the personal supervisor prior to any treatment execution. All the treatment interventions are carried out under the supervision of a staff member of the department of Oral Implantology and Prosthetic Dentistry. Every treatment is registered and the students are provided with feedback directly during treatment and during 360 degrees feedback after the clinic. All treatments are graded with either a pass or fail. All results are registered in the students log book.

Entrustable Professional Activities (EPAs)

ACTA applies EPA for the clinical judgement of our students. EPAs are structured descriptions of defined professional activities. These professional activities are recognizable in the workplace and therefore verifiable. An EPA describes the knowledge, skills and attitude you need to perform the activity, in combination with the CanMEDS competencies that are relevant in that situation.

Overview First Year

Topics	**ECTS points**
Theoretical modules	
Principles of Oral Implantology	6
Principles of Prosthodontics	6
Clinical programs	
Clinical Prosthodontics, year 1	15
Clinical Oral Implantology, year 1	15

Activities	**Sub-topics**
Tutorials	Treatment planning
	Biology and pathology of bone and soft tissues
	Dental Materials
	Cast metal and porcelain restorations Gerodontics
	Occlusion
	Fixed prosthodontics Implant systems
	Peri-implant tissues
	Biomechanical aspects of Dental Implants and Prosthodontics
	Osseointegration
	Communication with patients
	Communication with referring dentists
Preclinical exercises	Operative
	Fixed prosthodontics
	Occlusion Radiography
	Photography
Clinical	Treatment of patients
	Maintenance of Log Book
	Review of recall patients

	Removable prosthodontics
Presentations	Treatment plans
	2 written assignments
Research	Choice of research project
	Presentation of research protocol
	Proceed with project and draft report
	Research methods course
Undergraduate courses	Selected relevant topics
Continuing Education Courses	As appropriate
Research Symposium	As appropriate

End terms first year.

The student must be able to plan a complete prosthodontic and implant treatment. He/She must recognize the prosthetic problems involved with loss of teeth and periodontal structures and must be able to provide an adequate solution for the treatment there of. He/she must recognize the limitations of Oral Implants and Implant prosthodontics and be able to provide alternative treatment plans if indicated. Al necessary pre implant treatment skills must be achieved and the student must have the ability to provide the planned Implant supported superstructure.

- Knowledge of treatment strategies for patients with a reduced dentition
- Knowledge of the limitations of crown and bridgework, partial and complete denture prosthodontics, orthodontics and maxillofacial surgery when restoring oral function.
- Knowledge of the roll of Oral implants in restoring Oral Function
- Knowledge of Complete denture prosthodontics
- Knowledge of different occlusal schemes
- Knowledge of bone osteogenesis and osseointegration
- Knowledge of different implant systems and their indication
- Knowledge of the materials used in Oral Prosthodontics and Implantology.
- Clinical experience in providing implant supported overdentures
- Be able to describe the approach for the evaluation of scientific literature
- Have presented a research protocol for the research project in year 2 and 3.
- Being able to communicate with patients as well as referring dentists

Year 2: Study modules and seminar topics

In the second year several topics will be covered by tutorials that will be shared by the other post-grad training courses that are provided by the Oral Health Science curriculum. These are Periodontology, Orthodontics, Endodontics, Pharmacology, Statistics, Microbiology and Cell Biology. These modules will be described separately.

Implant dentistry is dictated by the prosthetic planning. Implants can only be inserted in the exact right location if the prosthetic planning has been done accurately beforehand. Implants on the other hand can only be inserted with a predictable long term result if the periodontal situation and the microbiology in the selected patients is up to an agreed standard. During the second year the emphasis will be put on

the oral rehabilitation of the partially edentulous patient with removable and fixed prosthodontics. Cad Cam in the treatment of implant patients will be discussed as well as the treatment of failing implants.

Basics of Prosthodontics

In this module topics concerning the edentulous patients and their specific problems and treatment strategies, will be further explored. Building on the previously learned Principles of occlusion in dentistry the effects of implant loading/overloading will be covered. The student will gain insight into the specific design of the superstructures and the positioning of the implants when looking at the forces and dynamics introduced by occlusion and articulation. The knowledge of materials used in prosthetic reconstructions in oral implantology will be deepened out when relevant to the discussed topics.

