



Kerman University of Medical Sciences
School of Nursing and Midwifery



M.Sc. in Critical Care Nursing

Last updated:

2023

Introduction

Critical care nursing is one of the main needs of developing societies such as Iran. The growing trend of industrialization and the development of caring technology on one hand and the emergence of new health problems, increase of natural disasters and prevalence of critical illness and patients on the other hand call for the development of critical care units and health care.

Considering the vital role of critical care nurses in the care of critically ill patients and also the need for scientific critical care services, the program of critical care nursing at master's degree level with the aim of providing specialized high quality patient care is a necessity.

Given the need for the revision of curriculums after 4 to 5 years of implementation, the significant changes in technology and medical equipment, and the decision of educational policy-makers, the revision of critical care nursing curriculum at master's degree level was made a priority, and this task was given to the school of nursing and midwifery of Isfahan University of Medical sciences. Therefore, a revision committee for the curriculum of critical care nursing at master's degree was created to revise the curriculum in accordance with the scientific advances and the society's needs. In the revision, an attempt was made to while maintaining the totality of nursing care, adopt the program with cultural condition of society, close the gap between scientific knowledge and practice, and use nursing models to educate students capable of providing high quality evidence-based care.

First, the school's critical care department created a committee and determined the revision framework in several meetings. Then, survey forms were sent to nursing and midwifery faculties that provide the relevant program in order to obtain their comments or suggestions in regard to the contents and modules of the program. After collecting the data, the first draft of the curriculum was created considering the foreign curriculums and the society's needs, and then it was sent again to other faculties to find out their opinions and comments. After collecting their opinions and comments, and amending the draft, the representatives of all relevant faculties were invited to attend a meeting in July 2017 in order to finalize the curriculum. In this meeting, which was held

with the participation of over 30 representatives, the curriculum was revised and the final draft of master's degree program in critical care nursing was created.

Title of program:

Master's degree (MSc) in critical care nursing

Definition:

Critical care nursing is a branch of nursing, which deals with the life threatening conditions and advanced lifesaving interventions. A critical care nurse is responsible for the delivery of advanced high quality care to critically ill patient and his/her family.

Entry criteria and process:

The applicants, in addition to general competences, need to have the following conditions:

- A. To have a bachelor's degree in nursing, anesthetic or operating room technology from an international or national university approved by the Ministry of Health and Higher Education.
- B. To have two years history of clinical practice in hospital ward or operating room.

The program's history and evolution in Iran and the world:

In the last two decades, some of the world's renowned universities, such as Stanford University, James Cook University (JCU), Nottingham University, John Hopkins University, and University of California at San Francisco (UCSF), have paid special attention to the creation of clinical care nursing programs. This led to the creation of programs such as advanced nursing, critical care nursing and its subsequent programs including cardiovascular critical care nursing, pulmonary critical care nursing, renal critical care nursing, etc.

In Iran, in response to the need for critical care nursing, special attention has been paid to this issue in the last three decades, which led to the creation of related programs in some universities when critical care units were being built. In 1989, Iran University of Medical Sciences offered a 6-month program on ICU, CCU and dialysis. In 2008, the first non-continuous master's degree program in critical care nursing was established in nursing faculties with the permission of Ministry of Health.

Work positions for the graduates:

The graduates of this program can get a job in one of the following positions:

- Critical care units of hospitals such as CCU, ICU, hemodialysis unit, emergency department, recovery room, and organ transplant department
- Critical care units at hospice
- Palliative care centers
- Research centers, science-based companies, technology development centers
- Other places needing critical care services
- District or home-based care centers

Philosophy:

The following values were considered in developing this program:

- Believing in scientific authority and striving to reach the highest quality evidence-based critical care nursing, which is an institutionalized nursing value
- The right to receive high quality critical care services, required trainings and the chance to participate in decision-makings related to nursing and medical practices in critical care units
- A nurse, who on one hand is involved in the care of patient as multidimensional being with physical, social and ethical characteristics, and on the other hand is obliged to preserve human right and social justice according to the teaching of Islam, must strive to preserve the above values by providing appropriate and high quality critical nursing care to critically ill patients.

The following values should be considered in the revision of this program:

- A holistic approach must be used in caring and assessing patients. In holistic approach, not only functional needs, but also physical, social, mental, emotional and spiritual needs of patients must be considered.
- Since holistic care of patients requires inter-professional cooperation and teamwork, participatory approaches must be considered in patient care.
- Provision of high quality care requires the acquisition of practical skills, so in the revision of this program an emphasis has been placed on the practical skills that the students must acquire in each unit.
- The independence and skills learning of students have been emphasized in the revision, so an educational unit called “internship” has been added to the educational units to help students learn practical skills.

