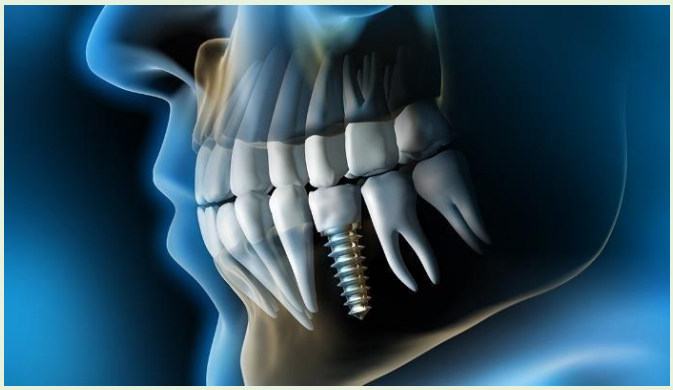
The Iraqi Board of Medical Specializations

The Scientific Council of Maxillofacial Surgery

Fellowship in Oral Surgery and Implantology

FIBMS-OSI



Surgical Curriculum Program

2022

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1. Introduction

The role of oral Implants in the rehabilitation of patients with edentulous sites has developed rapidly becoming a well-accepted treatment modality with well over 95% success rate. The dental implant is the best tooth-replacement option for nearly all situations where a tooth is missing or is failing, and implant supported prostheses can provide restoration of patients' normal contour, function, comfort, esthetics, and speech which makes them unique in achieving these goals. The future of oral implantology is promising and is expected to continue as one of the fastest and largest growth areas in medicine.

The increased need and use of oral implant-related treatments result from a combination of many factors, including; patients living longer, age-related tooth loss, patients are more socially active and esthetic conscious, a higher incidence of partial and complete edentulism, conventional prosthesis complications, and the inherent advantages of implant-supported restorations.

The success of implant procedures and maintenance of long-term stability are directly related to proper surgical and prosthetic planning, a high degree of expertise in both the basic and advanced implant placement surgical procedures, proficiency in the fabrication of implant-supported restorations, and postoperative care and maintenance.

This advanced education and training program aims to ensure the highest standards of practice in the field of Oral Surgery and Implantology in Iraq by delivering high-quality surgical training and education with the attainment of

knowledge, skills, and professional behavior relevant to the practice in the specialty.

This curriculum is founded on a common format and similar framework to all the surgical specialties in the Iraqi Board for Medical Specializations.

1.1. Overview of the curriculum

The Scientific Council of Maxillofacial surgery of the Iraqi Board for Medical Specializations provides a **four-year** education and training program in the field of Oral Surgery and Implantology that involves performing research. The program culminates in awarding the trainees with the degree of Fellow of Oral Surgery and Implantology (FIBMS-OSI) which is considered to be the highest professional degree in the field of the specialty.

All applicants willing to enroll in the specialty program must submit to a credentialing process which includes qualification in dentistry and passing a written competitive enrollment examination which is in Multiple Choice Question (MCQ) Single Best Answer format with a minimum 60% pass mark. All trainees will need to complete all the essential elements of the specialty syllabus satisfactorily in order to be awarded the FIBMS-OSI degree.

The academic year starts on the 1st of October, the four-year education and training program consists of the following frame:

1.1.1. Clinical training

- **The first year:** Training and residencies in Oral Surgery and other relevant medical specialties.
- **The second year:** Pre-clinical training in Oral Implantology procedures on jaw models and animal models followed by supervised clinical training that starts after the completion of pre-clinical training.
- **The third year:** Implant prosthetic training for 4 months in addition to clinical training in Oral Implantology.
- **The fourth years:** Clinical training in Oral Implantology.

1.1.2. Lectures and seminars

- During the first year, the trainees receive lectures on applied basic sciences (Head and Neck Anatomy, Physiology, and Oral Pathology), principles of Oral Surgery, and certain topics in Maxillofacial Surgery related to their specialty.
- During the second and third years, the trainees receive lectures on basic and advanced Oral Implantology topics in both surgical and prosthetics parts, and they are actively engaged in seminars and journal clubs to improve their abilities in presentation and critical thinking.