The use of CAD CAM in dentistry and specifically implant dentistry has taken a major leap during the last decade. It is unthinkable that a specialist in the implant field has little of no knowledge of these tools and their application in everyday implant practice. Next to theoretical knowledge the student also has to gain practical experience in the use of these tools practicing behind the computer on in vitro cases. Intra oral scanning can be practiced in each other during designated seminars.

Learning aims and competences

- In-depth knowledge of Complete denture prosthodontics
- Competent knowledge of fixed and removable denture prosthodontics on natural teeth.
- In-depth knowledge of fixed and removable denture prosthodontics related to oral implantology.
- In-depth knowledge of different occlusal schemes and their application in implant dentistry.
- In-depth of the materials used in Oral Prosthodontics and Implantology.
- In-depth knowledge of the application of CAD in implant treatment planning.
- In-depth knowledge of the application of CAD in implant prosthetic treatment planning.
- Have a proficient level of skills when applying these techniques using certain self chosen software modules.
- In-depth knowledge of the application of CAM in implant treatment planning.
- In-depth knowledge of the application of CAM in implant prosthetic treatment planning and the manufacturing of prosthetic appliances.
- Have a competent level of skills when applying these techniques using certain self chosen software modules.
- Have competent knowledge of the process and working mechanisms of intraoral scanners, 3D cameras, CBCT scans and the combination of these in implant practice.

Teaching methods

- Self-study of textbooks and articles
- Assignments
- Behind computer practice
- Workshops
- seminars

- Pico

Contact hours Total

- Weekly seminars of 4 hours

Literature

- A choice of chapters from the following books depending on topics. Atlas of tooth and implants supported Prosthodontics (Weinberg) Glossary of Oral And Maxillofacial Implants
- Dental Implant restoration (Stuart) Implant Overdentures (Feine / Carlsson) ITI treatment guides 1-8
- Clinical periodontology and implant dentistry (Lindhe)
- Plastic esthetic periodontal and implant surgery (Hurzler)
- Mucco gingival esthetic surgery (Zucchelli)
- Crown-bridge and implants (Rutten)
- Adhesive metalfree restorations (Dietschi)
- Volledig Keramische restauraties (Laverman)
- Codiagnostix software
- Simplant software
- Diverse prosthetic planning software brands
- Digitale technologien (Jahrbuch 2012/2013/2014)
- Reader with selected research papers

Learning assessment	**Grading**	**Final grading**
Assignments (summaries and Pico questions)	Pass or fail	
Participation in discussions	Pass or fail	
Written exam based on literature as discussed	Mark 1-10	
Oral presentation	Pass or Fail	
		All exams must be passed

Basics of Oral Implantology

Peri-implantitis can be seen as one of the most threatening risks implant patients can turn up against. In this module the etiology, patient risk assessment, differences with periodontal diseases, treatment strategies and treatment outcomes will be discussed.

Learning aims and competences

- In-depth knowledge of the etiology of peri-implantitis.
- In-depth knowledge of the patient specific risk factors involved with the prevalence of the illness in the general population
- In-depth knowledge of the specific micro biological factors involved with the prevalence of the illness.
- In-depth knowledge of the non invasive and invasive treatment strategies when treating patients with peri-implantitis.

Teaching methods

- Self-study of textbooks and articles
- Assignments
- seminars
- Pico

Contact hours Total

- Weekly seminars of 4 hours

Literature

A choice of chapters from the following books depending on topics.

- Clinical periodontology and implant dentistry (Lindhe)
- Glossary of Oral And Maxillofacial Implants
- Treatment guide 8
- Reader with selected research papers
-

Learning assessment	**Grading**	**Final grading**
Assignments (summaries and Pico questions)	Pass or fail	
Participation in discussions	Pass or fail	
Written exam based on literature as discussed	Mark 1-10	
Oral presentation	Pass or Fail	
Computer based assignments	Pass of Fail	
		All exams must be passed

Second year clinical program

Clinical Prosthodontics, year 2 & Clinical Oral Implantology, year 2

The goal of this course module is to provide the students enrolled in the specialist course Oral Prosthodontics and Implantology with the appropriate skills to plan and execute a complete implant treatment. He/She must recognize and diagnose the prosthetic problems involved with loss of teeth and periodontal structures, be able to provide an adequate treatment plan and be able to perform the proposed treatment. He/she must recognize the limitations of Oral Implants and Prosthodontics and be able to provide alternative treatment plans if indicated. Al necessary pre-implant treatment skills must be achieved and the student must have the ability to provide the planned Implant supported superstructure at a proficient level in the (partially) edentulous patient using CAD CAM tools. Patients suffering from peri-implant disease will also be treated at a proficient level . Furthermore he/she must be able to communicate the plan, the executed treatment and the evaluation thereof results with the referring dentists.

