

Program SPECIFICATION FOR Master Degree in Pain medicine

Code: 1716700

University: Alexandria

Faculty: Medical Research Institute

Program Specification

A- Basic information

1- Program title: Pain Medicine

2- Program type: single double multiple

3- Department: Department of Anaesthesia and pain management.

4- Coordinator : Dr. Wessam Alamrawy

5- External evaluator:

SALWA SHAARAWY , PROFESSOR IN ANAESTHESIA, ALEX University

6- Last date of program specification approval: 5/6/2014

B- Professional Information

1- Program aims:

Provide the students with knowledge, skills and critical awareness to make significant contribution to services provided by the department.

- 1- Provide the students with detailed anatomy of pain including central, peripheral ,autonomic nervous and musculoskeletal systems to aid in the understanding of the pain conditions and provide a concrete background for the performance of different nerve blocks ,neuroaxial blocks and joint injection
- 2- Provide the means for understanding the assessment, pathophysiology and management of acute pain and implementing acute pain service.
- 3- Recognize the setting principles in regional , peripheral and neuroaxial blocks .

4- Provide the students with basic concepts about the role of physiotherapy and psychotherapy in pain management .

5- Provide the students with knowledge on the assessment and management of cancer pain , and the new modalities in cancer pain management

6- List the neurological principles related to human health and diseases.

7- Recall clinical competencies and professional practice in pain management

8- List the different antiseptic and disinfection procedures in decreasing the incidence of infection, and improving the outcome.

9. Use systematic approaches to design and conduct scientific research

2- Intended learning outcomes (ILOS)

a- knowledge and understanding:

A1- Identify major landmarks of the central nervous system and correlate them with a known function.

A2 – Identify the steps of performing a neuroaxial analgesia and precautions of anticaagulations use with anticaogulants .

A3- Describe comprehensive management of plexopath, breakthrough pain and pain at the end of life (palliative care)

A4- Identify the general characteristics and components of the physiological pain control system.

A5- Describe bio psychosocial approach to pain, as well as psychological aspect interpretation of pain and its management.

A6- Design, conduction & explore publishing of scientific research.

b- Intellectual skills:

B1- categorize the relation between the basic anatomical knowledge and the painful conditions and pain syndromes.

B2- Analyze the complications that might occur during performing a block.

B3- Appraise a strategy to use opioid in non cancer pain

B4- Appraise a comprehensive pain management protocol in hospital.

B5- Appraise the normal functions of different components of the central nervous system and the effect of their lesions .

B6- Appraise the adverse and toxic effects of commonly used drug in pain management (opioid and non-opioid analgesics, NMDA antagonists, anti convulsants, local anesthetic , anti-depressant and neuroleptic drugs)and give an account on limitations to the use of these drugs such as contraindications and drug interactions.

B7. Write a thesis protocol using a scientific systematic approach to a research problem.

c- professional and practical skills:

c1 -Use the anatomical location of interventional pain management procedures based on evidence-based medicine.

c2- Use the technique of neuro-axial block

c3- Demonstrate appropriate plans in the management of acute pain and complications of blocks

C4- Illustrate the comprehensive pain programmes and practice the management of neuropathic pain

C5- Use the different pharmacological parameters in the treatment of pain, taking in consideration the most appropriate drug to be used in different pain syndromes.

d- General and transferable skills:

d1-Make scientific presentations

d2-Communicate effectively through group discussion

d3-Work in group.

d4-Use multimedia effectively and internet resources.

3- Academic standards

3a External references for standards (Benchmarks)

Generic Academic Reference Standards of the National Authority for Quality Assurance and Accreditation of Education (NAQAAE)

Adopted at MRI council 12/2/2014 and re-adopted at 15/1/2023

Last date of ARS approval by institute council 15/1/2023

3b Comparison of provision to selected external references

Comparison between Generic Academic Standards of NAQAAE and ARS of master of pain medicine