1.1.3. Research requirements

At the beginning of the third year, the trainee is required to conduct clinical research work and write a thesis under the supervision of an assigned educational supervisor. At the beginning of the fourth year, the thesis is submitted for examination and approval by an examining committee assigned by the Scientific Council as a fulfillment of the requirement for the final examination.

1.1.4. Assessment

The assessment consists of two examinations held at two key stages:

- **Primary examination:** A machine-marked written examination conducted at the end of the first year, it consists of two papers in MCQ single best answer format, one in applied basic sciences and the other in principles of Oral Surgery and certain relevant topics in Maxillofacial Surgery.
- **Final examination:** It is a comprehensive assessment in Oral Implantology conducted at the end of the four-year training in two sections:
  - **Section 1**: It is a written examination composed of 2 papers; paper 1 in MCQ single best answer format and paper 2 in essay format. Trainees must meet the required standard in Section 1 in order to gain eligibility to proceed to Section 2.
  - **Section 2**: It is the clinical component of the final examination, it consists of case-based clinical and oral examinations.

2. Mission statement

The Scientific Council of Maxillofacial Surgery of the Iraqi Board for Medical Specializations provides training, attainment of the necessary knowledge, experience, and skills for a competent specialist in Oral Surgery and Implantology, and a commitment to continuous learning and contemporary practice.

The four-year training program integrates supervised surgical and prosthetic training with theoretical learning for the key topics that are considered essential in basic and advanced Oral implantology, it also provides the trainees with the ability to develop their experience in academic research, and presentations and contribute to the specialty literature.

Throughout the training period, all trainees will be assessed by practice-based assessments covering knowledge, clinical judgement, technical skills, and professional behavior, complemented by the surgical logbook of procedures to support the assessment of operative skills, in addition to examinations held at 2 key stages; at the end of the first year, and towards the exit examination at the end of specialty training.

3. Program requirements

3.1. Training centers

The trainees entering the specialty of Oral Surgery and Implantology will undertake initial basic training in Oral Surgery for 7 months to develop fundamental surgical skills. This is followed by a 2-month residency in Maxillofacial Surgery, 1 month in ENT, 1 month in Plastic and Reconstructive Surgery, and 1 month in radiology, providing a good interaction with these disciplines. The final 3 years of the specialty training are undertaken in recognized training centers.

The recognition of the training centers by the Scientific Council follows strict rules and regulations and depends on the academic standards and clinical experience of the trainers and the medical and teaching facilities available in the center. The following requirements should be available in the training centers:

- A minimum of 2 trainers (Professor, Assistant Professor, or Consultant) in Maxillofacial Surgery and Prosthodontics.
- A proper clinical setup for implant surgeries with a minimum of 2 well recognized implant systems approved by the American Dental Association (ADA).
- A properly equipped prosthetic lab and qualified implant technicians.
- The presence of imaging modalities including CT and CBCT.

Currently, there are 4 recognized training centers.

3.2. The Scientific Council, trainers, and educational supervisors

The founding Scientific Committee that supervises the education and training program consists of 5 members, presided over by the Chairman of the Scientific Council of Maxillofacial Surgery, and 4 members (Professor, Assistant Professor, or Consultant); 3 maxillofacial surgeons, and 1 prosthodontist.

The trainers should hold the highest professional degree (Fellow of the Iraqi Board for Medical Specializations, FIBMS or equivalent in Maxillofacial Surgery or Ph.D. in Prosthodontics) with at least 5-year experience after qualification. The selection of trainers and directors of training centers is decided by the Scientific Council of Maxillofacial Surgery according to the above criteria.

The trainers are responsible for 1-3 trainees at any time depending on factors such as the size of the unit and the overall number of trainees.

The roles of trainers are to:

- Ensure that the trainee has appropriate day-to-day supervision in relation to their stage of training;
- Ensure patient safety in relation to trainee performance.

At the beginning of the third year, the trainee will have an assigned educational supervisor who should be a Professor or Assistant Professor (Ministry of Higher Education and Scientific Research) or Consultant Maxillofacial surgeon (Ministry of Health).

The roles of the educational supervisor are to:

- Have overall educational and supervisory responsibility for the trainee in a given placement and act as a mentor to the trainee and help with both professional and personal development.
- Keep the Chairman of the Scientific Council informed of any significant problems that may affect the trainee's training.
- Supervise the research work.

