



MGM Institute of Health Sciences

MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

Curriculum

M.Sc Nursing

(Nurse Practitioner in Critical Care)

Based on Indian Nursing Council Syllabus 2017



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PROGRAM DESCRIPTION

The Nurse Practitioner (NP) program is a Nursing residency program with a main focus on Competency based training. The duration is of two years with the curriculum consisting of theory that includes core courses, advanced practice courses and clinical courses besides clinical practicum which is a major component (Refer Curricular framework).

AIM

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

On completion of the program, the NP will be able to;

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



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EXAMINATION REGULATIONS –

- Attendance minimum is 80% in theory and practical before appearing for final university examination but must complete 100% in practical before the award of degree.
- OSCE type of examination will be followed alongside viva (oral examination)
- The team of practical examiners will include one internal examiner (M.Sc. faculty with two years of experience in teaching the NPCC program/M.Sc. faculty (Medical Surgical Nursing preferable) with 5 years of Post PG experience], one external examiner (same as above) and one medical internal examiner who should be preceptor for NPCC program.
- Maximum period to complete the programme is 4 years. Number of attempts is not regulated.
- Pass marks are 60% in aggregate of internal and external both in theory and practical in every course/ subject.
- If a candidate fails in theory or practical, he/she has to appear for the paper in which he/she has failed be it theory or practical.
- Declaration of pass - 60% and above is pass in all courses and < 60% is fail. For calculating the rank, the aggregate of the two years marks will be considered.

DISSERTATION

- Research guides: Main guide – M.Sc Nursing faculty with 3years post PG experience teaching NPCC program
- Co guide: Shall be Medical preceptor (Medical PG / Intensivist)
- Guide student ratio- 1:5
- Ethical clearance should be obtained by the hospital ethics committee
- There should be a separate research committee in the college/hospital to guide and oversee the progress of the research (minimum of 5 members with Principal or CNO-M.Sc).
- Topic Selection – The topic should be relevant to critical care nursing that will add knowledge or evidence for nursing intervention. The research should be conducted in any of the critical care settings.
- Submission of research proposal – between 6 to 9 months after the date of admission in the first year.
- Data collection – 7 weeks are allotted for data collection, which can be integrated during clinical experience after 6 months in first year and before 6 months in second year.
- Writing the research report – 6-9 months in second year.
- Submission of dissertation final – 9 months before completion of second year.
- Dissertation Examination - Internal assessment – Viva & dissertation report – 50 marks
- University Examination - Viva & dissertation report – 50 marks



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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

TEACHING METHODS

Teaching theoretical, skill 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

PROCEDURES/LOG BOOK

At the end of each clinical posting, clinical log book (Specific competencies/Clinical skills & clinical requirements) has to be signed by the preceptor every fortnight.



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MSc NURSING (NPCC) PROGRAMME

Scheme of Examination

Title	Theory %			Practical %		
	Hours	Internal	External	Hours	Internal	External
First Year						
Core Courses						
1. Theoretical Basis for Advanced Practice Nursing	3 hrs	50				
2. Research Application and Evidence Based Practice in Critical Care	3 hrs	30	70			
3. Advanced skills in Leadership	3 hrs	30	70			
Advanced Practice Courses						
4. Advanced Pathophysiology & Advanced Pharmacology relevant to Critical Care	3 hrs	30	70			
5. Advanced Health/physical Assessment	3 hrs	30	70		50	50

Title	Theory %			Practical %		
	Hours	Internal	External	Hours	Internal	External
Second Year						
Speciality Courses						
1. Foundation of Critical Care Nursing Practice	3 hrs	30	70		100	100
2. Critical Care Nursing I	3 hrs	30	70		100	100
3. Critical Care Nursing II	3 hrs	30	70		100	100
4. Dissertation and Viva	3 hrs				50	50



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MSc NURSING (NPCC) PROGRAMME

