Program SPECIFICATION FOR Doctor Degree in Pain medicine

Code: 1716800

University: Alexandria **Faculty:** Medical Research Institute

Program Specification

A- Basic information

1- Program title: Pain Medicine

2- Program type: single [√] **double** [ ] **multiple** [ ]

3- Department(s) : Department of Anaesthesia and pain management.

4- Coordinator : Dr. Engy yousry

5- External evaluator(s):

-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 them significantly contributing to research and services provided by the department.

1. To Provide the students with knowledge, skills and critical awareness to make significant contribution to services provided by the department.
2. To clarify Transmission and processing of pain, ion channel modulators and facilitation/inhibition of nociception.
3. To recall Modulation of pain perception, potentiation and transition from acute to chronic pain, placebo analgesia, chronic pain at cellular level and neuroendocrinal mechanism in pain.
4. To explore Pharmacokinetic principles, Pharmacodynamics, and Issues relating to pharmacotherapeutics, local anaesthetics ,NSAIDS, opioids, anti depressants, anti convulsants, neuroleptics, corticosteroids and herbal medicine .
5. To list Science of anesthesia for the Non-Anesthesiologist, assessment of acute pain in adult, assessment of acute pain in children and neonates, acute pain team, Quality assurance in acute pain, Mishaps in acute pain, Multimodal approach for pain management, trauma, acute abdomen. .
6. To list Back and neck pain, complex regional pain syndrome (CRPS), fibromyalgia, headache, neuropathic pain, orofacial pain and pelvic pain
7. To recall The control of the symptoms and psychosocial care of patients with chronic disease and cancer patients in addition , ,ethics in dealing with end stage patients.
8. To list The communication skills and advanced practice in dealing with intractable pain
9. To list The program will spot the importance of the different antiseptic and disinfection procedures in decreasing the incidence of infection, and improving the outcome.
10. To recall The health related acquired infection, and possible methods to decrease the incidence of infection, and improve the outcome.
11. To list New guidelines to control infection and to use proper antibiotic use to decrease the overwhelming problem of antibiotic resistance.
12. Use systematic approaches to design and conduct scientific research
13. Conduct research studies that add to the existing speciality knowledge

2- Intended learning outcomes (ILOS)

a- knowledge and understanding:

a1- Identify the mechanism of developing, transmission ,modulation and perception of pain.

a2- Identify the effect of the opioid, non-opioid analgesics, the role sodium and calcium channel antagonists and local anesthetic drugs in prevention of pain

a3- Provide service by acute pain team., different type of pain and Multimodal approach for its management

a4- Identify different pathophysiology for muscloskeletal, low back pain neuropathic pain, headache and cancer pain for better management

a5- Identify pain management early in chronic disease in addition to , in end of life terminal patients and interventional techniques for intractable pain

a6- Describe neurological principles emotion and behaviour changes to pain

a7- Describe the health related acquired infection and infection control policy in operative theater., icu and wards

a8-Describe the advanced radiodiagnostic parameters in pain medicine.

A9- Design, conduction & explore publishing of scientific research.

b- Intellectual skills:

b1-Categorize the modulation of pain and prevention of developing chronic pain

b2- Appraise the recent advances in the mechanism of action of analgesics,pharmacological principles and their application

b3-Appraise a safe and effective plan for the treatment of acute pain using multiple analgesics and coanalgesics

b4-.Analyze problems related to cancer pain , neuropathic and muscloskeletal pain

b5-. Analyze the problems with symptoms in patients with chronic disease and problem with communications with angry, dying patients and their families.

b6-Appraise the psychology of addiction

b7-Appraise the hand hygiene and professional responsibility for infection control

b8-Appraise advanced radiological guidance in pain intervention

b9- Prepare scientific articles to be published in indexed journals

c- professional and practical skills:

c1-Demonstrate the different types of pain and their modulation at acute stage

c2Illustrate the proper multimodal drug therapy in acute pain

c3-Use the intervention pain techniques for cancer patients and non cancer pain

c4-Use drugs for palliative pain therapy and understanding their interaction with other medications taken by the patient for other systemic disease, and dealing with the complications

c5 - Interpret the radiodiagnostic images for diagnosis of pain

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 if 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