3.3. Admission requirements

The following is required to be admitted to the training and education program:

1. Qualification in dentistry (Bachelor of Dental Surgery, B.D.S. or equivalent), residency in Maxillofacial surgery is recommended (with a bonus score).
2. Applicants with a Higher Diploma in Dentistry (H.D.D.) or Master of Science (M.Sc.) in Oral Surgery can also apply for the Oral Surgery and Implantology training program (with a bonus score).
3. For applicants who work for the government, official permission from the employer is required.
4. Passing a competitive enrollment examination which is in MCQ format with a minimum 60% pass mark.

The applicants who pass the enrollment examination are ranked according to the points collected as follows:

- The examination mark: 70 points.
- The rank and the final average for the five-year dentistry study: 30 points.
- Additional 0.5 point for every month of residency in Maxillofacial Surgery with a maximum of 6 points.

The number of applicants who are enrolled in the training program is determined by the annual plan of the Iraqi Board for Medical Specializations.

After enrollment, the new trainees are interviewed by a special committee chaired by the Chairman of the Scientific Council of Maxillofacial Surgery for assigning the trainees to the training centers.

3.4. Rotation of trainees through the program

❖ **The first year:** Clinical training in:

- Oral Surgery for 7 months.
- Maxillofacial Surgery for 2 months
- Ear, Nose, and Throat (ENT) for 1 month.
- Plastic and reconstructive surgery for 1 month.
- Radiology including Cone Beam Computed Tomography (CBCT) for 1 month.

During this period, the trainees will receive basic training in Oral Surgery skills such as surgical extraction of impacted teeth, endodontic surgery, surgical exposure of impacted teeth, pre prosthetic surgery, biopsies, closure of oro-antral fistulae and

communications, treatment of cystic lesions, closed treatment of jaw fractures under local anesthesia and other oral surgical procedures, together with a limited range of competencies from other specialties that are relevant to their chosen surgical specialty. The trainees are actively engaged in all the activities and duties assigned to their colleagues in other disciplines such as attending the outpatient clinics and the surgical theater in addition to participating in all the meetings and ward rounds that are held in these units.

- **The second year:** Pre-clinical training in Oral Implantology procedures on jaw models and animal models in addition to supervised clinical training in Oral implantology that starts after the completion of the pre-clinical training.

- **The third year:** It consists of prosthetic training for 4 months which includes impression handling and fabrication of implant prostheses using the different prosthetic components in the appropriate sequence, and clinical training in Oral Implantology.

- **The fourth year:** Clinical training in Oral Implantology.

During the third and fourth years the trainees will progress in surgical training in the domains of specialty-based knowledge, clinical and technical skills, and professional behavior and leadership toward the development of competent surgical practice. The trainees will practice at the workplace and their tasks and responsibilities will increase in complexity in line with the progression through the training program and they should record their operative experience in the surgical logbook corresponding to the operative levels: operator or assistant

3.5. Educational program

3.5.1. Lectures

During the first year, the trainees receive lectures on applied basic sciences (Head and Neck Anatomy, Physiology, and Oral Pathology), principles of Oral Surgery, and certain topics in Maxillofacial Surgery related to their specialty. During the second and third years, the trainees receive lectures on basic and advanced Oral Implantology topics in both surgical and prosthetics parts.

3.5.2. Seminars and journal clubs

Throughout the training period, the trainees will participate in the seminars and journal clubs held at the training centers covering the subjects and topics relevant to the knowledge of the specialty to improve their abilities in presentation and critical assessment of the up-to-date literature.

3.5.3. Research requirements

The trainees are required to conduct clinical research work and write a thesis that is supervised by assigned educational supervisors and they should submit their theses to be examined and approved by examining committees assigned by the Scientific Council as a fulfillment of the requirement for the final examination.

4. The training objectives

The purpose of training in the specialty of Oral Surgery and Implantology is to produce surgeons competent to work as specialists in Iraq in the three main domains of competency; knowledge, skills and attitudes/behavior.