Generic Academic Standards of NAQAAE	ARS of master of pain medicine
A1-Basic facts , theories, of the specialty and related subjects/ fields	a1- List the steps of performing a neuroaxial analgesia and precautions of anticaogulations use with anticaogulants
A2- Mutual relation between professional practice and effects on environment	a2- Define appropriate cleaning, disinfection, and sterilization processes of medical devices and equipment to prevent transmission of infection.
A3- Main scientific advances in the field of practice	a3-Describe the drugs, novel techniques and devices including PCA,continuous catheter techniques both stimulating and non stimulation catheters
A4-Fundamentals of ethical & legal practice	a4- Recognize the fundamentals of ethical & legal practice and know the quality standards of the practice
A5 -Quality standards of the practice	a5- Describe the different approaches of peripheral blocks including the upper and lower limb blocks ,paravertebral , ileoinguinal , ileohypogastric ,TAP and rectus sheath blocks and reported complications.
A6- Basics and ethics of scientific research	a4- Recognize the fundamentals of ethical & legal practice and know the quality standards of the practice
B1 -Interpret, analyze & evaluate the information to solve problems	b1-Solve the complications of the nerve blocks in view of the relations to the adjacent structure

B2- Solve some problems that do not conform to classic data (incomplete data)	b2- Distinguish problems related to inadequate pain management
B3- Integrate different information to solve professional problems	b3. Analyze rational therapeutic strategies for both acute and chronic clinical pain pathological conditions and take into account the various variables that influence these strategies and choose the proper drugs for the proper clinical situation in the proper dosage
B4- Conduct a scientific research &/Or write scientific systematic approach to a research problem (hypothesis)	Write a thesis protocol using a scientific systematic approach to a research problem.
B5- Evaluate risks imposed during professional practice.	b1-Solve the complications of the nerve blocks in view of the relations to the adjacent structure
B6- Plan for professional improvement	b5-Take history ,examine patients using different pain scales for assessing pain and monitoring treatment.
B7- Take professional decisions in wide range of professional situations	b6- Use neuroaxial blocks on simulators and perform supervised trial on patients.
C1- Competent in all basic and some of the advanced professional skills (to be determined according to the specialty board/ department)	c1. Use nerve stimulator and ultrasound in conduction of peripheral nerve blocks.
C2- Write and appraise reports	c2- Develop skills in self appraisal, learning and seek continuous learning
C3- Evaluate methods and tools used in specialty	c3- Develop skills in communication using all methods. Manage time effectively.
D1- Communicate effectively using all methods	d1- Develop skills in self appraisal, learning and seek continuous learning

D2- Use information technology to improve his/her professional practice	d2- Use information technology to improve professional practice and use different sources of information to obtain data.
D3- Practice self appraisal and determines his learning needs	d3- Develop skills in communication using all methods. Manage time effectively
D4- Share in determination of standards for evaluation of others (e.g.: subordinates/ trainees etc.)	d4-- Develop team work skills ,work as team leader as well as a member in larger teams.
D5- Use different sources of information to obtain data	d1 -Develop skills in self appraisal, learning and seek continuous learning
D6- Work in teams	d4-- Develop team work skills ,work as team leader as well as a member in larger teams.
D7- Manage time effectively	d3- Develop skills in communication using all methods. Manage time effectively
D8- Work as team leader in situations comparable to his work level	d4-- Develop team work skills ,work as team leader as well as a .member in larger teams
D9- Learn independently and seek continuous learning	d1- Develop skills in self appraisal, learning and seek continuous learning

4- Curriculum structure and contents

4.a program duration: 1.5 years

Program duration was determined according to the average time needed for student graduation up to 10 years

4.b program structure : 3 semesters

4.b.i- No. of hours per week in each year/semester:

Semester	Number of hours
6Cr	basic studies anatomy, physiology and pharmacology)
13Cr	acute pain(a),acute pain (b), internal medicine and elective courses),
11 Cr	chronic pain (a),chronic pain (b) and radio diagnostic approaches).

4.b.ii- No. of credit hours Lectures Practical Thesis Total

Compulsory Elective Optional

4.b.iii- No. of credit hours of specialized courses No. %

4.b.iv- No. of credit hours of other courses No. %

4.b.v- Program levels (in credit-hours system)

Student is required to pass at least 12 credit hours with CGPA not less than C+ before submitting a thesis proposal.