Vision:

The master’s degree program in critical care nursing intends to train healthcare professionals capable of providing high quality critical nursing care to patients who need specialized care. This will reduce mortality and complications in critically ill patients. The graduates of this program are able to provide required consultations to health system managers and policy-makers in order to reduce the problems of patients admitted to critical care units and also promote the quality of nursing care.

Mission:

The mission of this program includes; training of healthcare professionals capable of providing high quality critical nursing care to patients who need specialized care. This will reduce mortality and complications in critically ill patients. The graduates of this program are able to provide required consultations to health system managers and policy-makers in order to reduce the problems of patients admitted to critical care units and also promote the quality of nursing care.

Main objectives:

The main objectives of this program include; training healthcare professionals who have the necessary knowledge, attitude, performance and abilities (professional behavior, communication skills, information technology, lifelong self-learning, research, management and quality

development, innovative criticism and problem solving in critical situations) to improve the quality of care provided to critically ill patients.

The role of graduates in society:

The graduates of this program have different caring, educational, research, support, counseling, and managerial roles.

Professional duties of the graduates (task analysis):

1. Caring role:

- Providing skillful nursing care and implementing required nursing intervention to patients who need specialized care
- Performing the necessary assessments (non-invasive) and helping to perform invasive assessment in patients admitted to critical care units
- Analyzing and interpreting data collected from patients who need specialized care
- Using the principles of professional behavior in relation to colleagues, patients, families and companions

2. Educational role

- Updating the knowledge and skills of colleagues continuously using the conventional methods of continuous learning
- Teaching other staffs involved in the care of patients in critical care units
- Performing the necessary teaching and education to patients and families in critical care units

3. Research role

- Designing and implementing applied research on problems and challenges of critical care units
- Producing evidence and articles in valid resources in regard to the care of critically ill patients
- Performing joint projects with other centers and producing evidence that can be transferred to entire country

- Establishing connection with national and international research centers in relation to the care of critically ill patients

4. Managerial role

- Analyzing the system of nursing care delivery to patients in critical care units
- Optimizing the process of care delivery to critically ill patients by designing and implementing interventions
- Using managerial tools and methods to improve factors affecting nursing care, and reducing mortality, complications and risks of critically ill patients

Outcomes expected from the graduates

Graduates of this program are expected to be able to:

- Resolve the problems of patients admitted to critical care units and meet their needs
- Have necessary knowledge on the mechanism, side effects, interference, and contraindication of drugs used in critical care units, minimize drug side effect by monitoring patients, and increase the positive outcomes of drug therapies
- Work with invasive tools and equipment needed in critical care units
- Develop and implement research project in the areas of critical care
- Organize the implementation and evaluation of trainings given to patients, colleagues, clients and families
- Participate in the policy-making in regard to the health of patients receiving critical care
- Help to promote the most specialized critical care nursing services in critical care units

The expected empowerment and skills for the graduates (expected competencies)

A. General competencies

- Negotiation and communication skills
- Teaching skills
- Cognitive skills
- Managerial skills
- Research skills
- Use of nursing care models and theories

- Teamwork and inter-professional skills
- Critical thinking and problem solving skills
- Evidence-based performance
- Professionalism

M.Sc. in Critical Care Nursing

Basic Information of the Course		
Program Type:		Degree Based
Level of study:		Master's
Department:		Department of Critical Care Nursing
Major (Name of Program):		Critical Care Nursing
Credits	Prerequisite Subjects*	12 credits
	Core Subjects (Obligatory):	26 Credits
	Non-core Subjects (Optional):	2 Credits
	Thesis:	4 Credits
	Total	32 Credits
Length of Training:		Total of 4 Semesters
Language Requirement:		English
Admission Requirement:		Completion of Bachelor of Nursing, Anesthesiology, and Surgical Technology
		Proficiency in English language
Course Length Requirement:		Attending Persian Language Course