The student must show proficient skills in the field of treatment planning, the execution of the treatment and be able to communicate the plan and the treatment results with the referring dentist. In

the second year this is for the treatment of (partially) edentulous patients and patients suffering from peri-implant disease. He/she must also be able to perform a review of completed and recall patients.

Teaching methods

- Practical work
- Training
- Supervision
- Intervision

Contact hours

- Participation in practical work 12 hrs a week.

Supervision / Intervision

All treatment plans are discussed with the personal supervisor prior to any treatment execution. All the treatment interventions are carried out under the supervision of a clinical staffmember. Every treatment is registered and the students are provided with feedback directly during treatment and during 360 degrees feedback after the clinic. All treatments are graded with either a pass or fail. All results are registered in the students log book.

Overview Second Year

Topics	**ECTS points**
Theoretical modules	
Basics of Oral Implantology	6
Basics of Prosthodontics	6
Clinical program	
Clinical Prosthodontics, year 2	15
Clinical Oral Implantology, year 2	15

Study modules / seminar topics, Second Year

Activities	**Topics**
Tutorials	Oral rehabilitation
	Partial removable / fixed prosthodontics CAD CAM
	Periodontology
	Orthodontics
	Endodontics
	Pharmacology
	Peri-implantitis
	Implant loading
Preclinical exercises	Occlusal adjustment
	Treatment plan work-up
	Occlusal splints

Clinical	As in first year
	Review of completed & recall patients
	TMD clinic
	Implant clinic
	Prosthodontic clinic
Presentations	2 written assignments
	Treatment plans, completed patients
Research	Continue research project
Continuing Education Courses	As appropriate
Research Symposium	As appropriate

End terms second year.

- Knowledge of the limitations of the periodontally involved patient when restoring oral function using implants.
- Knowledge of the limitations of the treatment of peri-implantitis.
- Knowledge of the use of CAD in implant surgery treatment planning
- Knowledge of the use of CAD in implant prosthetics treatment planning
- Knowledge of the CAM techniques when manufacturing implant drill guides and implant related prosthodontics
- Knowledge of the limitations of the endodontically involved patient when restoring oral function using implants
- Knowledge of the limitations of the TMD patient when restoring oral function
- Knowledge of the oral microbiology and the effects of dental hygiene protocols on inflammation of peri-implant tissues.
- Knowledge of the effect of loading and overloading of dental implants.
- Knowledge of the pharmaceuticals indicated in dentistry and specifically in Oral Implantology as well as their effects on the oral tissues.
- Being able to differentiate between the various types of radiological analysis that can be used in oral Implantology and to choose the appropriate analysis in each specific case.
- Knowledge of the use and limitations of implants in orthodontic treatment.
- Knowledge of the limitations of orthodontics when restoring oral function.
- Being able to evaluate patients treated by oneself.

Year 3: Study modules and end terms.

In the third year of training the student will be exposed to the most difficult cases. The medically compromised patient with all the red flags, do's and don'ts will be presented. Also the most complicated prosthetic cases where dental implant play a roll. Trouble shooting will also be a part of the third year training where both prosthetic complications caused by implant failure or prosthesis failure will be extensively discussed.

Advanced Prosthodontics

In this module the treatment of the medically compromised patient and the complex prosthetic cases where oral implants play a role will be discussed. As cases get more complicated the chances of failure of the superstructures and or the implants also grows. Therefore it is important that the implant specialist has in-depth knowledge of and specialist insight in the treatment strategies' and protocols when treating this patient category. Treatment of the Maxillo Facial Patient is best carried out by a specialized team. The implant specialist must have competent knowledge of the treatment of this patient category even though he will not always be a member of such a treatment team.