In general terms, by the end of the training, surgeons have to demonstrate:

- Theoretical and practical knowledge related to Oral Surgery in general and to Oral Implantology in particular;
- Technical and operative skills;
- Clinical skills and judgement;
- Generic professional and leadership skills;
- An understanding of the values that underpin the profession and the responsibilities that come with being a member of the profession;
- The special attributes needed to be a specialist;
- A commitment to their on-going personal and professional development and practice using reflective practice and other educational processes;
- An understanding and respect for the multi-professional nature of healthcare and their role in it;
- An understanding of the responsibilities of being an employee in the government's health systems and/or a private practitioner.

At the end of this education and training program, the fellows will be able to manage:

- Patients presenting with problems relating to the teeth and their supporting structures, such as; impacted teeth, endodontic surgery, and oro-antral communications and fistulae.
- Patients requiring pre-prosthetic surgery.
- Patients presenting with infection of the head and neck, both acute and chronic that can be managed in an outpatient setting.
- Straightforward cases in Oral Implantology.
- Advanced and complicated cases in Oral Implantology such as; ridge augmentation before or during implant placement surgery, soft tissue grafting before, during, or after implant placement surgery, Immediate implant/ immediate loading, Internal and lateral sinus lifting procedures, full mouth rehabilitation of edentulous patients with implant supported fixed restorations, ridge expansion, and splitting, piezosurgery, All-on-Four systems, narrow implants, zygomatic and pterygoid implants, alveolar distraction osteogenesis, Inferior alveolar nerve lateralization or transposition and craniofacial implants.

In addition to the basic competencies required in all specialties, these include:

4.1. Patient Care

Trainees must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of Oral problems and the promotion of health. They are expected to:

a. Demonstrate caring and respectful behavior when interacting with patients and their families;

b. Obtain essential and accurate information about their patients;

c. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment;

d. Develop and implement patient management plans;

e. Educate the patients and their families;

f. Perform all procedures that are considered essential for the practice of the specialty;

g. Provide services aimed at preventing health problems or promoting health;

h. Interact with health care professionals, including those from other disciplines, to provide quality care;

i. Provide competent care and management for patients consistent with the patient's values and desires for treatment.

4.2. Medical Knowledge

At the end of the training program, the trainees must demonstrate an adequate level of knowledge in the applied basic sciences, basic principles of Oral Surgery, and all the fields of Oral Implantology, they are expected to be able to demonstrate knowledge in:

a. Human anatomy, in particular Head and Neck Anatomy, appropriate for surgery including development and embryology, gross and microscopic anatomy, surface and imaging anatomy.

b. Physiology relevant to surgical practice such as; homeostasis, metabolic pathways and abnormalities, blood loss and shock, fluid balance and fluid replacement therapy, bleeding, coagulation, thermoregulation, and nutrition.

c. Pathological principles underlying system-specific pathology such as; inflammation, wound healing, cellular injury, pathology of neoplasms, tumor development and classification, staging, and grading of cancers.

d. Pharmacology relevant to the surgical practice and the safe prescription of drugs.

e. Microbiology relevant to surgical practice such as; surgically important microorganisms, sources of infection, sepsis, principles of disinfection and sterilization, and principles of antibiotics.

f. Principles of diagnostic and interventional imaging including plain radiographs, ultrasound, CT, CBCT, MRI, PET, and radiounucleotide scanning.

g. Oral Surgery such as; principles of the management of impacted teeth, endodontic surgery, in addition to principles of incisional, excisional and needle biopsy techniques.

h. Head and neck infections and the principles of surgical management and the use of antimicrobial agents.

i. Basic and advanced Oral Implantology.

4.3. Interpersonal and Communication Skills

The trainees must be able to demonstrate interpersonal and communication skills that result in effective information exchange with patients, families, and health professionals. Residents are expected to:

a. Create and sustain a therapeutic and ethically sound relationship with patients;

b. Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills;

c. Work effectively with others as a member or leader of a healthcare team or other professional groups;

d. Demonstrate effective communication skills, while handling difficult situations (managing difficult patients);

e. Maintain empathy with patients even under difficult circumstances;

f. Manage appropriate boundaries with patients and families;

g. Manage transference and counter-transference with patients and families;

h. Demonstrate sensitivity to sociocultural issues and differences;

i. Communicate their treatment plans to patients and their families in an understandable way.

j. Maintain a polite and courteous attitude at all times with all people;

k. Listen to and learn from others, even those with different viewpoints and backgrounds;

l. Communicate effectively within a multi-disciplinary inpatient treatment team;

m. Communicate effectively with colleagues from all disciplines;

n. Communicate effectively with peers;

o. Communicate effectively with supervisors and teachers for purpose of learning;

p. Maintain all necessary and appropriate documentation of patient care;

q. Demonstrate ability to lead a clinical team.

