



## PROGRAMME SPECIFICATION Faculty of Medicine- Mansoura University

### (A) Administrative information

(1) Programme Title & Code	Master Degree of Orthopaedic surgery OSUR 525
(2) Final award/degree	Master Degree
(3) Department (s)	Orthopaedic Surgery Department
(4) Coordinator	Dr/ Khalid Nour
(5) External evaluator (s)	Prof. Dr/ Gamal Hosny
(6) Date of approval by the Department`s council	11 .5 . 2016
(7) Date of last approval of programme specification by Faculty council	9/8/2016

### (B) Professional information

#### (1) Program Aims:

The overall aim of the program is to:

- 1- Provide the principles required for management of patients and improvement of patient care.
- 2- Teaching the candidate the basic skills needed to deal with patients from history taking, examination and communication skills.

- 3- Learn and practice the basic skills of trauma surgery and focusing on management of life saving and resuscitation techniques.
- 4- Teach our candidate how to design a clear and defensible management plan and presenting the plan in scientific way.
- 5- Encourage our candidates to collect and analyze data and information through primary or secondary data collection and/or systematic use of library resources.
- 6- Establish the ability to work effectively within a team.

(2) **Intended Learning Outcomes (ILOs):**

On successful completion of the programme, the candidate will be able to:

**A- Knowledge and Understanding**

- A1- Discuss the macroscopic and microscopic anatomy of musculoskeletal system.
- A2- Discuss the physiology of bone healing.
- A3- Describe the surgical anatomy of important regions and organs of importance to the musculoskeletal system.
- A4- Identify the general signs and symptoms of fractures and joints injuries.
- A5- Select the appropriate diagnostic tools and therapeutic lines for the most important musculoskeletal system dysfunction including applicable recent modalities.
- A6- Defines the possible early and late complications for regional musculoskeletal system injuries, diseases, infections and tumours.
- A7- List the appropriate lines of treatment modalities for selected common musculoskeletal system injuries.
- A8- Recognize the common descriptive pharmacological terms and how to correctly use the drug pre and post-operative, clinical instruction and follow-up of side effects and toxicity of different drugs.
- A9- Recognize bone metabolism, Ca, magnesium, phosphate metabolism and trace elements.

**B- Intellectual activities**

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

- B1- Appraise the importance of physical assessment to the diagnosis of musculoskeletal dysfunction.
- B2- Present a complete medical history and physical examination.
- B3- Analyse the clinical and investigational results, with the knowledge and the skill in clinical problem solving.
- B4- Differentiate between different types and classifications of fractures.
- B5- Perform an examination of bone and joint in a chronological manner.
- B6- Interpret complications of major Orthopedic dysfunctions beyond the capacities of institute and or personnel and determine when to refer to a more well equipped location.
- B7- Distinguish and outline management of patients with acute and chronic Orthopedic Surgery conditions requiring short or long-term follow-up, rehabilitation and pain relief.
- B8- Monitor the effectiveness of therapy by identifying clinical and investigative parameters that can be used in assessing the patient's response to treatment and re-evaluate management plan accordingly particularly in musculoskeletal system infections.

### **C- Professional/practical skills:**

C1- Perform routine bedside procedures.

C2- Evaluate musculoskeletal deformities and describe them in a proper way.

C3- Assess the ability to identify appropriate management and leadership styles to motivate and influence individual and group behavior, and resolve conflict through collaborative approaches.

C4- Develop skills in examination of different joints including gait description, joint deformity, joint motion and measurements.

C5- Assess awareness and analysis of differing learning styles, requirements and processes.

### **D- Communication & Transferable skills**

D1- Personal drive, initiative and effectiveness in planning and implementing projects and accomplishing objectives together with the ability to manage time and work to deadlines.

D2- Conduct sincere and effective patient interviews, properly explain their condition and plan of management, obtain consents and convey bad news in a professional way.

D3- Communicate, consult and respect the role of other health-care providers.

D4- Effective oral and written communication using a range of media.