Learning aims and competences

- In-depth Knowledge of the treatment of the medically compromised patient.
- In-depth knowledge of the technical approach when treating complicated Implant / prosthodontic cases.
- In-depth knowledge of procedures to be followed when involved with patients with either or both implant as well as superstructure related problems).
- Competent knowledge of the application of dental implants in Maxillo Facial Prosthodontics

Teaching methods

- Self-study of textbooks and articles
- Assignments
- seminars
- Pico

Contact hours Total:

- Weekly seminars of 4 hours

Literature

A choice of chapters from the following books depending on topics.

- Clinical periodontology and implant dentistry (Lindhe)
- Glossary of Oral And Maxillofacial Implants
- ITI Treatment guides 1- 8
- Syllabus of prosthodontics for osseointegrated implants (Douglas)
- Reader with selected research papers

Learning assessment	**Grading**	**Final grading**
Assignments (summaries and Pico questions)	Pass or fail	
Participation in discussions	Pass or fail	
Written exam based on literature as discussed	Mark 1-10	

Oral presentation	Pass or Fail	
Computer based assignments	Pass of Fail	
		All exams must be passed

Advanced Oral Implantology

Placing implants in areas with insufficient bone volume is not an easy procedure as bone augmentation procedures are the often indicated. These procedures vary from more straightforward grafting using deprotenized bovine bone or other bone substitutes via sinus augmentation procedures to more complex bone harvesting procedures from the chin or retro molar area. Sometimes the help of the oral and maxillofacial surgeon is called in when the necessary bone volumes get that large that the transplants have to be harvested extra orally. This implicates in-depth knowledge from the implantologist on harvesting techniques, the biology of the bone ingrowth, the use of membranes and the risks of the procedures involved.

Learning aims and competences

- In-depth knowledge of the techniques and limitations involved with sinuslift procedures
- In-depth knowledge of the techniques and limitations of the use of bone substitutes in bone augmentation procedures
- In-depth knowledge of the use of bone transplants in procedures where extensive bone augmentation is being performed.
- Knowledge of the limitations of maxillo facial surgery when treating compromised cases when restoring oral function using implants

Teaching methods

- Self-study of textbooks and articles
- Assignments
- Behind computer practice
- Workshops
- Seminars
- Pico

Contact hours Total:

- Weekly seminars of 4 hours
- Workshops

Literature

A choice of chapters from the following books depending on topics.

- Reader with selected research papers
- Bone augmentation in the esthetic area (Carlo Maiorana, et al.)
- Atlas of oral and extraoral bone harvesting (R Marx)
- Bone, Harvesting, grafting for dental implants .
- Rationale and clinical Applications (A.K.Garg)
- ITI treatment guide 7

Learning assessment	Grading	Final grading
Assignments (summaries and Pico questions)	Pass or fail	
Participation in discussions	Pass or fail	
Written exam based on literature as discussed	Mark 1-10	
Oral presentation	Pass or Fail	
Computer based assignments	Pass of Fail	
		All exams must be passed

Third year clinical Program and First Aid residency

The goal of this course module is to provide the students enrolled in the specialist course Oral Prosthodontics and Implantology with the appropriate skills to plan and execute a complete implant treatment and bone regeneration / augmentation. He/She must recognize and diagnose the prosthetic problems involved with loss of bone and be able to provide an adequate treatment plan and be able to perform the proposed treatment. He/she must recognize the limitations of Oral Implants and Prosthodontics in augmented situations and be able to provide alternative treatment plans if indicated. Al necessary pre- implant treatment skills involved with bone augmentation and bone regeneration must be achieved and the student must have the ability to provide the planned Implant treatment and the supported superstructure at a proficient level in the augmented patient. Furthermore he/she must be able to communicate the plan, the executed treatment and the evaluation thereof results with the referring dentists and dental specialists if indicated.

The student must show proficient skills in the field of treatment planning, the execution of the treatment and be able to communicate the plan and the treatment results with the referring dentist. In the third year this has a special focus on the treatment of (partially) edentulous patients in need of bone augmentation.. He/she must also be able to perform a review of completed and recall patients.

Teaching methods:

- Practical work
- Training
- Supervision
- Intervision

Contact hours

Participation in practical work 12 hrs a week.

