



**PEKING UNIVERSITY HEALTH SCIENCE CENTER-MACAO POLYTECHNIC UNIVERSITY NURSING ACADEMY**  
**BACHELOR OF SCIENCES IN NURSING**  
**LEARNING MODULE OUTLINE**

Academic Year	2023-2024	Semester	2
Module Code	CCEN3102		
Learning Module	Critical Care and Emergency Nursing		
Pre-requisite(s)	Fundamental nursing I & II, Medical -Surgical Nursing I & II		
Medium of Instruction	Chinese /English		
Credits	3	Contact Hours	45
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**MODULE DESCRIPTION**

Emergency and critical care nursing is a highly professional and comprehensive nursing course. Students must study after completing the courses of basic medicine, basic nursing and internal and external nursing. The course covers emergency care and critical care, highlighting the latest theories and technologies of emergency and critical care at home and abroad. By studying this course, students will master the basic knowledge and technology required in the work of intensive care unit and emergency room, establish professional and unique logical thinking, be familiar with the working methods of clinical nursing in this field, have preliminary emergency and critical nursing ability.

**MODULE INTENDED LEARNING OUTCOMES (ILOS)**

On completion of this learning module, students will be able to:

M1.	To identify and analyses the life-threatening situation in critical care and emergency nursing
M2.	To understand etiology ,risk factors, pathophysiology ,clinical manifestations, diagnostic investigations, rescue treatment principles ,nursing management ,and health education related to emergent or emergent critical illness
M3.	To understand the usage principles of apparatus and machines in the emergency room and critical care unit
M4.	To apply the skills of resuscitation in emergency nursing and the monitoring and supporting techniques in critical care
M5.	To exercise critical thinking in caring for clients in emergent and critical situations



These ILOs aims to enable students to attain the following Programme Intended Learning Outcomes (PILOs):

PILOs	M1	M2	M3	M4	M5
P1. Demonstrate an understanding of the holistic nature of the clients' health status involving individual, family, and community aspects.	✓	✓	✓	✓	✓
P2. Demonstrate effective communication skills and the ability to establish and maintain a therapeutic relationship with clients.		✓		✓	✓
P3. Demonstrate a mastery and an application of knowledge and skills for nursing practice, including biological sciences, social sciences and humanities, by making appropriate clinical reasoning and performing safe and therapeutic practice.	✓	✓	✓	✓	✓
P4. Demonstrate the ability to maintain legal and ethical standards of nursing practice.	✓	✓	✓	✓	✓
P5. Demonstrate the ability to carry out relevant research and contribute to the health of the community.		✓			
P6. Work effectively and efficiently alone or in teams.	✓	✓	✓	✓	✓
P7. Demonstrate the ability to identify and evaluate health care issues.	✓	✓		✓	✓
P8. Demonstrate a critical understanding and apply the principles of evidence-based practice to the delivery of nursing care.	✓	✓	✓		✓

#### MODULE SCHEDULE, COVERAGE AND STUDY LOAD

Week	Content Coverage	Contact Hours
1	<b>Overview of Critical Care, Emergency Nursing and disaster nursing</b> - The definition of Emergency nursing - Emergency medical services - The definition of Critical nursing - The definition of Disaster nursing	2
	<b>Triage and nursing evaluation in ER</b> - Triage in Emergency Department/Room (ED/ER) - The ER nurse's role in patient assessment and triage	2
	<b>Heat-related emergency, drowning and mountain sickness</b> - Pathophysiology and etiology - Clinical manifestations - Diagnostic investigations	2



	<ul style="list-style-type: none"> <li>- Fast responses and ER treatments,</li> <li>- Nursing assessment, nursing diagnosis, nursing intervention</li> <li>- Health education for patients</li> </ul>	
2	<p><b>Acute Poisoning</b></p> <ul style="list-style-type: none"> <li>- Classification and conception</li> <li>- Pathophysiology, etiology, and risk factors</li> <li>- Clinical manifestations</li> <li>- Diagnostic investigations</li> <li>- Surgical and medical treatments</li> <li>- Nursing diagnosis and intervention</li> <li>- Health education for patients</li> </ul>	2
	<p><b>Burns care</b></p> <ul style="list-style-type: none"> <li>- Classifications and degrees</li> <li>- Pathophysiology, etiology, and risk factors</li> <li>- Clinical manifestations</li> <li>- Surgical and medical treatments</li> <li>- Nursing diagnosis and intervention</li> <li>- Health education for patients.</li> </ul>	2
	<p><b>Artificial airway ,Heimlich Maneuver ,cardioversion</b></p> <ul style="list-style-type: none"> <li>- Identify emergency airway management including the use of Bag-Mask-Ventilation, oropharyngeal and nasopharyngeal airways.</li> <li>- Describe the establishment and maintenance of the airway.</li> <li>- Describe the Heimlich Maneuver of definition, indications, nursing management, and skills.</li> <li>- Explain the cardioversion of definition, risk factors, cardiopulmonary resuscitation, and nursing roles.</li> </ul>	2
3	<p><b>BLS, ACLS, pharmacy in ER and ICU</b></p> <ul style="list-style-type: none"> <li>-Explain the Basic Life Support (BLS) definition, risk factors, cardiopulmonary resuscitation, and nursing roles.</li> <li>- Describe the Basic Life Support (BLS) and the Advanced Cardiovascular Life Support (ACLS) specific assessment and management that occurs with each step of the systematic approach.</li> </ul>	3



