



Suez Canal University
Faculty of Medicine

Department of Orthopedic Surgery and Trauma



**Postgraduate Program of
Orthopedic Surgery & Trauma
(Master of Science)**

2019

Programme Specification

A- Basic Information

- 1- Programme Title: MSc Orthopaedic Surgery and Trauma
- 2- Programme Type: Single Double Multiple
- 3- Department (s): Orthopaedic Surgery and Trauma
- 4- Coordinator: Prof. Mohamed Saleh, Dr. Asser Sallam
- 5- External Evaluator(s):
- 6- Last date of programme specifications revision approval: 2019
- 7- Number of credit points: 120 credit points (CP)

B- Professional Information

1. Program Aims

The overall goals of the program are to:

1. Acquire the basic knowledge regarding the basic concepts of orthopedics and trauma situations with their scientific background including basic sciences knowledge related to orthopedic and trauma(O&T).
2. Be able to effectively treat patients.
3. Monitor up-to-date literature in Orthopedics and Trauma
4. Demonstrate the ability towards better Research skills.
5. Demonstrate administrative skills related to job description.
6. Organize and contribute to in-service education of Orthopedics and Traumatology
7. Demonstrate a good attitude towards patients, Colleagues, assisting staff, maintaining the ethical issues of service, research and teaching.
8. Understand health care delivery systems, provide qualitative patient care within the system.

2. Intended Learning Outcomes (ILOs)

A. Knowledge and Understanding

- a.1. Describe the natural history, pathogenesis and management of different orthopedic disorders including metabolic bone disease, deformities, foot and ankle disorders, knee disorders, hip disorders, hand and wrist disorders, elbow disorders, shoulder disorders, pediatric disorders, neuro-orthopedic disorders, musculoskeletal tumors and spine disorders.
- a.2. Describe the diagnosis, pathophysiology, biomechanics and management of general and specific traumatic conditions in adults and children.
- a.3. Describe the First aid measurements and resuscitations in emergency.
- a.4. Describe the specifications for main operative interventions in Orthopedics and Trauma
- a.5. Recognize knowledge of basic sciences relevant to orthopedic surgery and trauma such as anatomy, physiology, histology, microbiology, biochemistry and

pathophysiology and pathology of the musculoskeletal systems, kinesiology and biomechanics, functional anatomy, electrodiagnostic medicine, fundamental research design and methodologies, and surgical instrumentation related to the field.

- a.6. Recognize knowledge of related general surgery.
- a.7. Identify relevant laboratory, and imaging studies for the patient.
- a.8. Describe orthotics and prosthetics, including fitting and manufacturing, through instruction and arrangements made with appropriate orthotic-prosthetic facilities.
- a.9. Describe the principles of pharmacology as they relate to the indications for and complications of drugs utilized in O&T.
- a.10. Describe the basis of quality related to the orthopedics and trauma practice.
- a.11. Recognize the principles of biomedical ethics, medico-legal aspects of health problems, and malpractice.

B. Intellectual Skills

- b.1. Correlates anatomic knowledge to imaging finding
- b.2. integrate the results of history, physical and laboratory test findings into a meaningful diagnostic formulation. (Define problem and formulate differential diagnosis) (Problem solving skills)
- b.3. Think critically by recognizing the impact of their own value judgments and those of patients.
- b.4. Analyze, interpret, objectively evaluate and prioritize information, recognizing its limitations;
- b.5. Interpret relevant laboratory, and imaging studies for the patient.
- b.6. Demonstrate insight into research and scientific method through:
 - b.6.1. Design of methodology;
 - b.6.2. formulating research questions that are pertinent to medicine;
 - b.6.3. choice and application of appropriate quantitative and qualitative methodologies;
 - b.6.4. recognition of the importance of rigor in collecting, analyzing and interpreting data;
 - b.6.5. evaluating the relationship between evidence, audit and observed variation in clinical practice.
- b.7. Synthesize the creativity/resourcefulness in their professional learning, scientific endeavor and clinical practice.
- b.8. Predict and cope with uncertainty by:
 - b.8.1. interpreting that uncertainty is unavoidable in the practice of medicine;
 - b.8.2. practicing appropriate cognitive and intellectual strategies to deal with uncertainty when it arises.