Courses of Instruction

First Year

Sl. No		Hours		
		Theory	Lab/ Skill Lab	Clinical
I	Core Courses			
1	Theoretical Basis for Advanced Practice Nursing	40		
2	Research Application and Evidence Based Practice in Critical Care	56	24	336 (7weeks)
3	Advanced skills in Leadership, Management and Teaching Skills	56	24	192 (4weeks)
II	Advanced Practice Courses			
1	Advanced Pathophysiology applied to Critical Care.	60		336 (7weeks)
2	Advanced Pharmacology applied to Critical Care.	54		336 (7weeks)
3	Advanced Health/physical Assessment	70	48	576 (12weeks)
	Total – 2208 Hours	336 (7weeks)	96 (2weeks)	1776 (37weeks)

Second Year

Sl. No		Hours		
		Theory	Lab/ Skill Lab	Clinical
III	Speciality Courses			
1	Foundation of Critical Care Practice	96	48	576 (12 weeks)
2	Critical Care Nursing I	96	48	576 (12 weeks)
3	Critical Care Nursing II	96	48	624 (13 weeks)
	Total Hours - 2208	288 (6weeks)	144 (4weeks)	1776 (37 weeks)



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MASTER PLAN

(As per Indian Nursing Council norms)

CLINICAL PRACTICE

- A. Clinical Residency experience - Minimum of 48 hrs/ week, 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

Sl. No.	Area	Placement in Weeks	
		First Year	Second Year
1	Medical ICU	12	12
2	Surgical ICU	12	12
3	Cardio / Cardiothoracic (CT) ICU	8	8
4	Emergency Department	6	8
5	Other: Neurology, Burns, Dialysis unit	6	5
	Total weeks	42	45

Sr. No.	Particulars	Weeks/hours
1.	Total available weeks in a year	52 weeks
2.	Annual Leave, Casual Leave, Sick leave	06 weeks
3.	Available weeks	46 weeks
4.	Hours per week	48 hours
5.	Instructional hours (theory)	624 hours
6.	Skill Lab	240 hours
7.	Clinical	3552 hours
8.	Total hours in two years	4416 hours



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Critical Care Competencies (Adapted from ICN, 2005)

1. 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, counseling, 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 judgment, 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



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FIRST YEAR

Sl. No.	Courses	Prescribed hours (Theory + Skill Lab)	Introductory Classes	Workshop	Theory integrated in clinical practicum	Methods of teaching
1	Theoretical Basis for Advanced Practice Nursing	40	8 hrs	-	1 x 32 = 32 hrs	<ul style="list-style-type: none"> • Seminar/ Theory application • Lecture (by faculty)
2	Research Application and Evidence Based Practice in Critical Care	56 +24	8 hrs	46 hrs (5days x 8hrs 1 day x 6 hrs)	1 x 26 = 26hrs.	<ul style="list-style-type: none"> • Research Study analysis • Exercise/ Assignment (lab)
3	Advanced skills in Leadership, Management and Teaching Skills	56 +24	12hrs	2 hrs (Block classes)	1x 26 = 26 hrs 2.5x 16 = 40 hrs	<ul style="list-style-type: none"> • Clinical conference • Seminar • Exercise /Assignments (Lab)
4	Advanced pathophysiology applied to Critical Care	60	04		1.5x 37 = 56 hrs	<ul style="list-style-type: none"> • Case Presentation • Seminar • Clinical Conference • Lecture (by faculty)
5	Advanced Pharmacology applied to Critical Care	54	10		1 x 44 = 44 hrs	<ul style="list-style-type: none"> • Nursing Rounds • Drug Study Presentation • Standing orders/ presentations • Lecture (by faculty)
6	Advanced Health/physical Assessment	70 +48	9 hrs		2x26 = 52 hrs. 1.5 x 18 = 27 hrs 1.0 x 12 = 12 hrs 2.0 x 7 = 14 hrs 2.0 x 2 = 4 hrs	<ul style="list-style-type: none"> • Clinical Demonstration (by faculty) • Return Demonstration • Nursing Rounds • Physical Assessment (All systems) • Case Study • Lecture (by faculty)
	TOTAL	432 hrs	51 hrs	48 hrs	333 hrs	

