SGT University, Gurugram

Faculty of Nursing

Post Graduate Course: Nurse Practitioner in Critical Care Post Graduate Residency

Program

Syllabus

Preamble

Healthcare system landscape in India is changing rapidly to meet the growing health needs and demands of the population. Nurses in India are expected to extend and expand their scope of practice beyond general practice. The need for significant expansion in tertiary care services in public and private health sector is recognised by the government. Specialist nurses with advanced educational preparation are required to support specialized and super specialized healthcare services. Recognizing this need, INC has prepared Nurse Practitioner in Critical Care post graduate residency program to meet the challenges and demands of tertiary care services reflected in NHP 2015 draft document in order to provide quality care to critically ill patients of all age groups and families.

These programs have a strong clinical component and utilize a competence based training approach. The curriculum comprises three major areas namely core courses, advanced practice courses and critical care speciality courses. Through development of competencies and accreditation, this program aims to enhance service delivery and improve health outcomes. It is hoped to provide new opportunities for Nurses practitioners in terms of career pathway and professional development. Established institutional protocols/standing orders will guide their independent and advanced critical care nursing practice. The critical care nursing practice standard of INC will regulate their practice

The basic principles and practices of nursing as taught in educational programs for nurses. In a course on the Nurse Practitioner in Critical Care Post Graduate Residency Program, the student attends classes and gives care to selected patients. A Nurse Practitioner in Critical Care Post Graduate Residency Program emphasizes the importance of the fundamental needs of humans as well as competence in basic skills as prerequisites to providing comprehensive nursing care for Critical Care Patients. The Course provides a solid foundation in critical thinking, evidence-based practice, nursing theory, and safe clinical care especially in Critical Care and ICU settings. This course will introduce fundamentals of being a Nurse practitioner, the roles, responsibilities and scopes of Nurse practitioner course for the student.

Course as per council

First Year

S.No	Subject	Theory(Hrs)	Lab/Skill (Hrs)	Clinical (Hrs)
	Core Course			
1	Theoretical Basis for Advanced Practice	40	-	-
	Nursing			
П	Research Application and Evidence	56	24	336 (7wks)
	Based Practice in Critical Care			
Ш	Advanced skills in Leadership,	56	24	184 (4wks)
L	Management and Teaching			
	Advanced Nursing Course			
IV	Advanced Pathophysiology Applied to	60	-	336 (7 wks)
	Critical Care Nursing			
V	Advanced Pharmacology relevant to	54	-	336 (7 wks)
ļ	Critical Care Nursing	{		
VI	Advanced Health/Physical Assessment in	70	48	576 (12wks)
	Critical Care			
	Nursing			
Total	2208 hrs	336 (7wks)	96 (2wks)	1776(37wks)

Second Year

	, 			,
S.No	Subject	Theory(Hrs)	Lab/Skill (Hrs)	Clinical (Hrs)
	Specialty Courses			
1	Foundations of Critical Care Nursing	96	48	552 (11 wks)
	Practice			
H	Critical Care Nursing I	96	48	552 (13wks)
Ш	Critical Care Nursing II	96	48	644 (13wks)
Total	2208hrs	288 (6wks)	144(4wks)	1748 (37wks)

Goals

The primary goal of the course is to train specialist nurses in critical care Nursing with advanced educational preparation required to support specialized and super specialized healthcare services. The critical care NP program prepares registered B.Sc. Nurses for advanced practice roles as clinical experts, managers, educators and consultants leading to M.Sc degree in critical care NP

Objectives

After completing of the program, the Nurse Practitioner in Critical Care Post Graduate Residency Program will be able to

1. Assume responsibility and accountability to provide competent care to critically ill patients and appropriate family care in tertiary care centers

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- 2. Demonstrate clinical competence / expertise in providing critical care which includes diagnostic reasoning, complex monitoring and therapies
- 3. Apply theoretical, patho-physiological and pharmacological principles and evidence base in implementing therapies / interventions in critical care
- 4. Identify the critical conditions using differential diagnosis and carry out treatment/interventions to stabilize and restore patient's health and minimize or manage complications independently or collaboratively as a part of critical care team
- 5. Collaborate with other health care professionals in the critical care team, across the continuum of critical care

Duration

Duration of Nurse Practitioner in Critical Care Post Graduate Residency Program is Two year program

Eligibility

- Applicants must possess a registered B.Sc. nurse with a minimum of one year clinical experience, preferably in any critical care setting prior to enrollment
- Must have undergone the BSC in an institution recognized by the Indian Nursing Council.
- Must have scored not less than 55% aggregate marks in the BSc program
- Selection must be based on the merit of an entrance examination and interview held by the competent authority critical care setting prior to enrolment.

Career opportunities

NPs are "registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order, and interpret diagnostic tests, prescribe pharmaceuticals, and perform specific procedures within their legislative scope of practice. Nurses work in all types of critical care and ICU settings where there is a need for health care emergencies locally and globally, such as hospitals, community agencies, ambulatory care offices, occupational settings, and government agencies.

Nursing work involves a broad range of health care activities, such as performing consultations / receiving referrals, Research patient histories, perform physical exams, Order & interpret diagnostic tests, prescribe medications, coordinate patient care, make referrals to & collaborate with other specialists as needed

Teaching strategies

Teaching-theoretical, lab & Clinical can be done in the following methods and integrated during clinical posting

Clinical conference

- Case/clinical presentation
- In depth drug study, presentation and report
- Nursing rounds
- Clinical seminars
- Journal clubs
- Case study/Nursing process
- Advanced health assessment
- Faculty lecture in the clinical area
- Directed reading
- Assignments
- Case study analysis
- Workshops

Subject distribution:

The subject will be for 1 year duration. The topics covered under theory training are as follows

1st Year

I. Theoretical Basis for advanced practice nursing

Unit	Topic	Hours			
1.	Global Health Care Challenges and Trends(Competency-1) 2				
2.	Health System in India	2			
	Health Care Delivery System in India – Changing Scenario (Competency-3)				
3.	National Health Planning – 5 year plans and National Health	2			
	Policy(Competency-2)				
4.	Health Economics & Health Care financing(Competency- 4)	4			
5.	Health Information system including Nursing Informatics (use of	4			
	computers)(Competency-5)				
6.	Advanced Nursing Practice (ANP)	3			
	Definition, Scope, Philosophy, Accountability, Roles & Responsibilities				
	(Collaborative practice and Nurse Prescribing roles)(Competency-6&7)				
7.	Regulation (accreditation of training institutions and Credentialing) &	3			
	Ethical Dimensions of advanced nursing practice role (Competency-8)				
8.	Nurse Practitioner – Roles, Types, Competencies, Clinical settings for 3				
	practice, cultural competence(Competency-6)				
9.	Training for NPs – Preceptorship (Competency-9)	2			
10.	Future challenges of NP practice(Competency-11)	4			

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11.	Theories of Nursing applied to APN(Competency-10)	3
12.	Nursing process applied to APN(Competency-9)	2
13.	Self Learning assignments	6
	TOTAL	40 hrs

NP Critical Care Competencies (Adapted from ICN, 2005)

- Uses advanced comprehensive assessment, diagnostic, treatment planning, implementation and evaluation skills
- 2. Applies and adapts advanced skills in complex and / or unstable environments
- 3. Applies sound advanced clinical reasoning and decision making to inform, guide and teach in practice
- 4. Documents assessment, diagnosis, management and monitors treatment and follow-up care in partnership with the patient
- 5. Administer drugs and treatments according to institutional protocols
- 6. Uses applicable communication, counselling, advocacy and interpersonal skills to initiate, develop and discontinue therapeutic relationships
- 7. Refers to and accepts referrals from other health care professionals to maintain continuity of care
- 8. Practices independently where authorizes and the regulatory framework allows in the interest of the patients, families and communities
- 9. Consults with and is consulted by other health care professionals and others
- 10. Works in collaboration with health team members in the interest of the patient
- 11. Develops a practice that is based on current scientific evidence and incorporated into the health management of patients, families and communities
- 12. Introduces, tests, evaluates and manages evidence based practice
- 13. Uses research to produce evidence based practice to improve the safety, efficiency and effectiveness of care through independent and inter-professional research
- 14. Engages in ethical practice in all aspects of the APN role responsibility
- 15. Accepts accountability and responsibility for own advanced professional judgement, actions, and continued competence
- 16. Creates and maintains a safe therapeutic environment through the use of risk management strategies and quality improvement
- 17. Assumes leadership and management responsibilities in the delivery of efficient advanced practice nursing services in a changing health care system
- 18. Acts as an advocate for patients in the health care systems and the development of health policies that promote and protect the individual patient, family and community
- 19. Adapts practice to the contextual and cultural milieu

CLINICAL PRACTICE

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Budhera, Gurugram

- a. Clinical Residency experience (A minimum of 48 hrs/ week is prescribed, however, it is flexible with different shifts and OFF followed by on call duty)
- b. 8 hours duty with one day Off in a week and on call duty one per week

Clinical placements:

I year: 44 wks (excludes 2 weeks of introductory block classes and workshop)

- Medical ICU 12 weeks
- Surgical ICU 12 weeks
- Cardio/Cardio thoracic (CT) ICU 8 weeks
- Emergency Department 6 weeks
- Other ICUs (Neurology, Burns, Dialysis unit) 6 weeks

I year: 336-96-1776hrs (Theory-skill lab-clinical) [Theory + Lab=20%, Clinical=80%]

I YEAR =46 weeks/ 2208 hrs(46x48hrs)(Theory +Lab :7.5 hrs/week for 44wks =336+96 hrs*)

*Theory + Lab= 96 hrs can be given for 2wks in the form of introductory block classes and workshop

I. Theoretical Basis for Advanced Practice Nursing

Placement: Nurse Practitioner in Critical Care 1st year

Hours of Instruction
Theory 40 hours

S.		Doma	ins	Cognitive	psychomotor	Affective
No						
1	Global Health Care Challenges	Good	to	Identifyes		Develops
	and Trends	know		Global Health		understanding
				Care		
				Challenges and		
				Trends		
2	Health System in India	Good	to			Develops
	Health Care Delivery System in	know	İ			understanding
	India – Changing Scenario					Health Care
			١			Delivery System
						in India
3	National Health Planning – 5	Good	to	Analyzes 5		
	year plans and National Health	know		year plans and		
	Policy			National		

			Lieskie Delies		
			Health Policy		
4	Health Economics & Health	Good to			Appreciates
	Care financing	know			Health
					Economics &
					Health Care
					financing
5	Health Information system	Essential to		Utilizes Health	
	including Nursing Informatics	perform		Information	
	(use of computers)			system	
				including	
				Nursing	
				Informatics	
6	Advanced Nursing Practice		Aware of her	Performs	Write
	(ANP)	Good to	Accountability	nurse	philosophy of
	Definition, Scope, Philosophy,	know	and	practitioner	her institution
			responsibilities	role for five	/ANP
				patients	
		Essential to			
	Accountability,	perform			
	Roles (roles) (Competency-	· ·			
	6&7)			İ	
7	Regulation (accreditation of	Essential to	Identifies the	Maintains	Appreciate and
	training institutions and	perform	ethical	nursing	applies ethical
	Credentialing) &		dimensions of	standard for	values in her
	Ethical Dimensions of		advanced	quality	practice
	advanced nursing practice role	1	nursing	assurance of	
	(Competency-8)		practice role	her institution	
			p. dolloc i o.c		
8	Nurse Practitioner – Roles,	Essential to	Discusses	Participates in	
	Types, Competencies, Clinical	perform	various role of	collaborative	
	settings for practice, cultural	, , , , , , ,	nursing	health care	
	competence(Competency-6)		practice role	team	
9	Training for NPs	Essential to	p. doctor toto	Carries out	
	Preceptor-ship (Competency-	perform		preceptor ship	
	9)	perioriii		role for five	
				students	
10	Future challenges of NP	Eccontial to	Idontifics the		
10		Essential to	Identifies the	Predict the	
}	practice (Competency-11)	perform	challenges of	future	
			nursing	challenge of	
<u> </u>			practice	APN	
11	Theories of Nursing applied to	Essential to	Described the	Applies	
L	APN (Competency-10)	perform	various	Nursing	

1			theories	of	theories to	
			nursing		Advanced	
			applied to	o ANP	practice	
İ					nursing for five	
				-	patients	
12	Nursing process applied to	Essential to	Discuss	the	Applies	
	APN(Competency-9)	perform	steps	of	Nursing	
			nursing	Ì	process to	Ì
		:	process		Advanced	
					practice	
					nursing for five	
					patients	
13	Self-Learning assignments	Essential to	Analyse	the	Writes the	
	a) Identify Health Care	perform	impact	health	health care	
	and Education Policies		care	and	policies of	
	and analyze its impact		educatio	n	India.	
	on Nursing		polices			
	b) Describe the legal				Describes the	
	position in India for NP		Discuss	the	legal position	
	practice. What is the		legal	issues	in India for NP	
	future of nurse		related	to NP	practice.	
	prescribing policies in		practice			ļ
	India with relevance to	ŧ			Examine the	ļ
	these policies in other				nursing	
!	countries?				protocols ICUs	
	c) Examine the nursing				in tertiary	
	protocols relevant to				center	
	NP practice found in					
	various ICUs in tertiary					
	center			İ		ł
	CCITC	Ĺ	L		L	<u> </u>

Assessment techniques for Theory

- Monthly teat (objective type)
- Sessional Examination Objective structured clinical examination (OSCE)
- Pre University Examination (OSCE)
- Assignment
- Project work
- Practice teaching
- Annotated references from journals

Assessment techniques for practical

• Sessional Examination = Objective structured practical examination (OSPE)

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- Pre University Examination (OSPE)
- Clinical conference
- Nursing Rounds
- Clinical assignments
- Clinical evaluation

I. Theoretical Basis for Advance Practice Nursing

Placement: Nurse Practitioner in Critical Care 1st Year

Hours of Instruction
Theory: 40 Hours

			LEARNIN	G OBJ	ECTIVES			
S.	CONTENT	OF	(at the			TEACHING OBJECTIVES	METHODOLOGY	TIME
NO	TOPICS		session	the	student			
			should	be ab	le to)		;	
1	Global	Health	Discuss	the	global	To teach and discuss	Interactive session	2 hrs

	Coro Challange	healthcare trends and	about global	with the students	
	Care Challenges		about global healthcare trends and	regarding global	
	and Trends	challenges.		healthcare trends	
	(Competency-1)		challenges.		
	' 			and challenges.	
2	Health System in	Appreciate the impact	To teach and discuss	Focus group	2 hrs
	India	of Healthcare and	about Health care	discussion on	
	Health Care	Education policies in	delivery system in	health care	
	Delivery System	India	India.	delivery system.	
	in India –				
1	Changing				
	Scenario(Compet				
	ency-3)				
3	National Health	Elaborate the National	To teach and discuss	Student seminar	2 hrs
	Planning – 5 year	health planning and	aboutNational Health	on National Health	
	plans and	health information	Planning – 5 year plans	Planning – 5 year	
	National Health	system in India	and National Health	plans &National	
	Policy		Policy	Health Policy	
	(Competency-2)				
4	Health	Appreciate theHealth	To teach and discuss	Panel discussion	4 hrs
	Economics &	Economics & Health	about Health	on health	
	Health Care	Care financing	Economics & Health	economics and	
	financing		Care financing	health care	
	(Competency- 4)			financing	
5	Health	Discuss the Health	To teach and discuss	Seminar on health	4 hrs
	Information	information system and	about Health	information	
	system including	Nurse informatics	information system	system	
	Nursing	, va. se imprination	and Nurse informatics)	
	Informatics (use		(use of computers)	Simulated learning	
	of		(asc of compaters)	on Nurse	
	computers)(Com			Informatics.	
	petency-5)			miormatics.	
6		Cummariza	To touch and discuss	Student cominer	3 hrs
6	Advanced	Summarize the	To teach and discuss	Student seminar	21112
	Nursing Practice	Definition, Scope,	about Definition,	on scope,	
	(ANP)	Philosophy,	Scope, Philosophy,	philosophy and	
	Definition, Scope,	Accountability, Roles &	Accountability, Roles &	Accountability in	
	Philosophy,	Responsibilities of	Responsibilities of	advanced nursing	
	Accountability,	advanced nursing	advanced nursing	practice.	
	Roles &	practice	practice		
	Responsibilities			Fish bowl	
	(Collaborative			technique on roles	
	practice and			and	
	Nurse Prescribing			responsibilities of	

7	roles) (Competency-6&7) Regulation (accreditation of training institutions and Credentialing) &	Review the Regulation and ethical dimensions of advanced nursing practice	To teach and discuss about Regulation and ethical dimensions of advanced nursing practice	Advanced nursing practice Interactive session on Regulation and ethical dimensions	3 hrs
	Ethical Dimensions of advanced nursing practice role (Competency-8)		To too she and discuss	Cimulated Learning	2 hwa
8	Nurse Practitioner — Roles, Types, Competencies, Clinical settings for practice, culturalCompete nce (Competency-6)	Enumerate the Roles, Types, Competencies, Clinical settings for practice &culturalCompetence	To teach and discuss about Roles, Types, Competencies, Clinical settings for practice &culturalCompetencein advance nursing practice	Simulated learning regarding clinical settings for practice Role play	3 hrs
9	Training for NPs - Preceptorship (Competency-9)	Appreciate the Training preceptorship for Nurse practitioner	To teach and discuss about Training preceptorship for Nurse practitioner	Simulated learning regarding Training preceptorship for Nurse practitioner	2 hrs
10	Future challenges of NP practice (Competency-11)	Analyze theFuture challenges of Nurse Practitioner practice	To teach and discuss aboutFuture challenges of Nurse Practitioner practice	Panel discussion on future	4 hrs
11	Theories of Nursing applied to APN (Competency-10)	Apply the theories of Nursing in Advanced Nursing Practice	To teach and discuss about theories of Nursing applied in Advanced NursingPractice	Seminar on Theories of Nursing applied to APN	3 hrs
12	Nursing process applied to APN (Competency-9)	Plan the Nursing process applied in Advanced Practice Nursing	To teach and discuss about Nursing process applied in Advanced Practice Nursing	Simulated learning based on nursing process related to advanced nursing	2 hrs

				practice	
13	Self-Learning				6 hrs
	assignments	Analyzes the	To teach and discuss	Spot group	
	I.Identify Health	impacthealth care	about health care	discussion	
	Care and	polices on nursing.	policy and its impact		
	Education		on nursing and nursing		
	Policies and	Prepares the nursing			
	analyse its	protocols related to NP	- · · · · · · · · · · · · · · · · · ·	Role play	
	impact on	practice in ICUs and			
	Nursing	tertiary Centre.			
	II.Describe the			Panel discussion	
	legal position in				
	India for NP				
	practice. What is				
	the future of				
	nurse				
	prescribingpolicie				
ŀ	s in India with				
	relevance to				
	these policies in				
	other countries?				
	III.Examine the				
	nursing protocols				
	relevant to NP				
	practice found in				
	various ICUs in				
	you tertiary				
	Centre				

Text book:

- 1. Barkers, A.M. (2009). Advanced Practice Nursing. Massachussets: Jones & Bartlett Publishers
- 2. Hickey, J. V., Ouimette, R. M., & Venegoni, S. L. (1996) Advanced practice nursing: Changing roles and clinical applications. Philadelphia: Lippincott Williams and Wilkins.
- 3. Schober, M., &Affara, F. A. (2006), Advanced nursing practice. Oxford: Blackwell publishing.
- 4. Stewart, G.J, & Denisco, S.M. (2015). Role Development for the Nurse Practitioner. USA: Springer Publishing Company

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II. Research application and Evidence Based Practice in critical care

Subject distribution:

The subject will be for 1 year duration. The topics covered under theory training are as follows

S. No	TOPIC	HRS
1.	Research and Advanced Practice Nursing:	2
	Significance of Research and inquiry related to Advanced nursing	
	role	
2.	Research agenda for APN practice:	5
	 Testing current practice to develop best practice 	
	 Health outcomes Indicators of quality care in advanced 	
	practice	
	 Promoting research culture 	
3.	Research Knowledge and skills:	40 (5 days
	 Research competencies essential for APNs 	workshop)
	 Research Methodology: Phases / steps 	
	 Writing research proposal and research report 	
4.	Writing for publication	5 (Workshop)
5.	Evidence based practice	4
	 Concepts, principles, importance and steps 	
	 Integrating EBP to ICU environment 	
	 Areas of evidence in critical care 	
	 Barriers to implement EBP 	
	 Strategies to promote 	

II. Research Application And Evidence Based Practice In Critical Care

Placement: Nurse Practitioner in Critical Care Post Graduate Residency Program

Hours of Instruction

(Theory: 56+Lab/skill lab: 24hrs) =80hrs

Research practicum: Dissertation (336 hrs.=7weeks)

S. No	TOPIC	DOMAINS	COGNITIVE	PSYCHOMOTOR	AFFECTIVE
1	Research and Advanced Practice Nursing: Significance of Research and inquiry related toAdvanced nursing role	Good to know	Identifies Significance of Research and inquiry related to Advanced nursing role		
2	Research agenda for APN practice: Testing current practice to develop best practice Health outcomes Indicators of quality care in advanced practice Promoting research culture	Essential to perform	itursing role	Evaluates current practice to develop best practices and health outcomes and quality care in advanced practice	
3	Research Knowledge and skills: Research competencies essential for APNs Research Methodology: Phases / steps Writing research	Essential to perform		Applies sound research knowledge and skills in conducting independent research in critical care setting	

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	proposal and research report		Writes research proposal and research report	1
4	Writing for publication	Desirable to perform	Prepares manuscript fo publication Writes systematic review	Develop understanding in writing for publication (writing for workshop)
5	Evidence based practice	Essential to		Analyses the
	 Concepts, principles, importance and steps Integrating EBP to ICU environment Areas of evidence in critical care Barriers to implement EBP Strategies to promote 	perform		evidence for nursing interventions carried out in critical care nursing practice to promote safety and effectiveness of care.