4.4. Professionalism

The trainees must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

a. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; and a commitment to ongoing professional development and excellence;

b. Demonstrate a commitment to ethical principles pertaining to withholding of clinical care, the confidentiality of patient information, informed consent, and business practices;

c. Demonstrate sensitivity and responsiveness to patients' culture, age, religion, sex, and disabilities;

d. Maintain professional dress and professional attire;

e. Put the needs of patients and families first;

f. Maintain professional boundaries;

g. Understand and respect issues related to patient confidentiality and informed consent;

h. Work well with peers including helping out with group issues, emergencies, and cross-coverage;

i. Be on-time, available, and arranging for appropriate cross-coverage;

j. Maintain appropriate documentation;

k. Contribute to the overall welfare of the hospital and the program;

l. Demonstrate leadership in clinical and educational settings;

m. Serve as a role model for students.

4.5. Practice-based Learning and Improvement

The trainees must demonstrate the knowledge, attitude, and skills necessary to initiate self-directed learning to keep abreast of current information and practices relevant to the practice of Oral Surgery and Implantology, correct any areas of information or skill gaps, and improve patient care. Trainees are expected to exhibit progressive improvement in their level of knowledge and skill throughout their training. Practice-based learning includes the ability to:

a. Recognize and accept limitations in the knowledge base and clinical skills and understand the need for life-long learning;

b. Obtain, evaluate, and utilize evidence from the scientific literature to improve their patient care including prestigious journals and medical information databases (e.g., PubMed, ScienceDirect, Medline, EMBASE, etc.) and online services and information technology;

c. Utilize evidence-based approaches in providing treatment for the patients;

d. Use direct feedback to improve their performance;

e. Use systematic evaluation of caseload and practical experience to assess practice, growing competence, and expanding knowledge and skills;

f. Participate in research and/or scholarship, attend all classes, journal clubs, case conferences, ward rounds, and special conferences and actively participate in these educational activities;

g. Present scholarly work at conferences or meetings within and outside the program to improve patient care and knowledge base;

h. Demonstrate effective contribution to the teaching of medical students and other health care professionals.

4.6. System-based Practice

The trainees are expected to exhibit progressive improvement in their level of knowledge and skill throughout their training. System-based practice includes:

a. Understanding the influence of sociocultural factors on seeking, receiving, and assuring the effectiveness of treatment;

b. The ability to understand, use, or work with the resources available within the hospital health care system and the larger community in the care of patients requiring knowledge of social service systems, legal system, and educational system;

c. Understanding and ability to work within multi-disciplinary treatment setting;

d. Identifying and reporting system errors; learning from these to reduce medical system errors;

e. Understanding of and compliance with the hospital and program policies, systems, by-laws, and regulations pertaining to patient care and residency training;

f. Attention to cost-efficacy in patient care;

g. Attention to patient advocacy within the hospital and the healthcare system.

5. Syllabus

5.1. Theoretical program

5.1.1. Lectures

During the first year of training, the trainees will receive a series of lectures on applied basic sciences and Oral Surgery to acquire the knowledge of the basic surgical principles required for the specialty. The appropriate level of knowledge can be found in textbooks that are in the following table

Topic	Textbooks
Human Anatomy	• Last's Anatomy Regional and Applied 12th edition (Churchill Livingstone Elsevier). • Snell's Clinical Anatomy by Regions 10th edition (Wolters Kluwer)
Physiology	• Ganong's Review of Medical Physiology, 24th edition (Lange Basic Science) • Guyton and Hall Textbook of Medical Physiology, 14th edition (Elsevier)
Oral Pathology	• Cawson's Essentials of Oral Pathology and Oral Medicine, 8th edition 2008 (Churchill Livingstone, Edinburgh). • Oral and Maxillofacial Pathology, 4th edition 2016 (Elsevier)

Oral and Maxillofacial Surgery	• Contemporary Oral and Maxillofacial surgery 7th edition 2019 (Elsevier).
Local Anesthesia	• Handbook of Local Anesthesia 7th edition 2021 (Elsevier).