D5- Participate constructively in teams and assess the relevance and importance of the ideas of others.

D6- Effective use of technology for management of information, including use of spreadsheets, databases, word processing.

D7- Numerical skills and the ability to manipulate data and appreciate statistical concepts.

D8- Maintain a professional image, and practice a responsible attitude.

### **(3) Curriculum structure and contents:**

#### **3.a- Duration of the programme (in years or months): up to 36 months.**

#### **3.b- programme structure:**

Candidates should fulfill a total of 45 credit hours

●3.b.1: Number of credit hours:

**First part:** 5 credit hours. **Second part:** 18 credit hours. **Thesis:** 6 credit hours. practical 16 Credit Hours.

	Course	Code	Credit hours	Total
1st part	Surgical anatomy & embryology	OSURG 501	1	5
	Histology	OSURG 502	1	
	Physiology	OSURG 503		
	Biochemistry	OSURG 504	1	
	Pharmacology	OSURG 506		
	Pathology	OSURG 505	1	

	Microbiology	OSURG 507		
	General surgery	OSURG 520 OSURG 520 C	1	
2nd part	Orthopaedic	OSURG 525	8	18
	Traumatology	OSURG 525 TR	9	
	Elective course <ul style="list-style-type: none"> <li>• Rehabilitation Programs &amp; Ortho</li> <li>• Principle of Microvascular sur</li> </ul>	OSURG 525 RO OSURG 525 MS	1	
PRACTICAL	Practical training		14	16
	Scientific activity		2	
thesis				6
TOTAL				45

**(4) Programme courses:**

**First part**

**a- Compulsory courses: 15 weeks**

Course Title	Course Code	NO. of hours per week			Total teaching hours (15 weeks)	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical		
		Lectures	Seminars			
Surgical Anatomy & Embryology	OSURG 501				1	A3
Histology	OSURG 502					
Physiology	OSURG 503				7.5	
Biochemistry	OSURG 504					A9
Pharmacology	OSURG 506					B8
General Surgical	OSURG 505					
Microbiology	OSURG 507					B8
General Surgery	OSURG 520 OSURG 520 C				1	D2,A4

**Second part: 45 weeks**

Course Title	Course Code	NO. of hours per week				Total Credits	Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical				
		Lectures	Seminars					
Orthopaedic Surgery	OSUR 525	120			8	120 Hours	A4→A9 B1→B8 C1→C5 D1→ D8	
Traumatology	OSUR 525 TR	135				135 Hours		
Elective: 1. Rehab.programs & orthotics 2. Principle of microvascular surgery	OSUR 525 RO OSUR 525 PM					15 Hours		
Log Book	OSUR 525 C OSUR 525 TRC				16	480 Hours		
Thesis								

## Programme-Courses ILOs Matrix

Course Title/Code	a1	a2	a3	a4	a5	a6	a7	a8	a9	b1	b2l	b3	b4	b5	b6	b7	b8	C1	C2	C3	C4	C5	d1	d2	d3	d4	d5	d6	d7	d8
<b>Surgical Anatomy &amp; Embryology/ OSURG 501</b>	X		X																											
<b>Histology/ OSURG 502</b>	X																													
<b>Physiology/ OSURG 503</b>		X																												
<b>Biochemistry / OSURG 504</b>		X							X																					
<b>Pharmacology / OSURG 506</b>								X									X													
<b>Pathology/ OSURG 505</b>	X																													
<b>Microbiology/ OSURG 507</b>					X												X													
<b>General Surg /OSURG 520, OSURG 520C</b>			X																					X						
<b>Orth. Surg./ OSUR525</b>				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Traumatology /OSUR525TR</b>				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

## 6– Teaching and Learning Methods

6.1 Lectures.

6.2 Practical / surgical /clinical lessons

6.3 Discussion sessions

6.4 Information collection from different sources.

6.5 Attending and participating in scientific meeting and workshops

## 7- Student Assessment Methods

7.1 **Written examination:** to assess **knowledge and intellectual skills..**

MCQ exam to assess knowledge and intellectual skills.