Assessment techniques for Theory

- Monthly teat (objective type)
- Sessional Examination Objective structured clinical examination (OSCE)
- Pre University Examination (OSCE)
- Assignment
- Project work
- Practice teaching
- Annotated references from journals

Assessment techniques for practical

- Sessional Examination = Objective structured practical examination (OSPE)
- Pre University Examination (OSPE)
- Clinical conference
- Nursing Rounds
- Clinical assignments
- Clinical evaluation

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II.RESEARCH APPLICATION AND EVIDENCE BASED PRACTICE IN CRITICAL CARE

Placement: Nurse Practitioner in Critical CarePost Graduate Residency Program

Hours of Instruction

(Theory: 56+Lab/skill lab: 24hrs) =80hrs Research practicum: Dissertation (336hrs.=7weeks)

		LEARNING OBJECTIVES			
S.	CONTENT OF	(At the end of the	TEACHING	METHODOLOGY	TIME
NO	TOPICS	session the student	OBJECTIVES	METHODOLOGY	TITVIE
		should be able to)			
1	Research and				
	Advanced Practice	1. Describe the	To teach and	• Interactive session	2 hrs
	Nursing:	concept of Research	discuss Research,	with the students	
	 Significance of 	2. Discuss the concept	Advanced Nursing	regarding concept	
İ	Research	of Advance Practice	roles and to	of research and	
	 Advanced 	Nursing	understand about	Advanced Practice	
	nursing role	3. Review the	thesignificance of	Nursing.	
		significance of	Research and		
		Research.	inquiry related to	Spot group	
		4. Analyze the	Advanced nursing	discussion on	İ
		relation of Research	role in respect to	Research and	
		inAdvanced nursing	Research.	Advanced Practice	
		role		Nursing	

2	Research agenda for APN practice: Testing current practice Developing best practice Indicators of quality care in advanced practice Promotingresea rch culture	 Discuss the concept and scope of Advance Practice Nurse. Analyze the possible health outcomes of research in health care sector. Enlist the indicators of quality care in advanced practice. Summarize the advantages in promoting research culture in advanced practice. 	To teach and discuss about Testing current practice to develop best practice, health outcomes and indicators of quality care in advanced practice, promoting research culture	 Teachers seminar on healthoutcomes and indicators of quality care in advanced practice Interactive session with students regarding promoting research culture. Role play on application of research in advanced practice. 	5 hrs
3	Research Knowledge and skills: Research competencies essential for APNs Research Methodology Phases / steps of research. Writing research proposal and research report.	 Appreciate the research competencies essential for APNs Demonstrate the research competencies essential for APNs Elaborate steps or phases of research. 	To teach and discuss about Research competencies essential for APNs: interpretation and use of research, evaluation ofpractice, participation in collaborative research. Research MethodologyPhas es / steps: Research question, Review of literature, conceptual framework,	 Workshop on Research Methodology and Phases. Student seminar on Research competencies essential for APNs 	40 hrs (5 days workshop)

					T
			research designs,		
			sampling,data		
		·	collection,		
			methods &tools,		
			Analysis and		
			Reporting.		
			writing research		
			proposal and		
			research report		
					ļ
4	Writing for				
-	publication	1. Demonstrate on writing	To teach and	 Integrated teaching 	5 hrs
	Writing workshop	workshop manuscript.	practice on	on writing	(Workshop)
	• writing workshop	Workshop manaseript.	writing workshop	workshop	(11011101101)
		2. Enlistthe sources for	Manuscript	manuscript	
		workshop funding.	preparation and	manuscript	
		workshop randing.	finding funding		
			sources for		
			workshop.		
5	Evidence based				
	practice	1. Explain the concept,	To teach and		4 hrs
	Concepts,	principles, importance	discuss about	 Simulated learning 	
	principles,	and steps of Evidence	Concepts,	on implementation	
	importance and	Based Practice.	principles,	of EBP in ICUs.	
	steps	2. Demonstrate	importance and	Role play	
	Integrating EBP	integration of EBP to	steps, Integrating	• Focus group	ļ
	to ICU	ICU.	EBP to ICU	discussions	
	environment	3. Enlist the areas of	environment,		
	Areas of	evidence in critical care.	Areas of evidence		
	evidence in	4. List the barriers to	in critical care,		
	critical care	implement EBP.	Barriers to		
	 Barriers to 	5. Discuss the strategies to	implement EBP,		
	implement EBP	promote EBP	Strategies to		
	• Strategies to		promote.		
	promote EBP				
	promote Lbr				
1		1	1	I .	1

Bibliography:

- Burns, N., & Grove, S. K. (2011). Understanding nursing research: Building an evidence-based practice (5thed.). Ist Indian reprint 2012, New Delhi: Elsevier.
- Polit, D. F., & Beck, C. T. (2012). Nursing research: Generating and assessing evidence for nursing practice (9thed.). Philadelphia: Lippincott Williams & Wilkins.
- Schmidt, N. A., & Brown, J. M. (2009). Evidence based practice for nurses' appraisal and application of research. Sd: Jones and Bartlet Publishers.

III. Advanced in Leadership, Management and Teaching skills

Subject distribution:

The subject will be for 1 year duration. The topics covered under theory training are as follows

Unit	Topic	Hours
1	Theories, styles of leadership and current trends	2
2	Theories, styles of management and current trends	2
3	Principles of leadership and management applied to critical care settings	6
4.	Stress management and conflict management – principles and application	4
	to critical care environment, Effective time management	
5.	Quality improvement and audit	4

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6	Problem solving, critical thinking and decision making, communication					
	skills applied to critical care nursing practice					
7.	Team building, motivating and mentoring within ICU set up	2				
8.	Budgeting and management of resources including human resources – ICU	6				
	budget, material management, staffing, assignments					
9.	Change and innovation	2				
10.	Staff performance, and evaluation (performance appraisals)	6				
11.	Teaching – Learning theories and principles applied to Critical Care Nursing	2				
12.	Competency based education and outcome based education	2				
13.	Teaching methods / strategies, media: educating patients and staff in	8				
	Critical Care settings					
14.	Staff education and use of tools in evaluation	4				
15.	APN – Roles as a teacher					
16.	Advocacy roles, family counseling in critical care environment	2				
	Total	60hrs				

Practical / Lab = 20.5 hrs.

- 1. Preparation of budget
- 2. Preparation of staff duty roster
- 3. Preparation of staff patient assignment
- 4. Development of teaching plan
- 5. Micro teaching / patient education sessions
- 6. Preparation of teaching media for patients and staff

Assignment - ICU work place violence

COMPETENCIES (Advanced skills in Leadership, Management and Teaching)

- 1.Applies principles of leadership and management in critical care units
- 2. Manages stress and conflicts effectively in a critical care setting using sound knowledge of principles

- 3. Applies problem solving and decision making skills effectively
- 4. Uses critical thinking and communication skills in providing leadership and managing patient care in ICU
- 5. Builds teams and motivates others in ICU setting
- 6. Develops unit budget, manages supplies at staffing effectively
- 7. Participates appropriately in times of innovation and change
- 8. Uses effective teaching methods, media and evaluation based on sound principles of teaching
- 9. Develops advocacy role in patient care, maintaining quality and ethics in ICU environment
- 10. Provides counseling to families and patients in crisis situations particularly end of life care

CLINICAL PRACTICE

- c. Clinical Residency experience (A minimum of 48 hrs/ week is prescribed, however, it is flexible with different shifts and OFF followed by on call duty)
- d. 8 hours duty with one day Off in a week and on call duty one per week

REFERNECES

- 1. Bastable, S. B. (2010). *Nurse as educator: Principles of teaching and learning for nursing practice* (3rd ed.). New Delhi: Jones & Bartlett Publishers 17
- 2. Billings, D. M., & Halstead, J. A. (2009). *Teaching in nursing: A guide for faculty* (3rd ed.). St.Louis, Missouri: Saunders Elsevier.
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- 5. Roussel, L., &Swansburg, R. C. (2010). Management and leadership for nurse administrators (5th ed.). New Delhi: Jones and Bartlet Publishers.

III.ADVANCED SKILLS IN LEADERSHIP, MANAGEMENT AND TEACHING

Dean
Faculty of Nursing
SGT University

Budhera, Gurugram

Theory 60 hours
Practical 20.5 hours
Total: 80.5 hours

S. No	TOPIC	DOMAINS	COGNITIVE	PSYCHOMOTOR	AFFECTIVE
	 			PSTCHOIVIOTOR	AFFECTIVE
1	Theories, styles of	Good to	Develops		
	leadership and current	know	knowledge		
	trends		inTheories,		
			styles of		
			leadership and		
			current trends		
2	Theories, styles of	Good to	Develops	<u></u>	
	management and	know	knowledge in		
	current trends	İ	Theories, styles		
			of management		
ĺ		i	and current		
			trends		
3	Principles of leadership	Essential to		Applies	
	and management	perform		principles of	
	applied to critical care			leadership and	
	settings			management in	
]		,		critical care units	
4	Stress management and	Essential to		Manages stress	
	conflict management -	perform		and conflicts	
	principles and			effectively in a	
	application to critical	į		critical care	
	care environment,			setting using	
	Effective time			sound	
}	management			knowledge of	
				principles	
5	Quality improvement	Desirable to		Participates in	
	and audit	perform		quality	
				improvement	
		İ		and audit	
					,
				Prepare nursing	
				care standards	
				and protocols	
C	Droblem colving critical	Eccential to			
6	Problem solving, critical	Essential to		Applies problem	
L	thinking and decision	perform		solving and	

Déan

	making, communication			decision making	
	skills applied to critical			skills effectively	
	care nursing practice			,	
7	Team building,	Essential to		Builds teams and	
/	motivating and	perform		motivates others	
		periorii		in ICU setting	
	mentoring within ICU			in ico setting	
	set up			Davidana	
8	Budgeting and	Essential to		Develops unit	}
	management of	perform		budget,	
	resources including			manages	
	human resources — ICU			supplies and	
	budget, material			staffing	
	management, staffing,			effectively	
	assignments				
				Prepare staff	
				duty roster	
9	Change and innovation	Desirable to		Participates	
		perform		appropriately in	
		periorm		times of	
-				change	
10	Staff performance, and	Essential to		Evaluates staff	
	evaluation	perform		performance	
	(performance			DI.	
	appraisals)			Planning and	
				conducting	
				OSCE/OSPE	
11	Teaching – Learning	Desirable to		Applies Teaching	
	theories and principles	perform		Learning	
	applied to Critical Care			theories and	
	Nursing			principles in	
				Critical Care	
				Nursing	
12	Competency based	Good to	Develops		
	education and outcome	know	knowledge in		
	based education		Competency		
			based education		
			and outcome		
Í			based education		
			based education		
13	Teaching methods /	Essential to		Uses effective	
	strategies, media:	perform	<u> </u>	teaching	

	educating patients and		methods, media	
	staff in Critical Care		and evaluation	
	settings		based on sound	
	Security		principles of	
			teaching	
			teaching.	
			Conduct	
			microteaching-	
			patient	
			education	
			teaching	
14	Staff education and use	Essential to	Prepares	
	of tools in evaluation	perform	evaluation tool	2
			Construction of	
			tests	
15	APN – Roles as a	Essential to		Appreciates
	teacher	perform		the role of
				APN
16	Advocacy roles, family	Essential to	Demonstrate	
	counseling in critical	perform	advocacy role in	
	care environment		patient care,	
			maintaining	
			quality and	
			ethics in ICU	
			environment	

Assessment techniques for Theory

- Monthly teat (objective type)
- Sessional Examination Objective structured clinical examination (OSCE)
- Pre University Examination (OSCE)
- Assignment
- Project work
- Practice teaching
- Annotated references from journals

Assessment techniques for practical

- Sessional Examination = Objective structured practical examination (OSPE)
- Pre University Examination (OSPE)
- Clinical conference
- Nursing Rounds

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- Clinical assignments
- Clinical evaluation

III.ADVANCED SKILLS IN LEADERSHIP, MANAGEMENT AND TEACHING

Placement: Nurse Practitioner in critical care 1st Year

Hours of Instruction

Theory: 56 Hours Practical: 24 Hours Total: 80 Hours

				Total: 80 Hours	
S. NO	CONTENT OF TOPICS	LEARNING OBJECTIVES (at the end of the session the student should be able to)	TEACHING OBJECTIVES	METHODOLOGY	TIME
1	Theories, styles of leadership and current trends	Describe the theories, styles of leadership and current trends.	To teach and discuss about theories, styles of leadership and current trends.	Interactive session with the students regarding theories, styles of leadership and current trends.	2hrs
2	Theories, styles of management and current trends	Elaborate the theories, styles of management and current trends	To teach and discuss about the theories, styles of management and current trends.	 Teachers seminar on theories. Interactive session with students regarding theories and current trends. Role play on functions of a nurse. 	2hrs

·					
3	Principles of leadership	Review the	To teach and		
	and management applied	principles of	discuss about the	 Student seminar 	
	to critical care settings	leadership and	principles of	on leadership and	6 hrs
ļ		management	leadership and	management	
		applied to critical	management	Spot group	
		care settings	applied to critical	discussions	
			care settings		
İ					
4	Stress management and	Review about	To teach and		
	conflict management –	stress	discuss about the	 Role play and 	
] '	principles and application	management and	stress management	video film on the	
	to critical care	conflict	and conflict	nurses interacting	4 hrs
	environment, Effective	management –	management –	with the patient	
	time management	principles and	principles and		
		application to	application to	 Problem based 	
		critical care	critical care	learning for	C)
		environment,	environment,	maintaining	
1		Effective time	Effective time	nurse patient	
ļ		management	management	relationship.	
]		1		 Seminar on stress 	
				and conflict	
				management	
5	Quality improvement and	Summarize quality	To teach and	management	4 hrs
,	audit	improvement and		- Donal diagrapian	4 1115
	audit			 Panel discussion 	
		audit	quality	on quality	
			improvement and	improvement and	
		,	audit	audit	
6	Problem solving, critical	Describe problem	To teach and		
	thinking and decision	solving, critical	discuss about the	 Case studies 	
	making, communication	thinking and	problem solving,	- case studies	
	skills applied to critical	decision making,	critical thinking and	- Church	6 hrs
				• Student seminar	2111.0
	care nursing practice	communication	decision making,	on Problem	
		skills applied to	communication	solving, critical	
		critical care nursing	skills applied to	thinking and	
		practice	critical care nursing	decision making,	

			practice	communication	
			practice	skills.	
7	Team building, motivating	Demonstrate team	To teach and		
	and mentoring within ICU	building,	discuss about the	Integrated	2 hrs
	set up	motivating and	team building,	teaching on team	
		mentoring within	motivating and	building in ICU	
	İ	ICU set up.	mentoring within		
			ICU set up.	Role play	
		•			
		D 11 +1-	T- 1		
8	Budgeting and	Describe the	To teach and	Facus	6 hrs
	management of resources	budgeting and management of	discuss about the	Focus group discussion on	6 hrs
	including human		budgeting and management of	discussion on budgeting and	
	resources – ICU budget,	resources including	management of resources including		
	material management,	human resources – ICU budget,	human resources —		
	staffing, assignments	ICU budget, material		resources.	
			J .	Cominar	
		management,	material	Seminar on	
		staffing,	management, staffing,	material	
		assignments		management and	
	Change and invarian	Diagues the shapes	assignments To teach and	staffing Panel discussion	
9	Change and innovation	Discuss the change and innovation	To teach and discuss about	on change and	
		and innovation		innovation	2 hrs
			change and innovation	imiovation	21113
Ē			IIIIOVation		
10	Staff performance and	Review staff	To teach and	Seminar on	
10	Staff performance, and evaluation (performance	performance, and	discuss about Staff	Seminar on performance	
	appraisals)	evaluation	performance, and	appraisals.	
	appraisais)	(performance	evaluation	арргаізаіз.	6hrs
		appraisals)	(performance	Project based	01113
		appraisais/	appraisals)	learning	
			appraisais	learning	
11	Teaching - Learning	Elaborate teaching	To teach and		
1	theories and principles	- Learning theories	discuss about the	• Cominar	
	applied to Critical Care	and principles		• Seminar on	2 hrs
L	applied to Critical Care	and principles	teaching – Learning	teaching –	2 hrs

	N				
	Nursing	applied to Critical	theories and	Learning theories	
		Care Nursing	principles applied to	and principles	
			Critical Care Nursing	applied to Critical	
				Care Nursing	
				• Interactive	
		!		sessions	
12	Competency based	Demonstrate the	To teach and	Focus based	
	education and outcome	competency based	discuss about	discussion on	
	based education	education and	competency based	competency based	2 hrs
		outcome based	education and	education	
		education	outcome based		
			education	Fish bowl	
				technique on	
				outcome based	
				education	
				Cadeation	
13	Tea <mark>ching</mark> methods /	Demonstrate	To teach and		
	strategies, media:	teaching methods /	discuss about the	Seminar on	
	educating patients and	strategies, media:	teaching methods /	teaching methods	8hrs
	staff in Critical Care	educating patients	strategies, media:	and strategies	
	settings	and staff in Critical	educating patients		
1		Care settings	and staff in Critical	Interactive session	
		<u> </u>	Care settings		
				27	
14	Staff education and use of			Seminar on staff	
	tools in evaluation	education and use	discuss about staff	education	
		of tools in	education and use		4 hr
		evaluation	of tools in		€. J
			evaluation	Role play on staff	
			<u> </u>	education and use	
				of tools in	
				evaluation.	
15	APN – Roles as a teacher	Elaborate the APN	To teach and		
		– Roles as a	discuss about the	Teachers seminar	
		teacher	APN – Roles as a	on Simulated	2 hrs
			teacher	learning on APN -	21113
L	1		teacher	learning on Ariv -	

				Roles as a teacher.	
16	Advocacy roles, family	Review the	To teach and		
	counseling in critical care	advocacy roles,	discuss about	Project based	
	environment	family counseling	advocacy roles,	learning	2 hrs
		in critical care	family counseling in		
		environment	critical care	Role play on family	
			environment	counseling	

Text book:

- 1. Bastable, S. B. (2010). Nurse as educator: Principles of teaching and learning for nursing practice (3rd ed.). New Delhi: Jones & Bartlett Publishers 17
- 2. Billings, D. M., & Halstead, J. A. (2009). *Teaching in nursing: A guide for faculty* (3rd ed.). St.Louis, Missouri: Saunders Elsevier.
- 3. Clark, C. C. (2010). Creative nursing leadership and management. New Delhi: Jones and Bartlet Publishers.
- 4. McConnel. (2008). Management principles for health professionals. Sudbury, M. A: Jones and Bartlet Publishers.
- 5. Roussel, L., &Swansburg, R. C. (2010). Management and leadership for nurse administrators (5th ed.). New Delhi: Jones and Bartlet Publishers.

A. Advanced pathophysiology applied to critical care nursing – I

S no	Topic	Hours
1	Cardiology function	8
2	Pulmonary function	4
3	Neurological function	6
4	Renal function	4
5	Gastro-intestinal and hepatobiliary function	4
6	Endocrine function	4

Course distribution

Advanced pathophysiology applied to critical care nursing -I

S no	Content	Hours
1	Hematological function	8
2	Integumentary function	2
3	Multisystem dysfunction	8
4	Specific function	6
5	Reproductive function	6

Clinical practice -

- Clinical residency experience(a minimum of 48 hrs/ week is prescribed, however, it is flexible with different shifts and off followed by on call duty)
- 8 hours duty with one day off in a week and on call duty one per week clinical placements:

Bibliography -

- 1. Huether, s. E., &mccance, k. L. (2012). Understanding pathophysiology (5th ed.). St. Louis, missouri: elsevier
- 2. John, g., subramani, k., peter, j. V., pitchamuthu, k., &chacko, b. (2011). Essentials of critical care (8th ed.). Christian medical college: vellore.
- 3. Porth, c. M. (2007). Essentials of pathophysiology: concepts of altered health states (2nded.). Philadelphia: lippincottwilliams and wilkins.
- 4. Urden, I. D., stacy, k. M., & lough, m. E. (2014). Critical care nursing- diagnosis and management (7th ed.). Elsevier: Missouri

IV (A). Advanced pathophysiology applied to critical care nursing - I

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S no	Content	DOMAINS	COGNITIVE	PSYCHOMOTO	AFFECTIVE

Déan

				R	
1	Cardiovascular function	Good to		Applies	Integrates the
	Advanced	know	pathophysiological	pathophysiologi	knowledge of
	pathophysiological		changes relevant	cal principles in	pathophysiolo
	process of	Essential	to cardiovascular	symptom	gical process in
	cardiovascular	to	conditions	management	cardiovascular
	conditions	perform	recognizing the	and secondary	conditions in
	 hypertensive disorder 		value of diagnosis,	prevention of	developing
	 peripheral artery 		treatment, care	cardiovascular	diagnosis and
	disorder		and prognosis	conditions	plan of care
	 venous disorders 				
	 coronary artery 				
	diseases				
	 Valvular heart disease 				
	 cardiomyopathy and 				
	heart failure				
	 cardiac tamponade 				
	Arrythmias				
	 Corpumonale 				
	 heart block and 				
	conduction				
	disturbances				
2	pulmonary function	Good to	Analyzes the	Applies	Integrates the
	advanced	know	pathophysiological	pathophysiologi	knowledge of
	pathophysiological process		changes relevant	cal principles in	pathophysiolo
	of pulmonary conditions	Essential	to pulmonary	symptom	gical process in
	 chronic obstructive 	to	conditions	management	pulmonary
	pulmonary disease	perform	recognizing the	and secondary	conditions in
	 disorders of the 		value of diagnosis,	prevention of	developing
	pulmonary vasculature		treatment, care	pulmonary	diagnosis and
	• infectious diseases		and prognosis	conditions	plan of care
	 respiratory failure 				
	 chest trauma 				
3	Neurological function	Good to	Analyzes the	Applies	Integrates the
	advanced	know	pathophysiological	pathophysiologi	knowledge of
	pathophysiological process		changes relevant	cal principles in	pathophysiolo
	of neurological conditions	Essential	to cardiovascular	symptom	gical process in
	• seizure disorder	to	conditions	management	neurological
	 cerebrovascular disease 	perform	recognizing the	and secondary	conditions in
	infections		value of diagnosis,	prevention of	developing
	 spinal cord disorder 		treatment, care	neurological	diagnosis and
	 degenerative neurological 		and prognosis	conditions	plan of care
	diseases		and prognosis	Contactions	plati of care
L	uiseases	L	<u> </u>	L	

	neurological traumacoma, unconsciousness				
4	Renal function Advanced pathophysiological process of renal conditions • acute renal failure • chronic renal failure • bladder trauma • infections(glomerulonephrit is) • nephrotic syndrome.	Good to know Essential to perform	Analyzes the pathophysiological changes relevant to renal conditions recognizing the value of diagnosis, treatment, care and prognosis	Applies pathophysiologi cal principles in symptom management and secondary prevention of renal conditions	Integrates the knowledge of pathophysiolo gical process in renal conditions in developing diagnosis and plan of care
5	Gastrointestinal and hepatobiliary function Advanced pathophysiological process of hepatobiliary conditions • gastrointestinal bleeding • intestinal obstruction • pancreatitis • hepatic failure • gastrointestinal perforation	Good to know Essential to perform	Analyzes the pathophysiological changes relevant to gastrointestinal and hepatobiliary conditions recognizing the value of diagnosis, treatment, care and prognosis	Applies pathophysiologi cal principles in symptom management and secondary prevention of gastrointestinal and hepatobiliary conditions	Integrates the knowledge of pathophysiolo gical process in gastrointestina I and hepatobiliary conditions in developing diagnosis and plan of care
6	Endocrine functions Advanced pathophysiological process of endocrine conditions • diabetic ketoacidosis • hyperosmolar non ketotic coma • hypoglycemia • thyroid storm • myxedema coma • adrenal crisis • syndrome of inappropriate antidiuretic hormone secretion	Good to know Essential to perform	Analyzes the pathophysiological changes relevant to endocrine conditions recognizing the value of diagnosis, treatment, care and prognosis	Applies pathophysiologi cal principles in symptom management	Integrates the knowledge of pathophysiolo gical process in endocrine conditions in developing diagnosis and plan of care

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IV.A. Advanced Pathophysiology Applied to Critical Care Nursing – I

s. NO	CONTENT OF TOPICS	LEARNING OBJECTIVES (at the end of the session the student should be able to)	TEACHING OBJECTIVES	METHODOLOGY	TIME
1	Cardiovascular function	Describe the pathopysiological process in critical conditions in developing diagnosis and plan of care in cardiovascular function.	To teach and discuss about Peripheral artery disorder Venous disorders Venous disorders Coronary artery diseases Valvular heart disease Cardiomyopathy and heart failure Cardiac Tamponade Arrythmias Corpumonale Heart block and conduction disturbances	Problem based learning Cooperative learning Case studies Teacher seminar Spot group discussion on valvular heart disease Student interactive session on heart block and conduction.	8
2	Pulmonary function	Enumerate the etiology pathopysiological process in critical conditions in developing diagnosis and plan of care in pulmonary functions	To teach and discuss about the about the Advanced pathophysiological process of pulmonary conditions Chronic obstructive pulmonary disease Disorders of the pulmonary vasculature Infectious diseases Respiratory failure Chest trauma	Lecture Discussion Case Discussion/ Seminar Teacher seminar Spot group discussion Tutorials. Panel discussion on COPD.	4