Supervision / Intervision

All treatment plans are discussed with the personal supervisor prior to any treatment execution. All the treatment interventions are carried out under the supervision of a staff, member of the department of Oral Implantology and Prosthetic Dentistry. Every treatment is registered and the students are provided

with feedback directly during treatment and during 360 degrees feedback after the clinic. All treatments are graded with either a pass or fail.

Overview third Year

Topics	ECTS points
Advanced Prosthodontics	6
Advanced Oral Implantology	6
Clinical Prosthodontics and Oral Implantology	24
First Aid residency	6

Study modules / seminar topics, third Year

Activities	Topics
Tutorials	GBR
	Sinus lift procedures
	Trauma patients
	Immediate loading
	Immediate restoration
	The extremely resorbed maxilla
	Oral surgery
	Medically compromised patients
	Maxillofacial prosthetics
Clinical	Prosthodontic clinic
	Implant clinic
	Maintenance of Log Book
	Review of recall patients
Presentations	Treatment plans
	1 written assignment
	Summary of research report
Research	Complete report
	Present research report
Continuing Education Courses	As appropriate
Research Symposium	As appropriate

End terms third year

- In-depth Knowledge of the treatment of the medically compromised patient.
- In-depth knowledge of the technical approach when treating complicated Implant / prosthodontic cases.
- In-depth knowledge of procedures to be followed when involved with patients with either or both implant as well as superstructure related problems).
- Competent knowledge of the application of dental implants in Maxillo Facial Prosthodontics

- In-depth knowledge of the techniques and limitations involved with sinuslift Procedures
- In-depth knowledge of the techniques and limitations of the use of bone substitutes in bone augmentation procedures
- In-depth knowledge of the use of bone transplants in procedures where extensive bone augmentation is being performed.
- Knowledge of the limitations of maxillo facial surgery when treating compromised cases when restoring oral function using implants
- Have completed the research report or finished the article based on performed research and have it ready for submission.

Interdepartmental seminars and tutorials

MOI Research Core Course	-	As given
TMD	-	As provided by the department of Oral Kinesiology
Orthodontics		Selected topics relevant to occlusion and preparation of the dentition for fixed and removable prostheses. Coordinated by the discipline of Orthodontics.
Periodontology	-	Selected topics in Periodontology, coordinated by the discipline of periodontology
Endodontics	-	Selected topics in Endodontology, coordinated by the discipline of endodontology
Maxillofacial surgery	-	Selected topics in Maxillofacial surgery. Coordinated by the discipline of Maxillofacial surgery

Weekly timetable (subject to change)

	Monday	Tuesday	Wednesday	Thursday	Friday
8.30-12.30	Self study	Research administration	Case presentations Current literature	Clinic/research	Clinic
13.30-17.00	Self study	Research Administration	Clinic	Clinic/research	Clinic

Teaching Methods

Tutorials and Seminars

By staff, who will provide references and guidance.

Written Assignments

Candidates present written assignments to staff and graduate students in the Department.

There are two classes of assignments reflecting the topic assigned and the depth of inquiry required. A minor assignment requires approximately 1000 words excluding references (5 A4 pages, 12 point Times,

double spaced). The major assignment, a publication, will be presented in a form suitable for publication in a per reviewed journal.

During the course, 1 major and 3 minor assignments will be completed and will be presented formally to members of the staff of the Department and other postgraduate students. Candidates should keep close to the stipulated length.

Three year MSc Course

Year 1	Second semester	-	1 minor, and research protocol
Year 2	First semester	-	1 minor
	Second semester	-	1 minor
Year 3	Second semester	-	Publication

Assignments must be double spaced and printed on A4 paper, with references presented in the style of the Journal of Dental Research and available for distribution at least one week before their presentation.

The aim is to assist graduate students to

- Develop skills in the evaluation of journal articles and textbooks
- Use their knowledge of statistical method to assess the presentation of data in journal articles
- Develop a logical discussion of information from the literature
- Introduce their own opinions
- Define a conclusion from the discussion
- Present a bibliography of the selected references
- Prepare a concise abstract of the assignment

Presentation of Assignments

Assignments will be discussed by staff and graduate students at weekly Wednesday sessions. The aims of assignment presentations are to:

- Provide the opportunity for graduate students to present work for discussion, criticism, formative assessment, and feedback
- Provide the opportunity for experience in presentation before an audience
- Provide the opportunity for staff and graduate students to interact
- Provide a forum to update knowledge

Candidates should prepare notes to assist in the presentation of an assignment and where appropriate use visual aids to support the presentation.