During the second year, the trainees will receive lectures on basic specialty topics to educate them thoroughly on implant biomaterials, tissue biology, and clinical and radiographic assessment. The appropriate level of knowledge can be found in the textbooks that are in the following table

Topic	Textbooks
Oral Implantology	▪ Misch's Contemporary Implant Dentistry, 4th edition, (Elsevier) 2021.
Oral Implantology	▪ Dental Implant Prosthetics, 2nd edition, (Elsevier) 2015.

The lectures include the following topics:

- History of dental implants.
- Terminology and functional basis for implant designs.
- Bone physiology, metabolism, and biomechanics.
- Dental implant surfaces.
- Implant stability.
- Osseointegration.
- Applied anatomy.
- Clinical and radiographical assessment.
- Bone density.
- Basic implant surgical procedures.
- Criteria of success.
- Surgical complications.

During the third year, the trainees will receive lectures covering the prosthetic aspects and advanced implantology topics including:

- Force factors related to patient conditions: A determinant for implant number and size.
- Treatment plan related to key implant position and implant number.
- Natural teeth adjacent to an implant site: joining implants to teeth.
- Surface characteristics and cell adhesion.
- Biomaterials for dental implants.
- Principles for abutment and prosthetic screws and screw-retained components and prostheses.
- Clinical biomechanics in Implant dentistry.

- Bone response to mechanical loads.
- Prosthetic complications.
- Prosthetic options in implant dentistry.
- Treatment plans for partially and completely edentulous arches in implant dentistry.
- Diagnostic casts, surgical templates, and provisionalization.
- Mandibular and maxillary implant overdenture design and fabrication.
- Guided bone regeneration, bone substitutes and membranes.
- PRF in Oral Implantology.
- Socket preservation.
- Vertical and horizontal bone augmentation.
- Implants in the esthetic zone.
- Full arch rehabilitation.
- Ridge expansion and ridge splitting.
- Narrow implants.
- Short implants.
- Osseodensification.
- Piezosurgery.
- Sinus augmentation.
- Inferior alveolar nerve lateralization and repositioning.
- Zygomatic implants.
- Periimplantitis.
- Extraoral implants for rehabilitation of facial defects.
- Digital technology in implantology.

5.1.2. Seminars and journal clubs

Throughout the training period, the trainees will participate in seminars and journal clubs covering the subject and topics relevant to the knowledge of the specialty to improve their abilities in presentation and critical thinking of the up-to-date literature, the Scientific Council utilizes e-learning through online communication technology services in seminars and journal clubs.

5.2. Clinical Program

- **The first year:** Clinical training in:
  - Oral Surgery for 7 months.
  - Maxillofacial Surgery for 2 months
  - Ear, Nose and Throat (ENT) for 1 month.
  - Plastic and reconstructive surgery for 1 month.
  - Radiology including Cone Beam Computed Tomography (CBCT) for 1 month.

During this period, the trainees will receive the basic training in Oral Surgery skills together with a limited range of competencies that are relevant to their chosen surgical specialty. The trainees are actively engaged in all the activities and duties assigned to their colleagues in other disciplines such as attending the outpatient clinics and the surgical theater in addition to participating in all the meetings and ward rounds that are held in these units.

- **The second year:** It includes Pre-clinical training in Oral implantology procedures on jaw models and animal models. Supervised clinical training in Oral implantology starts after the completion of the pre-clinical training. The trainees are expected to complete the surgical and prosthetic treatment of a minimum of 50 dental implants divided as follows:

  - Single-tooth implant; anterior and posterior – 32 implants
  - Implants supporting bridge – 10 implants
  - Implants supporting overdenture – 8 implants.