3	Neurological function	Discuss the etiology pathopysiological process in critical conditions in developing diagnosis and plan of care in neurological functions	To teach and discuss about the about the Advanced pathophysiological process of neurological conditions • Seizure disorder • Cerebrovascular disease • Infections • Spinal cord disorder • Degenerative neurological diseases • Neurological trauma • Coma, unconsciousness	Case Discussion/ Seminar Student interactive session Problem based learning Fish bowel technique Simulation technique	6
4	Renal function	Enumerate the etiology pathophysiological process in critical conditions in developing diagnosis and plan of care in renal function.	To teach and discuss about the about the Advanced pathophysiological process of renal conditions • Acute renal failure • Chronic renal failure • Bladder trauma • Infections(Glomerulone phritis) • Nephrotic syndrome	Case Discussion / Seminar Role play Panel discussion Project based learning Case studies Focus group discussion	4
5	Gastro- intestinal and hepatobiliary function	Elaborate and discuss the etiology pathophysiological process in critical conditions in developing diagnosis and plan of care in Gastrointestinal and hepatobiliary function	To teach and discuss about the Advanced pathophysiological process of hepatobiliary conditions	Seminar Problem based learning Panel discussion Project based learning Case studies Integrated teaching Spot group discussion Student interactive session	4

6	Endocrine functions	Review the etiology pathophysiological process in critical conditions in developing diagnosis and plan of care in endocrine functions	To teach and discuss about the Advanced pathophysiological process of endocrine conditions Diabetic ketoacidosis Hyperosmolar non ketotic coma Hypoglycemia Thyroid storm Myxedema coma Adrenal crisis Syndrome of inappropriate antidiuretic hormone secretion	Student interaction session Problem based learning Student interactive session Panel discussion Presentation Fish bowel technique
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IV (B) Advanced pathophysiology applied to critical care nursing – II

7					·
S	TOPIC	DOMAIN	COGNITIVE	PSYCHOMOTOR	AFFECTIVE
NO					
1	Hematological function	Good to know	Analyzes the	Applies	Integrates the
	advanced		pathophysiological	pathophysiological	knowledge of
	pathophysiological	Essential to	changes relevant	principles in	pathophysiologic
	process of hematological	perform	to Hematological	symptom	al process in
	conditions		conditions	management and	Hematological
	 disorders of red blood 		recognizing the	secondary	conditions in
	cells - polycythemia -		value of diagnosis,	prevention of	developing
	anemia - sickle cell		treatment, care	Heatological	diagnosis and
	diseases		and prognosis	conditions	plan of care
	 disorders of white 				
	blood cells - leucopenia -				
	neoplastic disorders				
	 disorders of hemostasis 				
	- platelet disorders -		,		
	coagulation disorders -				
	disseminated				
	intravascular coagulation				
2	Integumenatry function	Good to know	Analyzes the	Applies	Integrates the
	advanced		pathophysiological	pathophysiological	knowledge of
	pathophysiological	Essential to	changes relevant	principles in	pathophysiologic
	process of integumentary	perform	to integumentary	symptom	al process in
	conditions		conditions	management and	integumentary

					Γ
	 wound healing 		recognizing the	secondary	conditions in
	• burns		value of diagnosis,	prevention of	developing
	 Stevenjohnson 		treatment, care	integumentary	diagnosis and
	syndrome		and prognosis	conditions	plan of care
3	multisystem dysfunction	Good to know	Analyzes the	Applies	Integrates the
	advanced		pathophysiological	pathophysiological	knowledge of
	pathophysiological	Essential to	changes relevant	principles in	pathophysiologic
	process of neurological	perform	to multisystem	symptom	al process in
	conditions		dysfunction	management and	multisystem
	shock - hypovolemic -		recognizing the	secondary	dysfunction in
	cardiogenic - distributive		value of diagnosis,	prevention of	developing
	systemic inflammatory		treatment, care	multisystem	diagnosis and
	syndrome		and prognosis	dysfunction	plan of care
	 multiple organ 				
	dysfunction syndrome				
	 trauma - thoracic - 				
	abdominal -				
	musculoskeletal -				•
	maxillofacial • drug				
	overdose and poisoning				
	envenomation				
				l .	1
ļ					
4	Specific infections	Good to know	Analyzes the	Applies	Integrates the
4	Specific infections advanced	Good to know	Analyzes the pathophysiological	Applies pathophysiological	Integrates the knowledge of
4		Good to know Essential to			
4	advanced		pathophysiological	pathophysiological	knowledge of
4	advanced pathophysiological	Essential to	pathophysiological changes relevant	pathophysiological principles in	knowledge of pathophysiologic
4	advanced pathophysiological process of specific	Essential to	pathophysiological changes relevant to specific	pathophysiological principles in symptom	knowledge of pathophysiologic al process in
4	advanced pathophysiological process of specific infections	Essential to	pathophysiological changes relevant to specific infections	pathophysiological principles in symptom management and	knowledge of pathophysiologic al process in specific
4	advanced pathophysiological process of specific infections • HIV	Essential to	pathophysiological changes relevant to specific infections recognizing the	pathophysiological principles in symptom management and secondary	knowledge of pathophysiologic al process in specific infections in
4	advanced pathophysiological process of specific infections • HIV • tetanus	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis,	pathophysiological principles in symptom management and secondary prevention of	knowledge of pathophysiologic al process in specific infections in developing
4	advanced pathophysiological process of specific infections • HIV • tetanus • SARS	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care	pathophysiological principles in symptom management and secondary prevention of	knowledge of pathophysiologic al process in specific infections in developing diagnosis and
4	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care	pathophysiological principles in symptom management and secondary prevention of	knowledge of pathophysiologic al process in specific infections in developing diagnosis and
4	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care	pathophysiological principles in symptom management and secondary prevention of	knowledge of pathophysiologic al process in specific infections in developing diagnosis and
4	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care	pathophysiological principles in symptom management and secondary prevention of	knowledge of pathophysiologic al process in specific infections in developing diagnosis and
4	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue Chikungunya • rabies	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care	pathophysiological principles in symptom management and secondary prevention of	knowledge of pathophysiologic al process in specific infections in developing diagnosis and
4	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue Chikungunya • rabies • avian flu	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care	pathophysiological principles in symptom management and secondary prevention of	knowledge of pathophysiologic al process in specific infections in developing diagnosis and
4	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue Chikungunya • rabies • avian flu • swine flu	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care	pathophysiological principles in symptom management and secondary prevention of	knowledge of pathophysiologic al process in specific infections in developing diagnosis and
	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue Chikungunya • rabies • avian flu • swine flu • malaria	Essential to perform	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care and prognosis	pathophysiological principles in symptom management and secondary prevention of specific infections	knowledge of pathophysiologic al process in specific infections in developing diagnosis and plan of care
4	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue Chikungunya • rabies • avian flu • swine flu • malaria Reproductive functions	Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care and prognosis	pathophysiological principles in symptom management and secondary prevention of specific infections	knowledge of pathophysiologic al process in specific infections in developing diagnosis and plan of care
	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue Chikungunya • rabies • avian flu • swine flu • malaria Reproductive functions Advanced	Essential to perform Good to know	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care and prognosis Analyzes the pathophysiological	pathophysiological principles in symptom management and secondary prevention of specific infections Applies pathophysiological	knowledge of pathophysiologic al process in specific infections in developing diagnosis and plan of care
	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue Chikungunya • rabies • avian flu • swine flu • malaria Reproductive functions Advanced pathophysiological	Essential to perform Good to know Essential to	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care and prognosis Analyzes the pathophysiological changes relevant	pathophysiological principles in symptom management and secondary prevention of specific infections Applies pathophysiological principles in	knowledge of pathophysiologic al process in specific infections in developing diagnosis and plan of care Integrates the knowledge of pathophysiologic
	advanced pathophysiological process of specific infections • HIV • tetanus • SARS • rickettsiosis • leptospirosis • dengue Chikungunya • rabies • avian flu • swine flu • malaria Reproductive functions Advanced	Essential to perform Good to know	pathophysiological changes relevant to specific infections recognizing the value of diagnosis, treatment, care and prognosis Analyzes the pathophysiological	pathophysiological principles in symptom management and secondary prevention of specific infections Applies pathophysiological	knowledge of pathophysiologic al process in specific infections in developing diagnosis and plan of care

• antepartum	tions	recognizing	secondary		conditions	in
hemorrhage	the	value of	prevention	of	developing	
 pregnancy induced 	diagno	osis,	reproductive		diagnosis	and
hypertension	treatm	nent, care	conditions		plan of care	
 obstructed labour 	and pr	ognosis				
 ruptured uterus 						
 postpartum 						
hemorrhage						
puerperal sepsis						
 amniotic fluid 						
embolism						
 HELLP (hemolysis, 						
elevated liver enzymes,						1
low platelet count)						
• trauma						:
						;

IV. (B) Advanced Pathophysiology Applied to Critical Care Nursing – II

		LEARNING OBJECTIVES			į
S.	CONTENT OF	(at the end of the	TEACHING	METHODOLOGY	TIME
NO	TOPICS	session the	OBJECTIVES	INICIRODOLOGI	INVIC
		student should be			
		able to)			
		Elaborate the	To teach and discuss	Case presentation	
	Hematological	etiology	about Advanced	Seminar	
	functions	pathophysiological	pathophysiological	Student interactive	
1	Tarictions	process in critical	process of	session	8
*		conditions in	hematological	Panel discussion	
		developing diagnosis	conditions	Spot group	
		and plan of care in	 Disorders of red 	discussion	
		Hematological	blood cells -	Focus group	

		functions	Polycythemia -	discussion	
			Anemia - Sickle cell	Project based	
			diseases	learning	
 			 Disorders of white 		
			blood cells -		
			Leucopenia -		
			Neoplastic disorders		
			 Disorders of 		
			hemostasis - Platelet		
			disorders -		
			Coagulation		
			disorders -		
			Disseminated		
			intravascular		
			coagulation		
				Health education	
			To too observed allows	Supervised clinical	
		Elaborate the	To teach and discuss	practice	
		etiology	about the Advanced	Panel discussion	
		pathophysiological	pathophysiological	Spot group	
		process in critical	process of	discussion	
	Integumentary	conditions in	integumentary	Focus group	
2	function	developing	conditions	discussion	2
	Tunction	diagnosis and plan	 Wound healing 	Project based	
		of care in	• Burns	learning	
			 Steven Johnson 		1
,		integumentary	Syndrome	Case presentation	
		functions		Seminar	
			To teach and discuss		
			about the Advanced	Case presentation	
		Describe and the	pathophysiological	Seminar teacher	
		etiology	process of	seminar	
		pathopysiological	neurological		
}		process in critical	conditions	Panel discussion	
	Multisystem	conditions in	• Shock -	Case Discussion /	[
3	dysfunction	developing	Hypovolemic -	Seminar	
		diagnosis and plan	Cardiogenic -	Case presentation	
		of care in	Distributive	Seminar	
		multifunction	• Systemic	Student Interactive	
}	1	dysfunction	inflammatory	session	
		dystaticatori	syndrome		
	I		 Multiple organ 	<u></u>	

4	Specific functions	Enumerate the etiology pathophysiological process in critical conditions in developing diagnosis and plan of care in specific function	dysfunction syndrome Trauma - Thoracic - Abdominal - Musculoskeletal - maxillofacial Drug overdose and poisoning Envenomation To teach and discuss about the Advanced pathophysiological process of specific infections HIV Tetanus SARS Rickettsiosis Leptospirosis Dengue Malaria Chickungunya Rabies Avian flu Swine flu	Case presentation Seminar. Case studies Project based learning Seminar panel discussion teacher seminar students seminar	6
5	Reproductive functions	Elaborate the etiology pathophysiological process in critical conditions in developing diagnosis and plan of care in Reproductive functions	To teach and discuss about the Advanced pathophysiological process of reproductive conditions • Antepartum hemorrhage • Pregnancy induced hypertension • Obstructed labour • Ruptured uterus • Postpartum hemorrhage • Puerperal sepsis • Amniotic fluid	Simulation technique Tutorials Focus group discussion Drug book / presentation. Case presentation Seminar Student interactive session	6

	embolis	im	
	HELLE	(Hemoly	sis,
	Elevate	d L	iver
	enzyme	s, t	_ow
	Platelet	Count)	
	Trauma		

V. Advanced Pharmacology relevant to Critical Care Nursing

Subject distribution:

The subject will be for 1 year duration. The topics covered under theory training are as follows

Unit	Topic	Hours
20.	Introduction to pharmacology in critical care	2
21.	Pharmacokinetics and Pharmacodynamics	5
22.	Pharmacology and Cardiovascular alterations in Critical care	6
23.	Pharmacology and Pulmonary alterations in Critical care	6
24.	Pharmacology and Neurological alterations in Critical care	6
25.	Pharmacology and Nephrology alterations in Critical care	6
26.	Pharmacology and Gastrointestinal alterations in Critical care	6
27.	Pharmacology and Endocrine alterations in Critical care	6
28.	Pharmacology and Hematology alterations in Critical care	6
29.	Pharmacology and Skin alterations in Critical care	4
30.	Pharmacology and Multisystem alterations in Critical care	8
31.	Pharmacology and Infections in Critical care	8
32.	TOTAL	69

COMPETENCIES (Advanced Pharmacology relevant to Critical Care Nursing)

- 1. Applies the pharmacological principles in providing care to critically ill patients and families
- 2. Analyzes pharmaco-therapeutics and pharmacodynamics relevant to drugs used in the treatment of critical care conditions
- 3. Performs safe drug administration based on principles and institutional protocols
- 4. Documents accurately and provides follow up care
- 5. Applies sound knowledge of drug interactions in administration of drugs to critically ill patients in the critical care settings and guiding their families in self care management

REFERNECES

- 1. Johnson, T. J. (2012). *Critical care pharmacotherapeutics*. Jones & Bartlett Learning: United States of America.
- 2. Wynne, A. L., Woo, T. M., &Olyaei, A. J. (2007). *Pharmacotherapeutics for nurse practitioner prescribers* (2nd ed.). Philadelphia: Davis.

V.ADVANCED PHARMACOLOGY RELEVANT TO CRITICAL CARE NURSING

Placement: Nurse Practitioner in critical care 1st Year

Hours of Instruction
Theory: 60

S. No	TOPIC	DOMAIN	COGNITIVE	PSYCHOMOTOR	AFFECTIVE
1	Introduction to pharmacology	Good to know			Develop
	in critical care				knowledge in
	1 History				classification
	Classification of drugs and				of drugs and
	schedules				schedules
2	Pharmacokinetics and	Good to know	Analyses		
	Pharmaco-dynamics		Pharmacokin		
	 Introduction 		etics and		
	 Absorption, Distribution, 		Pharmaco-		
	Metabolism, Distribution and		dynamics	}	
	Excretion in critical care		relevant to		
	 Plasma concentration, half 		drugs used in		
	life		treatment of		
	 Loading and maintenance 		critical care		
	dose		conditions	_	
	 Therapeutic index and drug 			; ;	
	safety				
	 Potency and efficacy 	1			
	 Principles of drug 				
	administration				
	The rights of drug				
	administration				
	2 Systems of measurement				
	2 Enteral drug administration				
	Topical drug administration				
	Parentral drug administration			,	L .
3	Pharmacology and	Essential to	Develops	Applies the	
	Cardiovascular alterations in	perform	knowledge in	pharmacological	
	Critical care		drugs used in	principles in	
	 Vasoactive Medications 	Good to know	cardiovascul	providing care to	
	2 Vasodilator,		ar conditions	patients with	
	Vasopressor,			cardiovascular	
	Inotropes			alterations	
	- Cardiac glycosides – digoxin				
	- Sympathomimetics –			Perform safe	

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Dopamine, dobutamine,			drug	
epinephrine,isoproterenol,			administration	
norepinephrine, phenylephrine			based on	
- Phosphodiesterase			principles and	
inhibitors – amrinone,			institutional	
milrinone			protocols	
Antiarrhythmic Medications			A	
• Cardiac critical care			Applies sound	1
conditions			knowledge of	
Medications to improve			drug interaction	
cardiac contractility			in administration	
2 Medications in the			of drugs with	
management of hypertension			cardiovascular	
in critical care			alterations	
Medications in the				
management of heart failure				
Medications in the				
management of angina pectoris				
and myocardial infarction				
Medications in the				
management of dysrhythmias,				
Heart block and conduction				
disturbances				
Medications in the				
management of Pulmonary				
hypertension, Valvular heart				
disease,				
Cardiomypathy				
Medications in the				
management of Atherosclerotic	ļ			
disease of aorta and Peripheral	Í			
arterydisease				
Medications in the				
management of Deep vein				
thrombosis				
Institutional Protocols/Standing				
orders for cardiac critical care				
emergencies				
	Essential to	Develops	Applies the	
	perform	knowledge in	pharmacological	
 Mechanical Ventilation 		drugs used in	principles in	
	Good to know	pulmonary	providing care to	
Medications used on patients		conditions	patients with	
	I	03/10/0/13	Patrones With	

with mechanical ventilator		1	cardiovascular	······································
Mechanical ventilation			alterations	
impact on pharmacotherapy –				
Sedation and analgesia,			Perform safe	
Neuromucsular			drug	
blockade, Nutrition			administration	
 Pulmonary critical care 			based on	
conditions			principles and	
2 Medications in the			institutional	
management of Status			protocols	
asthmaticus			•	
Medications in the			Applies sound	
management of Pulmonary			knowledge of	
edema			drug interaction	
Medications in the			in administration	
management of Pulmonary			of drugs with	
embolism			cardiovascular	_
2 Medications in the			alterations	
management of Acute				
respiratory failure and Acute				
respiratory distress				
syndrome				
Medications in the				
management of Chest trauma				
Medications in the				
management of Chronic				
obstructive pulmonary disease				
Medications in the				
management of Pneumonia				
Medications in the				
effusion in the				_
Medications in the management of Atalograpis				<i>(</i>
management of Atelectasis				Name of the Control o
Standing orders for Standing orders for Standing orders for Standing orders for Standing orders for Standing orders for Standing orders for				
pulmonary critical care				
emergencies.				
Pharmacology and Neurological	Essential to	Develops	Applies the	
alterations in Critical care	perform	knowledge in	pharmacological	
• Pain		drugs used in	principles in	
? NSAID	Good to know	neurological	providing care to	
① Opioid analgesia		conditions	patients with	

• Se <mark>dation</mark>	neurological
amino butyric acid stimulants	alterations
Dexmeditomidine	
2 Analgosedation	Perform safe
Delirium	drug
2 Haloperidol	administration
2 Atypical anti psychotics	based on
 Medications used for local 	principles and
and general anesthesia	institutional
Local- Amides, esters, and	protocols
miscellaneous agents	
② General – Gases, Volatile	Applies sound
liquids, IV anesthetics	knowledge of
Non anesthetic drugs	drug interaction
adjuncts to surgery	in
Paralytic Medications	administrationof
Non-depolarizing and	drugs with
depolarizing agents	neurological
2 Anxiolytics	alterations
 Autonomic drugs 	
Adrenergic agents/	
Sympathomimetics	
Adrenergic blocking agents	
2 Cholinergic agents	
2 Anti cholinergic agents	
 Medications in the 	
management of anxiety and	
insomnia	
Antidepressants	
Benzodiazepines	
Barbiturates	
Neurological critical care	
conditions	
Medications in the	
management of psychoses	
Medications in the	
management of acute head and	
spinal cord injury with elevated	
intracranial pressure	
Medications in the	
management of muscle spasm	
? Medications in the	
management of spasticity	
management of spasticity	

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	? Medications in the				
	management of Cerebro				
	vascular disease and cerebro				
	vascular accident				
	Medications in the				
	management of				
	Encephalopathy				
	Medications in the				
	management of Gillian Bare				
	syndrome and Myasthenia				
	gravis				
	Medications in the				
	management of Brain				
	herniation syndrome				
	Medications in the				
	management of Seizure				
	disorder				
	Medications in the				
	management of Coma,				•
	Unconsciousness and				
	persistent vegetative state				
	Appropriate nursing care to				
	safeguard patient				
	Standing orders for neurology				
	critical care emergencies				
6	Pharmacology and Nephrology	Essential to	Develops	Applies the	
	alterations in Critical care	perform	knowledge in	pharmacological	
	• Diuretics		drugs used in	principles in	
ļ	 Fluid replacement 	Good to know	nephrologica	providing care to	
	Crystalloids		l conditions	patients with	
	2 Colloids			nephrological	
	• Electrolytes			alterations	
	2 Sodium				
	Potassium			Perform safe	
	2 Calcium			drug	
	2 Magnesium			administration	
	Phosphorus			based on	
	 Nephrology critical care 			principles and	
	conditions			institutional	
	Medications in the			protocols	
	management of Acute /			Applies sound	
	Chronic renal failure			knowledge of	
	Medications in the			drug interaction	
1	THE THE THE	1		08	l

management of Acute tubular			in administration	
necrosi <mark>s</mark>			of drugs with	
Medications in the			nephrological	
management of Bladder			alterations	
trauma				
② Medications in the				
management of Electrolyte				
imbalances				
Medications in the				
management of Acid base				
imbalances				
② Medications used during				
dialysis				
 Standing orders for 				
nephrology critical care				
emergencies				
7 Pharmacology and	Essential to	Develops	Appli <mark>es the</mark>	
Gastrointestinal alterations in	perform	knowledge in	pharmacological	
Critical care		drugs used in	principles in	
 Anti-ulcer drugs 	Good to know	gastrointesti	providing care to	į
Laxatives		nal	patients with	ļ
 Anti diarrheals 		conditions	gastrointestinal	
 Anti emetics 			alterations	
 Pancreatic enzymes 				
 Nutritional supplements, 			Perform safe	
Vitamins and minerals			drug	
 Gastro intestinal critical care 			administration	
conditions			based on	
Medications in the			principles and	
management of Acute GI			institutional	
bleeding, Hepatic failure			protocols	
2 Medications in the			Applies sound	
management of Acute			knowledge of	
pancreatitis			drug interaction	
Medications in the			in administration	
management of Abdominal			of drugs with	
injury			gastrointesinal	
Pamedications in the			alterations	
management of Hepatic				
encephalopathy				
Medications in the				
management of Acute				
intestinal obstruction				

	Medications in the				
	management of Perforative			i	İ
	peritonitis				
	Medications used during				
	Gastrointestinal surgeries and				
	Liver transplant				
	Standing orders for gastro				
	intestinal critical care				
	emergencies				
	Pharmacology and Endocrine	Essential to	Develops	Applies the	
	alterations in Critical care	perform	knowledge in	pharmacological	
	? Hormonal therapy		drugs used in	principles in	
	Insulin and Other	Good to know	endocrine	providing care to	
	hypoglycemic agents		conditions	patients with	
	Endocrine critical care			endocrine	
	conditions			alterations	
	management of Diabetic			Perform safe	
	ketoacidosis, Hyperosmolar			drug	
	non ketotic coma			administration	
	Medications in the			based on	
	management of hypoglycemia			principles and	
	Medications in the			institutional	
	management of Thyroid storm			protocols	
	Medications in the				
	management of Myxedema			Applies sound	
	coma			knowledge of	
	Medications in the			drug interaction	
,	management of Adrenal crisis			in administration	
	Medications in the			of drugs with	
	management of SIADH			endocrine	
	2 Standing orders for endocrine			alterations	
	critical care emergencies				
8	Pharmacology and Hematology	Essential to	Develops	Applies the	0
	alterations in Critical care	perform	knowledge in	pharmacological	
	Anticoagulants		drugs used in	principles in	
	Antiplatelet drugs	Good to know	hematology	providing care to	
	Thrombolytics	Jood to Miow	conditions	patients with	
	Hemostatics/ antifibrinolytics		201141110113	hematology	
	Hematopoietic growth factors			alterations	
				arterations	
	© Erythropoietin			Perform safe	
	© Colony stimulating factors			1	
	2 Platelet enhancers		ļ	drug	