7.2 **Clinical examination (OSCE):** to assess **practical and intellectual skills.**

7.3 **Structured Oral examination:** to assess **knowledge.**

## Assessment Schedule

### ➤ 1<sup>ST</sup> PART

Exam	Mark				Total
	Written	MCQ	Oral	Clinical	
<b>Anatomy</b>	<b>72</b>	<b>18</b>	<b>60</b>		<b>150</b>
<b>Histology</b>	<b>72</b>	<b>18</b>	<b>60</b>		<b>150</b>
<b>Physiology</b>	<b>48</b>	<b>12</b>	<b>40</b>		<b>100</b>
<b>Biochemistry</b>	<b>48</b>	<b>12</b>	<b>40</b>		<b>100</b>
<b>Pharmacology</b>	<b>48</b>	<b>12</b>	<b>40</b>		<b>100</b>
<b>Pathology</b>	<b>72</b>	<b>18</b>	<b>60</b>		<b>150</b>
<b>Microbiology</b>	<b>72</b>	<b>18</b>	<b>60</b>		<b>150</b>
<b>General Surgery</b>	<b>144</b>	<b>36</b>	<b>60</b>	<b>60</b>	<b>300</b>

### 2<sup>ND</sup> PART

Exam	Mark					Total
	Written	MCQ	Oral	Clinical	practical	
<b>Orthopaedic</b>	112	28	50	50	50	290
<b>Trauma</b>	112	28	50	50	50	290
<b>Elective</b>	16	4				20
						600

## **8-Programme admission requirements:**

### **•General requirements:**

- According to the faculty postgraduate bylaws.

## **9-Regulations for progression and programme completion:**

- Student must complete minimum of 45 credit hours in order to obtain the Master degree, which include the courses of first and second parts, thesis and activities of the log book.
- Registration for the M.Sc. thesis is allowed 6 months from the day of registration to the programme.

### **Log book fulfillment:**

- Student must fulfill a minimum of 16 credits of log book activities including conferences attendance or speaking.
- Lectures and seminars of the previously described courses must be documented in the log book and signed by the lecturer.
- Any workshops, conferences and scientific meetings should be included in the log book.
- Continuous assessment: in a weekly seminar, monthly meeting.
- Final assessment: written, oral and clinical exams at the end of the first and second part.



Aim	Intended learning outcomes (ILOS)																													
	knowledge									intellectual								practical					communication							
	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	D7	D8
1			*	*	*	*	*	*		*	*	*	*		*	*	*						*							
2											*			*				*												
3	*	*	*		*				*																					
4					*																*									
5																											*	*		
6																			*		*	*	*	*	*			*	*	

١- المعرفة والفهم:

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في جراحة العظام)
1-General surgical pathology 2-Surgical anatomy 3-Orthopaedic surgery 4-Traumatology 5- Elective rehabilitation programs & orthotics 6-Principles of microvascular surgery 7-Log book	A1,A9	A1- Discuss the macroscopic and microscopic anatomy of muskloskeletal system.  A9- Recognize bone metabolism, Ca, magnesium, phosphate metabolism and trace elements.	1) Theories, concepts and specialized knowledge of the learning area and also sciences appropriate to the professional practice.
1-Orthopaedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book 6- Microbiology	A5.A7	A5- Select the appropriate diagnostic tools and therapeutic lines for the most important muskloskeletal system dysfunction including applicable recent modalities.  A7- List the appropriate lines of treatment modalities for selected common muskloskeletal system injuries.	2) Mutual influence between professional practice and its impacts on the environment.
1-Orthopaedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	A7	A7- List the appropriate lines of treatment modalities for selected common muskloskeletal system injuries.	3) Scientific developments in the field of specialization
1-Orthopaedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book 6- pharmacology	A8	A8- Recognize the common descriptive pharmacological terms and how to correctly use the drug pre and post-operative, clinical instruction and follow-up of side effects and toxicity of different drugs.	4) Moral and legal ethics of the professional practice in the area of specialization.
1-Orthopaedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	A4	A4- Identify the general signs and symptoms of fractures and joints injuries.	5) The concepts and principles of quality of the professional practice in the area of specialization.