5- Program Courses

5.1- Compulsory

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	Clinical
1716701	Anatomy	2	1	2
1716702(a)	Acute pain I	3	1	4
1716702(b)	Acute pain II	4	1	6
1716703(a)	Chronic pain I	4	2	4
1716703(b)	Chronic pain II	4	2	4
1716704	Pharmacology of pain	2	2	
1716706	Physiology of pain	2	2	
1718720	Radiodiagnosis	3	2	2
1715605	Internal medicine	2	1	2
	TOTAL	26	14	24

5.2- Elective I

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	practical
1708720	Immunology	2	1	2
1716722	Infection Control	2	2	
1721720	Medical statistics	2	1	2
1721721	Computer	2	1	2
1713720	Human Genetics	2	1	2

5.3- Elective II

NA

5.4- Optional

NA

6- Program admission requirements

Graduate students with a M.B.Ch.B. of Medicine.

7- Teaching and learning methods

Lecture

Practical/Clinical

Discussion Groups

Problem Solving

Case Study

Training Workshops

Scientific meetings

Powerpoint presentation

7- Regulations for progression and program completion

For the progression and completion of the program to obtain the degree of master in pain medicine, the student must

1-complete 30 credit hours with CGPA of at least C+ through courses.

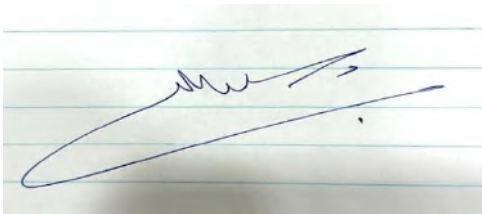
2- complete 8 credit hours with through thesis

3-Submit a thesis validity report by an examination committee approved by the department council and their members include at least two external examiners.

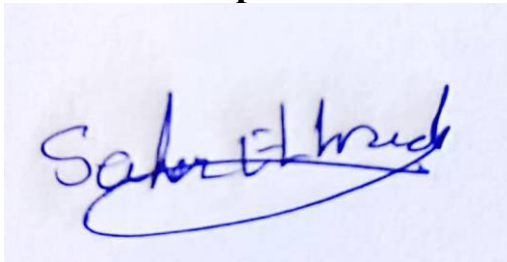
8- Evaluation of program intended learning outcomes

Evaluator	tool	Sample
1- Senior students	Questionnaire	At least 50%
2- Alumni	Questionnaire	Representative sample
3- Stakeholders (Employers)	meeting	Representative sample
4- External Evaluator(S) External Examiner (s)	Report	Prof/ dr/ salwa shaarawy
5- Other	NA	

Program coordinator : dr / wessam alamrawy



Head of the department :Prof/Dr /Sahar Elkaradawy



Date ...6/8/2023

Master Program courses vs ILOs matrix

Course Title	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	C5	D1	D2	D3	D4	
Anatomy 1716701								•				•											•
Acute pain I 1716702		•											•										
Acute pain II 1716703			•											•									•
Chronic pain I 1716704				•						•					•								
Chronic pain II 1716705					•											•							
Pharmacology of pain 1716706		•						•				•		•	•					•			
Physiology of pain 1716707				•						•				•		•							
Radiodiagnosis 1716720								•												•			
Internal medicine for pain management 1716726						•	•										•	•					•
Thesis						•							•										

Master Program Aims vs program ILO's matrix

AIMS	ILOS																					
	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	C5	D1	D2	D3	D4
1	X						X							X								
2		X						X								X					X	X
3			X						X						X				X	X		
4				X						X							X					
5					X						X							X				
6						X						X										
7													X									
8																			X	X	X	
9						X							X									

Teaching and Learning Methods Vs Courses Matrix

	Acute pain(A) 1216702(A)	Acute pain(B) 1216702(B)	Chronic pain(A) 1216703(A)	Chronic pain(B) 1216703(B)	Anatomy 1216701	Pharmacology 1216704	Infection control 1216720
Lecture	X	X	X	X	X	X	X
Practical/Clinical	X	X	X	X	X		
Brainstorming							
Discussion Groups	X	X	X	X	X		
Problem Solving	X	X	X	X			
Case Study	X	X	X	X			
Training Workshops	X	X	X	X			
Self-Directed Learning							
e-learning							
Project							
Scientific meetings	X	X	X	X			X
Powerpoint presentation	X	X	X	X	X	X	X