Blood and blood products	administration
Whole blood, Packed red	based on
blood cells, Leukocyte-reduced	principles and
red cells, Washed red	institutional
blood cells, Fresh frozen	protocols
plasma, Cryoprecipitate	
2 Albumin	Applies sound
 Transfusion reactions, 	knowledge of
Transfusion administration	drug interaction
process	in administration
• Vaccines	of drugs with
Immunostimulants	haematology
Immunosuppressant	alterations
 Chemotherapeutic drugs – 	
Alkylating agents, anti	
metabolites, anti tumor	
antibiotics,	
alkaloids, hormones and	
hormone antagonist,	
corticosteroids, gonadal	
hormones, anti	
estrogens, androgen	
antagonists, biologic response	
modifiers	
 Hematology critical care 	
conditions	
Medications in the	
management of Anemia in	
critical illness	
Medications in the	
management of DIC	
Medications in the	
management of	
Thrombocytopenia and acute	
leukemia	
2 Medications in the	
management of Heparin	
induced thrombocytopenia	
Medications in the	
management of Sickle cell	
anemia	
Medications in the	
management of Tumor lysis	

	cundrama.					
	syndrome Standing orders	for				
		are				
	07	are				
	emergencies Pharmacology and S	lin Ecco	ntial to	Develops	Applies the	
9	07			knowledge in	pharmacological	
	alterations in Critical careHematology critical c	perf	Offi	drugs used in	principles in	
	conditions	are	d to know	skin	providing care to	
	Medications used in beginning		u to know	conditions	patients with	
		uiii		conditions	skin alterations	
	management	, no ed			Skill alterations	
	Medications used in wor	unu			Perform safe	
	management					
	Standing orders for s	SKIN			drug administration	
	critical care emergencies			•		
					based on	
					principles and	
					institutional	
					protocols	₹ 🧷
					Applies sound	
					knowledge of	
					drug interaction	
					in administration	
					of drugs with	
			:		skin alterations	
10	Pharmacology and Multisyst	tem Esse	ential to	Develops	Applies the	
	alterations in Critical care	perf	orm	knowledge in	pharmacological	
	 Medications in 	the		drugs used in	principles in	
	management of shock, sep	osis, Goo	d to know	multisystem	providing care to	
	Multiple Organ Dysfunction,			conditions	patients with	
	Systemic inflammat	1			multisystem	
	response syndro				alterations	
	Anaphylaxis					\mathcal{O}
		the			Perform safe	
	management of Trau				drug	
	Injuries (Heat, Electrical, N	-			administration	
	Hanging,	-Cui			based on	
	Near drowning)				principles and	
	in the management of bi	toc			institutional	
	Drug overdose and Poisonin				protocols	
		the			A	
	management of fever in crit	tical			Applies sound	

	care setting			knowledge of	
	2 Antipyretics			drug interaction	
	■ NSAIDS			in administration	
	2 Corticosteroids			of drugs with	
	 Standing orders for multi 			multisystem	
	system critical care			alterations	
	emergencies				
12	Pharmacology and Infections in	Essential to	Develops	Applies the	
	Critical care	perform	knowledge in	pharmacological	
	 Antibacterial drugs 		drugs used in	principles in	
	2 Introduction	Good to know	infections	providing care to	
	Beta lactams – Penicillins,			patients with	
	cephalosporins, monobactams,			infections	
	carbapenams,				
	Aminoglycosides			Perform safe	
				drug	
	Macrolides			administration	
	② Quinolones			based on	
	Miscellaneous – lincosamide			principles and	
	group, nitroimidazole,			institutional	
	tetracyclins and			protocols	
	chloramphenicol,				
	polymyxins, anti malarials, anti			Applies sound	
	fungals, anti virals			knowledge of	
	 Anti fungal drugs 			drug interaction	
	 Anti protozoal drugs 			in administration	
	 Anti viral drugs 			of drugs with	
	 Choice of antimicrobials 			infections	
	 Infectious critical care 				
	conditions				
	2 Medications in the				
	management of HIV, Tetanus,				
	SARS, Rickettsiosis,				
	Leptospirosis, Dengue, Malaria,				
	Chickungunya, Rabies, Avian flu				
	and Swine flu				
	 Standing orders for infectious 				
	critical care emergencies	:			
L	critical care efficies				

Assessment techniques for Theory

- Monthly teat (objective type)
- Sessional Examination Objective structured clinical examination (OSCE)
- Pre University Examination (OSCE)

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- Assignment
- Project work
- Practice teaching
- Annotated references from journals

Assessment techniques for practical

- Sessional Examination = Objective structured practical examination (OSPE)
- Pre University Examination (OSPE)
- Clinical conference
- Nursing Rounds
- Clinical assignments

V.ADVANCED PHARMACOLOGY RELEVANT TO CRITICAL CARE NURSING

Placement: Nurse Practitioner in critical care 1st Year

Hours of Instruction
Theory: 69 Hours

S. NO	CONTENT OF TOPICS	LEARNING OBJECTIVE (at the end of session student sh be able to)	S the the	TEACHING OBJECTIVES		METHODOLOGY	TIME
1	Introduction to						
	pharmacology in critical care	1. Discuss	the	To teach	and	 Interactive 	2hrs
	History	history	of	discuss a	bout	session with	
	Classification of drugs and	pharmacology		introduction	to	the students	
	schedules			pharmacology	/ in	regarding	
		2. Enumerate	the	critical	care	pharmacology	
		classification	of	(history	of	in critical care.]
		drugs	and	pharmacology	/ and		
		schedules.		its classification	on of		
				drugs	and		
				schedules).			
L							

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2	Pharmacokinetics and				4.1
	Pharmaco-dynamics	1.ElaboratePharma -	To teach and		4 hrs
	• Introduction	cokinetics and	discuss about	• Seminar on	
	 Absorption, Distribution, 	Pharmaco-	Pharmacokinetics	Pharmacokin	
	Metabolism, Distribution and	dynamics.	and Pharmaco-	etics and	
	Excretion in critical care		dynamics	Pharmaco-	
	Plasma concentration, half		(IntroductionAbso	dynamics.	
}	life	2.Summarize	rption,		
	 Loading and maintenance 	introduction	Distribution,	 Interactive 	
	dose	Absorption,	Metabolism,	session with	
	Therapeutic index and drug	Distribution,	Distribution and	students	
	safety	Metabolism,	Excretion in critical	regarding	
	 Potency and efficacy 	Distribution and	care)Plasma	Principles of	
	 Principles of drug 	Excretion in critical	concentration, half	drug ·	
	administration	care	life,Loading and	administratio	
	☑ The rights of drug		maintenance	n n	
	administration		dose, Therapeutic		gola
	☑ Systems of measurement		index and drug		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
}	2 Enteral drug administration		safety,Potency		
	Topical drug administration		and efficacy ,		
	Parentral drug		Principles of drug		
	administration		administration		
			(The rights of drug		
İ			administration,Sys		
			tems of		
			measurement,		
			Enteral drug		
			administration,To		
			pical drug		
			administration,		
			Parentral drug		ļ
			administration).		
3	Pharmacology and	1.Review the	To teach and		₹.,,
	Cardiovascular alterations in	Pharmacology and	discuss about	• Student	
	Critical care	Cardiovascular	Pharmacology and	seminar on	5 hrs
	Vasoactive Medications	alterations in Critical	Cardiovascular	Cardiovascular] 3 3
	2 Vasodilator,	care	alterations in	alterations in	
	□ Vasopressor,	Carc	Critical care and	Critical care	
	Inotropes	2.Discuss Vasoactive			
			vasoactive	and vasoactive	
	- Cardiac glycosides –	Medications.	medications,	medications.	
	digoxin	2 December 4	medications to	• Focus group	
L	- Sympathomimetics —	3.Describe the	improve cardiac	discussions	

					-	<u></u>	
	Dopamine, dobutamine,	medications	to	contractility,	1	Integrated	1
	epinephrine, isoproterenol,	improve	cardiac	management of		teaching on	
	norepinephrine,	contractility,	in	hypertension in	_	cardiovascular	
	phenylephrine	critical	care,	critical care,		medications	
	- Phosphodiesterase	management	t.	management of			
	inhibitors – amrinone,			heart failure,			
	milrinone			management of			
	 Antiarrhythmic Medications 			angina pectoris			
	 Cardiac critical care 			and myocardial			
	conditions			infarction,			
	Medications to improve			management of			
	cardiac contractility			dysrhythmias,			
	Medications in the			Heart block and			
	management of hypertension			conduction			
	in critical care			disturbances,			
	Medications in the			management of			
	management of heart failure			Pulmonary			
	Medications in the		:	hypertension,	_		
	management of angina			Valvular heart			
	pectoris and myocardial			disease,Cardiomyp			
	infarction		,	athy, management	- 1		
	Medications in the			of Pulmonary			
	management of		1	hypertension,	_		
İ	dysrhythmias, Heart block			Valvular heart			
	and conduction disturbances			disease,			
	Medications in the			management of	ļ		
	management of Pulmonary			Atherosclerotic	1		
	hypertension, Valvular heart			disease of aorta			
	disease,			and Peripheral			
	Cardiomypathy			artery disease,			İ
	Medications in the			management of			
	management of			Deep vein			
	Atherosclerotic disease of			thrombosis.			
	aorta and Peripheral						į.
	arterydisease		İ				
	Medications in the						
	management of Deep vein						ĺ
	thrombosis		ĺ				
	Institutional						
	Protocols/Standing orders for						
	cardiac critical care						
	emergencies						
4	Pharmacology and Pulmonary	1.Discuss	the		1		

alterations in Critical care	Pharmacology and	To teach and	 Problem based 	
 Mechanical Ventilation 	Pulmonary	discuss about	learning for	
2 Introduction	alterations in Critical	Pharmacology and	Pulmonary	4 hrs
Medications used on	care.	Pulmonary	critical care	
patients with mechanical		alterations in	conditions.	
ventilator	2.Elaborate the	Critical care,		
2 Mechanical ventilation	working of	mechanical	 Student 	
impact on pharmacotherapy	mechanical	ventilation	seminar on	
 Sedation and analgesia, 	ventilation(Introduct	(Introduction,	Mechanical	
Neuromuscular	ion, Medications	Medications used	Ventilation	
blockade, Nutrition	used on patients	on patients with		
 Pulmonary critical care 	with mechanical	mechanical		
conditions	ventilator.	ventilator),		
Medications in the		Pulmonary critical		
management of Status	3. Review	care conditions.		
asthmaticus	Pulmonary critical	(Medications in		
2 Medications in the	care conditions	the management		Q.s.
management of Pulmonary		of Status		
edema		asthmaticus,	,	
Medications in the		Pulmonary edema,		
management of Pulmonary		Pulmonary		
embolism		embolism, Acute		
Medications in the		respiratory failure		
management of Acute		and Acute		
respiratory failure and Acute		respiratory		
respiratory distress		distresssyndrome,		
syndrome		Chest trauma,		
2 Medications in the		Chronic		
management of Chest trauma		obstructive		
2 Medications in the		pulmonary		
management of Chronic		disease,		
obstructive pulmonary		Pneumonia,		
disease				
Medications in the		•		
		Atelectasis		
management of Pneumonia				
Medications in the				
management of Pleural				
effusion				
Medications in the				
management of Atelectasis				
 Standing orders for 	:			
pulmonary critical care				
emergencies.				

[
5	Pharmacology and	1.Discuss the	To teach and		6 hrs
	Neurological alterations in	Pharmacology and	discuss about	 Simulated 	
	Critical care	Neurological	Pharmacology and	learning on	
	• Pain	alterations in Critical	Neurological	Neurological	
İ	2 NSAID	care	alterations in	alterations in	
	② Opioid analgesia		Critical care(Pain,	Critical care	
	• Sedation	2. Summarize the	Sedation,		
	2 amino butyric acid	medications used	Stimulants,	 Student 	
	stimulants	for local and general	Delirium,	seminar on	
	② Dexmeditomidine	anesthesia.	Psychotics),	medications	
	② Analgosedation		medications used	used for local	
	• Delirium	3. Review the	for local and	and general	
	2 Haloperidol	Paralytic	general	anesthesia.	
	Atypical anti psychotics	Medications,	anesthesia(Local		
	 Medications used for local 	Autonomic drugs,	Amides, esters,	 Case studies 	
	and general anesthesia	Medications in the	and miscellaneous		
	2 Local- Amides, esters, and	management of	agents, General –	 Integrated 	
	miscellaneous agents	anxiety and	Gases, Volatile	teaching	
	② General – Gases, Volatile	insomnia.	liquids, IV		
	liquids, IV anesthetics		anesthetics),		
	Non anesthetic drugs	4. Discuss about the	Paralytic		
į	adjuncts to surgery	Neurological critical	Medications(Non-		
	 Paralytic Medications 	care conditions.	depolarizing and		
	Non-depolarizing and		depolarizing		
	depolarizing agents		agents, Anxiolytics		
	2 Anxiolytics)Autonomic		
	 Autonomic drugs 		drugs(Adrenergic		
	Adrenergic agents/		agents/		
	Sympathomimetics		Sympathomimetic		
	Adrenergic blocking agents		s, Adrenergic		
	Cholinergic agents		blocking		
	2 Anti cholinergic agents		agents,Cholinergic		
	 Medications in the 		agents, Anti		
	management of anxiety and		cholinergic		
	insomnia		agents),		
	② Antidepressants		Medications in the		
	Benzodiazepines		management of		
	Barbiturates		anxiety and	}	
	Neurological critical care		insomnia(
	conditions		Antidepressants,		
	2 Medications in the		Benzodiazepines,		
	management of psychoses		Barbiturates),		
L	management of psychoses		barbiturates),	<u> </u>	

	Medications in the		Neurological		
	management of acute head		critical care		
	and spinal cord injury with		conditions,		
	elevated		Medications in the		
	intracranial pressure		management of		
	? Medications in the		psychoses, acute		
	management of muscle		head and spinal		
	spasm		cord injury with		
	2 Medications in the		elevatedintracrani		
	management of spasticity		al pressure,		
	? Medications in the		muscle spasm,		
	management of Cerebro		spasticity, Cerebro		
	vascular disease and cerebro		vascular disease		
	vascular accident		and cerebro		
	Medications in the		vascular accident,		1
	management of		Encephalopathy,		
	Encephalopathy		Gillian Bare		
	? Medications in the		syndrome and		
	management of Gillian Bare		Myasthenia gravis,		
	syndrome and Myasthenia		Brain herniation		
	gravis		syndrome, Seizure		
	Medications in the		disorder, Coma,		
	management of Brain		Unconsciousness		
-	herniation syndrome		and persistent		
	Medications in the		vegetative state.		
	· ·		vegetative state.		
	disorder				
	Medications in the				
	management of Coma,				
	Unconsciousness and				
	persistent vegetative state				
	Appropriate nursing care to				
	safeguard patient				
	Standing orders for neurology				
	critical care emergencies				
6	Pharmacology and	1.Explain about	To teach and		
	Nephrology alterations in	thePharmacology	discuss about	Simulated	
	Critical care	and Nephrology	Pharmacology and	learning on	
	• Diuretics	alterations in Critical	Nephrology	Pharmacology	5 hrs
	 Fluid replacement 	care.	alterations in	and	
	2 Crystalloids	2.Describe	Critical	Nephrology	
	2 Colloids	Nephrology critical	care(Diuretics,	alterations in	
L		epinology critical	car c(Drai ctics)	arterations in	L

	• Electrolytes	care conditions.	Fluid replacement,	Critical.	Ì
	2 Sodium		Electrolytes),		ĺ
	Potassium		Nephrology critical	Student	
ı	2 Calcium		care conditions.	seminar on	
	? Magnesium			fluid	1
	Phosphorus			replacement	į
	 Nephrology critical care 			therapy.	
	conditions				
	Medications in the			• Focus group	
1	management of Acute /			discussion	
	Chronic renal failure				
	Medications in the			 Integrated 	
	management of Acute			teaching	
	tubular necrosis				
	Medications in the				
	management of Bladder				
	trauma			,	1
	2 Medications in the				!
	management of Electrolyte			·	
	imbalances				
	Medications in the		i		
ŀ	management of Acid base				
ļ	imbalances				
	Medications used during				
İ	dialysis				
	 Standing orders for 				
	nephrology critical care				
	emergencies.				
7	Pharmacology and				
-	Gastrointestinal alterations in	1.Discuss the	To teach and	 Simulated 	5 hrs
	Critical care	Pharmacology and	discuss about	learning of	
	Anti-ulcer drugs	Gastrointestinal	Pharmacology and	Gastrointestin	
	• Laxatives	alterations in Critical	Gastrointestinal	al alterations	
	Anti diarrheal	care.	alterations in	in Critical care.	
~	Anti emetics		Critical care(Anti-	in orthodream.	
	 Pancreatic enzymes 	2.Review the Gastro	ulcer drugs,	Seminar on	
	 Nutritional supplements, 	intestinal critical	Laxatives, Anti	Gastrointestin	
	Vitamins and minerals	care conditions.	diarrheal, Anti	al alterations	
	 Gastro intestinal critical 	care conditions.	emetics,	in Critical care.	
	care conditions		Pancreatic	in critical care.	
	2 Medications in the		enzymes,		
	management of Acute GI		Nutritional		
	bleeding, Hepatic failure		supplements,		
	bleeding, nepatic failure		supplements,		L

Medications in the		Vitamins and		
management of Acute		minerals), Gastro		
pancreatitis		intestinal critical		
Medications in the		care conditions.		
management of Abdominal		(Acute GI		
injury		bleeding, Hepatic		}
22Medications in the		failure, Acute		
management of Hepatic		pancreatitis,		ļ
encephalopathy		Abdominal injury,		
Medications in the		Hepatic		ļ
management of Acute		encephalopathy,		
intestinal obstruction		Acute intestinal		
Medications in the		obstruction,		
management of perforative		perforative		
peritonitis		peritonitis,		
Medications used during		Gastrointestinal		}
Gastrointestinal surgeries and		surgeries and Liver		
Liver transplant		transplant).		
Standing orders for gastro				
intestinal critical care				
emergencies				
8 Pharmacology and Endocrine	1.Discuss the			
alterations in Critical care	Pharmacology and	To teach and	 Simulated 	4hrs
Hormonal therapy	Endocrine	discuss about	learning on	
2 Insulin and Other	alterations in Critical	Pharmacology and	Pharmacology	
hypoglycemic agents	care	Endocrine	and Endocrine	
2 Endocrine critical care		alterations in	alterations in	
conditions	2.Review the	Critical care,	Critical care	į
	Hormonal	Hormonal		
management of Diabetic	therapy,Insulin and	therapy,Insulin	• Seminar on	
ketoacidosis, Hyperosmolar	Other hypoglycemic	and Other	hormonal	
non ketotic coma	agents.	hypoglycemic	therapy,	
		agents, Endocrine	Insulin and	€,7
management of		critical care	Other	
hypoglycemia		conditions	hypoglycemic	
		(Medications in	agents.	1
management of Thyroid			agents.	
management of Thyroid storm		(Medications in	agents.	
		(Medications in the management of Diabetic	agents.	
storm Medications in the		(Medications in the management of Diabetic ketoacidosis,	agents.	
storm		(Medications in the management of Diabetic	agents.	
storm Medications in the management of Myxedema		(Medications in the management of Diabetic ketoacidosis, Hyperosmolar non	agents.	

	management of Adrenal crisis		Thyroid storm,		
	☑Medications in the		Myxedema coma,		
1	management of SIADH		Adrenal crisis,		
	Standing orders for	i	SIADH.		
	endocrine critical care				
	emergencies				!
9	Pharmacology and	1.Discuss the	To teach and		
j	Hematology alterations in	Pharmacology and	discuss about	Student	
	Critical care	Hematology	Pharmacology and	Seminar on	5hrs
1	 Anticoagulants 	alterations in Critical	Hematology	Hematology	
	 Antiplatelet drugs 	care.	alterations in	critical care	
	 Thrombolytics 		Critical care,(conditions.	
	Hemostatics/	2.Summarize the	Anticoagulants,		
	antifibrinolytics	Hematology critical	Antiplatelet drugs,	Case studies on	
	 Hematopoietic growth 	care conditions.	Thrombolytics,	hematological	
	factors		Hemostatics/	alterations in	
	Prythropoletin		antifibrinolytics,	Critical care	
	Colony stimulating factors		Hematopoietic		
	Platelet enhancers		growth factors,		
	 Blood and blood products 		Blood and blood		
	Whole blood, Packed red		products, Whole		
	blood cells, Leukocyte-		blood, Packed red		
	reduced red cells, Washed		blood cells,		
	red		Leukocyte-		j
	blood cells, Fresh frozen		reduced red cells,		
	plasma, Cryoprecipitate		Washed red, blood		
	2 Albumin		cells, Fresh frozen		
	 Transfusion reactions, 		plasma,		
	Transfusion administration		Cryoprecipitate,		
	process		Albumin)		
	• Vaccines		Hematology		
}	• Immunostimulants		critical care		
1	• Immunosuppressant		conditions.	,	
	 Chemotherapeutic drugs — 		Transfusion	1	
	Alkylating agents, anti		administration		
	metabolites, anti tumor		process	!	
	antibiotics,		(Vaccines,		
	alkaloids, hormones and		Immunostimulants		
	hormone antagonist,		Immunosuppressa	!	
	corticosteroids, gonadal		nt	,	}
	hormones, anti		Chemotherapeutic		
	estrogens, androgen		drugs – Alkylating		
L	estrogens, androgen		urugs - Aikyiatilig	l	l

	 antagonists, biologic response modifiers Hematology critical care conditions Medications in the 		agents, anti metabolites, anti tumor antibiotics, alkaloid		
	 Hematology critical care conditions Medications in the 		tumor	1	
	conditions 2 Medications in the	·			
	Medications in the				
			s, hormones and		
	management of Anemia in		hormone		
	critical illness		antagonist,		
!	Medications in the		corticosteroids,		
	management of DIC		gonadal	}	
	Medications in the		hormones,		
İ	management of		antiestrogens,		,
,	Thrombocytopenia and acute		androgen		
	leukemia		antagonists).		
	Medications in the		,		,
	management of Heparin				
	induced thrombocytopenia				
İ	Medications in the				
ĺ	management of Sickle cell				U
	anemia				
	Medications in the				
	management of Tumor lysis				
	syndrome				
	<pre>Standing orders for</pre>				
	hematology critical care				
	emergencies				
10	Pharmacology and Skin	1.Discuss the	To teach and	Seminar on	3hrs
i	alterations in Critical care	Pharmacology and	discuss about	Pharmacology	
	 Hematology critical care 	Skin alterations in	Pharmacology and	and Skin	
	conditions	Critical care.	Skin alterations in	alterations in	
1	Medications used in burn		Critical care,	Critical care.	
	management		Medications used		
1	Medications used in wound		in burn	Focus group	
1	management		management and	discussions	
1	 Standing orders for skin 		wound		
	critical care emergencies.		management.		
11	Pharmacology and	1.Discuss the	To teach and		
1	Multisystem alterations in	Pharmacology and	discuss about the		
{	Critical care	Multisystem	Pharmacology and	 Seminar on 	5 hrs
	Critical care			ocimilai on	,
	• Medications in the	alterations in Critical	Multisystem	management	
	Pharmacology and Skin alterations in Critical care • Hematology critical care conditions ② Medications used in burn management ② Medications used in wound management • Standing orders for skin critical care emergencies. Pharmacology and Multisystem alterations in	Pharmacology and Skin alterations in Critical care. 1.Discuss the Pharmacology and	discuss about Pharmacology and Skin alterations in Critical care, Medications used in burn management and wound management. To teach and discuss about the	Pharmacology and Skin alterations in Critical care. Focus group discussions	

	Multiple Organ Dysfunction,		Critical care,	
	Systemic inflammatory	2.Summarize the	Medications in the	 Simulated
}	response syndrome,	Medications in the	management of	learning on
	Anaphylaxis	management of	shock, sepsis,	management
	 Medications in the 	shock, sepsis,	Multiple Organ	of Trauma,
	management of Trauma,	Multiple Organ	Dysfunction,	Injuries.
	Injuries (Heat, Electrical,	Dysfunction,	Systemic	
}	Near Hanging,	Systemic	inflammatory	
	Near drowning)	inflammatory	response	
	 in the management of 	response syndrome,	syndrome,	
}	bites, Drug overdose and	Anaphylaxis, Anaphylaxis,		
	Poisoning	Medications in the		
1	 Medications in the 	management of		
	management of fever in		Trauma, Injuries (
	critical care setting		Heat, Electrical,	
	2 Antipyretics		Near Hanging,	
	2 NSAIDS		Near drowning),	
	② Corticosteroids		the management	
	 Standing orders for multi 		of bites, Drug	
	system critical care		overdose and	
}	emergencies		Poisoning,	
			Medications in the	
			management of	
			fever in critical	
			care setting	
}			(Antipyretics,	
į	1		NSAIDS,Corticoste	
			roids)	
12	Pharmacology and Infections	1.Discuss the	To teach and	
	in Critical care	Pharmacology and	discuss about the	
1	 Antibacterial drugs 	Infections in Critical	Pharmacology and	 Interactive
	☑ Introduction	care	Infections in	session on
	Beta lactams – Penicillins,		Critical care,	Pharmacolog
	cephalosporins,	2.Summarize	Antibacterial drug	y and
	monobactams, carbapenams,	theMedications in	(Introduction, Beta	Infections in
	② Aminoglycosides	the management of	lactams –	Critical care
	2 Anti MRSA	HIV, Tetanus, SARS,	Penicillins,	
	Macrolides	Rickettsiosis,	cephalosporins,	 Seminar on
	2 Quinolones	Leptospirosis,	monobactams,	Medications
	2 Miscellaneous –	Dengue, Malaria,	carbapenams),	in the
	lincosamide group,	Chickungunya,	Aminoglycosides,	management
	nitroimidazole, tetracyclins	Rabies, Avian flu and	Anti MRSA,	of HIV,
	and	Swine flu.	Macrolides,	Tetanus,
L	allu	Swiffe Hu.	Macrondes,	retanus,

chloramphenicol,	Quinolo	SARS,
polymyxins, anti malarials,	Miscellaneous –	Rickettsiosis,
anti fungals, anti virals	lincosamide	Leptospirosis
Anti fungal drugs	group,	, Dengue,
Anti protozoal drugs	nitroimidazole,	Malaria,
Anti viral drugs	tetracyclins and	Chickunguny
Choice of antimicrobials	chloramphenicol,	a, Rabies,
Infectious critical care	polymyxins, anti	Avian flu and
conditions	malarials, anti	Swine flu.
Medications in the	fungals, anti virals,	
management of HIV, Tetanus,	Anti fungal drugs,	
SARS, Rickettsiosis,	Anti-protozoal	
Leptospirosis, Dengue,	drugs,	
Malaria, Chickungunya,	Anti viral drugs	
Rabies, Avian flu and Swine		
flu		
 Standing orders for 		
infectious critical care		
emergencies		

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- 2. Wynne, A. L., Woo, T. M., &Olyaei, A. J. (2007). *Pharmacotherapeutic for nurse practitioner prescribers* (2nd ed.).