Generic Academic Standards of NAQAAE	ARS of doctor of pain medicine
A1-Basic facts , theories, of the specialty and related subjects/ fields	a1- Identify the mechanism of developing, transmission ,modulation and perception of pain. a2- Identify the effect of the opioid, non-opioid analgesics, the role sodium and calcium channel antagonists and local anesthetic drugs in prevention of pain a٣- Identify different pathophysiology for muscloskeletal, low back pain neuropathic pain, headache and cancer pain for better management
A2- Mutual relation between professional	a٤- Define appropriate cleaning, disinfection, and sterilization processes of medical devices and equipment to prevent transmission of infection.

practice and effects on environment	
A3- Recent advances in the field of practice	a5- Provide novel techniques and Multimodal approach for pain management
A4-Details of ethical & legal practice	a6- Recognize the fundamentals of ethical & legal practice and know the quality standards of the practice
A5 -Quality standards of the practice	a٤- Define appropriate cleaning, disinfection, and sterilization processes of medical devices and equipment to prevent transmission of infection.
A6- Design, conduction & publishing of scientific research	a7-Design, conduction & explore publishing of scientific research.
A7- Ethical considerations in different types of scientific research	a6- Recognize the fundamentals of ethical & legal practice and know the quality standards of the practice
B1- Analyze, deduce, extrapolate & evaluation of information	b1- Categorize the modulation of pain and prevention of developing chronic pain b2- Appraise the mechanism of action of analgesics, pharmacological principles and their application
B2- Solve the majority of problems in the specialty according to the available data (complete or incomplete)	b 3-analyze problems related to cancer pain , neuropathic and muscloskeletal pain
B3- Conduct research studies that add to the existing specialty knowledge	b4- Conduct research studies that add to the existing specialty knowledge
B4- Publish scientific articles/papers (in indexed journals)	b5- Prepare scientific articles/papers to be published in indexed journals.
B5- Plan and implement (or supervise implementation of) enhancement &	b6- Appraise the safe and effective plan for the treatment of acute pain using multiple analgesics and coanalgesics

Improvement approaches to practice	
B6- Take decisions in various professional situations (including dilemmas & controversial issues)	b7-. Analyze the problems inpatients with chronic disease and in communications with angry suffering related to the chonic disease in addition to dying patients and their family
B7- Add to the specialty field through creativity & innovation	b8- Use novel techniques for pain management
B8- Manage discussions on basis of evidence and proofs	b4- Conduct research studies that add to the existing specialty knowledge
C1- Competent in all basic and all required advanced professional skills (to be determined according to the specialty board/ department)	C1- Demonstrate palliative pain therapy and understanding their interaction with other medications taken by the patient for other systemic disease, and dealing with the complications C2- Illustrate different types of pain and their modulation at acute stage
C2- Write and appraise reports	C3- Conduct reports about management of cancer and non cancer pain
C3- Evaluate *and improve* methods and tools used in specialty	C4- Use the intervention pain techniques for cancer patients and non cancer pain
C4- Use technology to advance practice	C5- Interpret radiodiagnostic images for diagnosis of pain
C5- Plan professional development courses to improve practice and enhance performance of juniors	C6- Use drugs for palliative pain therapy and understanding their interaction with other medications taken by the patient for other systemic disease, and dealing with the complications
D1- Communicate effectively using all methods	d1- Develop skills in communication using all multimedia effectively and internet resources.

