الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

Adult Critical Care Nursing Diploma

2022


بسم الله الرحمن الرحيم

PREFACE

- The primary objective of this document is to enrich the training experience of postgraduate trainees by outlining the learning objectives to become independent and competent future practitioners.
- This curriculum may contain sections outlining some regulations of training; however, such regulations need to be sought from the training's "General Bylaws" and "Executive Policies" published by the Saudi Commission for Health Specialties (SCFHS), which can be accessed online through the official SCFHS website. In the case of discrepancy in regulation statements, the one stated in the most updated bylaws and executive policies will be the reference to apply.
- As this curriculum is subject to periodic refinements, please refer to the electronic version posted online for the most updated edition at www.scfhs.org.sa.

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II. COPYRIGHT STATEMENTS

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III. FOREWORD

The Adult Critical Care Nursing Postgraduate Diploma Curriculum Development team acknowledges valuable contributions and feedback from the scientific committee members in developing this program. We extend special appreciation and gratitude to all the members who have been pivotal in completing this curriculum, especially the Specialty Curriculum Development Group, Curriculum Advisory Committee members, and Nursing Scientific Council. We would also like to acknowledge that the Critical Care Networks-National Nurse framework UK is copyright[1]. Many of the descriptions' competencies were acquired from their resources.

IV. TABLE OF CONTENTS

V. INTRODUCTION

1. Context of Practice

Critical care nursing is a booming specialty in Saudi Arabia. Currently, hospitals offer critical care nurses more attractive incentives, including sign-on bonuses, relocation bonuses, and reimbursements for continuing education and certification. Although there are always very ill and severely injured patients, the concept of critical care as a specialty is relatively modern. Given advances in medicine and technology, nursing care for patients has become more complex. To provide appropriate care, nurses require specialized knowledge and skills, as delivery mechanisms evolve to support patients' continuous monitoring and treatment needs.

The practice of intensive care nursing (ICU) for adults has improved over the past few decades. Knowledge of the pathophysiology of life-threatening conditions and the technological capacity to monitor and treat adult patients with these conditions has advanced rapidly during this period.

To meet national and international standards, the SCFHS offers evidence-based training and educational programs tailored specifically to Intensive Care Unit (ICU) nurses. This program focused on nursing care for adult patients with acute and complex health problems. The emphasis is on enhancing the critical thinking skills necessary to make sound nursing judgments and promote self-directed nursing care for patients with acute and complex health problems. This program synthesizes evidence-based data to deliver competent, culturally sensitive, and appropriate holistic care to clients with complex health needs.

2. Goals and Responsibilities of Curriculum Implementation

Ultimately, this curriculum seeks to guide trainees to become competent in their respective specialties. Accordingly, this goal requires a significant amount of effort and coordination from all the stakeholders involved in postgraduate training. As "adult learners," trainees must be proactive, fully engaged, and exhibit the following: a careful understanding of learning objectives, self-directed learning, problem-solving, an eagerness to apply knowledge using reflective practice from feedback and formative assessment, and self-awareness and willingness to ask for support when needed. The program director plays a vital role in ensuring the successful implementation of this curriculum. Moreover, training committee members, particularly the program administrator and chief resident, significantly impact program implementation. Trainees should be called upon to share responsibility in curriculum implementation. The SCFHS applies the best models of training governance to achieve the highest quality of training. Additionally, academic affairs in training centers and the regional supervisory training committee play a significant role in training supervision and implementation. The Critical Care Nursing Scientific Committee will guarantee that the content of this curriculum is constantly updated to match the highest standards in postgraduate education for each trainee's specialty.

3. What is new in this edition?

In this edition, the curriculum is transformed into a competency-based curriculum that explicitly represents the learning domains (knowledge, skills, and behavior). In addition, it grades the responsibility for the trainee, with a clearer demarcation of what should be achieved at each stage of training (milestone) and provides detailed supervisory frameworks that support independent learning within a formal structure and enriches formative assessment.

VI. ABBREVIATIONS USED IN THIS DOCUMENT

Advice for Authors

Try to limit the use of abbreviations to the recognized ones, for examples:

Abbreviation	Description
SCFHS	Saudi Commission for Health Specialties
D1	(First) Year of Training
D2	(Second) year of Training
OSCE	Objective Structured Clinical Examination
SOE	Structured Oral Examination
MDT	Multidisciplinary Team
CBE	Competency-Based Evaluation
ITER	In-Training Evaluation Report
FITER	Final In-Training Evaluation Report
ITC	Institutional Training Committee

VII. PROGRAM ENTRY REQUIREMENTS

Eligible applicants must fulfill the application requirements of the SCFHS (as outlined in the executive policy of acceptance and registration) and meet the following criteria:

1. Bachelor of Nursing (BSN) degree.
2. At least one year of experience in acute nursing care unit before joining the program.
3. English Proficiency Results. Applicant should submit one of the following: (STEP: 64) Valid for three years; (IELTS: 4 goodalid for 2 years; (TOFEL: IBT 48-PBT 458) valid for 2 years
4. Pass the interview for admission.
5. For more information about registration and acceptance in the program, please visit the SCFHS website (https://www.scfhs.org.sa/MESPS/Pages/admissionregistration.aspx).

VIII. LEARNING AND COMPETENCIES

1. Introduction to Learning Outcomes and Competency-Based Education

Training should be guided by well-defined "learning objectives" driven by targeted "learning outcomes" of a particular program to serve specific specialty needs. Learning outcomes are supposed to reflect the professional "competencies" and tasks to be "entrusted" by trainees upon graduation. This will ensure that graduates meet the expected demands of the healthcare system and patient care for their particular specialty. Competency-based education (CBE) is an "adult learning" approach based on achieving predefined, fine-grained, and well-paced learning objectives driven by complex professional competencies.

Professional competencies related to healthcare are usually complex and contain a mixture of multiple learning domains (knowledge, skills, and attitude). CBE is expected to change the traditional method of postgraduate education. For instance, although it is a precious resource, training time should not be considered a proxy for competence (e.g., rotation time in certain hospital areas is not the primary marker of competence achievement). Furthermore, CBE emphasizes the critical role of an informed judgment of learners' competency progress based on a staged and formative assessment driven by multiple workplace-based observations. Several CBE models have been developed for postgraduate healthcare education,

for example, Critical Care Networks – National Nurse Leads (CC3N). The CC3N framework was designed to move the learner through a progressive development process from a novice to a competent and independent practitioner.

The following are concepts to enhance the implementation of CBE in this curriculum:

- **Competency:** Competency is a cognitive construct that assesses the potential to perform efficiently in a given situation based on the profession's standard. Professional roles (e.g., experts, advocates, communicators, leaders, scholars, collaborators, and professionals) are used to define the competency role and make it mendable for learning and assessment.
- **Milestones:** Milestones are the stages of the developmental journey throughout the competency continuum. Trainees throughout their learning journey, from junior and senior levels, will be assisted in transforming from being novice/supervised to master/unsupervised practitioners. This should not undermine the role of supervisory/regulatory bodies toward the malpractice of independent practitioners. Milestones are expected to enhance the learning process by pacing training/assessment to match the developmental level of the trainees (junior vs. senior).
- **Learning Domains:** Whenever possible, efforts should be directed to annotate the learning outcomes with the corresponding domain (K=Knowledge, S=Skills, and A=Attitude). You may have more than one annotation for a given learning outcome.
- **Content-area Categorization:** It is advisable to categorize the learning outcomes in a broad content area related to the practice of the profession—for example, diagnostic versus therapeutic, simple versus complex, and urgent versus chronic.

Trainees are expected to progress from the novice to mastery levels in a particular set of professional competencies. This curriculum applies the principles of competency-based medical education.

2. Program Durations

The Advanced Practice Nursing Program in Adult Critical Care is a two-year program.

3. Program Rotations

Hospital rotations

Most critically ill patients are admitted to the ICU. Therefore, to experience the role of adult critical care nurses, trainees are provided with adequate specialty experience, irrespective of the name of the ICU rotations in their respective training centers. Consequently, the following program rotations were considered mandatory.

See Appendix A for further description of each rotation.

Training Year	Mandatory Core Rotation *	Duration per Week	Setting
D1	Orientation	2	Critical Care Settings
	Module 1: Foundations of Intensive Care Nursing	8	Critical Care Settings
	Module 2: Intensive Care Nursing 1	7 blocks with each block 4 to 6 weeks duration	Critical Care Settings
	• Respiratory System 1	6	
	• Respiratory System 2	6	
	• Cardiovascular System 1	6	
	• Cardiovascular System 2	6	
	• Renal System 1	4	

Training Year	Mandatory Core Rotation *	Duration per Week	Setting
	• Renal System 2	4	
	• Gastrointestinal System	5	
	Total	47	
D2	Module 3: Intensive Care Nursing 2 (Systems-based approach including Advanced Health Assessment, Pathophysiology, Pharmacology, and Nursing Management) for the following systems:	7 blocks with each block 4 to 6 weeks duration	Critical Care Settings
	• Neurological System 1	4	
	• Neurological System 2	4	
	• Endocrine System	4	
	• Hematologic and Immune Systems	4	
	• Integumentary System	4	
	• Multisystem Dysfunction	4	
	• Special Situations in Critical Care	6	
	Module 4: Nursing Research and Evidence-Based Practice in Nursing	8	
	Module 5 : Leadership and Management	8	
	Total	47	
D1 and D2	Annual Vacation: 30 days	4	
	Eid Vacation: One of the two Eid holidays according to the training institution standards.	1	

(*Mandatory core rotation: Set of rotations that represent program core components and are mandatory

**Elective rotation: Set of rotations related to the specialty, as determined by the scientific council/committee, and the trainee must do some of them.

***Selective rotation: Set of other rotations that are selected by the trainee, directed by the mentor/program director, to enhance competency acquisition of the specialty.)

4. Mapping of learning objectives and competency roles to program rotations:

This section aims to match the competencies and objectives of each rotation. Trainees and trainers should work together to achieve these objectives during teaching and formative assessment. Expectations should evolve as the training level progresses (training stage and milestones).

See Appendix A

Steps 1 and 2 Competency-Metrix: to map Competency, Learning Domain, and Milestones

IX. CONTINUUM OF LEARNING

This includes learning that should take place at each key stage of progression within the specialty. Trainees are reminded of lifelong continuous professional development (CPD). Trainees should keep in mind the necessity of CPD for every healthcare provider to meet the demands of their vital profession. The following table shows how this role is progressively expected to develop throughout the junior, senior, and consultant levels of practice.

Undergraduate	D1 (Junior Level)	D2 (Senior Level)	(Expert Level)
Nonpracticing	Dependent/supervised practice	Minimum supervision and guidance, attaining competence in related knowledge /skills	Independent practice/provide supervision
Obtain basic health science and foundational level to core discipline knowledge	Obtain fundamental knowledge related to core clinical problems of the specialty	Demonstrate skilled performance in the activity with enhanced theoretical knowledge and understanding giving rationale for practice Demonstrate application of knowledge and understanding in relation to relevant policies, procedures and guidelines	Demonstrate competent performance in all the activities specified without direct supervision based on independently problem-solve complex situations and offer solutions through critical

Undergraduate	D1 (Junior Level)	D2 (Senior Level)	(Expert Level)
		Participate in problem-solving through critical analysis and evaluation of more complex situations	analysis and evaluation
Internship to the practice of discipline	Apply clinical skills such as physical examination and practical procedures related to the core presenting problems and procedures of the specialty	Analyze and interpret the findings from clinical skills to develop appropriate Nursing diagnoses and Nursing care plans for the patient	Supervise and instruct others in a range of activities related to their role and responsibilities Apply knowledge, demonstrate, and research to relevant policies, procedures, and guidelines to critically analyze and improve practice

X. TEACHING METHODS

The teaching process in postgraduate diploma training programs is based mainly on the principles of adult learning theory. The trainees felt the importance of learning and played an active role in the content and learning processes. The training programs implement the adult learning concept on each feature of the activities in which the trainees are responsible for their learning requirements. The formal training time includes the following three formal teaching activities:

- Program-Specific Learning Activities
- Universal Topics
- General Learning Opportunities

1.1. Program-Specific learning activities:

Program-specific activities are educational activities specifically designed and intended to teach trainees during their training time. Trainees are required to attend these activities, and noncompliance can subject trainees to disciplinary actions. Program administration should support these activities by providing a specific time for trainees to attend and participate in such activities.

Time Frame for Completion of Program Activities

Year	Modules	Outlines
MODULES OF FIRST YEAR TRAINING	Orientation	• Program introduction • General hospital orientation Program • Hospital mandatory training courses e.g., infection control , safety course , as per center admission policies and protocols
	Module 1: Foundations of Intensive Care Nursing	See Appendix A for further modules discerption and specific outlines
	Module 2: Intensive Care Nursing 1 (Systems-based approach including Advanced Health Assessment, Pathophysiology, Pharmacology, and Nursing Management) for the following systems:	
	• Respiratory System	
	• Cardiovascular System	
	• Renal System	
	• Gastrointestinal System	
MODULES OF SECOND YEAR TRAINING	Module 3: Intensive Care Nursing 2 (Systems-based approach including Advanced Health Assessment, Pathophysiology, Pharmacology, and Nursing Management) for the following systems:	See Appendix A for further modules discerption and specific outlines
	• Neurological System	
	• Endocrine system	
	• Hematologic and Immune Systems	
	• Integumentary System	
	• Multisystem Dysfunction	
	• Special Situations in Critical Care	
	Module 4: Nursing Research and Evidence-Based Practice in Nursing	
	Module 5 : Leadership and Management	

1. Program Academic half day:

The trainee must complete 40 hours of clinical practice each week. In addition, 8 hours of formal training time (commonly referred to as academic half day) should be reserved. Formal teaching time is an activity planned with an assigned tutor, time slots, and venue. Formal teaching time excludes bedside teaching and clinic postings. The academic half day covers the core specialty topics determined and approved by the specialty's scientific committee, aligned with the specialty-defined competencies and teaching methods. The core specialty topics will ensure that important clinical problems in critical care nursing are taught well. It is recommended that lectures be conducted in an interactive case-based discussion format. The learning objectives of each core topic need to be clearly defined, and the use of pre-learning material. The trainee should be actively involved in the development and delivery of the topics under faculty supervision; involvement might be in the form of delivery, content development, research, and so forth. The supervisor's educator should ensure that the discussion of each topic is stratified into three categories in the learning domain: knowledge, skill, and attitude.