Philadelphia: Davis.

VI. Advanced Health/Physical Assessment in Critical Care Nursing

Subject distribution:

The subject will be for 1 year duration. The topics covered under theory training are as follows

Unit	Topic	Hours
33.	Introduction	4
34.	Cardiovascular System	6
35.	Respiratory System	6
36.	Nervous System	6
37.	Renal System	6
38.	Gastrointestinal System	4
39.	Endocrine System	4
40.	Hematological System	4
41.	Integumentary System	3

42.	Musculoskeletal System	6
43.	Reproductive System (Male & Female)	5
44.	Sensory Organs	4
45.	Assessment of children	6
46.	Assessment of Older adults	6
	TOTAL	70

Clinical Training

The students will be exposed to practical demonstrations in various departments for above purposes. Clinical training comprises of 46 hours. A student must complete 100% of attendance notified in each of the practical areas before award of degree.

- Applies the physical assessment principles in developing appropriate system wise examination skills.
- Uses advanced health assessment skills to differentiate between variations of normal and abnormal findings
- Orders screening and diagnostic tests based on the examination findings
- Analyses the results of various investigations and works collaboratively for development of diagnoses
- Documents assessment, diagnosis, and management and monitors follow up care in partnership with health care team members, patients, and families

VI.ADVANCED HEALTH/PHYSICAL ASSESSMENT IN CRITICAL CARE NURSING

Placement: Nurse Practitioner in Critical Care Nursing I year

Hours of Instruction Theory: 70 Hours Practical: 46 Hours Total: 116 Hours

S.	TOPIC	DOMAIN	COGNITIVE	PSYCHOMOTOR	AFFECTIVE
NO			COGNITIVE		
1	Introduction:	Essential		Applies the	

	History taking	to		physical	
	Physical	perform		assessment	
[[examination			principles in	
-				developing	
				appropriate	
				system wise	
				examination	
				skills	Ì
2	Cardiovascular System	Good to	Analyzes the	Uses advanced	
-	Cardiac history	know	result of various	health	
		KITOVV	investigations	assessment	
	• Physical	Essential to	related to	skills to	
	examination			differentiate	
ļ	• Cardiac	perform	cardiovascular		
1	laboratory		system	between	
	Cardiac			variation of	
	diagnostic studies			normal and	
}				abnormal	
			'	findings	
			!		
				Orders screening	
ł				and diagnostic	
				tests based on	
				the examination	
				findings	
3	Respiratory System	Good to	Analyzes the	Uses advanced	
		know	result of various	health	
	History		investigations	assessment	
	Physical	Essential to	related to	skills to	
	examination	perform	respiratory	differentiate	
	 Respiratory 		system	between	
				variation of	
	monitoring			normal and	
	 Respiratory 			abnormal	
	Diagnostic tests			1	
				findings	
				Orders savasnina	
				Orders screening	
[and diagnostic	
				tests based on the examination	
}					
	Now Contract	Caral	A made and a second	findings	
4	Nervous System	Good to	Analyzes the	Uses advanced	
	 General physical 	know	result of various	health	
	examination		investigations	assessment	
1	 Assessment of 	Essential to	related to	skills to	

	cognitive function	norform	nonvous system	differentiate	
	cognitive functionAssessment of	perform	nervous system	between	
				variation of	
	cranial nerve function			normal and	
	Motor			abnormal	
	assessment –			findings	
	muscle strength,			mamgs	
	power, and			Orders screening	
	reflexes			and diagnostic	
	• Sensory			tests based on	
	assessment –			the examination	
	dermatome			findings	
	assessment				
	Neurodiagnostic				
	studies – CT scan,				
	MRI, PET				
5	Renal System	Good to	Analyzes the	Uses advanced	
5	History	know	result of various	health	
	Physical	KIIOVV	investigations	assessment	
	examination	Essential to	related to renal	skills to	
		perform	system	differentiate	
	• Assessment of	perioriii	System	between	
	renal function			variation of	
	 Assessment of 			normal and	
	electrolytes and			abnormal	
	acid base balance			findings	
İ	• Assessment of			iniumgs	
	fluid balance			Orders screening	
				and diagnostic	
				tests based on	
				the examination	
				findings	
6	Gastrointestinal System	Good to	Analyzes the	Uses advanced	
	History	know	result of various	health	
	Physical		investigations	assessment	
	examination	Essential to	related to	skills to	
	Nutritional	perform	gastrointestinal	differentiate	
	assessment		system	between	
	• Laboratory studies			variation of	
	Liver function			normal and	
	studies, blood			abnormal	
	parameters, stool			findings	
	test			_	
			i	l	

	Diagnostic studies —			Orders screening
	radiological and			and diagnostic
	imaging studies,			tests based on
	endoscopic			the examination
	studies			findings
7	Endocrine System	Good to	Analyzes the	Uses advanced
1	History	know	result of various	health
	Physical		investigations	assessment
	examination,	Essential to	related to	skills to
	• Laboratory	perform	endocrine system	differentiate
		po/10/111		between
	studies			variation of
}	 Diagnostic studies 			
				normal and
				abnormal
				findings
				Orders screening
				and diagnostic
1				tests based on
				the examination
				findings
8	Hematological System	Good to	Analyzes the	Uses advanced
Ì	History	know	result of various	health
1	Physical		investigations	assessment
	examination	Essential to	related to	skills to
	 Laboratory 	perform	hematological	differentiate
	studies		system	between
	 Diagnostic studies 			variation of
	• Diagnostic stadies			normal and
				abnormal
				findings
				midings
				Orders screening
				and diagnostic
				tests based on
				the examination
				findings
9	Integumentary System	Good to	Analyzes the	Uses advanced
	• History	know	result of various	health
	Physical	NI O VV	investigations	assessment
		Essential to	related to	skills to
	examination	perform		differentiate
	 Pathological 	perioriii	integumentary	
	examination		system	between
				variation of

Déan

					normal and	
					abnormal	
					findings	
					Orders screening	
					and diagnostic	
l					tests based on	
					the examination	
		C!	<u> </u>	A so alvers a set to a	findings Uses advanced	
10	Musculoskeletal System	Good	to	Analyzes the		
	• History	know		result of various	health	
	Physical	e		investigations	assessment	
	examination	Essential	to	related to	skills to	
	 Laboratory 	perform		musculoskeletal	differentiate	
	studies			system	between	
	 Diagnostic 				variation of	
	studies				normal and	
					abnormal	
					findings	
					Orders screening	
					and diagnostic	
					tests based on the examination	
					findings	
11	Reproductive System	Good	to	Analyzes the	Uses advanced	
11	(Male & Female)	know	ιο	result of various	health	
1	History	KIIOW		investigations	assessment	
		Essential	to	related to	skills to	
	• Physical	perform	to	reproductive	differentiate	
	examination	periorni		system	between	
	• Laboratory			system	variation of	
	studies					
	• Diagnostic				normal and	
	studies				abnormal	
					findings	Ĭ
					Orders screening	
	. [and diagnostic	
					tests based on	
					the examination	
					findings	
12	Sensory Organs	Good	to	Analyzes the	Uses advanced	
	History	know		result of various	health	
	Physical			investigations	assessment	

				, <u>.</u>	
	examination	Essential to	related to sensory	skills to	
	 Laboratory 	perform	organs	differentiate	
	studies			between	
	 Diagnostic 			variation of	:
ĺ	studies -			normal and	
	Radiological and			abnormal	
	imaging studies,			findings	
	endoscopic				
				Orders screening	
	studies			and diagnostic	
				tests based on	
				the examination	
				findings	
13	Assessment of children	Good to	Analyzes the	Uses advanced	
13		know	result of various	health	
		KHOW			
	development		assessment	assessment	
	 Nutritional 	Essential to		skills to	
	assessment	perform	related to	differentiate	
	 Specific system 		children	between	
1	assessment			variation of	
				normal and	
				abnormal	
				findings	
				Orders screening	
				and diagnostic	
				tests based on	
				the examination	
				findings	
14	Assessment of Older	Good to	Analyzes the	Uses advanced	
	Adults	know	result of various	health	
1		KIIOVV	assessment	assessment	
	History	Faccutial to			
	 Physical 	Essential to	•	skills to	
	assessment	perform	to older adults	differentiate	
	 Psychological 			between	
	assessment			variation of	
				normal and	
				abnormal	
1	·			findings	
				Orders screening	
				and diagnostic	
				tests based on	
				the examination	
				1	L

findings

Assessment techniques for Theory

- Monthly teat (objective type)
- Sessional Examination Objective structured clinical examination (OSCE)
- Pre University Examination (OSCE)
- Assignment
- Project work
- Practice teaching
- Annotated references from journals

Assessment techniques for practical

- Sessional Examination = Objective structured practical examination (OSPE)
- Pre University Examination (OSPE)
- Clinical conference
- Nursing Rounds
- Clinical assignments

VI.ADVANCED HEALTH/PHYSICAL ASSESSMENT IN CRITICAL CARE NURSING

Placement: Nurse Practitioner in Critical Care Nursing I year

Hours of Instruction

Theory: 70 Hours Practical: 46 Hours Total: 116 Hours

	s. NO	CONT	ENT OF TOPICS	(at the	e end	JECTIVES of the student ble to)	TEACHING	OBJECTIV	VES	METHO	DOLOG	Y TIME	
	1	Introd	uction:										
		•	History taking	Describe		patient's	To teach	and dis	cuss	• Intera	active	4hrs	
		•	Physical	history i	n a lo	ogical and	about th	e signif	icant	sessio	on wi	th	
			examination	organize	d mani	ner.	attributes	of	а	the	studer	its	}
				Demonst	rate	the four	symptom,	inclu	ıding	regar	ding		İ
				methods	of	physical	location a	ınd radia	tion,	meth	ods	of	ĺ
		•		examinat	rion (i	nspection,	intensity,	qu	ality,	physi	cal		ļ
		ļ		palpation	•		temporal		ence	exam	ination		
ļ		1				ercussion,	(onset,		tion,		steps	of	
		1		and ausc	ultatio	n)	frequency)	•	ating	histo	ry taking	<u>.</u>	İ
				Review	the	diagnostic	factors,	aggrav	ating	• Focus	gro	qı	

				·	
		value of history and	factors, setting,	discussion	
		physical examination.	associated symptoms,		
			functional impairment,		
			and patient's		
Ì			interpretation of		
			symptom, four methods	}	
1			of physical examination		
			(inspection, palpation,		
			percussion, and		
			auscultation), including,		
			their purposes, and the		
			findings they elicit, the		
			physiologic mechanisms		
			that explain key findings		
			in the history and		
			physical exam.		
1					
2	Cardiovascular				
	System	Enumerate the various	To teach and discuss		6hrs
	• Cardiac	cardiac laboratory	about logical and	• Seminar on	
	history	studies.	organizedcollection of	Cardiac	
ļ	Physical	statics.	cardiac history, Various	Diagnostic	
		Summarize the Cardiac	Cardiac laboratory	studies	
į.	examination	diagnostic studies.	studies including	studies	
	• Cardiac	diagnostic studies.	biochemical markers,	- Intorpotivo	
	laboratory		•	• Interactive	
	 Cardiac 		hematological studies, various Cardiac	session with	
	diagnostic			students	
	studies		diagnostic studies –	regarding	
			Electrocardiogram,	Cardiac	
			echocardiography,	laboratory	
			stress testing,	studies	
			radiologicalimaging		
				 Project based 	
				leaning	
3	Respiratory System				
		Explain the various			
	History	methods of respiratory	To teach and discuss		6 hrs
	Physical	monitoring.	about logical and	Student	
	examination		organized collection of	seminar on	
	 Respiratory 	Appreciate the	Respiratory history and	Respiratory	
	monitoring	Respiratory diagnostic	physical examination,	Diagnostic	
	• Respiratory	tests.	methods and	tests.	
	• Keshiratory		instruments for	ccsts.	
	<u>.l</u>	<u> </u>	mod difference 101		L

		Diagnostic		Respiratory monitoring	Simulated	
		tests		 Arterial blood gases, 	learning on	
			•	pulse oximetry, end-	Respiratory	[
				tidal carbon dioxide	monitoring.	İ
				monitoring, Respiratory		
	,			Diagnostic tests – Chest		1
				radiography, ventilation		
			j	perfusion scanning,		
				pulmonary angiography,		
			ļ	bronchoscopy,		
			İ	thoracentesis, sputum		
				culture, pulmonary		
				function test		
	4	Nervous System				
		 General 	Discuss the general	To teach and discuss	Interactive	6hrs
)		physical	physical examination and	about the General	session on	
		examination	assessment of cognitive	physical examination,	assessment of	
		 Assessment 	function.	assessment of cognitive	cognitive	
		of cognitive	Demonstrate the	function, assessment of	function and	
	:	function	assessment of cranial	cranial nerve function,	cranial nerve	
		 Assessment 	nerve function.	motor assessment –	function.	
		of cranial		muscle strength, power,		
		nerve	Perform the motor	and reflexes, Sensory		
		function	assessment and sensory	assessment –	Problem based	}
		Motor	assessment.	dermatome	learning	
		assessment	Evaluate the	assessment,		
		Sensory	neurodiagnostic studies.	Neurodiagnostic studies		
		assessment		- CT scan, MRI, PET		
		 Neurodiagnos 				
		tic studies				
		are occurred				
A			!			
	5	Renal System				6hrs
		• History	Discuss the history taking	To teach and discuss		31113
		Physical	and physical examination	about history taking and	Seminar on	
		examination	related to the Renal	physical examination	Assessment of	
		• Assessment	system	related to the Renal	Renal function	
			эузсент	system, assessment of	Renarrunction	
		of renal	Demonstrate the	renal function,	Focus group	
		function	assessment of renal	electrolyte and acid	Focus group discussion	
		• Assessment	function, electrolyte and	base balance and fluid	uiscussion	
		of electrolytes	runction, electrolyte and	base balance and muld		

	and acid base	acid base balance and	balance.		
	balance	fluid balance.			
	 Assessment 				
	of fluid				
	balance				
6	Gastrointestinal				
	System	1. Appreciate the history	To teach and discuss		
	History	taking and physical	about the history taking		4 hrs
	Physical	examination related to	and physical	 Interactive 	
	examination	the Gastrointestinal	examination related to	session on	
	 Nutritional 	System	the Gastrointestinal	Assessment of	
,	assessment	2. Perform the	System, Laboratory	gastrointestina	
	Laboratory	laboratory studies	studies – Liver function	l system	
	studies –	related to	studies, blood		
	Liver function	Gastrointestinal System	parameters, stool test,	Simulation	
	studies, blood		Diagnostic studies –	Technique on	
	parameters,	3. Assist the diagnostic	radiological and imaging	studies related	
	stool test	studies related to	studies, endoscopic	to	
	 Diagnostic 	Gastrointestinal	studies	Gastrointestin	
,	studies –	System		al System	
	radiological				
	and imaging				
	studies,				
	endoscopic				1
	studies				
7	Endocrine System				
-		1. Describe the history	To teach and discuss	 Interactive 	4 hrs
	History	taking and physical	about the history taking	Session on	
	Physical	examination related	and physical	assessment of	
	examination,	to the Endocrine	1 /	endocrine	
		System	the Endocrine System,	system	
	• Laboratory	Зузсент	of Hypothalamus and	System	
	studies	2. Perform the	pituitary gland, Thyroid		0
	• Diagnostic	laboratory	gland, Parathyroid	- Droiget has a	
	studies	studiesrelated to	gland, Endocrine gland	• Project based	
				learning	
		Endocrine System	and Adrenal gland		
		2 Assist diagnostic			
		3. Assist diagnostic			
		studies related to			
		Endocrine System			
8	Hematological	1. Describe the	To teach and discuss	<u> </u>	

	System	history taking and	about the history taking	 Spot group 	4 hrs
	History	physical examination	and physical	discussion of	
	Physical	related to the	examination related to	assessment of	
	examination	hematological System	hematological System,	hematological	
	 Laboratory 		Laboratory studies -	system	
	studies	2. Appreciate the	blood parameters,		
	 Diagnostic 	laboratory studies	Diagnostic studies –	- Cinnulation	ļ
	studies	and diagnostic studies	bone marrow aspiration	•Simulation	
		related to		technique on	
		hematological System		diagnostic studies related	,
				to	
				hematological	
				System	21
9	Integumentary	1. Describe the history	To teach and discuss	Interactive	3hrs
	System	taking and physical	about the history taking	Session	
	• History	examination related	and physical	onphysical	
	 Physical 	to	examination related to	examination	
	examination	IntegumentarySystem	Integumentary System,	related to	
	 Pathological 	2. Review the	the various pathological	Integumentary	
	examination	laboratory studies	examination related to	System	
		and diagnostic studies	the Integumentary	D 11 1	
		related to	System such as tissue	Problem based	
		Integumentary	examination.	leaning	
40		System	T	C	
10	Musculoskeletal	1. Describe the history	To teach and discuss	Seminar on	
	System	taking and physical	about the history taking	physical	
	• History	examination related	and physical	examination	C 1
	 Physical 	to Musculoskeletal	examination related to	related to	6 hrs
	examination	System the the	Musculoskeletal System	Musculoskeletal	
	• Laboratory	2. Explain the		System	
	studies	laboratory studies	joint		}
	 Diagnostic 	and diagnostic studies	assessment, Laboratory		
	studies	related to	studies – blood	Focus group	
		Musculoskeletal	parameters	discussion	
		System	(inflammatory enzymes,		
			uric acid), Diagnostic		
			studies - Radiological		
			and imaging studies,		
			endoscopic studies		
11	Reproductive System	1.Describe the history	To teach and discuss	Interactive	
	(Male & Female)	taking and physical	aboutthe history taking	Session	

• History	physical examination	and physical	sessions related
Physical	of older adults	examination of older	to the
assessment		adults, various	psychological
 Psychological 	2. Enumerate the	psychological	assessment of
assessment	various psychological	assessment of older	older adults
	assessment of older	adults.	
	adults		

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- Wilson, S. F., & Giddens, J. F. (2006). Health assessment for nursing practice (4th ed.). St. Louis, Missouri: Saunders Elsevier

Syllabus: 2nd year

I.Foundations of Critical Care Nursing Practice

Preamble

Foundations of Critical Care Nursing Practice, develops fundamental knowledge and skills required to care for patients in critical care nursing practice contexts. The subject provides a

theoretical and practical foundation that prepares students for ethically oriented professional practice and undertake further studies at more advanced levels in critical care nursing. The subject enables students to develop critical thinking and problem solving skills, specialized clinical proficiency, and effective communication skills. Students will be able to make independent judgements; plan, implement and evaluate practice in specialty contexts and function effectively as a member of a multidisciplinary team.

Goals

The primary goal of the subject is to train specialist nurses with advanced educational preparation required to support specialized and super specialized healthcare services. The critical care NP program prepares registered BSc nurses for advanced practice roles as clinical experts, managers, educators and consultants leading to M.Sc. degree in critical care NP

Objectives

At the end of this course, the student will be able to:

- 1. Assume responsibility and accountability to provide competent care to critically ill patients and appropriate family care in tertiary care centres
- 2. Demonstrate clinical competence / expertise in providing critical care which includes diagnostic reasoning, complex monitoring and therapies
- 3. Apply theoretical, patho-physiological and pharmacological principles and evidence base in implementing therapies / interventions in critical care
- 4. Identify the critical conditions using differential diagnosis and carry out treatment/interventions to stabilize and restore patient's health and minimize or manage complications independently or collaboratively as a part of critical care team
- 5. Collaborate with other health care professionals in the critical care team, across the continuum of critical care

Teaching strategies

Teaching strategies

The curriculum is based on both clinical and public health sectors of the society. Themajor focus is on individuals rather than population aggregates, students are prepared to participate in a multidisciplinary approach to planning, implementing and evaluating programs and services for client health and safety.