- Introductory Classes – 1 week
- Workshop - 1 week
- Total 44 weeks = 7.5 hrs/week



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SECOND YEAR

Sl. No.	Courses	Prescribed hours (Theory + Skill Lab)	Theory integrated in clinical practicum	Methods of teaching
1	Foundation of Critical Care Practice	96+48 =144 Hrs.	9 hrs x11 weeks = 99 hrs	<ul style="list-style-type: none"> • Demonstration (Lab) • Return demonstration (Lab) • Clinical Teaching • Case Study • Seminar • Clinical Conference • Lecture by faculty
2	Critical Care Nursing -I	96+48=144 Hrs.	9 hrs x16 weeks = 144 hrs	<ul style="list-style-type: none"> • Demonstration (Lab) • Return demonstration (Lab) • Clinical conference/ Journal Club • Seminar • Case Presentation • Drug Study (including drug interactions) • Nursing Rounds • Lecture by faculty
3	Critical Care Nursing II	96+48=144 Hrs.	9 hrs x16 weeks = 144 hrs	<ul style="list-style-type: none"> • Demonstration (Lab) • Return demonstration • Nursing Rounds • Clinical conference/ Journal Club • Seminar • Lecture by faculty
		432		

Total 45 weeks = 8.5/ 9 hrs/week

Block classes-1wk, 45 wks – 8.5/9hrs/wk



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COURSE PLANNING

MSc NURSING (NPCC) PROGRAMME

First Year



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CORE COURSES

Theoretical Basis for Advanced Practice Nursing

Placement: First Year

Theory: 40 hours

Course Description: This course provides the student with theoretical foundation for advanced nursing. The focus of the course is on the critical components of contemporary nursing knowledge; exploration of the nature of theory development in nursing; examination of relevance of concepts from basic and applied sciences; analysis and evaluation of nursing & related theories; and relevance of theory in terms of impact on professional nursing practice, and individuals, families, groups as clients in health care system.

COMPETENCIES

1. Analyses the global healthcare trends and challenges
2. Analyses the impact of Healthcare and Education policies in India on nursing consulting the documents available.
3. Develops in depth understanding of the healthcare delivery system in India, and its challenges.
4. Applies economic principles relevant to delivery of healthcare services in critical care.
5. Manages and transforms health information to affect health outcomes such as cost, quality and satisfaction.
6. Accepts the accountability and responsibility in practicing the Nurse practitioner's roles and competencies.
7. Actively participates in collaborative practice involving all healthcare team members in critical care and performs the prescriptive roles within the authorized scope.
8. Engages in ethical practice having a sound knowledge of law, ethics and regulation of advanced nursing practice.
9. Uses the training opportunities provided through well planned preceptor ship and performs safe and competent Care applying to Nursing process.
10. Applies the knowledge of nursing theories in providing competent care to critically ill patients.
11. Predicts future challenges of nurse practitioner's roles in variety of healthcare settings Particularly in India



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Theoretical Basis for Advanced Practice Nursing

Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
1	2	Global Health Care Challenges Trends (Competency -1)		Lecture	Written test
2	2	Health System in India Health Care Delivery System in India Changing Scenario (Competency-3)	2	Lecture Cum Discussion	Assignment - Identify Health Care and Education policies and analyze its impact on Nursing
3	2	National Health Planning- 5 year plans & National Health Policy (Competency-2)		Seminar	Seminar Evaluation
4	4	Health Economics & Health Care financing (Competency-4)		Symposium	Symposium evaluation
5	2	Health Information system including Nursing Informatics (Use of computers) (Competency-5)	1	Lecture Cum Demonstration	Return demonstration
Advanced Nursing Practice (ANP)					
6	3	ANP-Definition, Scope, Philosophy, Accountability, Roles & Responsibilities (Collaborative practice and Nurse prescribing roles) (Competency 6&7)		Seminar/ Presentation	Seminar Evaluation
7	3	Regulation (accreditation of training Institutions and Credentialing)& Ethical dimension of advanced nursing practice role (Competence-8)	2	Symposium- Describe the Legal position in India for NP Practice. Discuss the future of nurse Prescribing Policies in India with relevance to these policies	Symposium Evaluation
8	3	Nurse Practitioner- Roles, Types, Competencies, Clinical Settings for practice, cultural competence (Competence-6)	2	Critiquing- Examine the Nursing protocols relevant to NP Practice found in various ICUS in your Tertiary centre	Assignment Evaluation



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
9	2	Training for NP's – Preceptorship(Competency-9)		Seminar	Seminar evaluation
10	4	Future Challenges of NP practice (Competence-11)		Individual & Group Discussion- Describe specific challenges and provide strategies to improve advanced practice nursing clinical education	Assignment evaluation
11	4	Theories of Nursing applied to APN (Competence-10)		Presentation of Nursing Theories	Assignment - Evaluate the application of nursing model and theories in the current health care delivery system
12	2	Nursing process applied to APN (Competence-10)		Preparation of Care plan with application of Nursing Theories	Care plan Evaluation- Apply theories from nursing and other disciplines to the advanced practice care of individuals and families
	33 hrs		7hrs		

Bibliography:

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



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FIRST YEAR MSc NURSING (NPCC)

Theoretical Basis for Advanced Practice Nursing

INTERNAL ASSESSMENT (THEORY)

Total Marks 50

Sl. No	Item	Total Marks	Weightage in %	Marks
1	First term Examination	25 marks	50	25
2	Second term Examination	25 marks		
3	Written assignment /Term Paper (Global and national health Care trends & Policies)	50 marks	50	25
4	Clinical Seminar (Clinical /Care Pathway in specific Clinical condition /application of specific Nursing theory)	30 marks		
	Total	130	100	50



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FIRST YEAR MSc NURSING (NPCC)

SEMINAR/PRESENTATION EVALUATION CRITERIA

Name of the Student : _____

Topic : _____

Name of the Supervisor : _____

Total Marks: 30

Date : _____

S.No	Presentation skills	Marks Allotted	Marks Obtained
1.	Coverage of content (Relevant and current knowledge)	10	
2.	Clarity and credibility in presentation	2	
3.	Well organized	2	
4.	Interesting and creative	1	
5.	Group involvement & effective handling of questions	2	
6.	Confidence and resourcefulness	1	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
	WRITING SKILLS		
9	Content coverage (Relevant and current knowledge)	5	
10	Organization in presenting the content (Introduction, text and conclusion)	3	
11	Use of illustrations	1	
12	References	1	
	Grand Total	30	

Remarks: _____

Signature of Preceptor

Signature of Faculty



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FIRST YEAR MSc NURSING (NPCC)

TERM PAPER - EVALUTION CRITERIA

Name of the Student: - _____

Batch :- _____ Date:- _____

Topics:- _____

Name of the Supervisor:- _____

Total Marks – 50

Marks obtained:- _____

Sr. No.	Criteria	Marks Assigned	Marks Obtained
1	Content (Adequacy, Appropriateness, Clarity)	20	
2	Organization	5	
3	Illustration	20	
4	Resources Used	5	
	Total Marks	50	

Remarks:-

Signature of Preceptor

Signature of Faculty



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FIRST YEAR MSc NURSING (NPCC)

QUESTION PAPER FORMAT (FIRST TERM EXAMINATION)

Theoretical Basis for Advanced Practice Nursing

Marks: 50

Time: 2 hours

Q 1. Write Short Answers on any 4 out of 5

(20 marks)