	<ul style="list-style-type: none"> <li>- Describe the indications, contraindications, doses, and routes of administration for drugs</li> <li>- Recommended for specific dysrhythmias and cardiac arrest.</li> </ul>	
	<b>Practices 1:CPR、defibrillation</b>	2
	<b>Mid-term test</b>	2
4	<b>Patient assessment and monitoring of organ function-1</b> <ul style="list-style-type: none"> <li>- Demonstrate the patient assessment according to the simulated scenarios.</li> </ul>	2
	<b>Patient assessment and monitoring of organ function-2</b> <ul style="list-style-type: none"> <li>- Demonstrate the patient assessment according to the simulated scenarios.</li> </ul>	2
	<b>SIRS、Sepsis and MODS</b> <ul style="list-style-type: none"> <li>- Definitions</li> <li>- Etiology</li> <li>- Risk factors</li> <li>- Analyze mechanisms, pathophysiology</li> <li>- Clinical manifestations.</li> <li>- Diagnoses, and caring principles</li> <li>- Health education for patients</li> </ul>	2
5	<b>Practices 2:Nursing evaluation of critical/emergent patients in simulated scenarios</b>	2
	<b>Nutrition support in ICU</b> <ul style="list-style-type: none"> <li>- Parenteral nutrition</li> <li>- Enteral nutrition</li> <li>- The impact of critical illness on bowel function</li> </ul>	2
	<b>Pain management and sedation in ICU</b> <ul style="list-style-type: none"> <li>- The definitions, types, and responses to pain</li> <li>- Assessment, diagnoses, and caring principles of pain and sedation</li> <li>- Health education for patients</li> </ul>	2
6	<b>Techniques and machines in ICU-1</b> <ul style="list-style-type: none"> <li>- The nurses' roles, functions, and special skills and equipment in ICU</li> <li>- Essential equipment in ICU: respiratory machine and mechanical ventilation</li> </ul>	2
	<b>Techniques and machines in ICU-2</b> <ul style="list-style-type: none"> <li>- Special therapies and care in ICU:</li> </ul>	2



	- Invasive arterial blood pressure monitoring, pulmonary artery catheter, temporary pacing, intracranial pressure monitoring, and extracorporeal membrane oxygenation	
	<p><b>Complications in critical patients</b></p> <ul style="list-style-type: none"> <li>- Deep venous thrombosis</li> <li>- Skin breakdown</li> <li>- Sleep pattern disturbance</li> <li>- Hospital-acquired infections</li> <li>- Psychosocial impact: delirium, depression, anxiety</li> </ul>	2
7	<p><b>Head trauma, spine cord trauma</b></p> <ul style="list-style-type: none"> <li>- Mechanism, definition and category, etiology, risk factors</li> <li>- Clinical manifestations, diagnostic investigations</li> <li>- Nursing assessment and fast responses</li> <li>- Surgical and medical treatments,</li> <li>- Nursing diagnosis, nursing intervention, nursing aim</li> <li>- Health education for patients</li> </ul>	2
	<p><b>Multiple and complex trauma</b></p> <ul style="list-style-type: none"> <li>- Mechanism of injury, definition and category, etiology, risk factors</li> <li>- Clinical manifestations, diagnostic investigations</li> <li>- Nursing assessment through primary and secondary survey</li> <li>- Surgical and medical treatments</li> <li>- Nursing diagnosis, nursing intervention, nursing aim</li> <li>- Health education for patients</li> </ul>	2
	<p><b>Continuous blood purification, peritoneal dialysis</b></p> <ul style="list-style-type: none"> <li>- Hemodialysis</li> <li>- Continuous renal replacement therapy (CRRT)</li> <li>- Peritoneal Dialysis</li> <li>- Therapeutic methods, nursing assessment, nursing diagnosis, nursing intervention</li> <li>- Health education for patients</li> </ul>	2
8	<b>Final examination</b>	2
	<b>Total</b>	<b>45 hrs</b>



## TEACHING AND LEARNING ACTIVITIES

In this learning module, students will work towards attaining the ILOs through the following teaching and learning activities:

Teaching and Learning Activities	M1	M2	M3	M4	M5
T1. Interactive Lectures	✓	✓	✓	✓	✓
T2. In-class discussions	✓	✓	✓	✓	✓
T3. In-class group activities	✓	✓	✓	✓	✓

## ATTENDANCE

Attendance requirements are governed by the Academic Regulations Governing Bachelor's Degree Programmes of the Macao Polytechnic University. Students who do not meet the attendance requirements for the learning module shall be awarded an 'F' grade.