It is assumed that there will be approximately 144 in the 1 year period of this course subject. Of which, theory teaching will be for 96 hours and practical will be for 48 hours. Out of the 48 hours of practical include demonstration by the faculty and practice by the students

CPR (BLS and ACLS)

Airway Management

o Laryngeal mask airway

o Cuff inflation and anchoring the tube

o Care of ET tube

o Tracheostomy care

o Suctioning – open/closed

o Chest physiotherapy

② Oxygenation and oximetry, care of patient with oxygen delivery devices

o Devices to measure oxygen/oxygenation

- Fuel cell

Para magnetic oxygen analyzer

- PO2 electrodes-Clark electrodes

Transcutaneous oxygen electrodes

- Oximetry – Pulse oximetry, Venous oximetry

o Capnography

- o Non invasive ventilation
- Low flow variable performance devices: nasal catheters/cannulae/double nasal prongs, face mask, face mask with reservoir bags
- High flow fixed performance devices : Entrainment (Venturi) devices, NIV/CPAP/Anesthetic

masks, T pieces, breathing circuits

- o Postural drainage
- Ventilation and ventilator support
- o Connecting to ventilator
- o Weaning from ventilator
- o Extubation
- o Humidifiers
- o Nebulizers jet, ultrasonic
- o Inhalation therapy metered dose inhalers (MDI), dry powder inhalers (DPI)
- Circulation and perfusion (including hemodynamic evaluation and waveform graphics)
- o Invasive blood pressure monitoring
- o Non-invasive BP monitoring
- o Venous pressure (Peripheral, Central and Pulmonary artery occlusion pressure)
- o Insertion and removal of arterial line
- o Insertion and removal of central line
- o Pulse index Continuous Cardiac output (PiCCO)
- o Electrocardiography (ECG)
- o Waveforms

- Pluids and electrolytes
- o Fluid calculation and administration (crystalloids and colloids)
- o Administration of blood and blood products
- o Inotrope calculation, titration and administration
- Cardiac glycosides Digoxin
- Sympathomimetics Dopamine, dobutamine, epinephrine, isoproterenol, norepinephrine,
- phenylephrine
- Phosphodiesterase inhibitors amrinone, milrinone
- o Electrolyte correction (Sodium, potassium, calcium, phosphrous, magnesium)
- o Use of fluid dispenser and infusion pumps
- Evaluation of acid base status
- o Arterial blood gas (ABG)
- ☑ Thermoregulation, care of patient with hyper/hypothermia
- o Temperature probes
- o Critical care management of hyper and hypothermia
- Glycemic control, care of patient with glycemic imbalances
- o Monitoring GRBS
- o Insulin therapy (sliding scale and infusion)
- o Management of Hyperglycemia IV fluids, insulin therapy, potassium supplementation
- o Management of hypoglycemia Dextrose IV
- Pharmacological management of pain, sedation, agitation, and delirium
- o Calculation, loading and infusion of Morphine, Fentanyl, Midazolam, Lorazepam, Diazepam,

Propofol, Clonidine, Desmedetomidine, Haloperidol

o Epidural analgesia- sensory and motor block assessment, removal of epidural catheter after discontinuing therapy, change of epidural catheter site dressing, insertion and removal of subcutaneous port for analgesic administration, intermittent catheterization for urinary retention for patients on epidural analgesia/PCA, dose titration for epidural infusion, epidural catheter adjustment, purging epidural drugs to check patency of catheter and also for analgesia

Counseling

Pamily education

I.Foundations of Critical Care Nursing Practice

The subject will be for 1 year duration. The topics covered under theory training are as follows

s. NO	TOPICS	HOURS
1	Introduction to Critical Care Nursing	10 hrs
	 Review of anatomy and physiology of vital organs 	
	 Historical review- Progressive patient care(PPC) 	
	 Concepts of critical care nursing 	
	 Principles of critical care nursing 	
	 Scope of critical care nursing 	
į	 Critical care unit set up 	
	 Personnel in ICU 	
	 Technology in critical care 	
	 Healthy work environment 	

	Future challenges in critical care nursing	
2	Concept of Holistic care applied to critical care nursing practice	5hrs
	 Application of nursing process in the care of critically ill 	
	 Admission and progress in ICU- An overall view 	
	Overview of ICU Management	
3	Appraisal of the critically ill	10hrs
	Triaging concept, process and principles	
	 Assessment of the critically ill 	
	 Monitoring of the critically ill 	
	 Evaluation of the critically ill 	
4	Advanced Concepts and Principles of Critical Care	14hrs
	Principles of cardio-pulmonary-brain resuscitation	-
	• Emergencies in critical care	
	 Ventilation and ventilator support 	
	 Circulation and perfusion 	
	 Fluids and electrolytes imbalances. 	
	 Thermoregulation, care of patient with hyper/hypo-thermia 	
	 Liberation from life support (Weaning) 	
	 Glycemic control, care of patient with glycemic imbalances 	
5	Pain and management	8hrs
	Pain in Critically ill patients	
	 Pain – Types, Theories 	
	 Physiology, Systemic responses to pain and psychology of pain 	
	 Acute pain services 	
	• Pain assessment	
	Pain management	
6	Psychosocial and spiritual alterations: Assessment and management	8hrs
	Stress and psychoneuroimmunology	
	 Post traumatic stress reaction 	
	• ICU Psychosis, Anxiety, Agitation, Delirium	
	 Alcohol withdrawal syndrome and delirium tremens 	
	 Collaborative management 	
	• Sedation and Relaxants	
	 Spiritual challenges in critical care 	
	 Coping with stress and illness 	
	 Care of family of the critically ill 	
	 Counseling and communication 	

		Abra		
7	Patient and family education and counseling Challenges of patient and family education	4hrs		
	Process of adult learning			
	Factors affecting teaching learning process			
	 Informational needs of families in critical care 			
	Counseling needs of patient and family			
	Counseling techniques	ļ		
	Courseling teeriniques	}		
8	Nutrition Alterations and Management in critical care	5hrs		
	Nutrient metabolism and alterations			
	 Assessing nutritional status 			
	Nutrition support	Ì		
	 Nutrition and systemic alterations 			
	 Care of patient on enteral and parentral nutrition 			
9	Sleep alterations and management	4hrs		
	Normal human sleep			
	 Sleep pattern disturbance 			
	Sleep apnea syndrome			
10	Infection control in critical care			
	Nosocomial infection in intensive care unit			
	 Disinfection, Sterilization, 			
	 Standard safety measures, 			
	 Prophylaxis for staff 			
	Antimicrobial therapy- review			
11	Legal and ethical issues in critical care-Nurse's role	6hrs		
	 Legal issues 			
	Ethical issues			
	 Managing Scarce resource in critical care 			
12	Quality assurance	8hrs		
	Design of ICU/CCU) 		
ı	 assurance models applicable to ICUs 			
	• Standards, Protocols, Policies, Procedures			
	 Nursing audit relevant to critical care 			
	• Staffing			
13	Evidence based practice in critical care nursing			
	Evidence based practice in critical care	3hrs		
	Barriers to implementation			
	Strategies to promote implementation	-		

14 Class test 5hrs

Clinical Training

The students will be exposed to practical demonstrations in various departments for above purposes. Clinical training comprises of 48 hours. A student must complete 100% of attendance notified in each of the practical areas before award of degree.

- Applies advanced concepts of critical care nursing based on sound knowledge of these concepts
- Uses invasive and noninvasive technology and interventions to assess, monitor and promote physiologic stability
- Works in collaboration with other healthcare team members
- Consults with and is consulted by other health care professionals
- Provides nursing care related to health protection, disease prevention, anticipatory guidance, counseling, management of critical illness, palliative care and end of life care
- Uses advanced skills in complex and unstable environments
- Applies ethically sound solutions to complex issues related to individuals, populations and systems of care
- Practices principles of infection control relevant to critical care
- Practices independently within the legal framework of the country towards the interest of patients, families and communities
- Develops practice that is based on scientific evidence
- Uses applicable communication, counseling, advocacy and interpersonal skills to initiate
 , develop and discontinue therapeutic relationships
- Creates and maintains a safe therapeutic environment using risk management strategies and quality improvement
- Adapts practice to the social, cultural and contextual milieu

NP Critical Care Competencies (Adapted from ICN, 2005)

- Uses advanced comprehensive assessment, diagnostic, treatment planning, implementation and evaluation skills
- Applies and adapts advanced skills in complex and / or unstable environments
- Applies sound advanced clinical reasoning and decision making to inform, guide and teach in practice

- Documents assessment, diagnosis, management and monitors treatment and follow-up care in partnership with the patient
- Administer drugs and treatments according to institutional protocols
- Uses applicable communication, counselling, advocacy and interpersonal skills to initiate, develop and discontinue therapeutic relationships
- Refers to and accepts referrals from other health care professionals to maintain continuity of care
- Practices independently where authorizes and the regulatory framework allows in the interest of the patients, families and communities
- Consults with and is consulted by other health care professionals and others
- Works in collaboration with health team members in the interest of the patient
- Develops a practice that is based on current scientific evidence and incorporated into the health management of patients, families and communities
- Introduces, tests, evaluates and manages evidence based practice
- Uses research to produce evidence based practice to improve the safety, efficiency and effectiveness of care through independent and inter-professional research
- Engages in ethical practice in all aspects of the APN role responsibility
- Accepts accountability and responsibility for own advanced professional judgement, actions, and continued competence
- Creates and maintains a safe therapeutic environment through the use of risk management strategies and quality improvement
- Assumes leadership and management responsibilities in the delivery of efficient advanced practice nursing services in a changing health care system
- Acts as an advocate for patients in the health care systems and the development of health policies that promote and protect the individual patient, family and community
- Adapts practice to the contextual and cultural milieu

CLINICAL PRACTICE

- e. Clinical Residency experience (A minimum of 48 hrs/ week is prescribed, however, it is flexible with different shifts and OFF followed by on call duty)
- f. 8 hours duty with one day Off in a week and on call duty one per week

Clinical placements:

a. Clinical Residency experience(A minimum of 48 hrs/ week is prescribed, however, it is flexible with different shifts and OFF followed by on call duty)

- b. 8 hours duty with one day Off in a week and on call duty one per weekll Year: 45wks (Excludes one week of block classes)
 - Medical ICU 12 weeks
 - Surgical ICU 12 weeks
 - Cardio/Cardio thoracic (CT) ICU 8 weeks
 - Emergency Department 8 weeks
 - Other ICUs (Neurology, Burns, Dialysis unit) 6 weeks

II YEAR=46 weeks/ 2208 hrs(46x48hrs) (Theory +Lab: 8.5hrs/week for 45wks=384+48hrs)

(1 week Block classes = 48 hrs)

II year : 288-144-1776hrs ('' '') [Theory + Lab=20%, Clinical=80%]

References

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- 3. Morton, P. G., & Fontaine, D. K. (2013). Critical Care Nursing: A Ho; istic Approach (9th ed.). Lippincott Williams and Wilkins: Philadelphia
- 4. Perrin, K. O. (2009). Understanding the essentials of critical care nursing. New Jersey: Pearson Edcuation.
- 5. Urden, L. D., Stacy, K. M., & Lough, M. E. (2014). Critical Care Nursing- Diagnosis and management (7th ed.). Elsevier: Missouri
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I.FOUNDATIONS OF CRITICAL CARE NURSING PRACTICE

Placement: Nurse Practitioner in Critical Care Nursing II year

Hours of Instruction Theory: 96 Hours Practical: 48 Hours Total: 144 Hours

S. NO	TOPICS	DOMAIN	COGNITIVE PS	SYCHOMOTOR	AFFECTIVE
3. IVO				;	
1	Introduction to Critical Care	Good to	Develops		Develops
	Nursing	know	knowledge		understanding in
			in concepts		scope and future
	 Review of anatomy and 		and		challenge in
	physiology of vital		principles of		critical care

	organs		critical care		
	organsHistorical review-				nursing
	Progressive patient		nursing		
	care(PPC)				
	 Concepts of critical care 				
	· ·	1			
	nursing				
	Principles of critical care				
	nursingScope of critical care				•
	nursing				
	Critical care unit set up				
	Personnel in ICU				
	 Technology in critical 				
	care				
	• Healthy work				
	environment				
	 Future challenges in 				
	critical care nursing				
2	Concept of Holistic care applied	Essential to		Applies nursing	
	to critical care nursing practice	perform		process in care	
	 Application of nursing 			of critically ill	
	process in the care of			patients	
	critically ill				
	 Admission and progress 				
	in ICU- An overall view				
	 Overview of ICU 				
	Management				
3	Appraisal of the critically ill	Essential to		Uses invasive and	
	Triaging concept, process and	perform		noninvasive	
	principles			technology and	
	 Assessment of the 			interventions to assess, monitor	
	critically ill			and promote	
	 Monitoring of the 			physiologic	
	critically ill	i		stability	
	 Evaluation of the 				
	critically ill				
4	Advanced Concepts and	Essential to		Applies	
	Principles of Critical Care	perform		advanced	
	Principles of cardio-pulmonary-			concepts of	

brain re	uscitation					critical care	
• Emerg	encies in critica	l care				nursing based on	
Vent	lation and v	entilator				sound knowledge	
support						of these concepts	
• Circula	tion and perfus	sion				Performs ACLS	
• Flui	ds and ele	ctrolytes			İ	and BLS on 2	
imbalan						patients	
• Ther	noregulation,				ľ		
patient	with hyp	er/hypo-		1			
thermia				1			
• Libera	tion from life	support		1	i		
(Weanir	g)			1			
 Glyce 	mic control,	care of					
patient	with	glycemic		ļ			
imbalan	ces					 	
5 Pain and	management		Good	to	Develops	Performs pain	Develops
Pain in C	ritically ill patie	nts	know		knowledge	assessment on	understanding in
• Pain –	Types, Theories	5			in theories	5 patients	the management
• P	rysiology,	Systemic	Essential		and types of		of pain
response	s to pai	n and	toperforn	n	pain		
psycholo	gy of pain						
• Acute	pain services						
• Pain as	sessment						
• Pain m	anagement						
6 Psychos	ocial and	spiritual	Good	to	Develops	Demonstrate	
alteration	ns: Assessme	ent and	know		knowledge	counselling and	
manage	ment				in	communication	
Stress		and	Essential	to	psychosocial		
psychon	euroimmunolo	gy	perform		and spiritual		
• Post tr	aumatic stress	reaction			alterations		
• ICU	Psychosis,	Anxiety,					
Agitatio	, Delirium						
• Alcoho	l withdrawal s	yndrome					
and deli	ium tremens			1	ì		1
and deli	orative manage	ment					
and deli • Collab							
and deliCollabSedati	orative manage	ts					
and deliCollabSedati	orative manage on and Relaxan	ts					

7	 Care of family of the critically ill Counseling and communication Patient and family education and counseling Challenges of patient and family education Process of adult learning Factors affecting teaching learning process Informational needs of families in critical care Counseling needs of patient and family 	Essential to perform		Uses applicable communication, counseling, advocacy and interpersonal skills to initiate, develop and discontinue therapeutic relationships	
8	 Counseling techniques Nutrition Alterations and Management in critical care Nutrient metabolism and alterations Assessing nutritional status Nutrition support Nutrition and systemic alterations Care of patient on enteral and parentral nutrition 	Essential to perform		Provides care for 5 patients on enteral and parenteral nutrition	
9	Sleep alterations and management Normal human sleep • Sleep pattern disturbance • Sleep apnea syndrome	Good to know	Develops knowledge on sleep pattern disturbances	Provide care to 2 patients with sleep alterations	
10	Infection control in critical care Nosocomial infection in	Essential to perform		Practices principles of	

	 intensive care unit Disinfection, Sterilization, Standard safety measures, Prophylaxis for staff Antimicrobial therapy- review 		relevant to critical care
1 1	Legal and ethical issues in critical care-Nurse's role Legal issues Ethical issues Managing Scarce resource in critical care	Essential to perform	Practices independently within the legal framework of the country towards the interest of patients, families and communities
	Quality assurance Design of ICU/CCU assurance models applicable to ICUs Standards, Protocols, Policies, Procedures Nursing audit relevant to critical care Staffing	Essential to perform	Creates and maintains a safe therapeutic environment using risk management strategies and quality improvement
	Evidence based practice in critical care nursing Evidence based practice in critical care Barriers to implementation Strategies to promote implementation	Essential to perform	Practices evidence based care in critical care
14	Class test		

Assessment techniques for Theory

- Monthly teat (objective type)
- Sessional Examination Objective structured clinical examination (OSCE)
- Pre University Examination (OSCE)
- Assignment
- Project work

- Practice teaching
- Annotated references from journals

Assessment techniques for practical

- Sessional Examination = Objective structured practical examination (OSPE)
- Pre University Examination (OSPE)
- Clinical conference
- Nursing Rounds
- Clinical assignments
- Clinical evaluation

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VII.FOUNDATIONS OF CRITICAL CARE NURSING PRACTICE

Placement: Nurse Practitioner in Critical Care Nursing II year

Hours of Instruction Theory: 96 Hours Practical: 48 Hours Total: 144 Hours

S. NO	CONTENT OF TOPICS	LEARNING OBJECTIVES (at the end of the session the student should be able to)	TEACHING OBJECTIVES	METHODOLOGY	TIM E
1	Introduction to Critical				
	Care Nursing	Describe the	To teach and discuss	Interactive	10
	Introduction	anatomy and	about the anatomy and	session with the	hrs
	 Review of anatomy 	physiology of vital	physiology of vital organs	students	
	and physiology of	. ,	(Brain, Spinal Cord, Lungs,	regarding	
	vital organs	organs	Heart, Kidney,	anatomy and	ı
	 Historical review- 	Appreciate the	Liver, Pancreas, Thyroid,	physiology of vital	
	Progressive patient	concepts and	Adrenal and Pituitary	organs	
	care(PPC)	principles of critical	gland), Historical review-		
	 Concepts of critical 		Progressive patient	Focus group	
	care nursing	care nursing	care(PPC), Concepts of	discussion on	
	 Principles of critical 	Discuss the scope	critical care nursing,	concepts and	

	care nursing	and future challenges	Principles of critical care	principles in	
	 Scope of critical 	in critical care	nursing, Scope of critical	critical care	
	care nursing	nursing	care nursing, Critical care	nursing.	
į,	 Critical care unit set 	Hursing	unit set up (including		
	up		types of ICU, equipment,	Seminar on	
1	 Personnel in ICU 		supplies, beds and	progressive	
	 Technology in 		accessories, use	patient care.	
	critical care		and care of various type		
	 Healthy work 		of monitors & ventilators,		
	environment		Flow sheets, supply lines		
1	 Future challenges 		and the environment),		
	in critical care		Personnel in ICU such as		
	nursing		Nursing staff, Doctors,		
	3		Critical care technicians,		
			Ancillary staff, Technology		•
			in critical care, Healthy		
			work environment, Future		
			challenges in critical care		
			nursing	_	
2	Concept of Holistic care				
	applied to critical care	-Demonstrate the	-To teach and discuss	10	5
	nursing practice	application of nursing	about Application of		hrs
1	-Application of nursing	process in the care of	nursing process in the	Interactive	
	process in the care of	critically ill	care of critically ill,	session with	
	critically ill		Admission and progress in	students	
	-Admission and progress in	-Summarize the	ICU, Overview of ICU	regarding ICU	
	ICU- An overall view	overview of ICU	Management (Ensure	management	
	-Overview of ICU	Management	adequate tissue	 Case studies 	
	Management		oxygenation, Maintain		
ļ			chemical environment,		
			Maintain temperature,		
			Organ protection,		
			Nutritional support,		
ļ			Infection control,		
			Physiotherapy and		
			rehabilitation, Family		
			visiting hours), Restraints		
			in critical care – physical,		
1			chemical and alternatives		
			to restraints, Death in		
L	L	<u>L</u>	to restraines, Death III		

				critical care unit: End of life care/Care of dying, care of family, organ donation, Transport of the critically ill — By air ambulance and surface ambulance, Stress and burnout syndrome among health team members		
3	Appraisal of the critically ill Triaging concept, process and principles • Assessment of the critically ill • Monitoring of the critically ill • Evaluation of the critically ill	1.Demonstrate assessment, monitoring evaluation of critically ill	the and the	To teach and discuss about Assessment of the critically ill (General assessment, Respiratory assessment, Cardiac assessment, Renal assessment, Neurological assessment, Gastrointestinal assessment, Endocrine assessment, Musculoskeletal assessment, Integumentary assessment), Monitoring of the critically ill (Arterial blood gas (ABG), Capnography, Hemodynamics, Electrocardiography (ECG), Glasgow Coma Scale (GCS), Richmond agitation sedation scale,	-Simulated learning onassessment, monitoring and evaluation of the critically ill. Role play	10 hrs

4	Advanced Concepts and Principles of Critical Care Principles of cardio-pulmonary-brain resuscitation • Emergencies in critical care • Ventilation and ventilator support • Circulation and perfusion • Fluids and electrolytes imbalances. • Thermoregulation, care of patient with hyper/hypothermia • Liberation from life support (Weaning) • Glycemic control, care of	Discuss the principles of cardio-pulmonary brain resuscitation. Review the various emergencies in critical care	Evaluation of the critically ill (Evaluation of pre critical illness, Evaluation of critical illness, Outcome and scoring systems, Acute Physiology and Chronic Health Evaluation (APACHE I-IV), Mortality probability model (MPM I, II), Simplified acute physiology score (SAPS I, II), Organ system failure, Full outline of unresponsiveness (FOUR), Model for end-stage liver disease) To teach and discuss about the Principles of cardio-pulmonary-brain resuscitation, Emergencies in critical care: CPR, BLS, ACLS, Airway management, Oxygenation and oximetry, care of patient with oxygen delivery devices, Ventilation and ventilator support (including humidification and inhaled drug therapy), care of patient with invasive and non invasive ventilation,	 Simulated learning on cardio-pulmonary brain resuscitation. Seminar on emergencies in critical care Role play 	14 hrs	
	 Liberation from life support (Weaning) 		therapy), care of patient with invasive and	• Note play		

5	Pain and management Pain in Critically ill patients • Pain – Types, Theories • Physiology, Systemic responses to pain and psychology of pain • Acute pain services • Pain assessment • Pain management	 Describe about pain, its types, theories and physiology Enumerate the various methods for pain management 	graphics), Fluids and electrolytes (review), care of patient with imbalances of fluid and electrolytes, Evaluation of acid base status, Thermoregulation, care of patient with hyper/hypothermia, Liberation from life support (Weaning), Glycemic control, care of patient with glycemic imbalances To teach and discuss about Pain — Types, Theories, Physiology, Systemic responses to pain and psychology of pain, Acute pain services, Pain assessment — Pain scales, behavior and verbalization, Pain management-pharmacological (Opioids, benzodiazepines, propofol, Alpha agonist, Tranquilisers, Neuromuscular blocking agents)Nonpharmacologic al management Such as Transcutaneous electrical nerve stimulation(TENS)	• Focus group discussion on Pain management Integrated teaching	8 hrs
6	Psychosocial and spiritual	4. D			
	alterations: Assessment and management Stress and psychoneuroimmunology Post traumatic stress reaction	1. Describe about stress and pychoimmun ology	To teach and discuss aboutStress and psychoneuroimmunology, Post traumatic stress reaction, ICU Psychosis, Anxiety, Agitation,	 Interactive session on pychosocial alterations and its 	8 hrs