- a)
- b)
- c)
- d)
- e)

Q 2. Long Answer Questions any 2 out of 3

(30 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |



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FIRST YEAR MSc NURSING (NPCC)

QUESTION PAPER FORMAT (UNIVERSITY EXAMINATION)

Marks: 50

Time: 2 hours

Q 1. Write Short Answers on any 4 out of 5

(20 marks)

- a)
- b)
- c)
- d)
- e)

Q 2. Long Answer Questions any 2 out of 3

(30 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |



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RESEARCH APPLICATION AND EVIDENCE BASED PRACTICE IN CRITICAL CARE

Theory : 56 Hrs

Practical : 24Hrs (Lab/Skill lab)

Clinical (Hrs):336 (7wks)

Course Description – This course is designed to assist the students to acquire sound knowledge in research methodology and to use the research findings in evidenced based practice. It will further enable the students to participate in clinical research to improve quality patient care in critical care settings.

Competencies

1. Applies sound research knowledge and skills in conducting independent research in critical care setting.
2. Participates in collaborative research to improve patient care quality
3. Interprets and uses research findings in advanced practice to produce EBP
4. Tests/Evaluates current practice to develop best practices and health outcomes
5. Evaluate quality care in advanced practice
6. Analyses the evidence for nursing interventions carried out in critical care nursing practice to promote safety and effectiveness of care
7. Develops skills in writing scientific research reports



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RESEARCH APPLICATION AND EVIDENCE BASED PRACTICE IN CRITICAL CARE

nit	Theory Hours	Topic	Practical Hours	Teaching Learning Activities	Method of Assessment
I	2	Research and advanced Practice Nursing <ul style="list-style-type: none"> • Significance of Research and enquiry related to Advanced nursing role 	2	<ul style="list-style-type: none"> • Lecture-cum discussion • Identifying research priorities 	
II	5	Research for APN Practice <ul style="list-style-type: none"> • Testing current practice to develop best practice • Health outcome and Indicators of quality care in advanced practice • Promoting research culture 	2	<ul style="list-style-type: none"> • Journal club • Lecture-cum discussion 	Research article presentation
III	40 (5 days workshop)	Research Knowledge and skills: <ul style="list-style-type: none"> • Research competencies essential for APNs (interpretation and use of research, evaluation of practice, participation in collaborative research) • Research Methodology Phases / steps (Research question, Review of literature, conceptual framework, research designs, sampling, data collection, methods & tools, Analysis and Reporting) • Writing research proposal and research report 	13	<ul style="list-style-type: none"> • Research studies analysis • Workshop • Preparation of tool • Developing and presenting research proposal • Designing proposals for funding 	<ul style="list-style-type: none"> • Critiquing of research studies Assignment: <ul style="list-style-type: none"> • Writing systematic review (Analyse the evidence for a given nursing intervention in ICU)
IV	5	<ul style="list-style-type: none"> • Writing for publication workshop – Manuscript preparation and finding funding sources) 	5	<ul style="list-style-type: none"> • Workshop/ seminar • Preparation of manuscript for publication 	• Seminar



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Unit	Theory Hours	Topic	Practical Hours	Teaching Learning Activities	Method of Assessment
V	4	Evidence based practice <ul style="list-style-type: none"> • Concepts, principles, importance and steps • Integrating EBP to ICU environment • Areas of evidence in critical care • Barriers to implement EBP - Strategies to promote 	2	<ul style="list-style-type: none"> • Seminar • Seminar 	<ul style="list-style-type: none"> • Seminar

CLINICAL PLACEMENT

S.No	Area	Duration
1	Medical ICU	2 weeks
2	Surgical ICU	2 weeks
3	Cardio /cardiothoracic ICU	2 weeks
4	Dialysis	1 week
	Total	7 weeks

Clinical Practicum: Research practicum: Dissertation (336 hrs=7weeks)