* Prerequisite subjects are not counted in total credits

1 st Semester							
Subject	Code	Credits					Prerequisites (Subject Code)
		Theoretical	Practical	Clinical	Internship	Total	
Medical Information Systems	01	1	0.5	-	-	1.5	-
Advanced research methodology	02	1	0.5	-	-	1.5	-
Diagnostic Evaluations	04	1	-	-	-	1	-
Nursing Concepts **	05	2	-	-	-	2	-
Medical – Surgical **	6-7	3	-	2	-	5	04,08
Fundamentals of Critical Nursing Care	12	2	-	-	-	2	-
Pharmacology	11	1	-	-	-	1	-
Law, Nursing Ethics and Professional Relationship	08	1	-	-	-	1	-
Nursing Documentation in Intensive Care Units Workshop (Obligatory) ***	-	6 hours	-	-	-	-	-
Infection Control and Patient Safety Workshop (Obligatory)***	-	12 hours	-	-	-	-	-
Total Credits of the 1 st Semester:						15 Credits	

** Mandatory Courses for students with a bachelor's degree in anesthesia and operating room nursing.

*** Certificates from accredited universities are acceptable.

2 nd Semester							
Subject	Code	Credits					Prerequisites (Subject Code)
		Theoretical	Practical	Clinical	Internship	Total	
Statistics	03	1	0.5	-	-	1.5	-
Theories, models and concepts of critical care nursing	09	1.5	-	-	-	1.5	-
Patient and Family Education	10	0.5	-	0.5	-	1	-
Critical care (in Thoracic surgery and Respiratory system)	13-14	1.5	-	1	-	2.5	04,11,12,13
Critical care (in Cardiovascular system)	15-16	1.5	-	1	-	2.5	04,11,12,15
Critical care in gastrointestinal system, and abdominal surgery	19	1	-	-	-	1	04,11,12
Intensive care department management workshop (Obligatory)***	-	12 hours	-	-	-	-	-
Advanced cardiopulmonary resuscitation workshop (Obligatory)***	-	12 hours	-	-	-	-	-
Total Credits of the 2 nd Semester:						10 Credits	

*** Certificates from accredited universities are acceptable.

3 rd Semester							
Subject	Code	Credits					Prerequisites (Subject Code)
		Theoretical	Practical	Clinical	Internship	Total	
Critical care in neurological system and psychological disorders	17-18	1.5	-	1	-	2.5	04,11,12,17
Critical Care in Nephrology and Urology	20-21	1	-	0.5	-	1.5	04,11,12,20
Critical Care (endocrinology - gynecology)	22	0.5	-	-	-	0.5	04,11,12
Critical Care in Multiple Organ Dysfunction Syndrome and Patients with Special Needs	23-24	2	-	1	-	3	04,11,12,23
Non-Core credit**	27-38	-	-	2	-	2	All
Evidence-Based Practice (EBP) Workshop (Obligatory)***	-	6 hours	-	-	-	-	-
Healthcare service quality and accreditation Workshop (Obligatory)***	-	6 hours	-	-	-	-	-
Total Credits of the 3 rd Semester:						9.5 Credits	

** The student must complete 2 credits of non-core subjects according to the subject of the thesis, interest, supervisor's approval, and the approval of the graduate education council of the faculty.

*** Certificates from accredited universities are acceptable.



Course Subjects & Time Table

4 th Semester							
Subject	Code	Credits					Prerequisites (Subject Code)
		Theoretical	Practical	Clinical	Internship	Total	
Internship	25	-	-	-	6	6	All
Thesis	26	4	-	-	-	4	All
Total Credits of the 4 th Semester:						10 Credits	

Table of Non-core Subjects (Optional)

The student must complete 2 credits of non-core subjects according to the subject of the thesis, interest, supervisor's approval, and the approval of the graduate education council of the faculty. (2 credits in the third semester)

Non-Core Subjects							
Subject	Code	Credits					Prerequisites (Subject Code)
		Theoretical	Practical	Clinical	Internship	Total	
Specialized care in Cardiac Surgery ICU	27	-	-	2	-	2	All
Specialized care in neurosurgery ICU	28	-	-	2	-	2	All
Specialized care in surgical ICU	29	-	-	2	-	2	All
Specialized care in trauma ICU	30	-	-	2	-	2	All
Specialized care in internal medicine ICU	31	-	-	2	-	2	All
Specialized care in CCU	32	-	-	2	-	2	All
Specialized care in hemodialysis	33	-	-	2	-	2	All
Specialized cares in the emergency department	34	-	-	2	-	2	All
Management of intensive care units	35	-	-	2	-	2	All
Specialized care in respiratory ICU	36	-	-	2	-	2	All
Specialized care in Obstetrics & Gynecology	37	-	-	2	-	2	All
Specialized care in Burn ICU	38	-	-	2	-	2	All