## ASSESSMENT

In this learning module, students are required to complete the following assessment activities:

Assessment Activities	Weighting (%)	ILOs to be Assessed (M1,M2,M3,M4,M5,M6....)
A1. Class performance :Average score from all teachers	10	M1,M2,M3,M4,M5
A2. Assignment :there are two practicing classes.	20	M1,M2,M3,M4,M5
A3. Mid-term test: this is a close-book exam.	35	M1,M2,M3,M4,M5
A4. Exam: this is a close-book exam.	35	M1,M2,M3,M4,M5

This learning module is graded on a 100-point scale, with 100 being the highest possible score and 50 being the passing score.

The assessment will be conducted following the University's Assessment Strategy (see [www.mpu.edu.mo/teaching\\_learning/en/assessment\\_strategy.php](http://www.mpu.edu.mo/teaching_learning/en/assessment_strategy.php)). Passing this learning module indicates that students will have attained the ILOs of this learning module and thus acquired its credits.



## MARKING SCHEME

Assessment Activities	Assessment Criteria	Mark Ranges				
		88-100 High	73-87 Signification	58-72 Moderate	50-57 Basic	<50 Fail
A1. Mid-term Test	Demonstrate the ability to identify and apply appropriate concepts, methods and techniques	Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Not reaching marginal levels
A2. Final Examination	Demonstrate the ability to identify and apply appropriate concepts, methods and techniques	Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Not reaching marginal levels
A3. Class learning performance	Demonstrate the understanding of the module covered in classes and show active learning attitude.	Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Not reaching marginal levels
A4. Assignments (individual or group)	Demonstrate the ability to complete individual or group assignment, answer questions on the topics covered in the module.	Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Not reaching marginal levels

## REQUIRED READINGS

1. 鐘清玲, 許虹. 急危重症護理學 (雙語), 第 2 版, 北京: 人民衛生出版社. 2019.

## REFERENCES 參考文獻

1. 張波, 桂莉. 急危重症護理學, 第 4 版, 北京: 人民衛生出版社. 2017.
2. 桂莉, 金靜芬. 急危重症護理學, 第 5 版, 北京: 人民衛生出版社. 2022.
3. 李文濤, 崔巧玲. 急危重症護理學, 北京: 科學出版社. 2018.
4. EMERGENCY NURSES ASSOCIATION SUZANNE BURNS. AACN ESSENTIALS OF CRITICAL CARE NURSING (ENGLISH), MEDICAL, 5TH/2023. MCGRAW-HILL EDUCATION /MEDICAL



5. AITKEN LEANNE , MARSHALL ANDREA , CHABOYER WENDY (主編) . 李慶印 , 左選琴 , 孫紅 (主譯) .ACCCN 重症護理[Z]. 第 3 版. 北京:人民衛生出版社 , 2021.
6. EMERGENCY NURSES ASSOCIATION SUZANNE BURNS .SHEEHY'S EMERGENCY NURSING: PRINCIPL ES AND PRACTICE,7TH / 2019.MOSBY
7. EMERGENCY NURSES ASSOCIATION SUZANNE BURNS. AACN ESSENTIALS OF CRITICAL CARE NURSING.4TH / 2019.MCGRAW-HILL EDUCATION / MEDICAL

## **STUDENT FEEDBACK**

At the end of every semester, students are invited to provide feedback on the learning module and the teaching arrangement through questionnaires. Your feedback is valuable for instructors to enhance the module and its delivery for future students. The instructor and programme coordinators will consider all feedback and respond with actions formally in the annual programme review.

## **ACADEMIC INTEGRITY**

The Macao Polytechnic University requires students to have full commitment to academic integrity when engaging in research and academic activities. Violations of academic integrity, which include but are not limited to plagiarism, collusion, fabrication or falsification, repeated use of assignments and cheating in examinations, are considered as serious academic offenses and may lead to disciplinary actions. Students should read the relevant regulations and guidelines in the Student Handbook which is distributed upon the admission into the University, a copy of which can also be found at [www.mpu.edu.mo/student\\_handbook/](http://www.mpu.edu.mo/student_handbook/).