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- Teach and evaluate others	**d3-** Develop team work skills ,work as team leader as well as a member in larger teams.
D4- Perform self appraisal & seek continuous learning	d4- Develop skills in self appraisal, learning and seek continuous learning
D5- Use different sources of information to obtain data	d2- Use information technology to improve professional practice and use different sources of information to obtain data.
D6- Work in teams as well as a member in larger teams	d3-- Develop team work skills ,work as team leader as well as a member in larger teams.
D7- Manage scientific meetings and appropriately utilize time	d5- Make scientific presentations

4- curriculum structure and contents

4. a- programme duration (years): 2 years

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

4.bprogramme structure :4 semesters

Semester	Number of hours
6 Cr	(basic studies physiology , pharmacology and anatomy),
8Cr	(acute pain, and elective courses),
5Cr	(chronic pain and radio diagnostic approaches)
5Cr	(radio diagnostic approaches and palliative care)

4.b.ii- No. of credit hours	**Lectures**	**10**	**Practical**	**14**	**Thesis**	**24**	**Total**	**48**
	Compulsory	**20**	**Elective**	**4**	**Optional**	**0**		

4.b.iii- No. of credit hours of specialized courses **No.** **20** **%** **83.3%**

4.b.iv- No. of credit hours of other courses **No.** **4** **%** **16.7%**

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 (20 CHs)

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	clinical
1716802	Physiology of pain	2	2	
1716803	Pharmacology of pain	2	2	
1718822	Radiodiagnosis	1	1	
1718823	Radiodiagnosis	2	1	2
1716807	Acute pain	4	1	4
1716808	Chronic pain	4	1	4
1716809	Palliative care	3	1	2
1716810	Anatomy	2	1	2
	TOTAL	20	10	14

5.2- Elective I (4 CHs)

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	Clinical
1721820	Medical Statistics	**3**	**2**	**2**
1708820	Immunologoy	**3**	**2**	**2**
1716822	Infection Control	**1**	**1**	
1716811	Psychological and Neurological Principles of pain	**1**	**1**	

5.3- Elective II

NA

5.4- Optional

NA

6- Program admission requirements

Graduate students with Master degree in pain medicine, anaesthesia or any equivalent degrees

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 Doctor in pain medicine, the student must :

1-complete 24 credit hours with CGPA of at least C+ through courses.

2- complete 24 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.

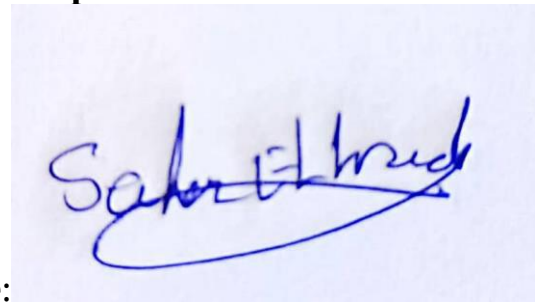
8- Evaluation of program intended learning outcomes

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 / Engy yousry

Signature: 

Head of the department : Prof/Dr/Sahar Elkaradawy

Signature: 

Date: 6/8/2023

Program courses vs ILOs matrix

Course Title	**A1**	**A2**	**A3**	**A4**	**5A**	**A6**	**A7**	**A8**	**A9**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**	**D1**	**D2**	**D3**	**D4**
Physiology 1716802										•														•	•	•	•
Pharmacology 1716803		•									•													•	•	•	•
Acute Pain 1716807			•									•						•	•				•	•	•	•	•
Chronic pain 1716808				•									•							•			•	•	•	•	•
Palliative care 1716809					•									•							•		•	•	•	•	•
Radio diagnosis 1716822								•									•							•	•	•	•
Radio diagnosis 1716823								•									•					•		•	•	•	•
Thesis						•						•	•														

Program Aims vs program ILO's matrix

AIMS		ILOS																								
	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
1	X																						X	X		
2										X								X							X	X
3		X									X												X	X	X	X
4			X									X							X				X	X	X	X
5				X									X							X			X	X	X	X
6					X									X							X		X	X	X	X
7																					X					
8						X									X								X	X	X	X
9							X									X										
10								X															X	X	X	X
11										X							X	X								
12						X					X															
13						X						X														