Assessment of Assignments

Assessments contribute to internal assessment. Students should expect brief written feedback from nominated staff in addition to verbal feedback from those attending the presentation. Written feedback may include comment on style and construction.

The marking criteria assesses the assignment under the following sections:

- Has the topic been adequately addressed?
- The literature review.
- Amount of individual contribution and thought in the module or assignment.
- Referencing - is it adequate, appropriate and in the correct style (Journal of Dental Research).
- Number of words (1000 limit)
- Other factors that are relevant to the module or assignment
- Comments

Referencing of Assignments

There are three principal methods of citing references in a text: footnotes, the author– date and reference number systems.

Only works referred to in the text should be included in the “References”.

If the Author-Date system has been used the references should be arranged alphabetically by author’s surname and under each name by year of publication.

In the Reference-Number system the arrangement is either by author’s name or in the order that the references are cited in the text.

It is important to retain the same style throughout the entire assignment.

Reference Style (taken from the Journal of Dental Research Instructions to authors)

Clinical Practice

The clinic of Reconstructive Oral Care operates to provide a broad range of complex dentistry for referred patients. It has a service function only where it fulfils the needs of individual MSc students.

Patients are accepted onto the MSc waiting list only on referral from members of the Department of Reconstructive Oral Care. Assignment to individual students is through the MSc Coordinator.

All patients treated by a graduate student must be entered on the list of patients of that student and included in his or her logbook. MSc students are expected to assist in the treatment of the department’s outpatients if requested.

Each case should be viewed as a learning experience. Prime requirements are that patients should receive the best treatment and that individual tasks should be executed with excellence. While clinical quantity guidelines are provided, candidates must ensure that, with the guidance of the MSc Coordinator, they gain a wide range of clinical experience.

Candidates may not treat patients other than those assigned by the MSc Coordinator. Normally, patients will be treated only during semester time unless the approval of the MSc Coordinator is obtained.

One of the main aims of the graduate program is "To prepare candidates for specialist practice". For this reason, clinical practice must be supervised. All patients treated by graduate students must be seen and checked by a member of the academic staff at the following stages

1. Treatment plan and confirmation letter
2. During the Implant Clinic
3. If any complications have been experienced
4. Preparations and impressions for crowns and bridges
5. Untrimmed dies for crowns and bridges
6. Pre-cementation for crowns and bridges
7. Try-in of waxed-up complete dentures
8. Conclusion of treatment

Every patient must be seen at least once by a member of staff in the graduate clinic patient treatment sessions. An appropriate entry in the patient's file must be signed by the member of staff. The faculty rules complying with the computer registrations of all patient records must be respected. The staff must control all entries into the system. A staff signature is also necessary on the confirmation letter.

Laboratory services

Laboratory services are provided by a technical laboratory appointed by the MS course coordinator. Graduate students should complete their own diagnostic wax-ups. Graduate students are also required to approve crowns and bridge castings and also to check all porcelain work at the biscuit stage.

Recall of patients

The graduate clinic is not run as a general practice and there is no recall for routine care other than for those patients partaking in research projects. Patients referred for treatment come either out of the ACTA undergraduate school, another department in the university or from a referring dentist. They must understand that they have been referred to the clinic for specific treatment items. However a limited recall is available for some patients as follows:

1. Patients referred in for individual specific items of treatment are not recalled.\
2. Where treatment is more extensive patients should be recalled once in the year following treatment to ensure that treatment has been successful
3. Patients who have received extensive oral rehabilitation should be recalled annually for five years
4. Patients referred in by general practitioners should be referred back to their general practitioner at the conclusion of treatment for continuing monitoring and treatment; no recall to the graduate clinic unless specifically requested by the referring practitioner.
5. The confirmation letter should include a statement about recall or regarding the responsibility of the patient to seek ongoing care from a practitioner.

Sessions are set aside each year specifically for recall patients. Recalled patients should give graduate students the opportunity to see and discuss cases where extensive restorative therapy has taken place. Recalled patients are an important educational and research resource.