					,	
	 ICU Psychosis, Anxiety, 	2. Explain about	Delirium, Alcohol	management		ĺ
	Agitation, Delirium	pychosocial	withdrawal syndrome and		Į	l
	 Alcohol withdrawal 	alterations	delirium tremens,	Fish bowl		ĺ
	syndrome and delirium	and its	Collaborative	technique		l
	tremens	management	management, Sedation			ŀ
	 Collaborative 		and Relaxants, Spiritual		[·]	ļ
	management		challenges in critical care,			1
	 Sedation and Relaxants 		Coping with stress and			1
1	 Spiritual challenges in 		illness, Care of family of			ł
	critical care		the critically ill,			ŀ
	 Coping with stress and 		Counseling and		}	i
	illness		communication			ĺ
	 Care of family of the 				ļ.	İ
	critically ill	İ			ļ	4
	 Counseling and 	i	ı		ļ	(
	communication	1				ĺ
}						ĺ
7	Patient and family	1. Describe				
	education and counseling	about family	To teach and discuss	 Interactiv 	4	
	Challenges of patient and	and adult	about Challenges of	e session	hrs	ł
	family education	education.	patient and family	on		
	 Process of adult learning 	2. Enumerate	education, Process of	Counselin	į	١
1	 Factors affecting 	the factors	adult learning, Factors	g	ę.	1
	teaching learning process	affecting	affecting teaching	technique		
	 Informational needs of 	teaching and	learning process,	S		1
	families in critical care	learning	Informational needs of	 Role play 		1
	 Counseling needs of 	process	families in critical care,	,		ĺ
	patient and family	3. Summarize	Counseling needs of		ļ	
1	 Counseling techniques 	about the	patient and family,		į	
		various	Counseling techniques		i	
		counseling			į	. 4
1		techniques.				ĺ
					<u>.</u>	
		r İ				
8	Nutrition Alterations and	1. Describe about	To teach and discuss			l
	Management in critical	the nutrition	about nutrient		5hr	İ
	care	and systemic	metabolism and	Seminar on	S	ļ
	Nutrient metabolism and	alterations	alterations, Assessing	nutrition and		1
	alterations		nutritional status,	systemic		ĺ
	 Assessing nutritional 	2. Demonstrate	Nutrition support,	alterations		l
	71336331116 1146116101141	Z. Demonstrate	reacticion support,	arcer acrons	اـــــــــــــــــــــــــــــــــــــ)

status Nutrition support Nutrition and systemic alterations Care of patient on enteral and parentral nutrition Sleep alterations and management Normal human sleep	the care of patient on enteral and parentral nutrition 1. Describe the normal human sleep pattern	Nutrition and systemic alterations, Care of patient on enteral and parentral nutrition To teach and discuss about normal sleep wake cycle (Stages of sleep,	 Problem based learning Seminar on Sleep pattern 	4 hrs
• Sleep pattern disturbance • Sleep apnea syndrome	2. Elaborate about sleep pattern disturbances	REM sleep, NREM sleep, Factors affecting sleep, Methods of sleep study), Sleep pattern disturbance (Hypersomnia and its management, Insomnia and its management, Parasomnia and its management), Sleep apnea syndrome	disturbances Spot group discussion on normal human sleep	
Infection control in critical care Nosocomial infection in intensive care unit Disinfection, Sterilization, Standard safety measures, Prophylaxis for staff Antimicrobial therapyreview	1. Describe about Nosocomial infection in intensive care unit 2. Review the standard safety measures	To teach and discuss about nosocomial infection in intensive care unit; methyl resistant staphylococcus aureus (MRSA) and other recently identified strains, Disinfection, Sterilization, Standard safety measures, Prophylaxis for staff, Antimicrobial therapy-review	 Role play and video films Fish bowl technique Interactiv e sessions 	5hrs
11 Legal and ethical issues in critical care-Nurse's role	1. Describe about the legal and	To teach and discuss aboutlegal issues (Issues	Focus group discussion	

		ethical issues in	giving raise to civil	-	6hrs
	• Lega <mark>l issues</mark>	critical care	litigation, Related laws in	 Interactive 	
	Ethical issues		India, Medical futility,	sessions on	
	 Managing Scarce 	2. Enumerate the	Administrative law:	managing	
	resource in critical	role of nurse in	Professional	Scarce resource	
}	care	ethical and legal	regulation,Tort law:	in critical care	
		issues	Negligence, professional		
			malpractice, intentional		
			torts, wrongful death,		
			defamation, assault and		
			battery, Constitutional		
			Law: Patient decision		
			making) Ethical issues		
			(Difference between		
			morals and ethics, Ethical		
			principles, ethical decision		
İ			making in critical care,		
			Strategies for promoting		
			ethical decision		
			Making, Ethical issues		
			relevant to critical care,		
}			withholding and		
	1		withdrawing treatment),		
			Managing Scarce resource		
			in critical care(Brain		
			death, Organ donation &		
			Counseling, Do Not		
}			Resuscitate(DNR),		
			Euthanasia, Living will)		
			Nurses' Role	<u>.</u>	
12	Quality assurance	1. Describe about	To teach and discuss		
	Design of ICU/CCU	the assurance	about Design of ICU/CCU,	Seminar on	[
	 assurance models 	model related to	assurance models	assurance model	8
]	applicable to ICUs	ICUs	applicable to ICUs,	related to ICUs	hrs
	 Standards, Protocols, 		Standards, Protocols,		
	Policies, Procedures	2. Appreciate	Policies, Procedures,	Role play	
	 Nursing audit relevant to 	nursing audit	Infection control policies		
	critical care	relevant to	and protocols, Standard		
	 Staffing 	critical care	safety measures, Nursing		
		·	audit relevant to critical		

	Annua		care, Staffing		
13	Evidence based practice in	1. Describe the	To teach and discuss		
	critical care nursing	evidence based	about evidence based		3
	Evidence based practice in	practice in critical	practice in critical care,	Interactive	hrs
	critical care	care	Barriers to	sessions on	
	 Barriers to 		implementation,	Barriers to	
	implementation	2.Discuss the	Strategies to promote	implementation	
	 Strategies to promote 	strategies to promote	implementation		
	implementation	implementation		Panel discussion	
				on Evidence	
				based practice in	
				critical care	
14	Class test				5
α					hrs

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- 2. John, G., Subramani, K., Peter, J. V., Pitchamuthu, K., &Chacko, B. (2011). Essentials of critical care (8th ed.). Christian Medical College: Vellore.
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II.Critical care nursing I

Subject distribution:

The subject will be for 1 year duration. The topics covered under theory training are as follows

	Unit	Topic	Hours
_			1

Déan

1.	Introduction	6
	Review of anatomy and physiology of vital organs	
	 Review of assessment and monitoring of the critically ill 	
2.	Cardiovascular alterations	16
	 Review of Clinical assessment, pathophysiology, and pharmacology 	
	Special diagnostic studies	
	 Cardiovascular conditions requiring critical care management 	İ
	- Heart block and conduction disturbances	ļ
	- Coronary heart disease	
	- Myocardial infarction	
	- Pulmonary hypertension	
	- Valvular heart disease	
	- Atherosclerotic disease of aorta	
	- Peripheral artery disease	
	- Cardiomyopathy	
	- Heart failure	
	- Deep vein thrombosis	
	- Congenital heart disease(cyanotic and acyanotic)	
	Cardiovascular therapeutic management	
	- Cardiac transplant	
	- Pacemakers	
	- Cardioversion	
	- Defibrillation	
	- Implantable cardiovert defibrillators,	
	- Thrombolytic therapy	
	- Radiofrequency catheter ablation	
	- Percutaneous Transluminal Coronary Angioplasty(PTCA)	
	- Cardiac surgery -Coronary artery bypass grafting(CABG)/ Minimally	
	invasive	
	coronary artery surgery) MICAS, Valvular surgery, vascular surgery	
	- Mechanical circulatory assistive devices – Intra aortic balloon pump	
	- Effects of cardiovascular medications	
	- Ventricular assist devices(VAD)	
	- Extra corporeal membrane oxygenation(ECMO)	
	Recent advances and development	
3.	Pulmonary alterations	15
	Review of Clinical assessment, pathophysiology, and pharmacology	
	Special diagnostic studies	
	 Pulmonary conditions requiring critical care management 	
	- Status asthmaticus	

	- Pulmonary edema	
	- Pulmonary embolism	
	- Acute respiratory failure	
	- Acute respiratory distress syndrome	
	- Chest trauma	
	- Chronic obstructive pulmonary disease	
	- Pneumonia	
	- Pleural effusion	
	- Atelectasis	
	- Longterm mechanical ventilator dependence	
	 Pulmonary therapeutic management 	
	- Thoracic surgery	
	- Lung transplant	
	- Bronchial hygiene: Nebulization, deep breathing and coughing exercise,	
	chest	
	physiotherapy and postural drainage	
	- Chest tube insertion and care of patient with chest drainage	
	 Recent advances and development 	
4.	Neurological alterations	15
	 Review of Clinical assessment, pathophysiology, and pharmacology 	
	Special diagnostic studies	
	 Neurological conditions requiring critical care management 	
	- Cerebro vascular disease and cerebro vascular accident	
	- Encephalopathy	
	- Gillian Bare syndrome and Myasthenia gravis	
	- Brain herniation syndrome	
	- Seizure disorder	
	- Coma, Unconsciousness	
	- persistent vegetative state	
	- Head injury	
	- Spinal cord injury	
	- Thermoregulation	
	 Neurologic therapeutic management 	
	- Intracranial pressure – Assessment and management of intracranial	
	hypertension	
	- Craniotomy	
	 Recent advances and development 	
5.	Nephrology alterations	15
J.	• Review of Clinical assessment, patho-physiology, and pharmacology	13
	• Special diagnostic studies	
	- Special diagnostic studies	

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- 1. Barkers, A.M. (2009). Advanced Practice Nursing. Massachussets: Jones & Bartlett Publisher.
- 2. Hickey, J. V., Ouimette, R. M., &Venegoni, S. L. (1996). Advanced practice nursing: Changing roles and clinical applications. Philadelphia: Lippincott Williams and Wilkins.
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II.Critical Care Nursing I

Placement: Nurse Practitioner in Critical Care IInd year

Hours of Instruction
Theory 96 hours
Practical 48 hours
Total 144 hours

S.	TOPIC	DOMAIN	COGNITIVE	PSYCHOMOTOR	AFFECTIVE
No					
1	Introduction	Essential to			Develops
	 Review of anatomy and 	perform			understanding in
	physiology of vital organs				assessment and
	 Review of assessment and 				monitoring of
	monitoring of the critically ill				critical ill
					patients
2	Cardiovascular alterations	Good to	Develop	Provides nursing	Appreciates
	 Review of Clinical 	know	knowledge in	care to 5	recent
	assessment, pathophysiology,		Clinical	patients related	advancement
	and pharmacology	Essential to	assessment,	to health	and
;	 Special diagnostic studies 	perform	pathophysiolog	protection,	development
	 Cardiovascular conditions 		y, and	disease	
	requiring critical care		pharmacology	prevention,	

management		of	anticipatory	
- Heart block and conduction	,	cardiovascular	guidance,	
disturbances		conditions	counselling and	
- Coronary heart disease			management of	
- Myocardial infarction			cardiovascular	
- Pulmonary hypertension			conditions	
- Valvular heart disease				
- Atherosclerotic disease of			Uses invasive	
aorta			and noninvasive	•
- Peripheral artery disease			technology and	
- Cardiomypathy			interventions to	
- Heart failure			assess, monitor	
- Deep vein thrombosis			patients with	
- Congenital heart			cardiovascular	\
disease(cyanotic and acyanotic)			disorders	
 Cardiovascular therapeutic 		,		
management	İ			
- Cardiac transplant		:		
- Pacemakers				
- Cardioversion				
- Defibrillation				
- Implantable cardiovert			,	
defibrillators,				
- Thrombolytic therapy				
- Radiofrequency catheter				
ablation				
- Percutaneous Transluminal				
Coronary Angioplasty(PTCA)				
- Cardiac surgery –Coronary				
artery bypass grafting(CABG)/				
Minimally invasive				
coronary artery surgery)MICAS,				
Valvular surgery, vascular				
surgery				
- Mechanical circulatory				
assistive devices – Intra aortic				
balloon pump				
- Effects of cardiovascular				
medications				
- Ventricular assist				

						1
	devices(VAD)					
	- Extra corporeal membrane					
	oxygenation(ECMO)					
	 Recent advances and 					
	development					
3	Pulmonary alterations	Good	to	Develop	Provides nursing	Appreciates
İ	 Review of Clinical 	know		knowledge in	care to 5	recent
	assessment, pathophysiology,			Clinical	patients related	advancement
	and pharmacology	Essential	to	assessment,	to health	and
	 Special diagnostic studies 	perform		pathophysiolog	protection,	development
	 Pulmonary conditions 			y, and	disease	
-	requiring critical care			pharmacology	prevention,	
	management			of pulmonary	anticipatory	
ام	- Status asthmaticus			conditions	guidance,	
	- Pulmonary edema				counselling and	
	- Pulmonary embolism				management of	
	- Acute respiratory failure				pulmonary	
	- Acute respiratory distress				conditions	
	syndrome				551747675715	
	- Chest trauma				Uses invasive	
	- Chronic obstructive				and non invasive	
	pulmonary disease				technology and	
	- Pneumonia				interventions to	
	- Pleural effusion				assess, monitor	
	- Atelectasis				patients with	
					pulmonary	
	ventilator dependence				alterations	
	Pulmonary therapeutic					
_	management					
	- Thoracic surgery					
	- Lung transplant					
	- Bronchial hygiene:					
	Nebulization, deep breathing					
	and coughing exercise, chest					
	physiotherapy and postural					
	drainage					
	- Chest tube insertion and care					
	of patient with chest drainage					
	 Recent advances and 					
	development					

4	Neurological alterations	Good to	Develop	Provides nursing	Appreciates
	Review of Clinical	know	knowledge in	care to 5	recent
	assessment, pathophysiology,	_	Clinical	patients related	advancement
	and pharmacology	Essential to	assessment,	to health	and
	Special diagnostic studies	perform	pathophysiolog	protection,	development
	 Neurological conditions 		y, and	disease	
	requiring critical care		pharmacology	prevention,	
}	management		of neurological	anticipatory	
	- Cerebro vascular disease and		conditions	guidance,	
	cerebro vascular accident			counselling and	
	- Encephalopathy			management of	
	- Gillian Bare syndrome and			neurological	
	Myasthenia gravis			conditions	
	- Brain herniation syndrome				
	- Seizure disorder			Uses invasive	9
	- Coma, Unconsciousness			and non invasive	
	- persistent vegetative state			technology and	
	- Head injury			interventions to	
	- Spinal cord injury			assess, monitor	
	- Thermoregulation			patients with	
	 Neurologic therapeutic 	-		neurological	
	management			disorders	
	- Intracranial pressure -				
	Assessment and management				
	of intracranial hypertension				
	- Craniotomy				
	 Recent advances and 			i	
	development				
5	Nephrology alterations		Develop	Provides nursing	Appreciates
	• Review of Clinical	Good to	knowledge in	care to 5	recent
	assessment, patho-physiology,	know	Clinical	patients related	
	and pharmacology	KITOV	assessment,	to health	and
	Special diagnostic studies	Essential to	pathophysiolog		development
	 Nephrology conditions 			protection,	development
		perform	y, and	disease	
	requiring critical care		pharmacology	prevention,	
	management		of nephrological	anticipatory	
	- Acute renal failure		conditions	guidance,	
	- Chronic renal failure			counselling and	
	- Acute tubular necrosis			management of	
	- Bladder trauma			nephrological	

	 Nephrology therapeutic 				sonditions	
	 Nephrology therapeutic management 				conditions	
	- Renal Replacement therapy:				Uses invasive	
	Dialysis				and non invasive	
	- Renal transplant				technology and	
	• Recent advances and				interventions to	
	development				assess, monitor	
	development				patients with	
					nephrological	
					disorders	
6	Gastrointestinal alterations	Good	to	Develop	Provides nursing	Annrociatos
U	Review of Clinical	know	ιυ	knowledge in	care to 5	Appreciates
	assessment, pathophysiology,	KHOW		Clinical	patients related	recent
	and pharmacology	Essential	to	assessment,	to health	advancement and
	Special diagnostic studies	perform	ιυ	pathophysiolog		
	 Gastrointestinalconditions 	perioriii		y, and	protection, disease	development
	requiring critical care			pharmacology		
	management critical care			of	prevention,	
	- Acute GI bleeding				anticipatory	
				gastrointestinal	guidance,	
	- Hepatic failure			conditions	counselling and	
	- Acute pancreatitis				management of	
	- Abdominal injury				Gastrointestinal	
	- Hepatic encephalopathy				conditions	
	- Acute intestinal obstruction					
	- Perforative peritonitis				Uses invasive	
	 Gastrointestinal therapeutic 				and non invasive	
	management				technology and	
	- Gastrointestinal surgeries				interventions to	
	- Liver transplant				assess, monitor	
)	 Recent advances and 				patients with	
	development				gastrointestinal	
					disorders	
7	Endocrine alterations	Good	to	Develop	Provides nursing	Appreciates
	 Review of Clinical 	know		knowledge in	care to 5	recent
	assessment, pathophysiology,			Clinical	patients related	advancement
	and pharmacology	Essential	to	assessment,	to health	and
	Special diagnostic studies	perform		pathophysiolog	protection,	development
	 Endocrineconditions 			y, and	disease	
	requiring critical care			pharmacology	prevention,	
L. <u>-</u>	management			of Endocrine	anticipatory	

 Neuroendocrinology of stress 	alterations	guidance,	
and critical illness		counselling and	
- Diabetic ketoacidosis,		management of	
Hyperosmolar non ketotic		Endocrine	
coma		alterations	
- hypoglycemia			
- Thyroid storm		Uses invasive	
- Myxedema coma		and non invasive	
- Adrenal crisis		technology and	
- SIADH		interventions to	
• Endocrine therapeutic		assess, monitor	
management		patients with	
 Recent advances and 		Endocrine	
development		alterations	

Assessment techniques for Theory

- Monthly teat (objective type)
- Sessional Examination Objective structured clinical examination (OSCE)
- Pre University Examination (OSCE)
- Assignment
- Project work
- Practice teaching
- Annotated references from journals

Assessment techniques for practical

- Sessional Examination = Objective structured practical examination (OSPE)
- Pre University Examination (OSPE)
- Clinical conference
- Nursing Rounds
- Clinical assignments
- Clinical evaluation

II.Critical Care Nursing I

Placement: Nurse Practitioner IInd Year

Hours of Instruction

Theory: 96 Hours Practical: 48 Hours Total: 144 Hours

		LEARNING OBJECTIV					
S. NO	CONTENT OF TOPICS	(at the end o	of the	TEACHII OBJECTI		METHODOLOGY	TIME
		student sl		OBJECTI	VES		
		be able to)	. <u>-</u> .				
1	Introduction	Describe	the	To teach	and	Interactive session	6 hrs
	 Review of anatomy and 	anatomy	and	discuss	about	with the students	
•	physiology of vital organs	physiology of	vital	anatomy	and	regarding anatomy	
	 Review of assessment and 	organs	and	physiology	of	and physiology of	
	monitoring of the critically ill	assessment	of	vital organ	is and	vital organs	
		critical ill patie	ents.	assessmen	it of		
				critical	ill		
				patients.			

2	Cardiovascular alterations	Summarize various	To teach and	Interactive session	16
	 Review of Clinical 	cardiovascular	discuss about	with students	hrs
	assessment, patho-physiology,	problems and its	various	regarding	
	and pharmacology	clinical	cardiovascular	cardiovascular	
	 Special diagnostic studies 	assessment,	problems and	problems	
	 Cardiovascular conditions 	pathophysiology,	its clinical		
	requiring critical care	diagnostic studies,	assessment,	Simulation	
	management	management and	pathophysiolog	technique	
	- Heart block and conduction	role of nurse	y, diagnostic		
	disturbances		studies and its	Spot group	
	- Coronary heart disease		management	discussion	
	- Myocardial infarction				
	- Pulmonary hypertension				
	- Valvular heart disease				
	- Atherosclerotic disease of				
	aorta				
	- Peripheral artery disease				
	- Cardiomypathy				ļ
	- Heart failure				
	- Deep vein thrombosis				
	- Congenital heart				
	disease(cyanotic and				
	acyanotic)				
	 Cardiovascular therapeutic 				
	management				
	- Cardiac transplant				
	- Pacemakers				
	- Cardioversion				
	- Defibrillation				
	- Implantable cardiovert				
	defibrillators,				
	- Thrombolytic therapy				
	- Radiofrequency catheter				
	ablation				
	- Percutaneous Transluminal				
	Coronary Angioplasty(PTCA)				
	- Cardiac surgery —Coronary				
	artery bypass grafting(CABG)/				
	Minimally invasive				
	coronary artery		·		

	surgery)MICAS, Valvular				
	surgery, vascular surgery				
	- Mechanical circulatory				
	assistive devices – Intra aortic				
	balloon pump				
	- Effects of cardiovascular				
1	medications				
	- Ventricular assist				
	devices(VAD)				
	- Extra corporeal membrane		-		
	oxygenation(ECMO)				
	 Recent advances and 				
	development		·		
~					
-		D • • • • • • • • • • • • • • • • • • •	—		4.5
3	Pulmonary alterations	Review various	To teach and		15
	 Review of Clinical 	pulmonary	discuss about		hrs
	assessment, pathophysiology,	alterations and its	various	Student seminar	
	and pharmacology	clinical	pulmonary	on pulmonary	
	 Special diagnostic studies 	assessment,	alterations and	alterations	
	 Pulmonary conditions 	pathophysiology,	its clinical		
	requiring critical care	diagnostic studies,	assessment,	Simulation	
	management	management and	pathophysiolog	technique	
	- Status asthmaticus	role of nurse	y, diagnostic		
	- Pulmonary edema		studies and its	Spot group	
	- Pulmonary embolism		management	discussion	
	- Acute respiratory failure				
	- Acute respiratory distress				
	syndrome				
	- Chest trauma				
	- Chronic obstructive				
	pulmonary disease				
	Pneumonia				
	- Pleural effusion				
	- Atlectasis				
	- Longterm mechanical				
	ventilator dependence				
	 Pulmonary therapeutic 				
	management				
	- Thoracic surgery				

			Y			1
	- Lung transplant				i	
	- Bronchial hygiene:					ĺ
	Nebulization, deep breathing					
	and coughing exercise, chest					
	physiotherapy and postural					
1	drainage					
	- Chest tube insertion and care					
	of patient with chest drainage					İ
	 Recent advances and 					
	development					
4	Neurological alterations	Summarize various	To teach and	Seminar on	15	
	• Review of Clinical	Neurological	discuss about	neurological	hrs	
	assessment, pathophysiology,	alterations and its	various	conditions in		
	and pharmacology	clinical	Neurological	critical care		
	 Special diagnostic studies 	assessment,	alterations and			1
	 Neurological conditions 	pathophysiology,	its clinical	Interactive		`
	requiring critical care	diagnostic studies,	assessment,	sessions		
	management	management and	pathophysiolog			
	- Cerebro vascular disease and	role of nurse	y, diagnostic	Spot group		
	cerebro vascular accident		studies and its	discussions		
	- Encephalopathy		management			
	- Gillian Bare syndrome and					
	Myasthenia gravis					
	- Brain herniation syndrome				l	
	- Seizure disorder					
	- Coma, Unconsciousness					
	 persistent vegetative state 					
	- Head injury					
	- Spinal cord injury					
	- Thermoregulation					}
	 Neurologic therapeutic 					1
	management					'
	- Intracranial pressure –					
	Assessment and management					
	of intracranial hypertension					
	- Craniotomy					
	• Recent advances and					
-	development					
5	Nephrology alterations	Evolain about	To touch and		1 5	
3		Explain about	To teach and	Cinculated Lagrania	15 bro	
L	 Review of Clinical 	various	discuss about	Simulated learning	hrs	ĺ

	assessment, pathophysiology,	Nephrology	various	on Nephrology	
	and pharmacology	alterations and its	Nephrology	alterations.	
}	 Special diagnostic studies 	clinical	alterations and		
	 Nephrology conditions 	assessment,	its clinical	Seminar on	
	requiring critical care	pathophysiology,	assessment,	nephrology	
	management	diagnostic studies,	pathophysiolog	conditions	
	- Acute renal failure	management and	y, diagnostic	requiring critical	
	- Chronic renal failure	role of nurse	studies and its	care	
	- Acute tubular necrosis		management		
	- Bladder trauma				
	 Nephrology therapeutic 				
	management				
	- Renal Replacement therapy:				
	Dialysis				
	- Renal transplant				
	 Recent advances and 				1
	development				
6	Gastrointestinal alterations	Review various	To teach and	Spot group	12
	 Review of Clinical 	Gastrointestinal	discuss about	discussion on	hrs
	assessment, pathophysiology,	alterations and its	various	gastrointestinal	
	and pharmacology	clinical	Gastrointestinal	alterations	
	 Special diagnostic studies 	assessment,	alterations and		
	 Gastrointestinal conditions 	pathophysiology,	its clinical		
	requiring critical care	diagnostic studies,	assessment,	Student seminar	
	management	management and	pathophysiolog	on	
	- Acute GI bleeding	role of nurse	y, diagnostic	Gastrointestinal	
	- Hepatic failure		studies and its	problems	
	- Acute pancreatitis		management		
	- Abdominal injury				
	- Hepatic encephalopathy				
الو	- Acute intestinal obstruction	,			
	- Perforative peritonitis				
	 Gastrointestinal therapeutic 				
	management				
	- Gastrointestinal surgeries				
	- Liver transplant				
	-				
	development	<u> </u>	<u> </u>		