Assessment

Year	Theory Marks			Practical Marks (Dissertation)		
	Hours	Internal	External	Hours	Internal	External
First	3	30	70	-	-	-
Second	-	-	-	3	50	50



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Dissertation:

- Ethical clearance should be obtained by the hospital ethics committee
- Topic Selection – The topic should be relevant to critical care nursing that will add knowledge or evidence for nursing intervention. The research should be conducted in any of the critical care settings.
- Submission of research proposal – between 6 to 9 months after the date of admission in the first year.
- Data collection – 7 weeks are allotted for data collection, which can be integrated during clinical experience after 6 months in first year and before 6 months in second year.
- Writing the research report – 6-9 months in second year.
- Submission of dissertation final – 9 months before completion of second year.
- Dissertation Examination -
 - Internal assessment - Viva & dissertation report – 50 marks
 - University Examination - Viva & dissertation report – 50 marks

Internal Assessment: Theory

Sl. No	Items	Marks	Weightage in %	Marks out of 30
1.	Test Papers			
	First term Examination	50	50	15
	Second term Examination	70		
2.	Assignments			
	a) Preparation of Research instrument	50	50	15
	b) Writing systematic review	50		
	c) Journal club – analysis of Research Evidence for ICU Nursing competencies (2)	20×2=40		
	Total	260	100%	30

Bibliography:

- Burns, N., & Grove, S. K. (2011). Understanding nursing research: Building an evidence-based practice (5th ed.). 1st Indian reprint 2012, New Delhi: Elsevier.
- Polit, D. F., & Beck, C. T. (2012). Nursing research: Generating and assessing evidence for nursing practice (9th ed.). 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



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FIRST YEAR MSc NURSING (NPCC)

RESEARCH APPLICATION AND EVIDENCE BASED PRACTICE IN CRITICAL CARE

QUESTION PAPER FORMAT (FIRST TERM EXAMINATION)

Marks: 50

Time: 2hours

Q 1. Write Short Answers on any 4 out of 5

(20 marks)

- a)
- b)
- c)
- d)
- e)

Q 2. Long Answer Questions any 2 out of 3

(30 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |



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RESEARCH APPLICATION AND EVIDENCE BASED PRACTICE IN CRITICAL CARE

QUESTION PAPER FORMAT (UNIVERSITY EXAMINATION)

Marks: 70

Time: 3 hours

Q 1. Write Short Answers on any 5 out of 6

(25 marks)

- a)
- b)
- c)
- d)
- e)
- f)

Q 2. Long Answer Questions any 3 out of 4

(45 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |
| d. i | (2) |
| ii | (5) |
| iii | (8) |



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EVALUATION CRITERIA FOR CRITIQUING RESEARCH STUDY

S. No.	Criteria	Max. Marks	Marks Obtained
1.	Title	1	
2.	Abstract	1	
3.	Introduction		
	▪ Statement of the problem	2	
	▪ Hypothesis or research questions	2	
	▪ Literature review	2	
4.	▪ Conceptual / theoretical framework	2	
	Methodology		
	▪ Following ethical principles	1	
	▪ Research design	2	
5.	▪ Population and sampling	1	
	▪ Data collection and measurement Procedures	1	
	▪ Validity, reliability and pilot study	2	
6.	Results		
	▪ Data analysis	2	
7.	▪ Findings	2	
	Discussion		
	▪ Appropriate discussion of the findings	1	
8.	▪ Strength and weaknesses of the review	1	
	▪ Any implications	1	
9.	References	1	
	Total Marks	25	