Teaching and Learning Methods Vs Courses Matrix

	Acute pain 1216807	Chronic pain 1216808	Palliative 1216809	Pharmacology 1216803	Physiology 1216802	Anatomy 1216810
Lecture	X	X	X	X	X	X
Practical/Clinical	X	X	X			
Brainstorming						
Discussion Groups	X	X	X			
Problem Solving	X	X				
Case Study	X	X				
Training Workshops	X	X				
Self-Directed Learning						
e-learning						
Project						
Scientific meetings	X	X				X
Powerpoint presentation	X	X	X	X	X	X
Journal clubs						X

ARS Vs ILOS matrix

ARS of doctor of pain medicine			ILOS																								
	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	B4	B5	B6	B7	B8	B9	C1	C2	C3	C4	C5	D1	D2	D3	D4
A1	X	X	X		X	X	X																				
A2							X																				
A3			X		X																						
A4							X																				
A5				X					X																		
A6							X																				
A7				X																							
B1										X		X		X		X	X										
B2													X	X													
B3													X					X									
B4											X				X												
B5															X												
B6												X				X											
B7										X							X	X									

B8										X			X		X												
C1																			X		X		X				
C2																					X						
C3																						X					
C4																				X		X					
C5																			X				X				
C6																				X		X					
D1																									X		X
D2																										X	
D3																								X		X	
D4																								X		X	
D5																									X		X

Graduate Attributes of Ph.D. Program in pain management

Generic Graduate Attributes of NAQAAE	Graduate Attributes of Doctor of Philosophy in pain management **By the end of this program, Graduate of Doctor of Philosophy in pain management, *should be able to***	Program aim
Master the basics and methodologies of scientific research.	Identify the mechanism of developing, transmission ,modulation and perception of pain	Provide the students with knowledge and skills
Work continuously to add to his/her knowledge in the field of specialty.	Use information technology to improve professional practice and use different sources of information to obtain data.	Recall Modulation of pain perception
Apply the analytical and critical approach to knowledge in the field of specialty and related fields.	Develop skills in communication using all multimedia effectively and internet resources.	Share in scientific meetings
Integrate knowledge in the field of specialty with related knowledge, deduce and develop relationships between them.	Work in group and multidisciplinary team	Learn about multimodal approach for pain management
Demonstrate a deep awareness of current problems and modern theories in the field of specialty.	Improve professional practice and use different sources of information to update data.	Update knowledge about pain management

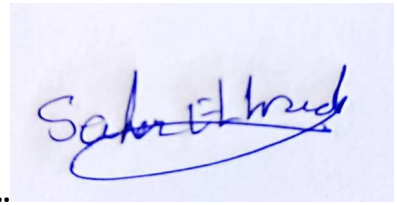
Identify professional problems and find innovative solutions to solve them.	Identify the recent advances in pain management	list The communication skills and advanced practice in dealing with intractable pain
Master a wide range of professional skills in the field of specialty.	Assess and manage cancer pain in multidisciplinary method	Develop team work, work as team leader as well as a member in larger teams
Develop new methods, tools and methods for professional practice.	Identify the communication skills and advanced practice in dealing with intractable pain	Help in pain management of patients
Use appropriate technological means to serve his professional practice.	Share in scientific presentations	Develop skills in communication using all multimedia effectively and internet resources.
Communicate efficiently and lead work teams in various professional scenarios.	Work in multidisciplinary team	Conduct scientific research
Take Decision in light of available data.	Train and get experience in pain management protocol	Identify the recent advances in pain management
Employ and develop available resources efficiently and work to find new resources.	Use multimedia effectively and internet resources.	list The communication skills and advanced practice in dealing with intractable pain
Show awareness of his/her role in community development and environmental preservation	Help in pain management of patients	Recognize recent advances in pain management protocol
Act in a manner that reflects a commitment to integrity, credibility, and professionality.	Develop team work, work as team leader as	list The communication skills and advanced practice in dealing with

	well as a member in larger teams.	intractable pain
Commit to continuous self-development and transfer his/her knowledge and experiences to others.	Develop skills in self appraisal, learning and seek continuous learning	Conduct scientific research

Program Coordinator Dr/ Engi yousry

Signature …… 

Head of the Department prof/ Dr/ Sahar Elkaradawy

Signature …… 

Date of Approval 6/8/2023