Log book/Portfolio

1. All candidates must keep a log book. The purpose of the log book is to preserve a record of a candidate's experience to which they and the examiners can refer.
2. The first pages of the logbook should be a summary of assigned patients and brief details of the treatment provided for each patient, eg. " Mrs J Jones - occlusal analysis and adjustment, 2 implants, 3 unit bridge”
3. Notes on a patient must include:
    a. Demographic data and registration number.
    b. Two charts of the dentition, one on presentation, the other on completion.
    c. Significant information from the examination and treatment plan — include the problem list, stabilization, maintenance and monitoring, and rehabilitation phases; indicate the sites for proposed implants and prostheses, then proceed to detail the implants, abutment teeth and bridge/denture components.
    d. Problems during treatment and their solution.
    e. Illustrations in the form of color slides suitable for projection (clinical cameras are available). Limit the number of illustrations to those necessary to illustrate the case. Slides must include identification and be incorporated into the department’s slide bank.
    f. Radiographs of 'before' and 'after' treatment. Photo’s of all casts and models and where they have been stored in the archives. All Photo’s and casts remain the property of the department of Oral Implantology and Prosthetic Dentistry of ACTA. The students are allowed to keep copies of the photo’s they make.
4. All cases should be fully documented as previously described.
5. A summary of treatment types under:
    a. Treatment plans
    b. Occlusal analyses
    c. Treatment plan wax-ups
    d. Interocclusal appliances
    e. Occlusal adjustments
    f. Crowns
    g. Bridges and design
    h. Complete dentures
    i. Maxillofacial prostheses
    j. Preventive and maintenance programs
    k. Bone augmentation procedures
    l. Sinus elevation procedures
    m. Peri-implantitis

Clinical case presentations

Case presentations provide an opportunity for formal discussion of clinical work with staff and other graduate students. Each session is intended to be a learning opportunity for all participating graduate students.

Clinical case presentations fall into one of the following categories.

1. Pre-treatment - where the graduate student is seeking input into treatment planning.
2. Under-treatment - here are a variety of reasons for presenting cases during treatment; perhaps one of the most important would be the need to re-assess the case and look at alternative treatment plans.
3. Post-treatment - the graduate student presents and discusses a treated case.

Before preparation the candidate should confer with the MSc Coordinator on the suitability of each case.

If discussion is to be properly focussed it is important that everyone taking part knows exactly where the case stands at the time of presentation. Documentation for pre-treatment cases must include full case notes, radiographs, articulated study casts, diagnostic wax-up (where applicable) and photographs.

Documentation for under-treatment and post-treatment cases must include the above together with an up-date list of the record of treatment from the patient's folder and a copy of the confirmation letter. Where treatment has been completed, the work done should be shown on a separate chart.

Study casts and radiographs should be made available in the secretary's office on the day before the presentation so that staff who wish to acquaint themselves with the details of the case may do so.

If input from a member of staff from another department is required at the session, the MS Co-coordinator should be notified so that necessary arrangements can be made. At presentation, the notes should be reviewed, treatment options discussed and the chosen treatment justified.

Dates for case presentations are scheduled on the Wednesday afternoon. All the departments' MS students are expected to be present (OI and OK).

Fees

Fees are charged according to the scale of fee for treatment published annually by the ACTA and department of Oral Function. Generally they will follow the Dutch UPT guidelines but in some cases there might be exceptions. Where difficulties arise with payment, time payment or some abatement of fees may be considered on referral of full details to the Head of Department. An estimate of treatment costs is always given to the patient at the time of acceptance of the treatment plan.

Confirmation letters

1. All patients must receive a letter from the graduate student responsible for their treatment outlining proposals for that treatment. A copy of the letter should go to the referring general dentist if the patient has been referred by one.
2. It is the responsibility of the graduate student to see that this is done. The letter is prepared in consultation with the clinical tutor who approves the treatment plan.
3. The letter should be kept as brief as possible. It is directed to the patient. Comment under some or all of the following headings should be included:
    a. Salutation
    b. Statement of problems (diagnosis)
    c. Outline of proposed therapy (primary treatment plan) Alternative treatment plans
    d. Limitations
    e. Possible consequences of therapy
    f. Possible consequences of not undertaking therapy Fees and payment schedule
    g. No guarantee clause
    h. Outline of patient obligations including maintenance through pp Duration of therapy
    i. Realistic closing

The letter should conclude as follows:

"If you are willing to accept this offer of treatment, would you please confirm your acceptance by signing and returning the attached duplicate copy of this letter.