C. Professional and Practical Skills

- c.1. Perform all clinical and surgical skills required in the course specifications
- c.2. Evaluate and apply reliable and current information and tools in diagnosis and treatment
- c.3. Demonstrate respect for patients and families and advocate for the primacy of patient's welfare and autonomy.
- c.4. Interact with others without discriminating on the basis of religious, ethnic, sexual, or educational differences.
- c.5. Demonstrate positive work habits, including punctuality, dependability, and professional appearance.
- c.6. Adhere to ethical principles in the practice of medicine.
- c.7. Demonstrate principles of confidentiality with all information transmitted both during and outside of a patient encounter.
- c.8. Demonstrate knowledge of regulatory issues pertaining to the use of human subjects in research.
- c.9. Communicate medical problems and patient options at appropriate levels of understanding.
- c.10. Maintain comprehensive, timely, and legible medical records.

D. General and Transferable Skills

- d.1. Perform self- and peer-assessment
- d.2. Demonstrate effective presentation skills.
- d.3. Present information clearly in written, electronic and oral forms
- d.4. Communicate ideas and arguments effectively;
- d.5. Manage time and resources and set priorities;
- d.6. Work within a changing environment;
- d.7. Teach effectively and act as a mentor to others
- d.8. Work effectively within a team.
- d.9. Use computers efficiently
- d.10. Adopt the principles of lifelong learning
- d.11. Treat patients in a manner consistent with the most up-to-date information on diagnostic and therapeutic effectiveness.
- d.12. Perform self-evaluations of clinical practice patterns and practice-based improvement activities using a systematic methodology.
- d.13. Use the medical library and electronically mediated resources to discover pertinent medical information.
- d.14. Demonstrate effectiveness in developing appropriate doctor-patient relationships.
- d.15. Demonstrate skills in obtaining informed consent, including effective communication to patients about procedures, alternative approaches,

and possible complications of laboratory-based patient care diagnostic and therapeutic activities, such as those related to transfusion medicine.

- d.16. Elicit medical information in effective ways and communicate ideas with others.
- d.17. Work effectively with others as a member or leader of a health care team

3. Academic Standards

3.a. External References for Standards (Benchmarks)

- “Orthopedic surgery milestones”, the Accreditation Council for Graduate Medical Education (ACGME) Report Worksheet. ACGME and The American Board of Orthopedic Surgery, 2015
- Generic Academic Reference Standards (ARS) for post graduate programs

3.b. Comparison of Provision to External References

- 4. **Program duration:** the program lasts for a minimum of 2 academic years and maximum 5 years, as specified in the internal bylaws for postgraduate studies based on credit points system in the Faculty of Medicine, Suez Canal University approved on February 7th, 2016.

5. Program Courses

5.1- Level/Year of Programme: 1st part MSc (30 CP)

Duration:15 weeks for one academic semester

Code No.	Course Title	No. of hours /week			Credit points
		Lecture	Practical	Tutorial	
OSOS01	Anatomy	1	-	-	3
OSOS02	Histology	1	-	-	1
OSOS03	Physiology	1	-	-	3
OSOS04	Biochemistry	1	-	-	2
OSOS05	Pathology	1	-	-	3
OSOS06	Pharmacology	1	-	-	2
OSOS07	Microbiology	1	-	-	2
OSOS08	Surgery	1	1	-	6
E	Elective	1			2
BR	Medical statistics	1			4
RE	Research ethics	1			2

5.2 Master thesis (30 CP): The candidate has the right to register the thesis protocol 6 months after registration for the Master of science degree.