2. Practice-based learning:

Training exposure occurs mainly during critical care rotations, bedside teaching during daily rounds, and other work-related activities such as courses and workshops. These activities allow the educator to supervise trainees to ensure that they become competent in practical skills, fulfilling knowledge, psychomotor, and attitude learning domains. Please refer to the formative assessment section for details on competency requirements.

No.	Top Core Specialty Procedures
1.	Assessment: General Survey
2.	Assessment: Vital Signs and Pain
3.	Assessment: Thorax and Lungs
4.	Oxygen Therapy and Oxygen Delivery
5.	Oral Airway Insertion
6.	Endotracheal Tube Care and Management
7.	Tracheostomy Tube Care and Management
8.	Endotracheal Tube and Tracheostomy Tube: Suctioning Open and Closed Procedures
9.	Oral Care (e.g., Oral Hygiene)
10.	Obtaining Blood Gas Sample and Blood Gas Interpretation
11.	Care of patient on Mechanical Ventilation
12.	Chest Tube Insertion (assist), Removal, and Care and Management
13.	Assessment: Cardiovascular
14.	Cardiac Monitor Setup and Lead Placement
15.	Electrocardiogram: 12 Lead
16.	Basic ECG/ Arrhythmia Interpretation
17.	External Defibrillator
18.	Cardioversion
19.	Code Management

No.	Top Core Specialty Procedures
20.	Arterial Catheter Insertion (Assisting), Care, Removal, and Blood Sampling
21.	Central Venous Catheter Insertion (assisting), Blood Sampling, Removal, and Site Care
22.	Hemodynamic Monitoring: Transducer System Setup and Zeroing
23.	Intravenous Therapy: Dose and Flow-Rate Calculations
24.	Blood and Fluid Pressure Infusers
25.	Blood and Blood Products Administration
26.	Blood Specimen Collection: Blood Cultures
27.	Eye Care for Unconscious Patients
28.	Assessment: Abdomen, Genitalia, and Rectum
29.	Assessment: Nutrition Screening
30.	Nasogastric Tube: Insertion, Irrigation, and Removal
31.	Feeding Tube: Enteral Nutrition
32.	Total Parenteral Nutrition (TPN) Administration
33.	Intra-abdominal Pressure Monitoring
34.	Assessment: Intake and Output
35.	Continuous Renal Replacement Therapy (CRRT)
36.	Preoperative Care
37.	Pressure Ulcer: Risk Assessment and Prevention
38.	Assessment: Wound

No.	Top Core Specialty Procedures
39.	Assessment: Neurologic System
40.	Intracranial Pressure Monitoring: External Ventricular Drain Care and Management
41.	Restraint Use
42.	Fall Prevention
43.	VTE assessment
44.	Sedation Assessment

1.2 Universal Topics

Universal topics are educational activities developed by the SCFHS and are intended for all specialties. Priority will be given to the following topics:

- High value
- Interdisciplinary and integrated
- Require expertise that might be beyond the availability of the local clinical training sites

Universal topics have been developed by the SCFHS and are available as e-learning via personalized access for each trainee (to access online modules). Each universal topic will have a self-assessment at the end of the module. As indicated in the executive policies of continuous assessment and annual promotion, universal topics are a mandatory component of the criteria for the annual promotion of trainees from their current level of training to the subsequent level. Universal topics were distributed throughout the training period. Instructors and trainees must refer to the Saudi Commission for

Health Specialties Online Universal Topics, which can be accessed at https://www.scfhs.org.sa/MESPS/PME/Pages/UniversalTopics.aspx

(A total of 20 topics must be completed according to SCFHS standards.)

Level	Module	Universal Topics
D1 and D2	Module 1: Medical Fundamentals	Blood Transfusion Hospital-Acquired Infections Antibiotic Stewardship Sepsis, Systemic Inflammatory Response Syndrome (SIRS), DIVC Safe Drug Prescribing
	Module3: Diabetes and Metabolic Disorder	Introduction Diabetic Emergencies Management of Diabetic Complications Obesity
	Module4: Medical and Surgical Emergencies	Introduction Acute Chest Pain Acute Breathlessness Altered Sensorium Hypotension Hypertension Upper GI Bleeding Lower GI Bleeding Abnormal ECG Medical and Surgical Emergencies Assessment
	Module5: Acute Care	Preoperative Assessment Post-operative Care Fluid Management in the Hospitalized Patient Management of Electrolyte Imbalances Acute Care Assessment

Level	Module	Universal Topics
	Module 7: Ethics and Healthcare	Introduction Occupational Hazards of Healthcare Workers Evidence-based Approach to Smoking Cessation Patient Advocacy Organ Transplantation Autonomy and Treatment Refusal Death and Dying Ethics and Healthcare Assessment Ethics and Healthcare

1.3 General Learning Opportunities:

Formal training time should be supplemented by other practice-based learning (PBL), such as:

- Journal club
- Involvement in quality improvement committees and meeting
- Continuous professional activities (CPD) relevant to specialties (conferences and workshops) approved by the program director.

XI. ASSESSMENT AND EVALUATION

1. Purpose of Assessment

Assessment plays a vital role in the success of postgraduate training. Assessment guides trainees and trainers to achieve defined standards, learning outcomes, and competencies. However, the evaluation will provide feedback to learners and faculty regarding curriculum development, teaching methods, and quality of the learning environment. A reliable and valid assessment is an excellent tool for assessing curriculum alignment between objectives, learning methods, and assessment methods. Finally, assessment assures patients and the public that health professionals are safe and competent to practice.

Assessment can serve the following purposes:

a. **Assessment for learning:** Trainers use information from trainees' performance to improve their learning. This enables educators to use information about trainees' knowledge, understanding, and skills to provide feedback to trainees about learning and how to improve.

b. **Assessment of learning** involves trainees in the learning process, which enables them to monitor their progress. Trainees use self-assessment and educators' feedback to reflect on their progress. It develops and supports the trainees' metacognitive skills. Assessment of learning is crucial in helping residents/fellows become lifelong learners.

c. **The assessment of learning** demonstrates learning achievement. This is a graded assessment and usually counts toward the trainee's end-of-training degree.

d. **Feedback and evaluation,** as assessment outcomes, represent quality metrics that can improve the learning experience.

2. Formative Assessment

2.1 General Principles

Trainees, as adults, should strive for feedback throughout their journey of competency from novice to mastery levels. Formative assessment (also referred to as continuous assessment) is an assessment component distributed throughout the academic year to provide trainees with effective feedback.

Trainers and trainees were directed to follow the recommendations of the scientific council regarding the updated forms, frequency, distribution, and deadlines related to the implementation of evaluation forms.

2.2 Formative Assessment Tools

Domain: Knowledge				
No.	Instrument	Assessment method	D1	D2
1.	Academic Activities	Quizzes	End of each theoretical module or as per needs assessment	End of each theoretical module or as per needs assessment
		Special Assignments	One assignment to be submitted every month (to be determined by PD or faculty members)	One assignment to be submitted every month (to be determined by PD or faculty members)

Domain: Knowledge				
No.	Instrument	Assessment method	D1	D2
		Case Study (Presentation)	Two per year (Topics / Cases to be determined by PD or faculty members)	Two per year (Topics / Cases to be determined by PD or faculty members)
		Case-based Evaluation (CBE)	Every month: a minimum of (10) CBEs should be completed per year	Every month: a minimum of (10) CBEs should be completed per year
		Universal Topics (Online modules)	A total of 20 topics must be completed per training period	
2.	End-of-year Progress Test	Exam	Promotion exam	Not applicable
Domain: Skills				
3.	Clinical Competency (Top Core Specialty Procedures)	Direct Observation	Competencies checkoff (each competency to be evaluated 3 times at 3 different sessions) *	Competencies checkoff (each competency to be evaluated 3 times at 3 different sessions) *
4.	Research	Self-assessment	Not applicable	Submitting minimum of proposal
Domain: Attitude				
5.	ITER	Direct Observation	Every month: a minimum of (10) ITER should be completed per year	Every month: a minimum of (10) ITER should be completed per year

* Program director/trainer may, however, use the following to support their decision if the trainee needs to complete the three checkoffs for each competency:

- Demonstrate skilled performance in the activity with enhanced theoretical knowledge and understanding, giving rationale for practice.
- Demonstrate competent performance in all procedures without direct supervision.

The evaluation of each component will be based on the following equation:

Percentage	< 50%	50-59.4%	60-69.4%	>70%
Description	Clear fail	Borderline fail	Borderline pass	Clear pass

To achieve unconditioned promotion, the candidate must score a minimum of "borderline pass" for all five components.

- The program director can still recommend the promotion of candidates if the above is not met in some situations.
- If the candidate scored "borderline failure" in one or two components at maximum, these scores should not belong to the same area of assessment (for example, both borderline failures should not belong to both skills).
- The candidate must have passed all other components and scored a minimum of precise passes in at least two components.

3. Summative Assessment

3.1 General Principles

Summative assessment is a component of assessment that aims primarily to make informed decisions about trainees' competency. Compared to formative assessment, the summative assessment does not aim to provide constructive feedback. Please refer to the General

Bylaws and Executive Policy of Assessment (available online: www.scfhs.org). To be eligible to sit for the final exams, trainees will be granted unk>unk > certification of training completion upon completing all training rotations.

3.1 Final In-training Evaluation Report (FITER)

In addition to the approval of the completion of clinical requirements by the supervising committee, FITER was also prepared by program directors for each trainee at the end of their final year of training. This report shall be the basis for obtaining the Certificate of Training Program Completion and the qualification to sit for the Final Specialty Exams.

3.4 Certification of Training Completion

To be eligible for the final specialty examinations, each trainee is required to obtain "Certification of Training Completion." Based on the training bylaws and executive policy (please refer to www.scfhs.org) trainees will be granted "Certification of Training Completion" once the following criteria are fulfilled:

a) Successful completion of all training rotations.
b) Completion of training requirements (e.g., logbook, research, and others), as outlined in FITER, approved by the scientific committee of specialty.
c) Clearance from SCFHS training affairs ensures compliance with tuition payments and the completion of universal topics.
d) Passing first part examination (whenever is applicable).

"Certification of Training Completion" will be issued and approved by the supervisory committee or its equivalent according to SCFHS policies.

3.5 Final Specialty Examinations

The final specialty examination is the summative assessment component that grants trainees the certifications of the Specialty. It has two elements:

A. **Final written exam:** The final written examination shall consist of one paper of multiple-choice questions (single best answer out of four options); trainees are required to have the "Certification of Training Completion" to be eligible for this exam.

B. **Final clinical/practical exam:** Trainees are required to pass the final written exam to be eligible to sit for the final clinical/practical exam.

The examination format (including the number of questions, eligibility, and scores required to pass) will be based on the Saudi Commission Examination Rules and Regulations.

Available from the Saudi Commission website:
https://www.scfhs.org.sa/MESPS/TrainingProgs/RegulationBoard/Pages/default.aspx.

Blueprint Outlines:

For further details on the final examinations (Promotion Exam, Final Written Exam, and Clinical Exams), please refer to the most updated version published on the SCFHS website.

https://www.scfhs.org.sa/en/MESPS/TrainingProgs/List%20graduate%20programs/Pages/default.aspx

Example of Final Written Exam Blueprint (Promotion Exam)

Section	Proportions (100%)	Number of the Question	Blooms Taxonomy					
			Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Module 1: Foundations of Intensive Care Nursing	20 %	20	4	3	10	2	-	1
Module 2: Intensive Care Nursing 1: (Systems-based approach including Advanced Health Assessment, Pathophysiology, Pharmacology, and Nursing Management) for the following systems Respiratory system	25%	25	5	6	6	6		2
Cardiovascular System	25%	25	5	6	6	6		2
Renal System	15%	15	4	3	5	2		1
Gastrointestinal System	15%	15	4	3	5	2		1
	Total	100%	22	21	32	18		7

Example of Final Clinical Exam Blueprint

		DIMENSIONS OF CARE				
		Health Promotion & Illness Prevention	Acute	Chronic	Psychosocial Aspects	Total
DOMAINS FOR INTEGRATED CLINICAL ENCOUNTER	Patient Care		1	1		
	Patient Safety & Procedural Skills	1	1			
	Communication & Interpersonal Skills					
	Professional Behaviors					
	Total Stations	1	2	1		4

XII. PROGRAM AND COURSES EVALUATION

The SCFHS applies variable measures to evaluate its implementation. Training outcomes of this program will follow the quality assurance framework endorsed by the Central Training Committee at the SCFHS. Trainees' assessment (both formative and summative) results will be analyzed and mapped to the curriculum content. Other indicators that will be incorporated are as follows:

- Report of the annual trainees' satisfaction survey.
- Reports from trainees' evaluation of faculty members.
- Reports from trainees' evaluation of rotations.
- Reports from the annual survey of program directors.
- Data are available from program accreditations.
- Reports from direct field communications with trainees and trainers.