ARS Vs ILOS matrix

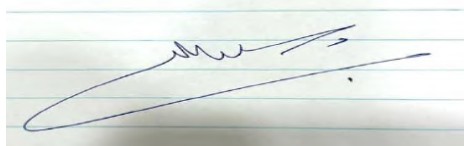
ARS of MASTE R of pain medici ne	ILOs																					
	A 1	A 2	A 3	A 4	A 5	A 6	B 1	B 2	B 3	B 4	B 5	B 6	B 7	C 1	C 2	C 3	C 4	C 5	D 1	D 2	D 3	D 4
A1	X		X	X																		
A2		X				X																
A3			X																			
A4					X																	
A5	X					X																
B1							X			X	X	X	X									
B2								X						X								
B3							X		X		X											
B4									X			X										
B5							X			X												
B6								X						X								
C1														X			X	X				
C2																X						
C3															X			X				
D1																				X		X
D2																					X	
D3																			X			X
D4																				X	X	

Graduate Attributes of Master Program in pain management

Generic Graduate Attributes of NAQAAE	Graduate Attributes of Master of Science in pain management By the end of this program, Graduate of Master of Science in pain management, should be able to	Program aim
Apply the basics and methodologies of scientific research and using its various tools proficiently.	Identify anatomy of the central and autonomic nervous systems. Also the anatomy of the head ,neck and peripheral nervous system including upper and lower limbs plexuses	Recognize the basic anatomy of the human body
Use the analytical methods in the field of specialty	Diagnose neuropathic pain and do intervention pain techniques.	Recognize the basic cognitive and psychologic aspects of chronic pain
Apply specialized knowledge in the field of specialty and integrate it with relevant knowledge in his professional practice.	Train in acute pain service in the hospital, Candidates should attend round table discussion once a week during the course.	Recognize the basis for assessment , pathophysiology and management of acute pain
Demonstrate awareness of current problems and modern visions in the field of specialty	Learn how to perform a successful thoracic epidural, paravertebral block, different peripheral nerve blocks using nerve stimulation and ultrasound guided techniques.	Discuss the principles of regional and neuroaxial blocks
Identify professional problems in the field of specialty and propose solutions to them.	Describe the pharmacological and non pharmacological therapy for cancer pain.	Assess and manage cancer pain in multidisciplinary method
Master an appropriate of professional skills in the field of including use of technology.	Describe pharmacological treatment of pain	Identify mechanism of action of analgesics, pharmacokinetics and pharmacodynamics of drugs
Communicate efficiently and lead work teams.	Recall the recent advances in drugs.	Share in scientific meetings
Take Decision in different professional contexts.	Train in acute pain service in the hospital, Candidates should attend round table discussion once a week during the course	Recognize the basis for assessment , pathophysiology and management of acute pain and acute pain service

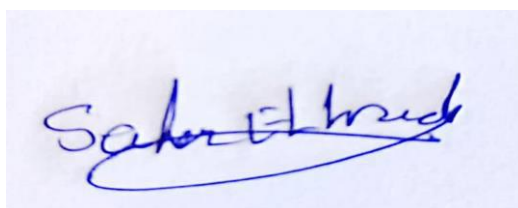
Employ the available resources to achieve the highest benefit and maintain them.	Assess and manage cancer pain	Provide the students with knowledge on the assessment and management of cancer pain
Show awareness of his/her role in community development and environmental preservation in light of global and regional changes.	Help in pain relief in different branches of medicine	Recall clinical competencies and professional practice in pain management
Act in a manner that reflects a commitment to integrity, credibility, professionalism, and accountability.	Identify recent advances in pain management protocol	Assess and manage cancer pain
Realize the need for self-development and engaging in continuous learning.	Develop skills in self appraisal, learning and seek continuous learning	conduct scientific research

Program Coordinator /Dr/ Wessam Alamrawy



Signature

Head of the Department prof/Dr/ Sahar ELkaradawy



Signature

Date of Approval 6/8/2023