7	Endocrine alterations	Elaborate various	To teach and	Seminar on	12
	•Review of Clinical	Endocrine	discuss about	endocrine	hrs
	assessment, pathophysiology,	alterations and its	various	alterations	
	and pharmacology	clinical	endocrine		
	 Special diagnostic studies 	assessment,	alterations and	Fish bowl	
	 Endocrineconditions 	pathophysiology,	its clinical	technique	
	requiring critical care	diagnostic studies,	assessment,		
	management	management and	pathophysiolog		
	- Neuroendocrinology of stress	role of nurse	y, diagnostic		
	and critical illness		studies and its		
	- Diabetic ketoacidosis,		management		
	Hyperosmolar non ketotic				
	coma				
	- hypoglycemia				6
	- Thyroid storm				
	- Myxedema coma				
	- Adrenal crisis				
	- SIADH				
	 Endocrine therapeutic 				
	management				
	 Recent advances and 				
	development				
8	Class tests				5 hrs

III. CRITICAL CARE NURSING -II

Subject distribution:

The subject will be for 1 year duration. The topics covered under theory training are as follows

S. No	CONTENT OF TOPICS	TIME
6.	Hematological alterations	
	 Review of Clinical assessment, pathophysiology, and pharmacology 	12 hrs
	 Special diagnostic studies 	
	 Hematology conditions requiring critical care management 	
	 Hematology therapeutic management 	
	 Recent advances and development 	
7.	Skin alterations	
	• Review of Clinicalassessment, pathophysiology, and pharmacology	8 hrs
	Special diagnostic studies	
	 Conditions requiring critical care management 	

Dean

	Therapeutic management	
	 Recent advances and development 	
0	NA. Idi and the salt and the sa	
8.	 Multi system alterations requiring critical care Trauma 	12 hrs
	• Sepsis	12 1113
	• Shock	
	Multiple Organ Dysfunction	
	Systemic inflammatory response syndrome	1
	• Anaphylaxis	
	• DIC	
	Other injuries (Heat, Electrical, Near Hanging, Near drowning)	
	• Envenomation	
	Drug overdose	
	• Poisoning	
9.	Specific infections in critical care	10 hrs
	• HIV	
	• Tetanus	
	• SARS	
	• Rickettsiosis	
	• Leptospirosis	
	• Dengue	
	• Malaria	
	• Chikungunya	
	• Rabies	
	• Avian flu	
	• Swine flu	
10.	Critical care in Obstetrics	
	 Physiological changes in pregnancy 	9 hrs
	Conditions requiring critical care	
11.	Critical care in children	
	 Prominent anatomical and physiological differences and implications 	10 hrs
	Conditions requiring critical care	
	Selected pediatric challenges	ĺ
	 Interaction with children and families 	
12.	Critical Care in Older Adult	
	 Normal psycho biological characteristics of aging 	10 hrs
	Physical challenges	

	Challenges in medication use	
	 Hospital associated risk factors for older adults 	
	 Long term complications of critical car 	
13.	Critical Care in Peri anesthetic period	10 hrs
	 Selection of anesthesia 	
	General anesthesia	
	 Anesthetic agents 	
	 Peri anesthesia assessment and care 	
	Post anesthesia problems	
14.	Other special situations in critical care	10
'	 Rapid response teams and transport of the critically ill 	
	Disaster management	
	 Ophthalmic emergencies – Eye injuries, glaucoma, retinal detachment 	
	• ENT emergencies - Foreign bodies, stridor, bleeding, quinsy, acute	
	allergic conditions	
	 Psychiatric emergencies – Suicide, crisis intervention 	
15.	Class Test	5 hrs

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- 1. Diepenbrock, N. H. (2008). Quick reference to critical care (3rd ed.). Philadelphia: Lippincott Williams and Wilkins.
- 2. John, G., Subramani, K., Peter, J. V., Pitchamuthu, K., &Chacko, B. (2011). Essentials of critical care (8th ed.). Christian Medical College: Vellore.
- 3. Morton, P. G., & Fontaine, D. K. (2013). Critical Care Nursing: A Ho;istic Approach (9th ed.). Lippincott Williams and Wilkins: Philadelphia
- 4. Perrin, K. O. (2009). Understanding the essentials of critical care nursing. New Jersey: Pearson Edcuation.
- 5. Urden, L. D., Stacy, K. M., & Lough, M. E. (2014). Critical Care Nursing- Diagnosis and management (7th ed.). Elsevier: Missouri
- 6. Wyckoff, M., Houghton, D., &Lepage, C. (2009).Critical care. New York: Springer publishing company.

Critical Care Nursing - II

Placement: Nurse Practitioner in Critical Care Post Graduate Residency Program

Hours of Instruction

Theory: 96 hours, Practical: 48 hours

	CONTENT OF TODICS	201111	CO CAUTILIE	Practical: 48	
S. No	CONTENT OF TOPICS	DOMAIN	COGNITIVE	PSYCHOMOTOR	AFFECTIVE
1	Hematological alterations	Good to	Develop	Provides nursing	Appreciates
	 Review of Clinical 	know	knowledge in	care to 5	recent
	assessment,		Clinical	patients related	advancement
	pathophysiology, and	Essential	assessment,	to health	and
	pharmacology	to	pathophysiology,	protection,	development
	 Special diagnostic studies 	perform	and	disease	<u> </u>
	 Hematology conditions 		pharmacology of	prevention,	
	requiring critical care		haematological	anticipatory	(
	management		conditions	guidance,	
}	 Hematology therapeutic 			counselling and	
1	management			management of	
	 Recent advances and 			haematological	
	development			conditions	
				Uses invasive	
				and non invasive	
1				technology and	}
				interventions to	
				assess, monitor	
1				patients with	}
				haematological	
				conditions	
				Assists in bone	
				marrow	
				transplantation	
2	Skin alterations	Good to	Develops	Provides nursing	Appreciates
	 Review of Clinicalassessment, 	know	knowledge in	care to 5	recent
	pathophysiology, and		Clinical	patients related	advancement
	pharmacology	Essential	assessment,	to health	and
	 Special diagnostic studies 	to	pathophysiology,	protection,	development
	 Conditions requiring critical 	perform	and	disease	
	care management		pharmacology of	prevention,	1
			- 3/ -		

ſ	_	Therapeutic management		skin alterations	anticipatory
		 Recent advances and 			guidance,
		development			counselling and
					management of
					skin alterations
			-		
					Uses invasive
					and non invasive
			'		technology and
					interventions to
					assess, monitor
					patients with
l			İ		skin alterations
	3	Multi system alterations	Essential		Provides nursing
		requiring critical care	to		care to 5
		• Trauma	perform		patients related
		• Sepsis			to health
		• Shock			protection,
		 Multiple Organ Dysfunction 			disease
		 Systemic inflammatory 			prevention,
		response syndrome			anticipatory
		 Anaphylaxis 			guidance,
		• DIC			counselling and
ļ		 Other injuries (Heat, 			management of
		Electrical, Near Hanging, Near			Multi system
		drowning)			alterations
		 Envenomation 			
		 Drug overdose 			
		Poisoning			

4	Specific infections in critical	Essential		Provides nursing	
	care	to		care to 5	
	• HIV	perform		patients related	
	Tetanus			to health	
	• SARS			protection,	
	 Rickettsiosis 	ļ		disease	
	 Leptospirosis 	i		prevention,	
	• Dengue			anticipatory	
	Malaria			guidance,	
	 Chikungunya 			counselling and	
	Rabies			management of	
	Avian flu			Specific	
	• Swine flu	:		infections in	
				critical care	
		1			
5	Critical care in Obstetrics	Good to	Draws	-	Develops
	 Physiological changes in 	know	partograph		understandi
	pregnancy				ng of
	 Conditions requiring critical 				Physiological
	care				changes in
					pregnancy
6	Critical care in children	Essential		Demonstrates	pregnancy
	 Prominent anatomical and 	to		skill in handling	
}	physiological differences and	perform		equipments	
	implications	•		such as	
	 Conditions requiring critical 			incubators and	
	care		Į Į	warmers	
	 Selected pediatric challenges 				
	 Interaction with children and 				
	families				V
7	Critical Care in Older Adult	Good to	Identifies long		Develops
	Normal psycho biological	know	term		understandi
	characteristics of aging	INTO VV	complications		ng in
	Physical challenges		of critical care		physical
	Challenges in medication use		or critical care		challenges
	 Hospital associated risk 				and
	factors for older adults				challenges in
	• Long term complications of				
					medication
L	critical care	<u> </u>	<u> </u>	<u> </u>	use of older

					adults
8	Critical Care in Peri anesthetic	Essential		Monitors 5	
	period	to		patients under	
	 Selection of anesthesia 	perform		anesthesia	
	 General anesthesia 				
	 Anesthetic agents 			Assists with	
	 Peri anesthesia assessment 			planned	
	and care			intubations	
	 Post anesthesia problems 				
				Demonstrates	'
				skill in titration	
				of drugs	
9	Other special situations in	Essential		Demonstrates	
	critical care	to		skill in disaster	
)	 Rapid response teams and 	perform		management	
	transport of the critically ill		9		
	 Disaster management 			Manages ENT	
	 Ophthalmic emergencies – 	Desirable		emergencies	
	Eye injuries, glaucoma, retinal	to		and psychiatric	
	detachment	perform		emergencies	
	• ENT emergencies - Foreign				
	bodies, stridor, bleeding,				
	quinsy, acute allergic				
	conditions				
	 Psychiatric emergencies – 				
	Suicide, crisis intervention				
	<u> </u>				

Assessment techniques for Theory

- Monthly teat (objective type)
- Sessional Examination Objective structured clinical examination (OSCE)
- Pre University Examination (OSCE)
- Assignment
- Project work
- Practice teaching
- Annotated references from journals

Assessment techniques for practical

- Sessional Examination = Objective structured practical examination (OSPE)
- Pre University Examination (OSPE)
- Clinical conference
- Nursing Rounds
- Clinical assignments
- Clinical evaluation

Critical Care Nursing - II

Placement: Nurse Practitioner in Critical Care Post Graduate Residency Program

Hours of Instruction

Theory: 96 hours, Practical: 48 hours

s. NO	CONTENT OF TOPICS	LEARNING OBJECTIVES (at the end of the session the student should be able to)	TEACHING OBJECTIVES	METHODOLOGY TIME
1	Hematological		To tooch and	-Interactive 12 hrs
	alterations	• Describe the	To teach and discuss on Clinical	session with the
	• Review of	special diagnostic		student'sClinical
	Clinical	studies in	assessment,	
	assessment,	hematological	pathophysiology,	assessment,
	pathophysiolo	alterations.	and pharmacology of hematologic	pathophysiology, and
	gy, and	 Elaborate 	alterations,	pharmacology of
	pharmacology	Hematology	Special diagnostic	hematologic
	• Special	conditions	studies,	alterations.
	diagnostic studies	requiring critical	Hematology	aiterations.
	Hematology	care	conditions	-Focus group
	conditions	managementDescribeHematol	requiring critical	discussion
	requiring		care management	onSpecial
	critical care	ogy therapeutic management.	such as DIC,	diagnostic
	management	Appreciate recent	Thrombocytopenia,	studies.
	 Hematology 	advances and	Heparin induced	
	therapeutic	developmentinhe	thrombocytopenia,	-Teachers
	management	matological	Sickle cell anemia,	seminar on
	 Recent 	alterations.	Tumor lysis	Hematology
	advances and	urcerations.	syndrome, Anemia	conditions
	development		in critical illness.	requiring critical
			Hematology	care
			therapeutic	management
			management such	
			as Autologus blood	

3	Skin alterations Review of Clinicalassessment, pathophysiology, and pharmacology Special diagnostic studies Conditions requiring critical care management Therapeutic management Recent advances and development Multi system	transfusion, bone marrow transplantation. Recent advances and development. • Discuss on Review of Clinical assessment, pathophysiology, and pharmacology of skin alterations. • Describe the special diagnostic studies in skin alterations • Summarize the conditions requiring critical care management. • Review the conditions requiring critical care management such as Reconstructive management. • Review the conditions requiring therapeutic management. • Appreciate recent advances and development in the field of skin.	8 hrs
3	alterations requiring critical care • Trauma • Sepsis • Shock	Summarize the various multisystem alterations discuss about requiring critical care Trauma, Sepsis, Shock, Multiple Organ Dysfunction, To teach and discuss about -Roleplay on various scenarios and management.	12 hrs
	 Multiple Organ Dysfunction 	Systemic inflammatory Seminar on multi	

		Systemic inflammatory		response syndrome,	system alterations	
		response syndrome		anaphylaxis, DIC,		
		 Anaphylaxis 		Other injuries (Interactive	
ļ		• DIC		Heat, Electrical,	sessions	
Í		 Other injuries (Near Hanging, Near		
		Heat, Electrical, Near		drowning),		
j		Hanging, Near		Envenomation,		
		drowning)		Drug overdose,		
		 Envenomation 		Poisoning		
		 Drug overdose 				
		 Poisoning 				
Ì	4	Specific infections in	Review specific			10 hrs
		critical care	infections in critical care	To teach and	Role play and	
)	• HIV		discuss onHIV,	video film on	
		Tetanus		Tetanus, SARS,	various	
-		• SARS		Rickettsiosis,	scenarios and	
		 Rickettsiosis 		Leptospirosis,	their	
		 Leptospirosis 		Dengue, Malaria,	management.	
		• Dengue		Chikungunya,		
		• Malaria		Rabies, Avian flu,	 Problem based 	
		 Chikungunya 		Swine flu	learning.	
		• Rabies		4	U	
		 Avian flu 				
		• Swine flu				
		o will a		•		
	Į					
	5	Critical care in				
		Obstetrics	1. Explain the	To teach and	Interactive	9 hrs
		 Physiological 	Physiological changes	discuss about	session on	
		changes in pregnancy	in pregnancy	Physiological	physiological	
		 Conditions requiring 	6. 503	changes in	changes in	
		critical care	2. Discuss on the	pregnancy,	pregnancy.	
			Conditions requiring	Conditions		
			critical care in	requiring critical	• Simulated	
			obstetric patients.	care such as	learning	
			- Control Particition	Antepartum	i carring	
				hemorrhage, PIH,		
- 1				nemorriage, rin,		

	 				
}			Obstructed labor,		
			Ruptured uterus,		
			PPH, Puperal		
			sepsis, Obstetrical		
			shock, HELLP		
			syndrome, DIC,		
			Amniotic fluid		
			embolism, ARDS,		ļ
			Trauma		
6	Critical care in	·			
	children	1. Elaborate the	To teach and	• Focus	10 hrs
	 Prominent 	conditions requiring	discuss about	group	
	anatomical and	critical care in	prominent	discussio	
1	physiological	children.	anatomical and	n	1
	differences and	2. Summarize the	physiological	 Simulated 	
	implications	various	differences and	learning	
ĺ	 Conditions requiring 	management	implications,		
	critical care	options available for	Conditions	 Role play and 	
	 Selected pediatric 	children in critical	requiring critical	video film on	
	challenges	care.	care such as	various	
ļ	 Interaction with 	3. Demonstrate	Asphyxia	scenarios and	
1	children and families	communication	neonatarum,	their	
}		with children.	Metabolic	management.	
		and the second second	disorders,		
			Intracranial	• Problem	
(hemorrhage,	based	
			Neonatal sepsis,	learning.	
			Dehydration, ARDS,		
			Poisoning, Foreign		
			bodies, Seizures,		
			Status asthmaticus,		
			Cyanotic heart		
			disease, congenital		
			hypertrophic		
			pyloric stenosis,		
			Tracheoesophageal		
			fistula, imperforate		
			anus, Acute		
		•	bronchopneumonia		
L			, Trauma in		

			children. Selected		
			pediatric challenges		
			such as Ventilatory		
			issue, medication		
			administration,		
			Pain Management.		
			Interaction with		
			children and		
			families		
7	Critical Care in Older		rannies		
'	Adult	1. Summarize the	To teach and	Interactive	10 hrs
			discuss about	sessions on	10 1113
	Normal psycho	normal psycho			
	biological	biological changes in	Normal psycho	normal	
-	characteristics of	older adults	biological	psycho	
	aging	2. Elaborate the	characteristics of	biological	
	 Physical challenges 	common health	aging such as	changes in	
	 Challenges in 	problems in older	Biological issues,	older adults.	
	medication use	adults.	Psychological		
	 Hospital associated 	3. Discuss the	issues, Concepts	 Simulated 	
	risk factors for older	challenges in	and theories of	learning	
	adults	medications of older	ageing, Stress &		
	 Long term 	adult.	coping in older	• Role play and	
	complications of	4. Explain about	adults, Common	video film on	
	critical care	palliative care.	Health Problems &	various	
	critical care	pamative care.	Nursing	scenarios and	
			Management.	their	
			Physical challenges		
				management.	
			such as Auditory		
			changes, Visual	 Problem 	
\downarrow			changes, Other	based	
H			sensory changes,	learning.	
			Skin changes,		
			Cardiovascular		
			changes,		
			Respiratory		
			changes, Renal		
			changes, Gastro		
			intestinal changes,		
			Musculoskeletal		
L			changes, Endocrine		<u></u>

		changes, Immunological changes, Psychological challenges, Cognitive changes, Abuse of the older person, Alcohol abuse. Challenges in medication use such as Drug absorption, Drug distribution, Drug metabolism, Drug excretion, Hospital associated risk factors for older adults, Long term complications of critical care, Care transitions, Palliative care and end of life in critical care		
8 Critical Care in Peri	1. Enlist the selection	To each and discuss	• Spot	10 hrs
anesthetic period	criteria for	onCritical Care in	group	
 Selection of 	anesthesia	Peri anesthetic	discussio	
anesthesia	2. Enlist the types of	period, Selection of	n on peri	
General anesthesia	anesthesia and	anesthesia, General	anestheti	1
Anesthetic agents	their	anesthesia,	c period.	
 Peri anesthesia 	characteristics.	Anesthetic agents,	• Simulate	
assessment and care	3. Demonstrate the	Peri anesthesia	d	
• Post anesthesia	pre-anesthetic	assessment and	learning	
problems	assessment and	care, Post anesthesia	Polo plan	
	care 4. Explain the	problems and	 Role play and 	
	problems arising	emergencies and	video	
	post anesthesia	requiring critical	film on	
1 1	post unestricisia	requiring critical	11111 011	ì
		care, Respiratory-	various	

		C 1:		and their	
		of cardiovascular	Laryngeal edema,		
		system by	Laryngospasm,	manage	
		anesthesia	Bronchospasm,	ment.	
		6. List the side	Noncardiogenic	Durale la va	
		effects of	pulmonary edema,	• Problem	
		anesthesia	Aspiration,	based	
			Hypoxia,	learning.	
			Hypoventilation,		
			Cardiovascular –		
			Effects of		
			anesthesia on		
			cardiac function,		
			Myocardial		
			dysfunction, Dysrhy		
			thmias,		
			postoperative		
			hypertension, post-		
			operativehypotensi		
			on,		
			Thermoregulatory,		
			Hypothermia,		
			shivering,		
			hyperthermia,		
			malignant		
			hyperthermia,		
			Neurology- Delayed		İ
			emergence,		
			emergence		
			delirium, Nausea		
			and vomiting		
9	Other special	1. Elaborate on rapid		Seminar on	10
9		•			10
	situations in critical	response teams	discuss on Rapid	disaster	
	care	2. Brief on disaster	response teams	management	
	Rapid response	management	and transport of	Durainat	
	teams and transport	3. Review ENT	the critically ill,	Project based	
	of the critically ill	emergencies	Disaster	learning	
	• Disaster	4. Discuss on	management,		
	management	psychiatric	Ophthalmic		
	• Ophthalmic	emergencies	emergencies – Eye		
	emergencies – Eye		injuries, glaucoma,		

10	Class Test		5 hrs
	intervention		
	Suicide, crisis	intervention	
	emergencies –	Suicide, crisis	
	 Psychiatric 	emergencies –	
	conditions	Psychiatric	ĺ
	quinsy, acute allergic	allergic conditions,	
	stridor, bleeding,	quinsy, acute	ł
	Foreign bodies,	stridor, bleeding,	
	 ENT emergencies - 	Foreign bodies,	
	retinal detachment	ENT emergencies -	
	injuries, glaucoma,	retinal detachment,	

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- Morton, P. G., & Fontaine, D. K. (2013). Critical Care Nursing: A Ho;istic Approach (9th ed.). Lippincott Williams and Wilkins: Philadelphia
- Perrin, K. O. (2009). Understanding the essentials of critical care nursing. New Jersey: Pearson Edcuation.
- Urden, L. D., Stacy, K. M., & Lough, M. E. (2014). Critical Care Nursing- Diagnosis and management (7th ed.). Elsevier: Missouri
- Wyckoff, M., Houghton, D., &Lepage, C. (2009). Critical care. New York: Springer publishing company.

SCHEME OF EXAMINATIONS

All Question Papers will have three parts. Note:

Part 1 will have three (03) Long Essay Type questions each of 15 marks out of which the student will attempt two (02) questions;

Part 2 will have two (02) Short Essay Type questions each of 10 marks; and Part 3 will have six (06) Short Answer Type questions each of five (05) marks out of which the student will attempt four (04) questions.

1st Year

Paper	Paper/ Subject	Theory Examination		Total	Practical Exam.		Total Mark	Duratio n of
Code				Mark				
		Intern	Extern	S	Intern	Extern	S	Paper
		al	al		al	al		(TH/P
								R)
								(Hours
	Theoretical Basis for	50		50				3
	Advanced Practice	οU		50	-	-	-	3
	Nursing							
	Research Application and	30	70	100	-	-	-	3
	Evidence Based Practice							
	in Critical Care							
	Advanced skills in	30	70	100	-	-	-	3
	Leadership, Management							
	and Teaching Skills							
	Advanced	30	70	100	-	-	-	3
	Pathophysiology &							
	Advanced Pharmacology							
	relevant to Critical Care							

Advanced Health/physical	30	70	100	50	50	100	3/3
Assessment							
Total	170	280	450	50	50	100	

2nd Year

Paper Code	Paper/ Subject	Theory Examination		Total Mar	Practical Examination		Total Mar	Durati on of
		Intern al	Extern al	ks	Intern al	Extern al	ks	Exam. (TH/PR) (Hours
	Foundations of Critical Care Nursing Practice	30	70	100	100	100	200	3/3
	Critical Care Nursing	30	70	100	100	100	200	3/3
	Critical Care Nursing	30	70	100	100	100	200	3/3
	Dissertation and viva				50	50	100	3
	Total		210	300	350	350	700	

Assessment (Formative and Summative)

- Seminar
- Written assignments/Term papers
- Case/Clinical presentation
- Nursing process report/Care study report
- Clinical performance evaluation
- Log book- (Competency list and clinical requirements) counter signed by the medical/nursing faculty preceptor
- Objective Structured Clinical Examination(OSCE)/OSPE
- Test papers
- Final examination