Goal-based evaluation: The achievement of the intended milestones will be evaluated at the end of each stage to assess the progress of curriculum delivery. Any deficiencies will be addressed in the following phase, utilizing the time devoted to trainee-selected topics and professional sessions. In addition to subject-matter opinions and best practices from benchmarked international programs, SCFHS will apply a robust method to ensure that this curriculum will utilize all the data available during the revision of this curriculum in the future.

XIII. POLICIES AND PROCEDURES

This curriculum represents the means and materials that outline the learning objectives with which trainees and trainers interact to achieve the identified educational outcomes. The SCFHS has a complete set of "General Bylaws" and "Executive Policies" (published on the official SCFHS website) that regulate all training-related processes. The general bylaws of training, assessment, accreditation, and executive policies on admission, registration, continuous assessment and promotion, examination, trainees' representation and support, duty hours, and leaves are examples of regulations that need to be implemented. Under this curriculum, trainees, trainers, and supervisors must comply with the most updated bylaws and policies that can be accessed online (via the official SCFHS website).

XIV. APPENDICES

A. Step 1 and Step 2 Competency-Metrix
B. Session plan
C. Universal Topics Modules
D. Nursing Research Project Guidelines (available as PDF doc. From ONE45 to be added)
E. Glossary
F. References

Appendix A

Steps 1 and 2 Competency-Metrix: to map Competency, Learning Domain, and Milestones

Appendix B

Universal Topics

Universal Topics - First Year

Module 1: Introduction

1. Safe drug prescribing
2. Hospital-acquired infections (HAI)
3. Sepsis, SIRS, Disseminated Intravascular Coagulation (DIVC)
4. Antibiotic Stewardship
5. Blood Transfusion

Safe drug prescription

At the end of the learning unit, you should be able to:

1. Recognize the importance of safe drug prescribing in healthcare.
2. Describe various adverse drug reactions with examples of commonly prescribed drugs that can cause such reactions.
3. Apply principles of drug-drug interactions, drug-disease interactions, and drug-food interactions in common situations.
4. Apply principles of prescribing drugs in special situations, such as renal failure and liver failure.
5. Apply principles of prescribing drugs in elderly and pediatric patients, and in pregnancy and lactation.
6. Promote evidence-based cost-effective prescribing.
7. Discuss the ethical and legal framework governing safe drug prescribing in Saudi Arabia.

Healthcare-associated infections (HAI)

At the end of the learning unit, you should be able to:

1. Discuss the epidemiology of HAI with special reference to HAI in Saudi Arabia.
2. Recognize HAI as one of the major emerging threats in healthcare.
3. Identify the common sources and presentation of HAI.
4. The risk factors of common HAIs include ventilator-associated pneumonia, Methicillin-resistant Staphylococcus aureus (MRSA), central line-associated bloodstream infection (CLABSI), and vancomycin-resistant enterococcus (VRE).
5. Identify the role of healthcare workers in the prevention of HAI.
6. Determine appropriate pharmacological (e.g., selected antibiotic) and non-pharmacological (e.g., removal of an indwelling catheter) measures in the treatment of HAI.
7. Propose a plan to prevent HAI in the workplace.

Sepsis, SIRS, DIVC

At the end of the learning unit, you should be able to:

1. Explain the pathogenesis of sepsis, SIRS, and DIVC.
2. Identifying patient-related and non-patient-related predisposing factors for sepsis, SIRS, and DIVC.
3. Recognize a patient at risk of developing sepsis, SIRS, and DIVC.
4. Describe the complications of sepsis, SIRS, and DIVC.
5. Apply the principles of management to patients with sepsis, SIRS, and DIVC.
6. Describe the prognosis of sepsis, SIRS, and DIVC.

Antibiotic stewardship

At the end of the learning unit, you should be able to:

1. Recognize antibiotic resistance as one of the most pressing public health threats globally.
2. Describe the mechanism of antibiotic resistance.
3. Determine the appropriate and inappropriate use of antibiotics.
4. Develop a plan for safe and proper antibiotic use, including correct indications, duration, types of antibiotics, and discontinuation.
5. Appraise local guidelines in the prevention of antibiotic resistance.

Blood transfusion

At the end of the learning unit, you should be able to:

1. Review the different components of blood products available for transfusion.
2. Recognize the indications and contraindications of blood product transfusion.
3. Discuss the benefits and risks of and the alternatives to transfusion.
4. Undertake consent for specific blood product transfusion.
5. Perform the steps necessary for safe transfusion.

6. Develop an understanding of the special precautions and procedures necessary during massive transfusions.
7. Recognize transfusion-associated reactions and provide immediate management.

Module 3: Diabetes and Metabolic Disorders

1. Recognition and management of diabetic emergencies
2. Management of diabetic complications
3. Comorbidities of obesity

Recognition and management of diabetic emergencies

At the end of the learning unit, you should be able to:

4. Describe the pathogenesis of common diabetic emergencies, including their complications.
5. Identify risk factors and groups of patients vulnerable to such emergencies.
6. Recognize a patient presenting with a diabetic emergency.
7. Institute immediate management.
8. Refer the patient to the appropriate next level of care.
9. Counsel patients and families to prevent such emergencies.

Management of diabetic complications

At the end of the Learning Unit, you should be able to:

1. Describe the pathogenesis of important complications of Type 2 diabetes mellitus.
2. Screen patients for such complications.
3. Provide preventive measures for such complications.
4. Treat such complications.
5. Counsel patients and families with special emphasis on prevention.

Comorbidities of obesity

At the end of the learning unit, you should be able to:

1. Screen patients for the presence of common and important comorbidities of obesity.
2. Manage obesity-related comorbidities.
3. Provide dietary and lifestyle advice for the prevention and management of obesity.

Module 7: Ethics and Healthcare

1. Occupational hazards of healthcare workers (HCWs)
2. Evidence-based approach to smoking cessation
3. Patient advocacy
4. Ethical issues: transplantation/organ harvesting; withdrawal of care
5. Ethical issues: treatment refusal; patient autonomy
6. Role of doctors in death and dying

Occupation hazards of HCWs

At the end of the learning unit, you should be able to:

1. Recognize common sources and risk factors of occupational hazards among HCWs.
2. Describe common occupational hazards in the workplace.
3. Develop familiarity with legal and regulatory frameworks governing occupational hazards among HCWs.
4. Develop a proactive attitude to promoting workplace safety.
5. Protect yourself and colleagues against potential occupational hazards in the workplace.

Evidence-based approach to smoking cessation

At the end of the learning unit, you should be able to:

1. Describe the epidemiology of smoking and tobacco usage in Saudi Arabia.
2. Review the effects of smoking on the smoker and family members.

3. Effectively use pharmacological and non-pharmacological measures to treat tobacco usage and dependence.
4. Effectively using pharmacological and non-pharmacological measures to treat tobacco use and dependence among special population groups, such as pregnant women, adolescents, and patients with psychiatric disorders.

Patient advocacy

At the end of the learning unit, you should be able to:

1. Define patient advocacy.
2. Recognize patient advocacy as a core value governing medical practice.
3. Describe the role of patient advocates in the care of patients.
4. Develop a positive attitude toward patient advocacy.
5. Be a patient advocate in situations of conflict.
6. Be familiar with local and national patient advocacy groups.

Ethical issues: transplantation/organ harvesting; withdrawal of care

At the end of the learning unit, you should be able to:

1. Apply key ethical and religious principles governing organ transplantation and withdrawal of care;
2. Be familiar with legal and regulatory guidelines regarding organ transplantation and withdrawal of care;
3. Counsel patients and families in the light of applicable ethical and religious principles; and
4. Guide patients and families to make informed decisions.

Ethical issues: treatment refusal and patient autonomy

At the end of the learning unit, you should be able to:

1. Predict situations in which a patient or family member is likely to decline the prescribed treatment.
2. Describe the concept of the “rational adult” in the context of patient autonomy and treatment refusal.
3. Analyze key ethical, moral, and regulatory dilemmas in treatment refusal.
4. Recognize the importance of patient autonomy in the decision-making process.
5. Counsel patients and families declining medical treatment in light of the patient’s best interests.

Role of doctors in death and dying

At the end of the learning unit, you should be able to:

1. Recognize the important role a doctor can play during a dying process.
2. Provide emotional as well as physical care to a dying patient and family.
3. Provide appropriate pain management in a dying patient.
4. Identify suitable patients and refer them to palliative care services.

Appendix D

Nursing Research Project Guidelines

Under the guidance of an adviser, the trainees are allowed to work in research as individuals or in groups. The clinical research project falls under the supervision of a faculty member and uses a scientific process to analyze clinical problems or issues related to advanced nursing practice. Emphasis is on a project that has a tangible application in the practice setting. The trainee must submit a written proposal/research report and complete a clinical research project. The maximum score for this study is 100 points (see the project assessment tool below). Each

item is weighted in terms of its importance in fulfilling the purposes of the project.

Research project assessment tool available as a pdf file on the One45 system

To be attached here

Appendix-E

Glossary

Glossary	
Blueprint	Description correlating educational objectives with assessment contents. For example, a test blueprint defines the proportion of test questions allocated to each learning domain and/or content.
Competency	Capability to function within a defined professional role that implies entrustment of a trainee by the graduation of the program with the required knowledge, skills, and attitude needed to practice unsupervised.
Specialty Core Content (Skills, Knowledge, and Professional Attitude)	Specific knowledge or skill, or professional attitude that is specific and integral to the given specialty.
Formative Assessment	An assessment is used to inform the trainer and learner of what has been taught and learned, respectively, to improve learning. Typically, the results of formative assessment are communicated through feedback to the learner. Formative assessments are not intended primarily to make judgments or decisions (though it can be as a secondary gain).
Mastery	Exceeding the minimum level of competency to the proficient level of performance indicates rich experience with excellent knowledge, skills, and attitude.

Glossary	
Portfolio	A collection of evidence of progression toward competency. It may include both constructed components (defined by mandatory continuous assessment tools in the curriculum) and unconstructed components (selected by the learner).
Summative Assessment	An assessment that describes the composite performance of the development of a learner at a particular point in time and is used to inform judgment and make decisions about the level of learning and certification.
Universal Topic	A knowledge, skills, or professional behavior that is not specific to the given specialty but universal for the general practice of a given healthcare profession.

Appendix-F

References:

1. Critical Care Networks- National Nurse framework UK: https://www.cc3n.org.uk/

Appendix A: Steps 1 and 2 Competency-Metrix: Map Competency, Learning Domain, and Milestones

Adapted from Critical Care Networks- National Nurse framework UK [1]

Module 1: Foundation of Critical Care Nursing
Description: This module is designed to understand the concepts, principles, and practices of biological and behavioral sciences in caring for critically ill patients
Teaching/Learning Strategies • Lectures • Case studies • Discussion • Reflective exercises • Mentor support • Demonstration observation and supervised practice
Suggested Reference 1. Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition. 2017 2. Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 3. The Saudi Commission for Health Specialties Department of Medical Education & Postgraduate Studies, Code of Ethics for Healthcare Practitioner, (2014)
Learning Outcomes

<table>
<tr><th colspan="2">Module 1: Foundation of Critical Care Nursing</th></tr>
<tr><td colspan="2">At the end of the module, the trainee will be able to:
• Describe the concepts, principles of critical care nursing
• Describe the functions and responsibilities of the professional critical care nurse
• Identify the sources of stress and manage burnout syndrome among healthcare providers
• Identify the psychosocial problems of patients and family members in the critical care setting and provide holistic care
• Discuss the physical and emotional responses to stress, including the local and general adaptation syndromes, anxiety, coping, and defense mechanisms
• Identify various coping strategies to assist in relieving emotional and spiritual distress among patient and family members
• Apply nursing process in providing comprehensive care to critically ill patients
• Discuss the ethical and legal contexts of professional nursing practice
• Use ethical reasoning to synthesize standards of practice, ethical principles, and legal/regulatory requirements in the resolution of ethical dilemmas
• Identify ethical and cultural life-and-death considerations encountered in the Kingdom of Saudi Arabia</td></tr>
<tr><td>Knowledge</td><td rowspan="3">Skills</td></tr>
<tr><td>Step 1 Competency-Metrix</td></tr>
<tr><td>Critical Care Nursing Practice</td></tr>
<tr><td>• Critical Care Nursing Roles, Practice
• Critical Care Professional Accountability
• Interprofessional Collaborative Practice
• Interdisciplinary Care Management Models
• Quality, Safety, and Regulatory Issues in Critical Care
• Privacy and Confidentiality
• Healthy Work Environment</td><td></td></tr>
<tr><td colspan="2">Ethical Issues</td></tr>
</table>

Module 1: Foundation of Critical Care Nursing	
• Differences Between Morals and Ethics • Ethical Principles • Negligence and Professional Malpractice • Withholding and Withdrawing Treatment • Ethics as a Foundation for Nursing Practice • Strategies for Promotion of Ethical Decision-Making in Critical Care • Organ Donation and Organ Procurement	
Psychosocial and Spiritual Alterations and Management	
• Stress and Psychoneuroimmunology • Post-Traumatic Stress Reactions • Coping with Stress and Illness • Anxiety, Delirium • Promoting Sleep • Crisis management • Palliative and end-of-life care	The trainee will be able to: * • Effectively communicate with the patient and family throughout the end-of-life stages. Refer to competency Step 1:13.2 and Step 1:13.3. • Implement aspects of the individualized end-of-life care and treatment plan promptly, in the correct sequence, and at the earliest possible opportunity. • Demonstrate an understanding of the emotional and spiritual support the patient and family may require. • Ensure the safety of individuals as they progress toward their end of life. • Demonstrate understanding of the families religious and spiritual needs immediately following death (including but not limited to): • Assemble all relevant equipment and assist with last offices • Respect for privacy