Yours sincerely

MSc Student Supervising Teacher

[The following paragraph to go on duplicate copies of letter]

I have read this letter and understand the treatment proposed. I wish to begin this course of care and agree to the terms stated. I realize that I have treatment options and that I may ask for an explanation of any aspect about which I have questions.

(Signed) (Date)

Research Projects, Reports and Publications

Research Project

Staff members with research projects suitable for MS candidates, and who are prepared to act as supervisors, submit an outline to the course coordinator. Alternatively, candidates may submit proposals on their own account. After discussing the proposals with the candidates the course coordinator will appoint a supervisor(s) appropriate to the project selected.

Protocol

A principal activity of the first semester of the course is the preparation of a research protocol. In conjunction with a proposed supervisor, the candidate prepares a written protocol which is formally presented to the department for comment and criticism before the mid-year break of the first year. A main objective of the discussion is to determine the appropriateness of the research project within the constraints of time and the availability of equipment, expertise and finance

The final report must be submitted in accordance with the regulations governing the Presentation of Theses or in a form suitable for submission to an appropriate journal

Guidelines for MS research reports

1. Protocol. The main constraints on projects should come at the planning stage to ensure that the research is well focussed. The objective is primarily to provide research experience.
2. Review of literature. The review of literature in the main should be undertaken at the time of the development of the research protocol and modified in the light of discussion when the protocol is presented. Further references can and should be added during the conduct of the actual research.
3. Methods. The methods section should fully describe what was used and how the research was conducted. Detail should be sufficient so that an informed researcher could repeat the experiment.
4. Results. The results should be concise. Avoid the common mistake of discussing the research in this section.
5. Discussion: Present the results in the light of other research findings. Discuss their meaning and end by stating how they alter or advance current ideas. Some future lines of research can be suggested.

Introduction	Why did you start?
Method	What did you do?
Results	What did you find?
Discussion	What does it mean?

Assessment in the MSc Course

By the end of the first semester of the first year the MSc Coordinator will assess a candidate's capacity to complete the course. At the end of the first year candidates will be invited to submit a statement on areas of learning in which they require further direction or tutoring.

Examination procedures and timing

Examinations will be held at the end of each year. A paper, a graded component of the total examination process, may be comprised of some or all of the following: internal assessment, written examination, oral examination, clinical oral examination, assessment of the logbook, presentation and oral examination of the research report. Candidates in the 3 year MSc programme are set the following papers:

Year 1

Paper - internal assessment and written components

- oral examination and written components

Year 2

Paper - internal assessment and written components

- oral examination and written components

Year 3

Paper - internal assessment, clinical oral examination, log book, and written components

- research report including oral examination

- the manuscript must be ready for application to a per reviewed journal

- external assessors will partake in the exam

The composition of the papers for the MSc in Prosthodontics and Implantology course are:

Internal assessment

A grade for the year's internal assessment will be derived from reports made by the candidate's clinical teachers (80%) and assessment of assignments (20%) presented during the year.

Written exams will normally be of three hours' duration and require essay type answers. They will normally be held in June of each year. Special examinations may be held at other times for candidates who fail to satisfy the requirement in the June exams.

Oral examination

Oral examinations will normally be of one hour's duration although this is variable at the discretion of the examiners.

Clinical oral examination

The clinical oral examination is based on a presentation of slides and other relevant material (such as radiographs and articulated study casts) of patients whose treatment has been managed by the candidate. The candidate will be asked to select 2 patients for presentation at the end of year 1, five for presentation at the end of year 2 and ten patients to present at the end of year 3. The aim is to demonstrate the range and quality of procedures carried out by the candidate and to provide a focus for discussion.

Oral exam of the research report

This will normally be of one hour's duration although this is variable at the discretion of the examiners. An oral examination may not be required however, if the candidate has submitted their research to an international peer reviewed journal for publication, and that manuscript has been accepted for publication.

Assessment of the logbook/portfolio

Logbooks are required to be available for inspection by the examiners during the final examination. Candidates will be informed of the date these are required to be submitted.