6- General surgery Microbiology	A5	A5- Select the appropriate diagnostic tools and therapeutic lines for the most important musculoskeletal system dysfunction including applicable recent modalities.	6) The basics and ethics of scientific research.
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ب - القدرات الذهنية :

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في جراحه العظام )
1-Orthopaedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	B7	B7- Distinguish and outline management of patients with acute and chronic Orthopedic Surgery conditions requiring short or long-term follow-up, rehabilitation and pain relief.	1) Analyze and evaluate of information in the field of specialization and make full use of such information to solve problems.
1-Orthopaedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	B4	B4- Differentiate between different types and classifications of fractures.	2) Solve specific problems on the basis of limited and contradictory information.
1-Orthopaedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	B6	B6- Interpret complications of major Orthopedic dysfunctions beyond the capacities of institute and or personnel and determine when to refer to a more well equipped location.	3) Demonstrate a high level of competence in the coordination of different sources of knowledge to solve professional problems..
1-Orthopaedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	B2	B2- Present a complete medical history and physical examination.	4) Carry out a research study and / or writing a scientific methodology study on research problem.

1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	B2	B2- Present a complete medical history and physical examination.	5) Assess and analyze risks of the professional practice in the field of specialization.
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	B5 , B7	B5- Perform an examination of bone and joint in a chronological manner.  B7- Distinguish and outline management of patients with acute and chronic Orthopedic Surgery conditions requiring short or long-term follow-up, rehabilitation and pain relief.	6) Plan to improve performance in the field of specialization
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book 6- Microbiology	B8	B8- Monitor the effectiveness of therapy by identifying clinical and investigative parameters that can be used in assessing the patient's response to treatment and re-evaluate management plan accordingly particularly in musculoskeletal system infections.	7) Make career decisions in different professional aspects

ج - المهارات العملية:

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في جراحه العظام )
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	C4	C4- Develop skills in examination of different joints including gait description, joint deformity, joint motion and measurements.	1) Apply modern and principle professional skills in the area of specialization.
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery	C2	C2- Evaluate musculoskeletal deformities and describe them in a proper way.	2) Write and evaluate technical reports.

5-Log book			
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	C3	C3- Assess the ability to identify appropriate management and leadership styles to motivate and influence individual and group behavior, and resolve conflict through collaborative approaches.	3) Adopt assessment methods and tools existing in the area of specialization

د- مهارات الاتصال:

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في جراحه العظام)
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	D3 , D4	D3- Communicate, consult and respect the role of other health-care providers.  D4- Effective oral and written communication using a range of media.	1) Communicate effectively in different aspects.
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book 6- General surgery	D2	D2-Conduct sincere and effective patient interviews, properly explain their condition and plan of management, obtain consents and convey bad news in a professional way.	2) Demonstrate efficient IT capabilities in such a way that serves in the development of the professional practice.
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery	D1	D1- Personal drive, initiative and effectiveness in planning and implementing projects and accomplishing objectives together with the ability to	3) Adopt self-assessment and specify his needs of personal learning.

5-Log book		manage time and work to deadlines.	
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	D6	D6-Effective use of technology for management of information, including use of spreadsheets, databases, word processing.	4) Use different resources for information and knowledge.
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	D8	D8- Maintain a professional image, and practice a responsible attitude.	5) Establish rules and indicators for assessing the performance of others.
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book	D1 ,D5	D1- Personal drive, initiative and effectiveness in planning and implementing projects and accomplishing objectives together with the ability to manage time and work to deadlines. D5- Participate constructively in teams and assess the relevance and importance of the ideas of others.	6) Collaborate effectively within multidisciplinary team and lead teams in different professional contexts.
1-Orthopedic surgery 2-Traumatology 3- Elective rehabilitation programs & orthotics 4-Principles of microvascular surgery 5-Log book 6- General surgery	D2 ,D6	D2-Conduct sincere and effective patient interviews, properly explain their condition and plan of management, obtain consents and convey bad news in a professional way. D6-Effective use of technology for management of information, including use of spreadsheets, databases, word processing.	7) Demonstrate a high level of competence in the time management.
1-Orthopedic surgery	D1	D1- Personal drive,	8) Continuous self-education.

2-Traumatology 3- Elective rehabilitation programs & orthotics 4- Principles of microvascular surgery 5- Log book		initiative and effectiveness in planning and implementing projects and accomplishing objectives together with the ability to manage time and work to deadlines.	
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**Course coordinator:**  
**Dr. Khalid Nour**  
**Head of the department:**  
**Prof dr. Hani Elmowafi**  
**Date:**

المعايير الأكاديمية القياسية  
لدرجة الماجستير في جراحه العظام  
جامعه المنصوره

قرر مجلس قسم جراحه العظام اعتماد المعايير الاتيه لدرجة الماجستير :

**A- Knowledge and Understanding**

- A1- Discuss the macroscopic and microscopic anatomy of musckluskeletal system.
- A2- Discuss the physiology of bone healing.
- A3- Describe the surgical anatomy of important regions and organs of importance to the musculoskeletal system.
- A4- Identify the general signs and symptoms of fractures and joints injuries.
- A5- Select the appropriate diagnostic tools and therapeutic lines for the most important musckluskeletal system dysfunction including applicable recent modalities.
- A6- Defines the possible early and late complications for regional musckluskeletal system injuries, diseases, infections and tumours.
- A7- List the appropriate lines of treatment modalities for selected common musckluskeletal system injuries.
- A8- Recognize the common descriptive pharmacological terms and how to correctly use the drug pre and post-operative, clinical instruction and follow-up of side effects and toxicity of different drugs.
- A9- Recognize bone metabolism, Ca, magnesium, phosphate metabolism and trace elements.

**B- Intellectual activities**

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

- B1- Appraise the importance of physical assessment to the diagnosis of musculoskeletal dysfunction.
- B2- Present a complete medical history and physical examination.
- B3- Analyse the clinical and investigational results, with the knowledge and the skill in clinical problem solving.
- B4- Differentiate between different types and classifications of fractures.
- B5- Perform an examination of bone and joint in a chronological manner.
- B6- Interpret complications of major Orthopedic dysfunctions beyond the capacities of institute and or personnel and determine when to refer to a more well equipped location.
- B7- Distinguish and outline management of patients with acute and chronic Orthopedic Surgery conditions requiring short or long-term follow-up, rehabilitation and pain relief.
- B8- Monitor the effectiveness of therapy by identifying clinical and investigative parameters that can be used in assessing the patient's response to treatment and re-evaluate management plan accordingly particularly in musculoskeletal system infections.

**C- Professional/practical skills:**

- C1- Perform routine bedside procedures.
- C2- Evaluate musculoskeletal deformities and describe them in a proper way.



C3- Assess the ability to identify appropriate management and leadership styles to motivate and influence individual and group behavior, and resolve conflict through collaborative approaches.

C4- Develop skills in examination of different joints including gait description, joint deformity, joint motion and measurements.

C5- Assess awareness and analysis of differing learning styles, requirements and processes.

#### **D- Communication & Transferable skills**

D1- Personal drive, initiative and effectiveness in planning and implementing projects and accomplishing objectives together with the ability to manage time and work to deadlines.

D2- Conduct sincere and effective patient interviews, properly explain their condition and plan of management, obtain consents and convey bad news in a professional way.

D3- Communicate, consult and respect the role of other health-care providers.

D4- Effective oral and written communication using a range of media.

D5- Participate constructively in teams and assess the relevance and importance of the ideas of others.

D6- Effective use of technology for management of information, including use of spreadsheets, databases, word processing.

D7- Numerical skills and the ability to manipulate data and appreciate statistical concepts.

D8- Maintain a professional image, and practice a responsible attitude.

رئيس القسم

إ.د/ هاني الموافي