Module 1: Foundation of Critical Care Nursing	
	• Following the death of a patient, facilitate processes after death (including but not limited to): • Collection of the death certificate and patient property • Provision of support documents • Discussions with regards to tissue and/or organ donation
Patient and Family Education in Critical Care	
• Standards of Patient and Family Education • Education, Teaching, and Learning • Three Domains of Learning • Adult Learning Principles • The Process of Adult Education • Assessing Learning Needs in a Time of Crisis • Assessing Learning Needs for End-of-Life Care • Effective Teaching Strategies • Learning Opportunities • Barriers to Teaching and Obstacles to Learning • Critical Illness and Stress • Prolonged Illness and Stress • Environmental Stress • Cultural and Language Differences • Low Health Literacy • Sensory Deficits • Evaluating the Teaching and Learning Process	

*: Skills to be evaluated as observation in the clinical setting

**: Skills to be assessed as a competency checkoff (Refer to clinical keys for detailed competency checklist and Formative Assessment Tools)

Module 2: Intensive Care Nursing 1 Respiratory System	
Description: This module aims to provide the trainee with the required physiology, pathophysiology, pharmacology, and nursing management knowledge and skills needed for critically ill patients. The skills associated with each section will help the trainee to provide holistic nursing care for patients in the critical care nursing unit	
Teaching/Learning Strategies • Lectures • Case Studies • Discussion • Reflective Exercises • Mentor Support • Observation and Supervised Practice	
Suggested References 1. Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 2. Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition. 2017 3. BLAINE, Pharmacology for Nurses.2nd edition. 2021 4. ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/	
Common Respiratory Problems include (Etiology, Pathophysiology, Assessment, Management)	
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Pneumonia • Pleural Effusion • Pneumothorax • Pulmonary Embolism • Chronic Obstructive Pulmonary Disease • COPD Exacerbations • Acute Asthma • Acute Respiratory Failure • Acute Respiratory Distress Syndrome	
Knowledge	**Skills**

Module 2: Intensive Care Nursing 1 Respiratory System		
Step 1 - Competency-Metrix	Step 2- Competency-Metrix	
1. Patient Assessment, Monitoring, and Observation		
The trainee will be able to: ➢ Discuss essential knowledge and its application. • Observe and monitor the patient requiring respiratory care including: - Normal parameters for respiratory observations - Rate/Depth respiration - Pulse rate - Skin Color, peripheral and central cyanosis - Indications for and limitations of pulse oximetry - Use of accessory muscles - Sputum assessment • Basic ABG analysis - Normal values - Respiratory/Metabolic Acidosis/alkalosis • Common causes of airway obstruction	The trainee will be able to describe the steps of: • Conducting a respiratory system physical assessment to evaluate a patient's respiratory status includes: • Assessing the patient (including color, respiratory workload, respiratory pattern, use of supplementary oxygen, demeanor, responsiveness) • Assessment and interpretation of altered respiratory observations • Recognition of normal and abnormal Lung sounds • Assessing Arterial Blood Gas: - ABGs analysis Indications - ABGs abnormalities - Nursing care plan for abnormal ABGs results - Common causes of acidosis and alkalosis • Patient positioning:	The trainee will be able to: • Perform a full respiratory assessment and document the findings correctly, including** - Rate/Depth/pattern of respiration - Pulse rate - Skin color - Pulse oximetry - Use of accessory muscles - EtCO2 - Sputum • Demonstrate an appropriate intervention to the assessment that you have recorded, including** • ABG's - Safely perform ABG sampling and report results to an appropriate team member - Offer basic interpretation - Suggest actions following interpretation • Prepare the required equipment to administer oxygen therapy via:** - A simple face mask - A venture system

Module 2: Intensive Care Nursing 1 Respiratory System		
	- Discuss the benefits and risks of different patient positions - Explain nursing interventions that done to position - Effects of positioning on the respiratory system - How positioning is used to optimize respiratory function	- Nasal cannula - Reservoir mask • Set up and use humidification methods** • Set up and use pulse oximetry** - Appropriately select probe site • Provide appropriate intervention for patients experiencing airway problems:** - Position - Head tilt/chin lift/jaw thrust - Insertion of airway - Manual ventilation
2. Non-Invasive and Invasive Ventilation		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Care and management of the patient requiring Non-Invasive ventilation (NIV) - Indications - Contraindications - Modes/settings used • Process of intubation, including equipment and medications required - Use of capnography - Causes for emergency re-	The trainee will be able to demonstrate knowledge using a rationale for: - Benefits of NIV over invasive ventilation - Correctly assemble and apply NIV circuits/equipment - Manage the patient on NIV - Adjust therapy in response to patient's condition - Correctly troubleshoot equipment - Physiological effects of	The trainee will be able to undertake the following safely and professionally manage the patient who requires:** • Non-invasive ventilation - Accurately monitors & documents ventilator observations - Seek support & advice as appropriate - Set alarm limits appropriately for specific patients • Intubation**

intubation • Care and management of a patient requiring mechanical ventilation (to include basic modes of mechanical ventilation): - Indications - Contraindications • Modes of ventilation used in the clinical area including: - Spontaneous modes - Pressure controlled ventilation - Volume or time cycled ventilation - Methods of humidification • Normal parameters of ventilation including: - Rate - Tidal volume - Minute volume - Set pressures - PEEP - I: E Ratio - Pressure support - Triggers • Indications for weaning and extubation • Management of Secretions including: - Physiotherapy - Indications for suctioning - Appropriate monitoring and	the NIV on the patient - Psychological impact on the patient of NIV • Endotracheal Intubation • Nursing care for a patient requiring endotracheal intubation: - The role of the nurse during the intubation procedure - Indications, advantages, and disadvantages of endotracheal intubation - How to manage Difficult Airway according to the policy and procedures of the hospital - Process of endotracheal intubation - Correctly identify and assemble equipment required - Correctly identify and prepare medications required - Correct application of cricoid pressure - Causes for emergency re-intubation and actions to minimize risk - Plan care according to the patient's need	- Complete ABCDE assessment of the patient about to undergo a rapid sequence induction - Identify and discuss the role of airway adjuncts, intubation equipment, complex airway equipment, and specific medications - Prepare patient - Prepare medications - Assist during procedure - Secure ETT/tracheostomy tube - Check and confirm the position of the tube - Document length and position of the tube - Check cuff pressure • Invasive ventilation** - Accurately monitor & document ventilator observations - Seek support & advice as appropriate - Set alarm limits appropriately for specific patients - Adhere to the Ventilator Care bundle - Monitor Et CO2 - Appropriately care for a

observations during the procedure • Potential complications associated with suctioning - Correct pressure - Correct sized suction catheter - Correct procedure - Sub-glottic suctioning	• Invasive Ventilation • Nursing care for a patient requiring invasive ventilation: - Indications for invasive ventilation - Prepare for invasive ventilators - The setting of appropriate parameters and alarm limits - Use of humidification - Use of capnography - Manage the patient on invasive ventilation - Adjust therapy in response to patient's condition - Troubleshoot equipment correctly - Assess the physiological and psychological effects of invasive ventilation - Follow a ventilator care bundle	patient during weaning - Recognize when extubation is appropriate - With support, extubate the patient - Care for the patient post-extubation • Suctioning** - Select appropriate suction pressures - Select appropriate catheter size - Suction using the correct technique via: ▪ Naso-oropharyngeal ▪ ET tube ▪ Tracheostomy - Monitor the patient before, during, and after suctioning** - Accurately monitor & chart findings* - Inform/liaise with relevant MDT members* - Practice in a manner that will minimize cross-infection* - Correctly and safely dispose of container/contents/suction equipment as per local policy*
3. Tracheostomy Care		**Skills**

Module 2: Intensive Care Nursing 1 Respiratory System		
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Anatomical position of tracheostomy • Indications for insertion of a tracheostomy - Types of tracheostomies - Percutaneous tracheostomy - Surgical tracheostomy - Mini tracheostomy • Knowledge of tracheostomy care bundle and • NCEPOD best practice standards • Importance of: - Securing tube safely - Changing/cleaning inner tube - Checking cuff pressures - Wound care management • Tracheostomy emergency algorithm and best practice standards, including bedside safety equipment, escalation for blocked tube, unplanned decannulation (Refer to national and local guidelines)	The trainee will be able to demonstrate knowledge using a rationale through discussing the following: • Common types of tubes used: - Cuffed / Uncuffed - Adjustable flange - Fenestrated / Non-fenestrated - Tubes with inner tube • Potential hazards associated with tracheostomies: - During insertion - Following insertion • Psychological effects of tracheostomy	The trainee will be able to undertake the following in a safe and professional manner: • Care for the stoma site** • Clean and change the inner tube** • Observe an insertion of a percutaneous tracheostomy • Appropriately monitor the patient following tracheostomy insertion • Observe a decannulation • Appropriately monitor the patient following decannulation* • Appropriately plan & deliver care in line with national/local guidelines • Nursing care for a patient with a tracheostomy:** - Assist with insertion of percutaneous tracheostomy - Preparation of equipment - Observe the patient pre-/peri-/post-procedure - Care pre-/peri-/post-procedure - Assess the potential physical and psychological effects of tracheostomies and provide care accordingly:** - Change /clean of inner tubes

		- Manage of speaking valves - Plan and provide care according to the hospital policy and procedure - Identify the time to de-cannulate correctly - Assess the patient for potential complications post decannulation
4. Chest Drains		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Indications for chest drain insertion including: - Pneumothorax - Hemopneumothorax - Pleural effusion - Empyema • General care and management: - Indications for the use of chest drain clamps - Drainage - Swinging - Bubbling - Bottle changes - Dressings - Removal	• The trainee will be able to demonstrate knowledge using a rationale through discussion of the following: • Anatomy & physiology related to chest tube insertion: - The chest tube physiological effect • Nursing care for a patient who requires a chest tube - Chest tube insertion indications - Prepare the required equipment for a chest tube insertion - Care for a patient with a chest tube - Change therapy according to the patient's condition - Troubleshoot equipment	The trainee will be able to undertake the following in a safe and professional manner** • Manage the patient with a chest drain in situ • Prepare the equipment ready for insertion • Observe and assist with chest drain insertion • Perform routine respiratory observations • With support, undertake correct action if: - Drain blocks/falls out - There is an air leak from around the stoma site - Bubbling stops - The underwater seal is lost - Tension pneumothorax develops • Effectively manage the drain:

Module 2: Intensive Care Nursing 1 Respiratory System		
• Application of low thoracic suction to a chest drain • Potential complications associated with chest drains	- Chest tube removal	- Position of bottle - Appropriate/cautionary use of drain clamps, in line with local guidance - Dressings - Changing/disposal of bottles - Monitoring drainage - Application of low suction
5. Associated Pharmacology		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • The most common medications for respiratory care: - Bronchodilators/Nebulizers - Steroids - Sedation/paralyzing agents - Analgesia	The trainee will be able to demonstrate knowledge using a rationale through discussion of the following: - The most common medications for respiratory care, indications, mechanism of action, and potential side effects. - Nursing care for a patient requiring medications to treat the respiratory system problems: - Prepare and administer respiratory medications by following 12 rights of medication administration - Monitor the patient during administration for any potential side effect - Adjust the medication	The trainee will be able to undertake the following in a safe and professional manner • Safely prepare and administer medications to support the respiratory system by following the 10 rights of medication administration** • Monitor effects of medication*

Module 2: Intensive Care Nursing 1 Respiratory System		
	does according to the order (e.g., sedation score to aid compliance to mechanical ventilation)	

*: Skills to be evaluated as observation in the clinical setting

**: Skills to be assessed as a competency checkoff (Refer to clinical keys for detailed competency checklist and Formative Assessment Tools)

Module 2: Intensive Care Nursing 1 Cardiovascular System
1. Common Cardiovascular Problems Include (Etiology, Pathophysiology, Assessment, Management)
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Infection and Inflammation of the Heart - Pericarditis - Myocarditis - Endocarditis • Cardiomyopathies • Dilated Cardiomyopathy • Hypertrophic Cardiomyopathy • Peripheral Vascular Disease • Peripheral Arterial Disease • Venous Disease • Aortic Disease • Aortic Aneurysm • Aortic Dissection • Hypertensive Crisis • Heart Failure - Definition of Heart Failure - Classification of Heart Failure

<table>
<tr><th colspan="3">Module 2: Intensive Care Nursing 1
Cardiovascular System</th></tr>
<tr><td colspan="3">- Acute Versus Chronic Heart Failure
- Left-Sided Heart Failure Versus Right-Sided Heart Failure
- Acute Decompensated Heart Failure
• Acute Myocardial Infarction
• Acute Coronary Syndrome
• Angina Pectoris
• Dysrhythmia
• Cardiac Surgery</td></tr>
<tr><th colspan="2">Knowledge</th><th>Skills</th></tr>
<tr><td>Step 1 - Competency-Metrix</td><td>Step 2- Competency-Metrix</td><td></td></tr>
<tr><td colspan="2">2. Assessment, Monitoring & Observation</td><td></td></tr>
<tr><td>The trainee will be able to:
• Discuss the indications for the critically ill adult hemodynamic monitoring:
- Invasive
- Non-Invasive
• Sepsis identification criteria:
- SIRS criteria
- Sepsis criteria (2 SIRS criteria + actual or presumed infection)
- Severe sepsis criteria (Sepsis + evidence of organ dysfunction)</td><td>The trainee will be able to:
• Demonstrate knowledge using a rationale through discussion, and practice application
• Describe the Normal Cardiac Cycle of Cardiac Output
- CO = HR (Autonomic control) x SV (Preload, afterload, contractility)
• Explain the measurement of Blood Pressure
- BP= CO x SVR
• Determine Central</td><td>The trainee will be able to:
• Perform a full cardiovascular assessment and document the findings correctly
• Assess the patient requiring cardiovascular support**
• Accurately perform a full cardiovascular assessment and correctly document the findings of the following: **
- Pulse/ECG
- Blood pressure, including MAP
- Temperature
- Urine output</td></tr>
</table>

Module 2: Intensive Care Nursing 1 Cardiovascular System		
	Venous Pressure • Normal Cardiac Conduction Pathway • Effects of ventilation on the cardiovascular system • Recognize when advanced cardiac support is required to correct hemodynamic instability • Discuss the Indications for hemodynamic monitoring about the critically ill adult: - Invasive - Non-invasive • Describe how to conduct a full cardiovascular assessment, document findings, provide treatment within prescribed limits, and report any abnormal findings to the team members: - Pulse/ECG - Capillary refill - Limb temperature	- Fluid therapies - Capillary refill time - Skin turgor - Limb temperature - Blood results - Biochemical markers

	- Skin turgor - Neurological status - Blood pressure with specific reference to MAP - Interpretation of arterial waveforms - Interpretation of central venous pressure values and waveforms - Recognize the significance of a distended JVP - Renal function & urine output - Cardiac output measurements - Fluid therapies - Blood results	
3. Arterial Access		Skills

Module 2: Intensive Care Nursing 1 Cardiovascular System		
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Selection of arterial cannula sites • complications of arterial cannulas/lines • Normal and abnormal arterial waveform patterns • Reasons for the removal of an arterial cannula • How a transducer system works		The trainee will be able to undertake the following safely and professionally: ** • Prepare the required equipment for insertion of an arterial cannula • Assist in the safe insertion of an arterial cannula • Prepare and prime a transducer system by following the steps provided in the checklist • Attach a transducer to an arterial cannula correctly by following the steps provided in the checklist • Zero a transducer system by following the steps provided in the checklist • Identify when re-zeroing is required by following the steps provided in the checklist • Set appropriate alarm limits • Apply an appropriate dressing following the hospital policy • Obtain a blood sample from the arterial cannula

		by following the steps provided in the checklist • Remove an arterial cannula by following the steps provided in the checklist
4. Central Venous Access		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Sites for central venous access • How a transducer system works • Complications of central venous catheters • Normal and abnormal waveform patterns • Reasons for the removal of a central catheter		The trainee will be able to undertake the following safely and professionally ** • Prepare the required equipment for insertion of a central venous catheter • Assist with the insertion of a central venous catheter • Position the patient for insertion/removal of a central venous catheter to minimize hazards but maintain safety at all times • Check the line position before use following the hospital policy

		• Prime/prepare a transducer system • Attach a transducer to a central venous catheter • Zero a transducer system correctly • Identify when re-zeroing is required • Set appropriate alarm limits • Apply an appropriate dressing following hospital policy • Obtain a venous sample from the central line • Remove a central line safely
5. Shock		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Classifications and treatment of: ○ Cardiogenic Shock ○ Hypovolemic Shock ○ Distributive Shock including:		The trainee will be able to undertake the following in a safe and professional manner:* • Correctly follow hospital and national treatment protocols for the management of shock • Assess the effectiveness of the prescribed treatments and

- Septic Shock - Neurogenic Shock - Anaphylactic Shock • Recognize and interpret signs and symptoms of all the above		interventions and escalate any concerns appropriately
6. Cardiac Rhythms		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Normal cardiac conduction pathway • Steps in Monitoring and interpretation of basic 3 or 5 lead ECG • Normal sinus rhythm • Life-threatening cardiac dysrhythmias - Atrial Fibrillation - Ventricular Tachycardia - Ventricular Fibrillation - Asystole - Pulseless Electrical Activity (PEA) • Other common cardiac dysrhythmias • Nurse role within the Rapid Response team or	The trainee will be able to demonstrate knowledge using a rationale through discussion of the following: • Identify Factors that confirm sinus rhythm • Nursing management for the following cardiac dysrhythmias: - Bradycardia - Tachycardia - Ectopic beats - Atrial fibrillation - Supraventricular arrhythmias - Heart blocks - Atrial flutter - Sinus arrhythmias • Differences between cardioversion and defibrillation and when each would be	The trainee will be able to undertake the following safely and professionally: ** • Attach the patient to a cardiac monitor correctly by following the provided checklist - Perform a 12 lead ECG correctly by following the provided checklist check "emergency" equipment, including the defibrillator correctly by following the procedure checklist • Use ECG analysis steps to identify the following abnormalities: - Bradycardia - Tachycardia - Ectopic beats - Atrial fibrillation - Atrial flutter • Follow BLS/ACLS guidelines

Code team • Identify the Key resuscitation equipment - Location of equipment - Application and use of resuscitation equipment • List the common Emergency drugs used in cardiac arrest	indicated • Managing life-threatening cardiac dysrhythmias (including pacing) • Recognize and follow BLS/ACLS guidelines where appropriate with particular focus on: - Asystole - Pulseless Electrical Activity (PEA) - Ventricular tachycardia - Ventricular fibrillation • Identify and outline management options for Shockable and non-shockable rhythms (as per AHA / Saudi Heart Resuscitation Guidelines) • Identify Potential causes of a cardiac arrest - 4 "H"s - 4 "T"s • List medications used in cardiac arrest • Explain Post arrest management strategies	to manage the following life-threatening dysrhythmias: - Asystole - Pulseless Electrical Activity (PEA) - Ventricular tachycardia - Ventricular fibrillation • Use of Automated Internal and External Defibrillator (AED)**
7. Associated Pharmacology		Skills

Module 2: Intensive Care Nursing 1 Cardiovascular System		
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Discuss the indication, action, and main side effects of the following medications (giving examples of those commonly used within your area): - Inotropes - Vasopressors - Vasodilators - Anti-arrhythmias - Anti-hypertensive - Diuretics	The trainee will be able to demonstrate knowledge using a rationale through discussion of the following: • Indications, contraindications, and mechanism of action and adverse effects of: - Inotropes - Vasopressors - Vasodilators - Anti-arrhythmias - Anti-hypertensive - Diuretics - Anti-coagulants - Anti-platelets - Fibrinolytic agents - Statins • Evaluate the effectiveness of drug therapy and adjust care accordingly • Review with the MDT prescribed medicines about the patient's cardiovascular status	The trainee will be able to undertake the following in a safe and professional manner • Prepare and administer medications used to support the cardiovascular system** by following the 10 rights of medication administration • Prepare medication under supervision to achieve targets limits to optimize outcome set by treating physician (e.g., MAP, systolic pressure) * • Interpret clinical findings and observations to form a rationale for increasing or decreasing a particular cardiovascular medication*

*: skills to be evaluated as observation in the clinical setting

**: Skills to be assessed as a competency checkoff (Refer to clinical keys for detailed competency checklist and Formative Assessment Tools)

Module 2: Intensive Care Nursing 1 Renal system		
1. Common Renal problems include (Etiology, Pathophysiology, Assessment, Management)		
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Acute Kidney Injury (AKI) • Chronic Kidney Disease • Fluids and electrolytes imbalances		
Knowledge		**Skills**
Step 1 - Competency-Metrix	Step 2- Competency-Metrix	
2. Assessment, Monitoring & Observation		
The trainee will be able to: ➢ Demonstrate through discussion essential knowledge and its application. • Describe Methods of measuring and recording fluid output: - Urine output - Fluid loss from drains - GI loss (including vomit, nasogastric drainage, feces) - Problems recording loss during operative procedures - Bleeding (external and internal) - Insensible loss (different routes and specific patients at risk) • Describe Methods and techniques for monitoring the fluid		The trainee will be able to: • Accurately perform and correctly document a full Renal assessment including: * • Assess patient renal function • Demonstrate the ability to measure and record fluid balance accurately and reports abnormalities appropriately • Monitor a patient's biochemistry and hematology results as directed • Identify normal parameters of Urea & Creatinine, Potassium, Chloride, Sodium, Bicarbonate, Hemoglobin • Identify factors that may affect the assessment of renal function (e.g., blocked

status, balance, and renal function of individuals in critical care at risk of renal deterioration: - Recognition of fluid depletion - Recognition of fluid overload - Maintenance of daily fluid balance charts - Patient weight - Urine output relative to weight - Renal blood profile - Creatinine clearance • Basic considerations in renal failure: - Nephrotoxic drugs - Drug dose adjustments in renal failure - Fluid overload - Hyperkalemia		catheters and urinary retention) • Evaluate the effectiveness of fluid replacement • Administer appropriate care to the patient with a urinary/urinary tract catheter (according to the hospital guidelines/policy) - Catheterization equipment - Urometers • Weigh patients routinely in line with local policy
3. Continuous Renal Replacement Therapy (CRRT)		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • The indications for CRRT - Fluid overload - Hyperkaliemia - Metabolic acidosis	The trainee will be able to demonstrate knowledge using a rationale for: • care and management for a patient requiring renal replacement therapy: - Select the prescribed treatment mode and set individualized	The trainee will be able to undertake the following safely and professionally: ** • Prepare the equipment required • Assist with vascular catheter line insertion, maintaining asepsis technique

Module 2: Intensive Care Nursing 1 Renal system		
- Toxin clearance • Define the following terms ultrafiltration, convection, and diffusion • Differentiate between types of CRRT available - CVVH - CVVHD - CVVHDF - SLEDD • Identify the complications associated with CRRT: • Explain how the following complications can be managed/prevented - Hemodynamic instability - Air Emboli - Platelet consumption - Blood Loss - Electrolyte imbalances - Hypothermia - Heparin-induced bleeding or thrombocytopenia	- Identify treatment goals - Assess all baseline blood profiles before treatment and offer explanations - Assess limb perfusion, if relevant - Document accurate fluid balance, including running totals and accumulative balance - Develop a care plan of care for renal replacement therapy • Explain the indication of anticoagulation, the types, preparation, side effects, and the starting doses of each	• Set up the filter ready for use • Connect the patient to the treatment therapy utilizing an aseptic technique • • Change prescribed filtration fluids and empty effluent bags adhering to infection prevention technique • Record appropriate filter pressures and explain their relevance, including signs of filter clotting • Identify the main alarm categories and their relevance • Assess the following: - Access pressures - Return pressures - Transmembrane pressure - Filter checks - Blood chamber check, if appropriate - Body temperature and proper adjustment of active warming /cooling (through replacement fluid or blood circuit) - Physiological parameters - Fluid balance assessment - Electrolyte balance - Acid-base balance

		- Other, specific to own equipment used • Identify what selections are available to end treatment • Demonstrate how to complete treatment, appropriately disposing of waste products according to hospital infection prevention guidelines • Clean filtration machine in line with the hospital policy and store as appropriate • Complete appropriate documentation
4. Managing Fluid Replacement		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Clinical indications that necessitate fluid intervention • Differences between colloids, crystalloids, and blood products	The trainee will be able to demonstrate knowledge using a rationale for: • Describe fluid compartments within the body • Describe osmosis and diffusion in relation to fluid movement • Identify the clinical indications that necessitate fluid intervention • Identify key differences between colloids, crystalloids, and blood products • Rationalize the choice of colloids, crystalloids, and blood products in relation to the cardiac compromised	The trainee will be able to undertake the following in a safe and professional manner: • Recognize altered fluid status* • Recognize the requirements for fluid intervention* • Administer fluids correctly according to the hospital guidelines* • Record fluid balance accurately according to the hospital policy* • Demonstrate optimal blood and blood products transfusions**

	patient • Rationalize the choice of colloids, crystalloids, and blood products in • Relation to the patient with pre-existing cardiac disease	
5. Associated Pharmacology		**Skills**
	The trainee will be able to demonstrate knowledge using a rationale through discussion of the following: • List the commonly used medications in AKI. • Discuss the indications, contraindications, and the appropriate care of the patient during therapy: - Diuretics - Dextrose and insulin - Salbutamol, nebulized - Calcium - Sodium bicarbonate	The trainee will be able to undertake the following in a safe and professional manner: • Evaluate the effectiveness of fluid replacement and medications and adjust care accordingly*

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Module 2: Intensive Care Nursing 1 Gastrointestinal System		
Knowledge		Skills
Step 1 - Competency-Metrix	Step 2 - Competency-Metrix	
1. Assessment and Management		
The trainee will be able to: ➢ Demonstrate through discussion essential knowledge and its application. • Assessment of bowel sounds • Acute GI conditions: - Pancreatitis - GI bleed - Esophageal varices - Duodenal ulcers - Intestinal obstruction and ileus - Hepatitis • Acute liver & biliary impairment: - Overdose of toxins - Biliary sepsis • Chronic Liver impairment • Complications of Liver Disease - Cirrhosis - Hepatic encephalopathy - Hepatorenal syndrome - Spontaneous bacterial peritonitis - Obesity • Differing types of stomas and adjuncts - Ileostomy - Colostomy - Ileal conduit	The trainee will be able to: • Demonstrate knowledge using a rationale through discussion, and practice application • Identify the physiological changes associated with chronic and acute liver disease and • Explain how a patient may present in critical care depending on the cause: - Acute liver & biliary impairment, signs, symptoms, and common causes specifying how a patient may present in critical care depending on the cause • Explain the nursing management for surgical drain associated with abdominal disorders • List the Risks of sepsis	The trainee will be able to: • Accurately perform and correctly document a full GI assessment including: * • Determine the monitoring needs for the individual with altered gastrointestinal function relevant to the underlying pathophysiology • Measure and record nutritional status and report abnormalities appropriately • Follow guidelines in the management of blood glucose control and feeding regimes • Monitor a patient's biochemistry and hematology results • Evaluate the effectiveness and tolerance of nutritional intake • Provide nursing care to the patient with enteral and parental devices (according to hospital guidelines and policy) • Care for the tunneled feeding line according to policy • Manage stoma and/or drains following national and hospital policy and guidelines

	associated with GI disorders	• Monitor and document stoma site appearance (such as color, positioning, functioning) and escalate any concerns
2. Nutrition in Critical Illness		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Identify Factors contributing to nutritional impairment in critical illness • Describe the Nutritional assessment tools appropriate for use in critical care • Different types of feeding and the indications for use - Nasogastric/gastrostomy (PEG) - Parental nutrition - Oral • Describe the steps of stomach/intestinal fluid aspiration - Normal appearance and content of stomach/intestinal fluid - Potential abnormal appearance and content of stomach/intestinal fluid depending on the individuals presenting medical condition	The trainee will be able to demonstrate knowledge using a rationale for: • Refer to patients' past medical history and outline how this may affect gastrointestinal function • Determine the monitoring needs for the individual at risk of deterioration related to gastrointestinal function • Report any abnormalities. • Correctly review a patient's biochemistry and hematology results and interpret the findings of gastrointestinal function • Recognize the patient at risk of deteriorating from sepsis	The trainee will be able to undertake the following safely and professionally: • Assess the patient's nutritional status using an appropriate tool ** • Manage the care of a patient with a nasogastric tube including ** - Method of insertion (depending on tube type) - Correct positioning of the patient - Testing pH and understanding normal values - Correct external measurement - When to Xray - Absorption and aspiration • Administration of medication ** - Correct anchoring of NG device - Monitoring for pressure sore prevention - Right size and appropriate tube selection

Module 2: Intensive Care Nursing 1 Gastrointestinal System		
• Nasogastric insertion in critical care • Correct placement of nasogastric tubes • Confirming placement by pH testing and CXR (when indicated) • Prevention and treatment of blocked enteral feeding tubes • Care of enteral feeding tubes • Types and benefits of various feeding tubes • Care of parenteral nutrition lines • Complications of nasogastric feeding in critical illness • Complications of parenteral nutrition • Management of bowel function in critical care • Nutritional needs of adults and how to maintain a healthy gut: - Food groups required - Calorific intake - Normal blood sugar levels • Types of nasogastric feed		• Manage the care of a patient with a nasojejunal tube—insertion, position, and care of tube** • Safely prepare and administer parental nutrition in line with hospital policy * • On-going assessment of nutritional needs * • Monitor and control blood glucose in critically ill patients according to the hospital policy*
3. Associated Pharmacology		Skills
The trainee will be able to demonstrate through discussion essential knowledge and its application.	The trainee will be able to demonstrate knowledge using a rationale through discussion of the following:	The trainee will be able to undertake the following in a safe and professional manner:** • Prepare medication by following 10 rights of medication administration

Module 2: Intensive Care Nursing 1 Gastrointestinal System		
• Commonly used medications for GI management - Prokinetics & motility - Laxatives - Anti-stimulants - Insulin/ hypoglycemic agents • Discuss the indication and/or contraindication of the GI medications	- Indications for the following medications about specific GI disorders: - Prokinetics & motility - Laxatives - Anti-stimulants - Insulin/hypoglycemic agents - Steroids - Anti-diarrhea drugs - Antisecretory drugs	• Administer medications used to support the gastrointestinal system • Measure medications to achieve targets set (e.g., blood glucose control)

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Second Year Modules

Module 3: Intensive Care Nursing II (Continuation of Intensive Care Module 1)

Module 3: Intensive Care Nursing II
Description: This module aims to provide the trainee with the required physiology, pathophysiology, pharmacology, and nursing management knowledge and skills needed for critically ill patients. The skills associated with each section will help the trainee to provide holistic nursing care for patients in the critical care nursing unit
Teaching/Learning Strategies • Lectures • Case studies • Discussion • Reflective exercises • Mentor support

<table>
<tr><th colspan="3">Module 3: Intensive Care Nursing II</th></tr>
<tr><td colspan="3">• Observation and supervised practice</td></tr>
<tr><td colspan="3">Suggested References
1. Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018
2. Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition. 2017
3. BLAINE, Pharmacology for Nurses. 2nd edition. 2021
4. ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/</td></tr>
<tr><th colspan="3">Module 3: Intensive Care Nursing 2
Neurological System</th></tr>
<tr><td colspan="3">Common Neurosurgical and Neurologic problems include (Etiology, Pathophysiology, Assessment, Management)</td></tr>
<tr><td colspan="3">The trainee will be able to demonstrate through discussion essential knowledge and its application.
• Neurologic Surgery
• Neurologic Disorders
- Stroke
- Seizures
- Guillain–Barré Syndrome
- Myasthenia Gravis
• Traumatic Brain Injury
• Brain Death
• Spinal Cord Injury
• Autonomic Nervous System Dysfunction
• Spinal Shock
• Neurogenic Shock</td></tr>
<tr><th colspan="2">Knowledge</th><th>Skills</th></tr>
<tr><td>Step 1 - Competency-Metrix</td><td>Step 2- Competency-Metrix</td><td></td></tr>
<tr><td colspan="2">1. Assessment, Monitoring & Observation</td><td></td></tr>
<tr><td>The trainee will be able to:
➢ Demonstrate through discussion essential knowledge and its application.</td><td>The trainee will be able to:
• Demonstrate knowledge using a rationale through discussion, and practice application</td><td>The trainee will be able to undertake the following safely and professionally:
• Assess GCS and record it by using the GCS form**</td></tr>
</table>

Module 3: Intensive Care Nursing II		
• Describe purpose of neurological assessment tools: - Glasgow Coma Scale (GCS) tool • identify the recommended frequency of GCS assessment and escalation of frequency • List the Logical steps to assess each component - Differentiating between normal power, mild weakness, severe weakness - Use the correct method of painful stimulus when assessing limb response • Discuss limitations of the GCS as an assessment tool:	• Describe the comprehensive neurological assessment - GCS assessment and accurate documentation - Pupil response (size, shape reactivity) - Limb movements - Signs and symptoms of raised ICP - EVDs nursing care and management • Identifying focal deficits • Describe the care and management of a patient with a neurological compromise - Maintenance of accurate fluid balance - Administration of fluids, including oncotic therapy as prescribed - Monitoring of hemodynamic status and managing therapy to maintain prescribed hemodynamic parameters such as MAP - Providing nursing care that demonstrates an awareness of the potential impact on ICP: e.g., body alignment, tying	• Identify deterioration in level and seek appropriate advice and guidance* • Identify focal deficits such as gag and swallow reflexes, pupil, verbal, and limb responses and correlate with anatomy and physiology** • Identify the need for airway protection in a patient with a deteriorating GCS * • Evaluate sudden changing parameters and initiation of a timely medical management plan to test neurological deterioration* • Assist with intracranial pressure (ICP) and external ventricular drain (EVD) insertion, monitoring, and related nursing care**

	of ET tapes - Transferring patient to neuro-surgical/tertiary center if required - Document the findings by using the proper documentation	
2. Sedation & Delirium Assessment and Management		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Discuss the importance of accurate assessment/recording and communication between care teams, patient and family • Identify strategies, recognize and treat delirium • List the characteristics of delirium - Changes in mental state - Inattention - Disorganized thinking - Altered consciousness • Identify the three clinical subtypes of delirium and their presentation - Hyperactive - Hypoactive - Mixed • Describe the process of	The trainee will be able to demonstrate knowledge using a rationale for:	The trainee will be able to undertake the following safely and professionally: ** • Confirm the desired sedation level for the patient • Administer sedation in accordance with hospital sedation guidance and prescription and by following the 12 rights of medication administration • Assess patients' sedation level using the hospital sedation scoring system • Record sedation levels at the recommended time intervals according to the hospital policy • Perform sedation hold as directed • Assess the need for re-sedation • Provide care for the sedated patient in relation to - Airway protection - Mechanical ventilation - Hygiene needs

assessing the delirium using an appropriate tool e.g., CAMICU • Name the treatment options if delirium is diagnosed • Outline the different types of sedation and indications for use • Assess the adequacy of sedation using a sedation scoring tool • Differentiate between different sedation scoring systems available • Identify strategies for administering sedation • Identify types of sedation used in the context of critical care and their effects • Explain the importance of sedation holds		- Pressure area care - Nutritional needs - Privacy and dignity • Administer and monitor the effect of prescribed pharmacological therapy, in accordance with hospital policy • Inform medical and senior nursing staff of problems if desired sedation levels cannot be achieved • Undertake delirium risk assessment
3. Pain Control		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Anatomy and physiology relating to pain perception • Concept of pain as the 5th vital sign • Basic pain categories - Chronic pain		The trainee will be able to undertake the following safely and professionally: ** • Assess pain score using hospital scoring system and document findings clearly • Assess and document physiological signs of pain • Adjust analgesic infusions as prescribed and administer other

<table>
<tr><th colspan="3">Module 3: Intensive Care Nursing II</th></tr>
<tr>
<td>- Acute pain
- Break through pain
- Withdrawal pain
- Neuropathic pain
• Methods of pain assessment and nonverbal signs of pain
- Utilization of a pain measurement tool and when to seek medical intervention
- Site, onset, character, radiation, timing, exacerbating, and relieving factors
- Types of pain and their likely origin:
- Rebound tenderness in the abdomen
- Musculoskeletal pain
- Incisional pain
- Neuropathic pain
• Importance of excluding causes of agitation such as
- Constipation
- A full bladder and blocked urinary catheter
- Hypoxia
- Poor positioning
• Pharmacological treatment options for different types of pain
- Opioid medications
- Non-opioid medications</td>
<td></td>
<td>prescribed analgesics according to hospital policy
• Use positioning and posture to maximize patient comfort
• Demonstrate safe use and recording of PCA and epidural devices
• Discuss with the patient the need for and safe use of the PCA/Epidural device*</td>
</tr>
</table>

- Adjunct medications such as amitriptyline - Non-steroidal anti-inflammatory drugs - Patient-controlled analgesia (PCA) and Epidurals - Anticonvulsants such as gabapentin and carbamazepine - Analgesic skin patches • Analgesic drugs commonly used in ICU, their effects and side effects • Advantage of using analgesic drugs in combination with each other • Non-pharmacological strategies for pain control - Deep breathing exercises - Use of heat and cold - Reassurance and control of environmental stimulus - Positioning for comfort • Use of relaxation and diversion, limiting the noise and lighting		
4. Associated Pharmacology		

Module 3: Intensive Care Nursing II		
	The trainee will be able to demonstrate knowledge using a rationale through discussion of the following: • Medications used in neurological management - Osmotic therapy - Analgesia - Sedation - Neuromuscular paralyzing agents - Anticonvulsant therapy - Vasoactive therapy - Steroids - Nimodipine	The trainee will be able to undertake the following in a safe and professional manner: • Safely prepare and administer medications** • Monitor effects of medication*

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<table>
<tr><th colspan="3">Module 3: Intensive Care Nursing II
Endocrine System</th></tr>
<tr><td colspan="2">Knowledge</td><td>Skills</td></tr>
<tr><td colspan="2">Step 1 -Level Competency-Metrix</td><td></td></tr>
<tr><td colspan="2">1. Common Endocrine problems include (Etiology, Pathophysiology, Assessment, Management)</td><td></td></tr>
<tr><td colspan="2">The trainee will be able to demonstrate through discussion essential knowledge and its application.
• Hypothalamic–Pituitary–Adrenal Function During Critical Illness
• Thyroid Dysfunction
• Thyrotoxic Crisis
• Myxedema Coma
• Antidiuretic Hormone Dysfunction
• Syndrome of Inappropriate Antidiuretic Hormone Secretion
• Diabetes Insipidus
• Emergencies for Patients with Diabetes Mellitus
• Diabetic Ketoacidosis
• Hyperosmolar Hyperglycemic State
• Hypoglycemia</td><td></td></tr>
<tr><th colspan="2">Assessment, Monitoring, & Observation</th><th>Skills</th></tr>
<tr><td>The trainee will be able to:
➢ Compare normal with abnormal history and physical findings for endocrine disorders</td><td>The trainee will be able to:
• Explore the nursing role in assessing, managing, and evaluating a care plan for acutely ill patients with endocrine disorders.</td><td>The trainee will be able to:
• Accurately perform and correctly document a full History and Physical Examination assessment. **</td></tr>
</table>

Module 3: Intensive Care Nursing II Integumentary System		
Knowledge		**Skills**
Step 1 Competency-Metrix	Senior-Level Competency-Metrix	
1. Skin Integrity		
The trainee will be able to Demonstrate through discussion essential knowledge and its application. • Discuss the risk assessments and the nursing responsibilities related to patients at risk of pressure injury • Identify high-risk areas of the body for pressure injury • Differentiate stages of pressure injury • Describe nursing role to prevent pressure damage • Differentiate various pressure-relieving devices available locally and the agreed pathway for accessing these • Use hospital reporting system for pressure-related injury • Discuss the Importance of collecting and auditing data on pressure area damage to improve pressure area care within the clinical area • Describe the associated costs of pressure damage:		The trainee will be able to undertake the following safely and professionally: ** • Assess the patient's skin using an appropriate risk assessment tool • Assess correct use of devices/equipment and that they are in good working order (in accordance with the hospital policy) • Provide a regular visual check of at-risk areas are conducted*