The thesis defense is allowed 6 months after the date of the Faculty Council approval of the thesis protocol and passing the First Part exam.

A faculty senior & junior supervisor from the staff members are nominated by the department council to prepare a proposal of the thesis protocol after the selection of a subject that is complementary to the research plans of the department. Data collection, methodologies, study question, timetable, ethical considerations and budget are formulated by the candidate under guidance of his supervisors into a research project. The research protocol is then peer reviewed by two different staff members nominated by the Head of the department who share their ideas and comments with the supervisors to reach to the final form. The research protocol is discussed then openly in one of the department councils to be approved and diverted to the Faculty research committee where it is subjected to a critical appraisal to meet the research basic standards set by the committee. The final approvals of the research protocol are then issued by the committee of post graduate studies, the Faculty and University Council to be registered.

5.3 Level/Year of Programme: second part MSc (60 CP)

Duration: 45 weeks for 3 consecutive academic semesters.

Code No.	Course Title	No. of hours /week			Credit points
		Lecture	Practical	Journal club	
OSOS09	Orthopedic surgery	1	4	1	60
	Trauma	1	4		

6. Program Admission Requirements

Bachelor of Medicine & surgery with minimum good grade & very good in Surgery

7. Regulations for Progression and Programme Completion

First part (30 credit points)

Completion of credit points

Passing level 60% of total marks of the exam

1 st part	Written	Oral	Clinical	total
	77%	15%	8%	100%
	460	90 marks	50 marks	600 marks

Second part (60 credit points)

Completion of credit points

Completion of 75% of the portfolio activities

Passing level 60% of total marks of the exam

2 nd part	Written	Oral	Clinical	Portfolio	Total
	30%	10%	30%	30%	100%
	330	110 marks	330 marks	330 marks	1100 marks

Thesis (30 credit points)

Approval by a committee of internal and external examiners is required for the degree

8. Assessment

8.a. Student Assessment Methods

Written exams: Problem solving and MEQ to assess recall, analysis & interpretation of knowledge

Oral Exam to assess Knowledge recall, comprehension, critical thinking and judgment.

Practical exam to assess; Knowledge, professional and intellectual skills.

Workplace-based continuous assessments (Portfolio)

8.b. Assessment Schedule

Assessment 1	Written Exam	Timing: end of the course
Assessment 2	Oral Exam	Timing: end of the course
Assessment 3	Practical Exam	Timing: end of the course

8.c. Weighting of Assessments

8.c.1. Written exam:

- Second part: 2 papers for orthopedics, trauma (330 marks)
- First part: 11 papers anatomy, medical statistics, research ethics, histology, physiology, biochemistry, pathology, microbiology, pharmacology, general surgery and one elective subjects (460 marks)

8.c.2. **Oral Exam:** 3 exams for long, short and ER cases (110 marks)

8.c.3. **Practical Examination:** operative and OSCE exam (330 marks)

8.c.4. **Workplace-based continuous assessments (Portfolio):** (330 marks)

Component	Orthopedic Surgery and Trauma
Clinical skills assessment (Mini-CEX)	40% - Master's degree candidates: 2 mini-CEX every 3 months training
Practical/procedural Skills assessment	20% (All core skills required by the Department)
Critical appraisal	20% - Master's degree candidates: 2 research articles
Scientific presentations	20% - Master's degree candidates: 2 presentations
Logbook	≥75% attendance of all activities

8.c.5. **Total:** 1700 marks

9. Evaluation of Programme Intended Learning Outcomes

Evaluator	Tool
1- Senior students	Questionnaires
2- Stakeholders (Employers)	Interviews
3-External Evaluator(s) (External Examiner(s))	Attending exam. (using checklist and/or rating scale)

Annex 1

Attach Course Specifications

Course Coordinator:, Associate Prof. Asser Sallam

Head of Department: Prof. Mohamed Saleh

Date: