PROGRAMME SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme Title & Code	- Postgraduate master degree of hospital infection control - **Code:** ICMIC 507
(2) Final award/degree	Master degree of infection control
(3) Department (s)	Medical Microbiology and Immunology
(4) Coordinator	Dr. **Samah Sabry** Dr. **Amani EL-matbouly**
(5) External evaluator (s)	
(6) Date of approval by the Department`s council	**2-12-2014**
(7) Date of last approval of programme specification by Faculty council	9–8–2016

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows:

1. Demonstrate understanding of the concepts and components of the infectious disease process and the role of vaccination and other control measures in preventing disease spread
2. define and outline the basic principles and applications of statistical analysis methods
3. To teach the candidate the basics of design and interpretation of surveillance systems and how to investigate and manage outbreaks in nosocomial infection
4. To ensure that candidates are prepared to lead infection prevention and control program.
5. Create behavioral changes
6. Identify Evidence based IC, define staffing and infection control consultant and how to suggest cost-efficient improvements within hospitals
7. Describe communication skills, leadership and team working
8. Describe Disaster management
9. Identify Medico-legal aspects of HAI
10. To give the candidate basic knowledge of the types of laboratory, biological risks, safety levels and infection control in microbiological lab.
11. To provide the candidate the basics of quality assessment and quality management in infection control and how to lead internal and external auditing.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

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

A- Knowledge and Understanding

A1- Discuss basic concepts and definitions of infection control.

A2- Recognize risk factors for infection and various site-specific infections.

A3- Recognize principles of microbial pathogenicity, the difference between colonization,contamination, and infection.

A4- Describe laboratory diagnostics.

A5- recognize essential definitions & basic concepts of research question,

A 6- discusses the principles of statistics & its role in interpretation of data.

A 7- Discuss how to design of surveillance system, collect, compile and interpret surveillance data.

A 8 –identify management and investigation outbreaks in nosocomial infection.

A 9 Recognize meausures of infection prevention

A 10 - describe the chain of infection.

A 11 recognize the medico-legal aspects of HAI

A 12- recognize behavioral changes

A 13- Discuss evidence based IC and describe disaster management.

A 14 Recognize factors increase antibiotic resistance in hospital

A 15 Teach antibiotics uses in prophylaxis

A 16 Outline the types, structural components, safety levels of laboratory.

A 17 Recognize infection control policy in lab

A 18 Identify quality assurance, quality auditing, how to and monitor the quality, discuss the idea of quality improvement and quality planning and how to prepare for quality accreditation and ISO.

A 19 recognize hospital assessment

B- Intellectual skills

B1- Assess infection risk and develop infection prevention and control strategies and evaluate infection control management.

B2- Assess risk of occupational exposure to infectious diseases and the educational needs of health care workers regarding IC and design evidence based teaching course for them.

B3- Use a systematic approach for statistical analysis and interpretation.

B 4- Use computational tools & packages

B 5- Analyze & interpret laboratory data relevant to the cases of medical microbiology & immunology.

B 6- Interpret the results of infection outbreak source tracing and assess the advantages of each typing method.

B7- design surveillance system and Assess collect, analyze and interpret surveillance data .

B 8- Identify weaknesses in infection control program and target a specific infection control issue needing improvement.

B 9- strengthen leadership.

B 10- Evaluate control measures for infection in microbiology laboratory.

B 11- Develop, under supervision, core reporting skills

B 12 Interpret the results of application of safety measures.

B 13 Assess and monitor quality assurance and quality auditing

B 14 Analyze and report the results of hospital infection control assessment.

C- Professional/practical skills

C1-Investigate and follow-up health care workers exposed to communicable diseases.

C2- Develop infection control program for health care workers and collaborate on immunization programs.

C3- Apply clinical and microbiological parameters for identification of hospital acquired infections.

C4- Measure compliance with regulations and standards.

C5-Implement evidence based IC guidelines for specific patient care settings, risky procedures, and common hospital acquired infections.

C6- Conduct a scientific research.

C7- Develop skills in statistical analysis of data

C8-Perform surveillance studies using risk stratification

C 9-Perform investigations and proper management in outbreaks in nosocomial infections and typing of micro-organisms.

C 10 Formulate a disaster plan

C 11 Apply behavior change communication program regarding hand washing, HIV and TB

C 12 Practice infection monitoring and reporting and apply policies and procedures to prevent and control infections

C 13 Formulate Antibiotic policy.

C 14 implement infection control measures in microbiology laboratory and perform quality control measures.

C15- Design a check list, and questionnaire.

C16- Build a team and manage a team meeting.

C17- Improve the quality practice in the hospitals.

C 18 Perform comprehensive infection control assessment and individual clinical unit or service area assessment

D- Communication & Transferable skills

D1- Effectively utilize the library to access and search for information

D2- Develop effective teaching skills by teaching junior colleagues and students as well as through conference presentations

D3- Conduct education to physician and other hospital staff about infectious diseases in seminars, lectures and ward rounds.

D4- Communicate effectively with learners

D5- Participate in research activities and follow the ethical regulations of sample collection and delivery of results, showing respect to the patient's privacy.

D6- Communicate results of screening & its implication in prevention & control measures

D 7- Search midline data base for other surveillance systems

D 8 Engage hospital administration in the process of hospital assessment

D 9- Develop effective skills in engaging hospital administration for infection prevention

D 10 Manage any disaster on scientific basis

D 11 Show leadership and safe supervision

D 12 Collaborate with appropriate persons to establish the existence of an outbreak.

D 13 Use different media for teaching that are appropriate to the teaching setting

D 14 Communicate with other members of the multidisciplinary team

D 15 Participate in multidisciplinary quality/performance improvement strategies.

(3) Academic standards:

- A table of comparison between ARS, NARS, and program ILOs is attached in Appendix I
- External reference points/Benchmarks are attached in Appendix II which are used as the program ARS.

(4) Curriculum structure and contents:

4.a- Duration of the programme (in years or months):… 4 semesters

4.b- programme structure:

●4.b.1: Number of credit hours (minimum): 45 hours

●4.b.2: Teaching hours/week:

First part:

Compulsory course: 6 hours lectures

3 hours field study 2 hour practical

Elective courses: 2 hour lectures

Second part:

Compulsory course: 14 hours lectures

2 hours field study 1 hours practical

Elective courses: 1 hour lectures

2 hours practical and field study

(5) Programme courses:

First part

a- Compulsory courses:

Course Title المقررات	Course Code	Lectures	Practical and Field study	Total hours / Week	Total teaching hours
Basic Microbiology, Med. Immunology & Epidemics	**ICMIC 507 MIE**	**6 hours**	**5 hours**	**11 hours**	**90 hours lectures 60 hours practical 180 hours field study**

b- Optional courses:

Course Title المقررات	Course Code	Lectures	Total teaching hours
Infection Control Statistics	**ICMIC 507 ICS**	**2 hour**	**30 hours lectures**
Surveillance of Hospital Infection	**ICMIC 507 SHI**	**2 hour**	**30 hours lectures**
Organization of Infection Control	**ICMIC 507 OIF**	**2 hour**	**30 hours lectures**

Second part

a- Compulsory courses:

Course Title المقررات	Course Code	lectures	Practical and field study	Total hours / Week	Total teaching hours
Basic principles &Implementation of Hospital Infection Control	**ICMIC 507 HIC**	**14 hours**	3 hours	17 hours	210 hours lectures 30 hours practical 120 hours field study

b- Optional courses:

Course Title المقررات	Course Code	Lectures	lab and/or field study	Total hours / Week	Total teaching hours
Laboratory Safety Quality	**ICMIC 507 LS**	**1 hour**	2 hours	3 hours	15 hours lectures 60 hours lab
Quality control and infectious disaeses	**ICMIC 507 QAIC**	**1 hour**	2 hours	3 hours	15 hours lectures 120 hours field study
Quality Assessment in Infection Control & Infectious Diseases	**ICMIC 507 QICI**	**1 hour**	2 hours	3 hours	15 hours lectures 120 hours field study

Program ILOs (knowledge)

Course Title/Code	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19
Basic Microbiology, Med. Immunology & Epidemics	■	■	■	■															
Infection Control Statistics					■	■													
Surveillance of Hospital Infection							■	■											
Organization of Infection Control									■		■	■	■						
Basic principles &Implementation of Hospital Infection Control										■				■	■				
Laboratory Safety Quality																■	■		
Quality control and infectious disease																		■	
Quality Assessment in Infection Control & Infectious Diseases																			■

Program ILOs (intellectual)

Course Title/Code	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
Basic Microbiology, Med. Immunology & Epidemics	■	■												
Infection Control Statistics			■	■	■									
Surveillance of Hospital Infection						■	■							
Organization of Infection Control								■	■					
Basic principles &Implementation of Hospital Infection Control						■				■				
Laboratory Safety Quality											■	■		
Quality Assurance in Infection Control													■	
Quality Assessment in Infection Control & Infectious Diseases														■

Program ILOs (practical/professional)

Course Title/Code	C1	C2	C3	C4	C5	C6	C7	C8	C 9	C10	C11	C12	C13	C14	C15	C16	C17	C18
Basic Microbiology, Med. Immunology & Epidemics	■	■	■	■	■													
Infection Control Statistics																		
Surveillance of Hospital Infection																		
Organization of Infection Control																		
Basic principles &Implementation of Hospital Infection Control													■					
Laboratory Safety Quality														■				
Quality Assurance in Infection Control															■	■	■	
Quality Assessment in Infection Control & Infectious Diseases																		■

Program ILOs (communication and transferrable)

Course Title/Code	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15
Basic Microbiology, Med. Immunology & Epidemics	■	■	■	■	■										
Infection Control Statistics						■									
Surveillance of Hospital Infection							■								
Organization of Infection Control								■	■	■	■				
Basic principles &Implementation of Hospital Infection Control	■	■			■				■			■	■	■	
Laboratory Safety Quality	■	■													
Quality Assurance in Infection Control	■	■											■	■	■
Quality Assessment in Infection Control & Infectious Diseases	■	■					■								■

Comparison between program aims and knowledge ILOs

Program aims	A1	A2	A3	A4	A5	A6	**A7**	**A8**	**A9**	A10	**A11**	A12	A13	A14	**A15**	**A16**	**A17**	**A18**	**A19**
Objective 1	■	■	■	■						■									
Objective 2					■	■													
Objective 3							■	■											
Objective 4									■		■	■	■	■	■				
Objective 5												■							
Objective 6													■	■	■				
Objective 7							■	■			■								
Objective 8													■						
Objective 9													■						
Objective 10																■	■		
Objective 11																		■	■

Comparison between program aims and intellectual ILOs

Program aims	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14
Objective 1	■	■												
Objective 2			■	■	■	■								
Objective 3							■							
Objective 4								■	■					
Objective 5								■	■					
Objective 6								■						
Objective 7								■						
Objective 8								■					■	
Objective 9								■						
Objective 10										■	■	■		
Objective 11													■	■

Comparison between program aims and practical ILOs

Program aims	C1	C2	C3	C4	C5	C6	C7	**C8**	**C9**	**C10**	**C11**	**C12**	**C13**	C14	C15	C16	**C17**	**C18**
Objective 1	■	■	■	■	■													
Objective 2						■	■											
Objective 3								■	■									
Objective 4		■		■	■							■	■					
Objective 5											■	■						
Objective 6												■						
Objective 7					■							■			■	■		
Objective 8										■								
Objective 9																		
Objective 10														■				
Objective 11																	■	■

(6) Programme admission requirements:

- **General requirements:**

Accoding to the faculty postgraduate by laws Appendix IV .

- **Specific requirements (if applicable):**

(7) Regulations for progression and programme completion:

1- Fulfillment of at least 75 % of logbook activities.

Attendance of lectures, clinical training, laboratory work and field training according to the master programme specification.

Log book fulfillment:

Final exam:

(8) Evaluation of Programme's intended learning outcomes (ILOs):

Evaluator	Tools*	Sample size
Internal evaluator (s)	Focus group discussion Meetings	Dr Enas Hammad
External Evaluator (s)	Reviewing according to External evaluator Checklist report.	Dr Mohammad Saleh
Senior student (s)		
-		
Stakeholder (s)		
Others		

* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinator: Name: Dr. **Samah Sabry** Dr. **Amani EL-matbouly**	Signature & date:
Head of department : Name: **prof.Dr.Mohammed Abo Alaa**	Signature & date:

Appendix I

Table of comparison between ARS, NARS, and program ILOs

مقارنة ما يقدمه البرنامج من نتائج تعليمية مستهدفة مع المعايير المرجعية لبرنامج الماجستير في الميكروبيولوجيا والمناعة الطبية.

أ ــ المعرفة والفهم:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(our own ARS) المعايير الأكاديمية الخاصة بنا	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في الميكروبيولوجيا والمناعةالطبية)
1. Basic Microbiology, Med. Immunology & Epidemics	A1- A4	By the end of the program the graduate should be able to: 1.Discuss basic concepts and definitions of infection control. 2.Recognize risk factors for infection and various site-specific infections. 3.Recognize principles of microbial pathogenicity, the difference between colonization, contamination, and infection. 4.Describe laboratory diagnostics.	1. Principles and basic concepts in the field of Hospital infection control
2. Infection Control Statistics	A5-A6	1.recognize essential definitions & basic concepts of research question, 2.Discuss the principles of statistics & its role in interpretation of data. 3.Successfully implement the chosen research methodology	2. Systems-based Practice Candidates must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to: (1) work effectively in various health care delivery settings & systems relevant to their clinical specialty; (2) coordinate patient care within the health care system relevant to their clinical specialty; (3) incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate; (4) advocate for quality patient care and optimal patient care systems; (5) work in inter-professional teams to enhance patient safety and improve patient care quality; and, (6) participate in identifying system errors and implementing potential systems solutions. 3. Ethics in research.

3. Surveillance of Hospital Infection 4. Organization of Infection Control	A7-A9 A11-A13	1. Discuss how to design of surveillance system, collect, compile and interpret surveillance data. 2. identify management and investigation outbreaks in nosocomial infection. 3. Recognize meausures of infection prevention, discuss evidence based IC and describe disaster management. 4. recognize the medico-legal aspects of HAI and behavioral changes	4.Recent advances in the field of Hospital infection control 5. Legal and medicolegal aspects in practice of Hospital infection control as well as medical ethics.
5. Basic principles &Implementation of Hospital Infection Control 6. Laboratory Safety Quality 7. Quality Assurance in Infection Control 8. Quality Assessment in Infection Control & Infectious Diseases	A14-A19	1.Describe the chain of infection. 2. Recognize factors increase antibiotic resistance in hospital and antibiotics uses in prophylaxis 3. Outline the types, structural components, safety levels of laboratory and infection control policy in lab 4. Identify quality assurance, quality auditing, how to and monitor the quality, discuss the idea of quality improvement and quality planning and how to prepare for quality accreditation and ISO. 5. recognize hospital assessment	6. Principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.

ب ــ القدرات الذهنية :

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(our own ARS) المعايير الأكاديمية الخاصة بنا	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في الميكروبيولوجيا والمناعةالطبية)
1. Basic Microbiology, Med. Immunology & Epidemics 2. Infection Control Statistics	B1-5	1. Assess infection risk and develop infection prevention and control strategies and evaluate infection control management. 2. Assess risk of occupational exposure to infectious diseases and the educational needs of health care workers regarding IC and design teaching course for them. 3. Analyze & interpret laboratory data relevant to the cases of medical microbiology & immunology.	1- Data interpretation and proper diagnosis (laboratory results) In this domain residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social behavioral sciences, as well as the application of this knowledge to patient care.
1.Infection Control Statistics 2.Surveillance of Hospital Infection	B3,4,6,7	1.Interpret the results of infection outbreak source tracing and assess the advantages of each typing method. 2.Use a systematic approach for statistical analysis and interpretation and effectively use computational tools & packages 3.Design surveillance system	2- Medical problem solving. 3- Principles of conducting scientific research, writing research design and formulation of research hypothesis.

		and assess collect, analyze and interpret surveillance data .	
1. Basic Microbiology, Med. Immunology & Epidemics 2. Organization of Infection Control	B2 A12 C5	1. Adopt an evidence Based approach to the prevention of major infectious diseases among healthcare workers through immunization of health care workers	4- Evidence-based medicine.
1. Organization of Infection Control 2. Basic principles &Implementati Hospital Infection Control 3. Laboratory Safety Quality 4. Quality Assurance in Infection Control 5. Quality Assessment in Infection Control & Infectious Disease	B18-14	1. Identify weaknesses in infection control program and target a specific infection control issue needing improvement. 2. Strengthen leadership. 3. Evaluate control measures for infection in microbiology laboratory. 4. Develop, under supervision, core reporting skills 5. Interpret the results of application of safety measures. 6. Assess and monitor quality assurance and quality auditing 7. Analyze and report the results of hospital infection control assessment.	5- Risk assessment in medical practise. 6- Planning for improvement of professional performance in the field of Hospital infection control 7- Decision making skills.

ج ــ المهارات العملية:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(our own ARS) المعايير الأكاديمية الخاصة بنا	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في الميكروبيولوجيا والمناعةالطبية)
1.Basic Microbiology, Med. Immunology & Epidemic 2.Surveillance of Hospital Infection	C1-3 C8-9	1. Investigate and follow-up health care workers exposed to communicable diseases and develop infection control program for health care workers and collaborate on immunization programs. 2. Apply clinical and microbiological parameters for identification of hospital acquired infections. 3. Perform surveillance studies using risk stratification 4. Perform investigations and proper management in outbreaks in nosocomial infections and typing of micro-organisms.	1- Professionalism and up to date practise. Residents provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
1. Basic Microbiology, Med. Immunology & Epidemics 2. Infection Control Statistics 3. Organization of Infection Control.	C4-7 C12	1. Practice infection monitoring and reporting and apply policies and procedures to prevent and control infections 2. Measure compliance with regulations and	2- Medical report writing and evaluation/appropriateness of patient medical report.

		standards. 3. Implement evidence based IC guidelines for specific patient care settings, risky procedures, and common hospital acquired infections. 4. Conduct a scientific research. 5. Develop skills in statistical analysis of data	
1. Organization of Infection Control 2. Basic principles &Implementation of Hospital Infection Control 3. Laboratory Safety Quality 4. Quality Assurance in Infection Control 5. Quality Assessment in Infection Control & Infectious Diseases	C10,11 C13-18	1.Formulate a disaster plan 2.Apply behavior change communication program regarding hand washing, HIV and TB 3.Formulate Antibiotic policy. 4.Implement infection control measures in microbiology laboratory and perform quality control measures. 5.Design a check list, and questionnaire. 6.Build a team and manage a team meeting. 7.Improve the quality practice in the hospitals. 8. Perform comprehensive infection control	3- Ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

		assessment and individual clinical unit or service area assessment	

د- مهارات الاتصال:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(our own ARS) المعايير الأكاديمية الخاصة بنا	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في الميكروبيولوجيا والمناعةالطبية)
1. Basic Microbiology, Med. Immunology & Epidemics 2. Infection Control Statistics 3. Basic principles &Implementation of Hospital Infection Control 4. Laboratory Safety Quality 5. Quality Assurance in Infection Control 6. Quality Assessment in Infection Control & Infectious Diseases	D2,6,15	1. Develop effective teaching skills by teaching junior colleagues and students as well as through conference presentations 2. Communicate results of screening & its implication in prevention & control measures 3. Participate in multidisciplinary quality/performance improvement strategies.	1- Interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals
1. Basic Microbiology, Med. Immunology & Epidemics 2. Infection Control Statistics 3. Surveillance of Hospital	D1 D3-6 D8,13	1. Effectively utilize the library to access and search for information 2. Conduct education to physician and other hospital staff about	2- Effective use of IT and healthcare information system in medical practise and patient medical records to optimize learning; and participate in the education of patients, families, students, residents &other health professionals

Infection 4. Basic principles &Implementation of Hospital Infection Control 5. Laboratory Safety Quality 6. Quality Assurance in Infection Control 7. Quality Assessment in Infection Control & Infectious Diseases		infectious diseases in seminars, lectures and ward rounds. 3. Communicate effectively with learners 4. Participate in research activities and follow the ethical regulations of sample collection and delivery of results, showing respect to the patient's privacy. 5. Communicate results of screening & its implication in prevention & control measures 6. Search midline data base for other surveillance systems 7. Use different media for teaching that are appropriate to the teaching setting	
1. Organization of Infection Control 2. Quality Assessment in Infection Control & Infectious Diseases	D7,9	1.Engage hospital administration in the process of hospital assessment 2.Develop effective skills in engaging hospital administration for infection prevention	3- Self-appraisal and needs assessment.
1. Basic Microbiology, Med. Immunology & Epidemics 2. Infection Control Statistics	D1,5,6,8,10	1. Effectively utilize the library to access and search for information	4- Accessibility to specialty-specific and other appropriate reference material in print or electronic format. Electronic medical literature databases with search capabilities `

3. Surveillance of Hospital Infection 4. Organization of Infection Control 5. Basic principles &Implementation of Hospital Infection Control 6. Laboratory Safety Quality 7. Quality Assurance in Infection Control 8. Quality Assessment in Infection Control & Infectious Diseases		2. Participate in research activities and follow the ethical regulations of sample collection and delivery of results, showing respect to the patient's privacy. 3. Communicate results of screening & its implication in prevention & control measures 4. Search midline data base for other surveillance systems 5. Manage any disaster on scientific basis	
7. Basic Microbiology, Med. Immunology & Epidemics	D3,4	1. Conduct education to physician and other hospital staff about infectious diseases in seminars, lectures and ward rounds. 2. Communicate effectively with learners	5- Incorporate formative evaluation feedback into daily practice.
8. Organization of Infection Control 9. Basic principles &Implementation of Hospital Infection Control	D11,12,14	1.Show leadership and safe supervision 2.Collaborate with appropriate persons to establish the existence of an outbreak. 3.Communicate with other members of the multidisciplinary team	6- Team work/leadership. 7- Time management

1. Basic Microbiology, Med. Immunology & Epidemics 2. Basic principles &Implementation of Hospital Infection Control 3. Laboratory Safety Quality 4. Quality Assurance in Infection Control 5. Quality Assessment in Infection Control & Infectious Diseases	D1	1. Effectively utilize the library to access and search for information	8- Self-learning ability and continuous medical education programme participation.