- Cost to the patient in terms of delayed rehabilitation and pain - Financial costs		
2. Joint Positioning & Range of Movement		**Skills**
• The trainee will be able to demonstrate through discussion essential knowledge and its application. • Concept of "range of movement" and the anatomical structures that could be damaged by poor joint positioning • Joints that are most at risk of damage • Concept of foot drop		The trainee will be able to undertake the following safely and professionally: * • Undertake a full range of passive exercises for the patient at the time intervals specified • Position patient's ankles to reduce the risk of foot drop • Apply any appropriate ankle/foot splint for patients at high risk of foot drop • Identify patients at high risk of joint damage (e.g., long stay, edematous) • Position shoulders to prevent excessive joint stretch when lying a patient on their side
3. VTE Assessment		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Importance and need to assess all patients admitted to hospital against the VTE assessment • Importance of assessing the patient level of mobility • Need for all patients (both surgical and medical patients) with significantly reduced mobility to be		The trainee will be able to undertake the following safely and professionally: ** • Identify and documents risks identified to the individual patient • Administer/provide mechanical prophylaxis according to the hospital policy • Safely administer prescribed pharmacological prophylaxis following the 12 rights of medication administration

further VTE risk assessed • Need to review the patient-related factors identified on the risk assessment against thrombosis risk • Why any patient at risk of thrombosis should receive thromboprophylaxis in accordance with EBP • Types of thromboprophylaxis - Pharmacological - Mechanical • Complications of pharmacological VTE prophylaxis		• Involve patient in the prevention of thrombosis as appropriate • Review VTE risk assessment according to the hospital policy
4. Burns		**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Classification of Burn Injuries • Causative Agent • Depth • Severity • Pathophysiology of Burn Injuries • Localized Tissue Response • Systemic Response • Assessment and Management of Burn Injuries • Resuscitative Phase • Reparative Phase • Rehabilitative Phase		

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<table>
<tr><th colspan="3">Module 3: Intensive Care Nursing II
Multisystem Dysfunction</th></tr>
<tr><td colspan="2">Knowledge</td><td rowspan="3">Skills</td></tr>
<tr><td colspan="2">Step 1 Competency-Metrix</td></tr>
<tr><td colspan="2">1. Trauma</td></tr>
<tr><td colspan="2">The trainee will be able to:
➢ Demonstrate through discussion essential knowledge and its application.
• Mechanism of Injury
- Blunt injury
- Penetrating injury
- Initial assessment and management
• Assessment and Management of Specific Injuries
- Thoracic trauma
- Abdominal trauma
- Musculoskeletal injuries
- Maxillofacial trauma
• Complications of Multiple Trauma
- Early complications
- Late complications</td><td>The trainee will be able to:
• Accurately perform and correctly document a full respiratory assessment including
- Perform a complete physical examination**
- Document the findings of the physical examination*
- Monitor Patient continuously*</td></tr>
<tr><th colspan="2">5. Drug Overdose and Poisoning</th><th>Skills</th></tr>
<tr><td>The trainee will be able to demonstrate through discussion essential knowledge and its application.
• The Poisoned or Overdosed Patient
- Poisoning
- Substance Abuse and Overdose
• Assessment
• Triage</td><td>The trainee will be able to demonstrate knowledge using a rationale for:
• Management
- Stabilization
- Initial decontamination
- Gastrointestinal decontamination
- Enhanced elimination of the drug or toxin</td><td>The trainee will be able to undertake the following safely and professionally:
• Perform a complete physical examination**
• Document the findings of the physical examination*
• Monitor Patient continuously *</td></tr>
</table>

Module 3: Intensive Care Nursing II Multisystem Dysfunction		
• History	- Antagonists, antitoxins, and antivenins - Laboratory studies	

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Module 3: Intensive Care Nursing II Hematologic and Immune Systems	
Knowledge	Skills
Step 1 Competency-Metrix	
2. Common Immunologic problems include (Etiology, Pathophysiology, Assessment, Management)	
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Immunopathogenesis of HIV - Viral replication - Immune defects - HIV transmission and natural history - Control of Opportunistic Infection • General Principles in the Critical Care of Patients with Cancer - Hematologic complications - Hematologic complications - Bone marrow suppression - Leukostasis	The trainee will be able to: • Perform a complete physical examination** • Document the findings of the physical examination* • Monitor patient continuously *
Common Hematologic Disorders include (Etiology, Pathophysiology, Assessment, Management)	Skills

Module 3: Intensive Care Nursing II Hematologic and Immune Systems	
The trainee will be able to demonstrate through discussion essential knowledge and its application. Disorders of Red Blood Cells - Polycythemia - Anemia - Sickle cell disease Disorders of White Blood Cells - Leukopenia - Neoplastic disorders Disorders of Hemostasis • Platelet disorders • Coagulation disorders • Disseminated intravascular coagulation	The trainee will be able to: • Perform a complete physical examination** • Document the findings of the physical examination* • Monitor patient continuously *

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Module 3: Intensive Care Nursing II Special Situations in Critical Care	
Knowledge	Skills
Step 2 -Level Competency-Metrix	
Special Situations in Critical Care	
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Rapid Response Teams and Transport of the Critically Ill Patient - Rapid Response Teams - Benefits of RRTs - Limitations of RRTs - Strategies for Future Improvement of RRTs	

Module 3: Intensive Care Nursing II Special Situations in Critical Care	
• Interfacility Transport - Modes of interfacility transport - Transfer guidelines and legal implications - Phases of interfacility transport	The trainee will be able to undertake the following in a safe and professional manner: * • Assist in the physiological optimization/stabilization of the patient prior to transfer • Assist in the preparation of equipment and resources - Airway management - Portable ventilation - Suction equipment - CV support - Vital sign monitoring - Fluid therapy & pharmacological requirements - Infusion devices/syringe drivers - Transfer bag - Psychological support • Assist in the location, calibration, and safely set up monitoring and transfer equipment including - Alarm parameters - Prepare electromechanical devices - Supplementary gases - Transportation - Establishing the optimum level of stability on portable equipment prior to transfer • Assist in and maintain the safety and continued treatment of the critically ill patient during transfer • Assist in the care for the family of the patient being transferred
• Intrahospital Transport - Adverse events during intrahospital transport - Team composition for an intrahospital transport - Equipment considerations during an intrahospital transports	

Module 4: Nursing Research and Evidence-Based Practice in Nursing
Description: This module will provide the trainees with the required knowledge and skills to understand the steps of a research process, ethical issues in research, maintaining confidentiality, saving data, and disseminating related to the clinical practice. The research component will focus on research methods, sampling, data collection, and data analysis, which contribute to advancing the research skills among the trainees.
Teaching/Learning Strategies • Lectures • Discussion • Reflective exercises • Mentor support • Assignment
Suggested References 1. Polit DF, Beck CT. Essentials of Nursing research: Apprising Evidence for Nursing Practice.9th edition. Lippincott Williams & Wilkins. 2018. 2. Plichta, SB, & Garzon, LS. Statistics for Nursing and Allied Health: Wolters Kluwer/Lippincott Williams & Wilkins Health. 2009. 3. Maxine O & Peter V. Developing a Healthcare Research Proposal: An Interactive Student Guide. 2010
Step 2- Competency-Metrix
Learning outcomes :
At the end of the module the trainee will be able to: • Define the basic concepts of research methodology • Describe different research designs • Describe the scientific process and its use in nursing research • Design a research proposal • Define the steps of the research process in the proposal and/or conduct a circumscribed nursing research project • Identify research problems and the components of the literature review process related to nursing practice • Discuss appropriate statistical techniques used in the analysis of data • Critique current studies of nursing practice • Discuss the utilization of research findings • Discuss the historical perspective of evidence-based practice

Module 4: Nursing Research and Evidence-Based Practice in Nursing	
• Define and apply evidence-based practice principles, which have been identified through nursing research	
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Overview of nursing research • Developing the Research Question • Searching and Reviewing the Literature • Research Design • Ethics in Research • Selecting Participants • Collecting Data • Analyzing Data • Evidence-based Practice and Research Application	• At the end of the module, the trainee will be able to ** • Demonstrate familiarity with research terminology • Demonstrate knowledge of research designs • Conduct a literature search using all resources (electronic and non-electronic resources) • Gather and interpret relevant data to make judgments to select best practices) • Identify evidence-based principles and their application to practice • Apply a critical approach to all steps of the research process • Review and critique journal articles • Formulate a research proposal for an investigation of a topic of interest in the specialty • Apply the research process to the design and implementation of the proposal • Prepare a manuscript for publication See appendix ( ) for Research proposal guidelines and evaluation

*: Skills to be evaluated as observation in the clinical setting

**: Skills to be assessed as a competency checkoff (Refer to clinical keys for detailed competency checklist and Formative Assessment Tools)

Module 5: Leadership and Management
Description: This module will provide the trainee with the knowledge of different leadership and management aspects and skills relevant to their role as critical care nurses. The trainee will gain an understanding of the organizational structure, leadership theories, and quality assurance. The trainee will also be introduced to the skills required for budgeting, staffing, and scheduling.
Teaching/Learning Strategies • Lectures • Discussion • Reflective exercises • Mentor support • Assignment
Suggested References 1. CARLO J.H. Leadership Roles and Management Function in Nursing Theory and Application.9th edition. 2017. 2. Jones, R. P. Nursing leadership and management: theories, processes, and practice. Philadelphia: Joanne P. DaCunha. 2007. 3. Carolyn, Application of Nursing Informatics: Competencies, Skills, and Decision-Making. 2019.
Step 2 - Competency-Metrix
Learning outcomes :
At the end of the module, the trainee will be able to: • Analyze the components of organizational structure and culture • Distinguish between the leadership and management theories • Define the Vision, Mission Statements, and Philosophy • Discuss the role of the nurse in the decision-making, problem-solving, critical thinking, and clinical-reasoning processes • Describe the role of the nurse in quality and risk management assessment • Explain the steps that the nurse follows in budgeting and staffing • Discuss how to delegate tasks effectively • Describe the role of the nurse in conflict situations • Identify differences between effective and ineffective communication • Summarize responsibilities for professional development • Summarize the responsibility of the nurse in the career development process

Module 5: Leadership and Management	
• Distinguish between the different methods for career development • Describe nursing informatics as an emerging field that has helped shape nursing informatics • Explain the implications of nursing informatics for nursing practice, administration, education, and research • Demonstrate skills in the acquisition and retrieval of nursing information using health information systems within institutions • Apply methods to safeguard data and information integrity while maintaining privacy and confidentiality	
Knowledge	**Skills**
Leadership skills	
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Organizational structure and culture • Application of leadership and management theories • Organizational and personal mission, vision, and goals • Critical thinking, problem-solving, and effective decision-making • Quality and risk management • Budgeting, cost, care-delivery models, and staffing • Communication, motivation, and team building • Change and conflict management • Role transition and delegation • Strategic planning and strategic management • Effective communication • Nurse as advocate	At the end of the module, the trainee will be able to* • Apply "systems thinking" to analyses of healthcare organizations • Utilize effective time-management skills • Discuss and implement the principles of information management • Utilize resources effectively (i.e., staffing and scheduling, resource allocation,) • Examine a healthcare organization's financial management (e.g., cost analyses, budget forecasting) • Develop plans for quality and risk management (e.g., quality plans, risk management models) • Use organizational principles to manage organizational change and conflict resolution • Outline the steps of the strategic planning process

Module 5: Leadership and Management	
	• Identify the components of strategic management • Advocate for the health and safety of patients • Demonstrate effective interprofessional relationships that facilitate meeting the needs of patients and families • Demonstrate safe and effective written, verbal, telephone, and electronic communication strategies
Professional Development	**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application. • Career Planning • Career Stages • Justifications for Career Development • Individual Responsibility for Career Development • The Organization's Role in Employee Career Development • Career Coaching • Management Development • Continued Competency as Part of Career Development • Professional Specialty Certification • Integrating Leadership Roles and Management Functions in Career Planning and Development	At the end of the module, the trainee will be able to:* • Initiate independent learning activities • Develop a career plan based on trends in healthcare • Assume responsibility for personal and professional development • Develop reflective practice and professional portfolio • Prepare resumé • Demonstrate self-awareness of own strengths and limitations • Demonstrate an ability to be a motivated self-directed learner • Demonstrate an ability to be an effective mentor and role model as appropriate
Healthcare Informatics	**Skills**
The trainee will be able to demonstrate through discussion essential knowledge and its application.	At the end of the module, the trainee will be able to:

Module 5: Leadership and Management	
• Introduction of nursing informatics and overview • Nursing informatics goals, standards, and scope of practice • Nursing informatics competencies (i.e., computer literacy skills, informatics literacy skills, etc.) • Internet, search engines, electronic databases, and resources • Data integrity, security, and confidentiality • Information technology in patient education • Integrating computers and information technology in nursing education and practice	• Assess the application of information and communication technology (ICT) in the management of patients/patient-related data • Identify different models of computerized healthcare electronic records • Analyze the implications for healthcare delivery arising from telehealth and telemedicine • Recognize the impact of the information-technology revolution on nursing practice • Apply skills to access, create, store, and retrieve nursing-related information from the internet and the worldwide web • Demonstrate ways of integrating nursing informatics with nursing administration, education, clinical practice, and research • Identify security regulations to safeguard data consisting of information about patients and organizations • Recognize ethical issues related to nursing informatics • Assess the future of information technology and its impact on the nursing practice