- **The third year:** Prosthetic training for 4 months which includes impression handling and fabrication of implant prostheses using the different prosthetic components in the appropriate sequence, and clinical training in Oral Implantology. During this year the trainees are expected to complete the surgical and prosthetic treatment of a minimum of 125 dental implants divided as follows:

  - After or with ridge augmentation – **4 cases**
  - After or with soft tissue grafting – **4 cases**
  - Augmentation with internal sinus lifting – **4 cases**
  - Immediate implant placement – **5 cases**
  - Immediate implant loading – **4 cases**
  - Immediate placement and immediate loading – **4 cases**
  - Full mouth rehabilitation – **3 cases**
  - Straightforward cases – **20 implants**.

- **The fourth year:** Clinical training in Oral Implantology. During this year the trainees are expected to complete the surgical and prosthetic treatment of a minimum of 125 dental implants divided as follows:
  - After or with ridge augmentation with autogenous bone graft – **4 cases**
  - Augmentation with lateral sinus lifting – **4 cases**
  - All-on-Four system – **3 cases**
  - Zygomatic and pterygoid implants – **2 cases**
  - Ridge expansion and splitting – **4 cases**
  - Craniofacial implants – **2 cases**
  - Narrow implants – **4 cases**
  - Implants with the use of Piezosurgery – **4 cases**
  - Distraction osteogenesis - **2 cases**
  - Straightforward cases – **10 implants**

5.3. Research

At the beginning of the third year, the trainee is required to conduct clinical research work and write a thesis that is supervised by assigned educational supervisor; Professor or Assistant Professor (Ministry of Higher Education and Scientific Research) or Consultant Maxillofacial Surgeon (Ministry of Health).

The trainees and their assigned educational supervisors should submit the study protocols to the Council to be reviewed and approved by a Scientific Committee assigned by the Council. The reviewing process include the research question and aims of the study, the methodology, the study design and the research methods utilized in the study, the use of proper statistical analysis in addition to the ethical issues involved in the research.

At the beginning of the fourth year the trainees should submit their theses to be examined and approved by examining committees assigned by the Scientific Council as a fulfillment of the requirement for the final examination. The trainees should contribute to the literature by publishing one article at least in a prestigious journal indexed in Scopus and/or Clarivate Analytics.

5.4. Assessment

5.4.1. Purpose of the assessment

- To determine whether trainees are meeting the standards of competence and performance specified at various stages in the curriculum for surgical training.
- To determine whether trainees have acquired the common and specialty-based knowledge, clinical judgement, operative and technical skills, and professional behavior and leadership skills required to practice the specialty.

5.4.2. Components of assessment

- Workplace-based assessments covering knowledge, clinical judgement, technical skills and professional behavior and attitudes by direct observation of the workplace tasks. These are complemented by the surgical logbook of procedures to support the assessment of operative skills.
- Examinations held at key stages; at the end of the first year and towards the end of specialty training.

The examinations are held at two key stages:

- **Primary examination:** A machine-marked written examination conducted at the end of the first year, it consists of two papers in MCQ single best answer format, one in applied basic sciences and the other in Principles of Oral Surgery and certain relevant topics in Maxillofacial Surgery.

- **Final examination:** It is a comprehensive assessment in Oral Implantology conducted at the end of the four-year training in two sections:

  - **Section 1:** It is a written examination composed of 2 papers;
    - Paper 1, MCQ single best answer format.
    - Paper 2, essay format.

The trainees must meet the required standard in Section 1 in order to gain eligibility to proceed to Section 2.

  - **Section 2:** It is the clinical component of the final examination, it consists of case-based clinical and oral examinations.

5.4.3. Examination regulations

The primary and final examinations are conducted twice a year in October and in April.

The pass mark for both examinations in each paper is 60% and the average pass mark for both papers is 70%. The trainees are eligible to sit 4 attempts within 6month interval and if unsuccessful their relation with the specialty program is terminated.

6. Program certification

The successful fellow will be awarded with a fellowship degree in Oral Surgery and Implantology (FIBMS-OSI) from the Iraqi Board for Medical Specializations and will be regarded as “Specialist in Oral Surgery and Implantology”.

7. Monitoring and evaluation

Monitoring and evaluation of the educational and training program is achieved through regular annual meetings held by the members of the Scientific Council headed by the Chairman of the Council with the directors of the training centers, supervisors, trainers and the trainees to assess the progress of the trainees and the challenges encountered throughout the stages of the training program.