Appendix (to be appendix B) Example of Session Plan

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	**Outlines**	**Teaching Methods**	**Activities**	**Assessment**	**Resources**
	Pneumonia: • Etiology • Pathophysiology • Assessment • Management • Prevention	• PowerPoint Presentations • Image • Discussion • Video • Reading • Group case study	Trainees will be asked to do the following: • Compare types of respiratory failure • Identify common causes of each type • List two types of respiratory failure • Discuss the cause(s) of each type and how that affects care • Discuss what care and treatment they were involved in providing	• Case Scenario • Quizzes • MCQs Exams • OSCE • SOE	References • Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition. 2017 • BLAINE, Pharmacology for Nurses.2n

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
					d edition.2021 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 26 (Pages: 1005-1015)
	Pleural Effusion • Pathophysiology • Assessment • Management	• PowerPoint presentations • Image • Discussion • Video • Reading • Group case study	Trainees will be asked to do the following: • Describe the pathophysiology of pleural effusion • List the steps that must be followed to	• Case Scenario • Quizzes • MCQs Exams • OSCE • SOE	References • Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • Critical Care Nursing

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			conduct a physical assessment • Discuss the medical and nursing management of pleural effusion		Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition.2017 • BLAINE, Pharmacology for Nurses.2nd edition.2021 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	**Outlines**	**Teaching Methods**	**Activities**	**Assessment**	**Resources**
					Chapter: 26 (Pages: 1015-1018)
	Pneumothorax • Pathophysiology • Assessment • Management	• PowerPoint presentations • Image • Discussion • Video • Reading • Xray image	Trainees will be asked to do the following: • Describe the pathophysiology of pneumothorax • Discuss the medical and nursing management of pleural effusion • Compare between normal chest Xray and chest Xray for a patient with pneumothorax	• Case Scenario • Quizzes • MCQs Exams • OSCE • SOE	References • Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition. 2017 • BLAINE, Pharmacology for

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	**Outlines**	**Teaching Methods**	**Activities**	**Assessment**	**Resources**
					Nurses. 2nd edition. 2021 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 26 (Pages: 1018-1020)
	Pulmonary Embolism (PE) • Pathophysiology • Assessment • Management • Prevention	• PowerPoint Presentations • Image • Discussion • Video • Reading	Trainees will be asked to do the following: • Discuss the nursing interventions to be implemented to prevent PE	• Case Scenario • Quizzes • MCQs Exams • OSCE • SOE	References • Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			• Discuss patients at risk to develop PE • Discuss the medical and nursing management for a patient with PE		• Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition. 2017 • BLAINE, Pharmacology for Nurses. 2nd edition. 2021 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	**Outlines**	**Teaching Methods**	**Activities**	**Assessment**	**Resources**
					Chapter: 26 (Pages: 1021-1026)
	Chronic Obstructive Pulmonary Disease (COPD) • Pathophysiology • Assessment • Management • Prevention	• PowerPoint presentations • Image • Discussion • Video • Reading • Xray image	Trainees will be asked to do the following: • Explain the pathologic and physiologic changes in (COPD) • List the assessment and diagnostic procedure that will be done to assess patient with COPD • Discuss the medical and nursing management for a patient with PE	• Case Scenario • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation	References • Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition. 2017 • BLAINE, Pharmaco

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			• Review Xray image to compare normal chest with abnormal chest		logy for Nurses.2nd edition. 2021 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 26 (Pages: 1027-1043)
	Acute Respiratory Failure • Pathophysiology • Classification • Assessment • Management	• PowerPoint presentations • Image • Discussion • Video • Reading • Xray image	Trainees will: • Describe the effect of the acute respiratory failure on the other organs • Discuss the causes of acute	• Case Scenario • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation	References • Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			respiratory failure • Compare and contrast between the different classifications of acute respiratory failure • Describe the diagnostic procedure and assessment that will be done for a patient with acute respiratory failure • Describe the medical and nursing management for a patient with acute		• Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition.2017 • BLAINE, Pharmacology for Nurses.2nd edition.2021 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	**Outlines**	**Teaching Methods**	**Activities**	**Assessment**	**Resources**
			respiratory failure		Chapter: 26 (Pages: 1005-1015)
	Acute Asthma • Pathophysiology • Assessment • Management • Status Asthmaticus	• PowerPoint presentations • Image • Discussion • Video • Reading • Different treatments for Asthma	Trainees will: • Describe the triggering factors for asthma attacks • Discuss how to avoid asthma attacks • Describe the diagnostic procedure and assessment that will be done for a patient with acute Asthma • Describe the medical and nursing manageme	• Case Scenario • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation	References • Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • Critical Care Nursing Diagnosis and Management, Linda D. Urden, Kathleen M. Stacy, Mary E. Lough. 7th edition.2017 • BLAINE, Pharmaco

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			nt for a patient with acute asthma		logy for Nurses.2nd edition.2021 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 26 (Pages: 1043-10149)
	Assessment of Respiratory system • Health History • Physical Examination	• PowerPoint Presentations • Image • Video • Reading • Demonstration and redemonstration	• Discusses the different life consideration • Perform a complete respiratory history taking	• Case Scenario • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation • Simulation	• Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
		• Simulated lung sounds/ Normal and abnormal • Standardized patient	• Perform respiratory assessment by using the assessment technique • Inspection • Palpation • Percussion • Auscultation • Pulse oximetry • Use of accessory muscles • EtCO2 • Sputum • Compare and contrast between normal and abnormal breathing sounds	• Redemonstration	Chapter: 24 (894-928)
	ABG Analysis	• PowerPoint presentations • Image • Video • Reading	• Explain the components of an arterial blood gas and the	• Case Scenario (ABGs results analysis) • Quizzes • MCQs Exams • OSCE	• Critical Care Nursing: A Holistic Approach. Morton, P.,

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
		• Demonstration and redemonstration • Simulation • Observation of techniques to perform ABG Analysis	normal values for each component • Compare and contrast the causes, signs, and symptoms of respiratory acidosis, respiratory alkalosis, metabolic acidosis, and metabolic alkalosis • Analyze examples of an arterial blood gas result • Describe the purpose of mixed venous oxygen	• SOE • Observation and supervised practice for care provided during simulation • Simulation • Redemonstration	Fontaine, D., 11th edition, Lippincott. 2018 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 24 (Pages: 914-922)

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			saturation monitoring Activity: Practice interpreting arterial blood gases		
	Oxygen Administration	• PowerPoint presentations • Image (Partial rebreathing and non-rebreathing oxygen masks). Air-entrainment (Venturi) mask with various jet orifices., Devices used to apply high-flow, high-humidity oxygen therapy. • Video • Reading	• Discuss why humidification is important for a patient with respiratory problems • Compare and contrast various oxygen devices: cannula, masks, and bag-valve devices. Nasal cannula, high-flow nasal cannula, simple face	• Case Scenario (Patient requiring oxygen therapy) • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation • Simulation • Demonstration and Redemonstration	• Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 24 (Pages: 934-941)

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
		• Demonstration and redemonstration • Simulation • Observation of techniques to administer oxygen therapy and prepare the required equipment	mask, face mask with reservoirs, venturi or air-entrainment mask • Discuss the uses of aerosol and humidity delivery systems • Demonstrate proper use of manual resuscitation bag • Discuss when its mandatory to move a patient to mechanical ventilation • Demonstrate how to set up and use pulse oximetry**		

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			• Prepare the required equipment to administer oxygen therapy via:**A simple face mask, a venture system, nasal cannula, reservoir mask • Demonstrate how to set up and use humidification methods** • Demonstrate appropriate intervention for patients experiencing airway problems ** • Position		

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			• Head tilt/chin lift/jaw thrust • Insertion of airway • Manual ventilation		
	Non-Invasive and Invasive Ventilation	• PowerPoint presentations • Image • Video • Reading • Simulation • Observation of setting up mechanical ventilation for patient • Observe different modes of ventilations • Observe a suctioning procedure	• Discuss the Care and management of the patient requiring NIV • List the steps of intubation, including equipment and medications required - Use of capnography - Causes for emergency re-intubation • Discuss the care and	• Case Scenario (Patient requiring Oxygen therapy) • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation • Simulation • Demonstration and redemonstration	• Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			management of a patient requiring mechanical ventilation (to include basic modes of mechanical ventilation) • Discuss management of secretions		Chapter: 24 (Pages: 941-946) Chapter: 24 (Pages: 969-986)
	Endotracheal Intubation	• PowerPoint presentations • Image (Endotracheal tube. B, Hi-Lo Evac) • Video (procedure of endotracheal tube insertion) • Reading • Simulation	• Discuss the steps that must be followed during endotracheal intubation - Assessment - Prepare patient - Prepare medications	• Case Scenario (Patient requiring endotracheal tube) • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided	• Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • ClinicalKey for Nurses, 2020

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
		• Observe an endotracheal intubation procedure • Observe the required preparation for endotracheal tube insertion • Image. Video Equipment used for endotracheal intubation • Image or video Patient position to facilitate endotracheal intubation • Image or a video for methods for securing the endotracheal tube	- Assist during procedure - Secure ETT/tracheostomy tube - Check and confirm the position of the tube - Document length and position of the tube - Check cuff pressure Discuss the role of airway adjuncts, intubation equipment, complex airway equipment, and specific medications	during simulation • Simulation • Demonstration and redemonstration (prepare equipment, assist during the procedure)	Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 24 (Pages: 945-947)

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
	Endotracheal Suctioning	• PowerPoint presentations • Video (procedure of endotracheal tube suctioning) • Reading • Simulation • Observe an endotracheal suctioning procedure • Observe the required preparation for endotracheal tube suctioning • Image. Video equipment used for endotracheal intubation	- Select appropriate suction pressures - Select appropriate catheter size - Suction using the correct technique via • Naso-oropharyngeal • ET tube • Tracheostomy - Monitor the patient before, during, and after suctioning - Accurately monitor & chart findings - Inform/liaise with relevant	• Case Scenario (Patient requiring endotracheal tube) • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation • Simulation • Demonstration and redemonstration (prepare equipment, assist during the procedure, perform endotracheal suctioning)	• Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 24 (Pages: 947-948)

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			MDT members - Practice in a manner that will minimize cross-infection • Correctly and safely dispose of container/contents/suction equipment as per local policy		
	Invasive ventilation	• PowerPoint presentations • Video (procedure for care provided for a patient on mechanical ventilator) • Reading • Simulation • Observe nursing care for a patient	• Discuss the indication for invasive ventilation • Discuss the care for a patient during mechanical treatment (monitor & document, seek support & advice as	• Case Scenario (Patient requiring mechanical ventilator) • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided	• Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • ClinicalKey for Nurses, 2020

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
		require mechanical ventilator • Image for mechanical ventilator parts	appropriate, and set alarm limits appropriately for specific patients) • Nursing care for a patient during weaning • Nursing care for the patient post-extubating Small Group Activity: Provide a case about a patient who might require mechanical ventilators scenarios and ask trainees to work in small groups to make decisions	during simulation	Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ • Chapter: 24 (Pages: 969-986)

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			regarding the need for mechanical ventilation.		
	Tracheostomy	• PowerPoint presentations • Video (procedure for tracheostomy care) • Reading • Simulation • Observe tracheostomy care • Observe the required preparation for tracheostomy care • Image. Video Equipment used for tracheostomy care.	• Discuss the anatomical position of tracheostomy • Discuss indications for insertion of a tracheostomy - Types of tracheostomies - Percutaneous tracheostomy - Surgical tracheostomy - Mini tracheostomy • List the steps of	• Case Scenario (Patient requiring tracheostomy) • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation • Simulation • Demonstration and redemonstration (prepare equipment, assist during procedure, perform tracheostomy care)	• Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 24 (Pages: 990-995)

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			tracheostomy care • Identify common types of tubes used - Cuffed/uncuffed - Adjustable flange - Fenestrated / non-fenestrated - Tubes with inner tube • Discuss potential hazards associated with tracheostomies - During insertion - Following insertion • Discuss psychological effects of tracheostomy		

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
			Activity: Demonstrate procedures for oral care with intubated patients/patients with tracheostomy		

Adult Critical Care Nursing Diploma Program Didactic Class - Session Plan Module 2: Intensive Care Nursing 1- Respiratory System					
Day/ Time Time	Outlines	Teaching Methods	Activities	Assessment	Resources
	Chest Tube • Chest Tubes • Equipment • Drainage Systems • Chest Tube Placement • Assessment and Management • Complications	• PowerPoint presentations • Video (procedure for chest tube insertion, and care, removal of chest tube) • Reading • Simulation • Observe chest tube care • Observe the required preparation for chest tube insertion, care, and removal Image. Video equipment used for chest tube insertion, care, and removal	• Discuss Indications for insertion of a chest tube • List the steps of chest tube care • Identify common types of chest tube systems • Discuss nursing care - During insertion - Following insertion - Removal Discuss the complication of chest tube Activity: Demonstrate procedures for care of a patient with a chest tube	• Case Scenario (Patient requiring chest tube) • Quizzes • MCQs Exams • OSCE • SOE • Observation and supervised practice for care provided during simulation • Demonstration and redemonstration (prepare equipment, assist during the procedure, perform tracheostomy)	• Critical Care Nursing: A Holistic Approach. Morton, P., Fontaine, D., 11th edition, Lippincott. 2018 • ClinicalKey for Nurses, 2020 Elsevier: https://service.elsevier.com/app/home/supporthub/epm/ Chapter: 24 (Pages: 969-986)