Remarks _____

Date & Signature of the Students

Date & Signature of the Preceptor



MGM Institute of Health Sciences

MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

EVALUATION CRITERIA FOR PRESENTATION

Sl. No.	Criteria	Marks Assigned	Marks Obtained
I.	Content	5	
	▪ Organization	1	
	▪ Coverage	2	
	▪ Use of current literature and research evidence	1	
	▪ Appropriateness	1	
II.	Presentation	10	
	▪ Introduction	1	
	▪ Coverage of subject content	2	
	▪ Sequencing	1	
	▪ Depth of knowledge	2	
	▪ Integration of subject matter	1	
	▪ Explanation and clarification	2	
	▪ Time management	1	
III.	AV Aids	3	
	▪ Relevant, clear and visible	1	
	▪ Creativity	1	
	▪ Used effectively at the right time	1	
IV.	Speaker's quality	3	
	▪ Grooming	1	
	▪ Modulation	1	
	▪ Gestures and mannerism	1	
V.	Group participation	2	
VI.	▪ Encourages participation	1	
VII.	▪ Rewards people for their efforts	1	
VIII.	References	2	
	Total Marks	25	

Remarks

Date & Signature of the Students

Date & Signature of the Preceptor



MGM Institute of Health Sciences

MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

EVALUATION CRITERIA FOR DISSERTATION

Names of the Student:

Subject: _____

Topic of presentation: Date:.....

S.N.	Criteria	1	2	3	4	5
I.	Statement of the problem					
	<ul style="list-style-type: none"> ▪ Significance of the problem selected ▪ Framing of title and objectives 					
II.	Organization					
	<ul style="list-style-type: none"> ▪ Inclusion of related studies on the topic, and its relevance ▪ Operational definition 					
III.	Research Design					
	<ul style="list-style-type: none"> ▪ Use of appropriate research design ▪ Usefulness of the research design to draw the inferences among study variables / conclusion 					
IV.	Sampling Design					
	<ul style="list-style-type: none"> ▪ Identification and description of the target population ▪ Specification of the inclusion and exclusion criteria ▪ Adequate sample size justifying study design to draw conclusions. 					
V.	Data Collection Procedure					
	<ul style="list-style-type: none"> ▪ Preparation of appropriate tool ▪ Pilot study including validity and reliability of tool ▪ Use of appropriate procedure / method for data collection ▪ Clear and logical organization of the findings 					
VI.	Analysis of data and interpretation					
	<ul style="list-style-type: none"> ▪ Clear presentation of the tables (title, table & column heading) ▪ Selection of appropriate statistical tests 					
VII.	Ethical Aspects					
	<ul style="list-style-type: none"> ▪ Use of appropriate consent process ▪ Use of appropriate steps to maintain ethical aspects and principles (Physical harm etc.) 					
VIII.	Interpretation of the findings					
	<ul style="list-style-type: none"> ▪ Consistent and appropriate discussion of the findings 					
IX.	Conclusion					
	<ul style="list-style-type: none"> ▪ Summary & recommendations for Nursing practice / Education / Administration 					
X.	Presentation / Report writing					
	<ul style="list-style-type: none"> ▪ Organization of project work including language & style of presentation 					
Total Marks (100)						

Remark:

Date & Signature of the Student

Date & Signature of the Preceptor



MGM Institute of Health Sciences

MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

FIRST YEAR MSc NURSING (NPCC)

EVALUATION CRITERIA FOR SYSTEMATIC REVIEW

Names of the Student: _____

Topic: _____

Total Marks: 50

Date : _____

S.N.	Criteria	1	2	3	4	5
1.	Title <ul style="list-style-type: none">Reflects the topic of the review					
2.	Abstract					
3.	Review of literature <ul style="list-style-type: none">Adequate Literature reviewsUse of relevant studies					
4.	Methodology					
	<ul style="list-style-type: none">Use of appropriate research design					
	<ul style="list-style-type: none">Data collection and measurement Procedures					
	<ul style="list-style-type: none">Validity, reliability					
5.	<ul style="list-style-type: none">Clear and logical presentation of data analysis					
	Discussion					
	<ul style="list-style-type: none">Appropriate discussion of the findings					
	<ul style="list-style-type: none">Limitation of the studies					
	<ul style="list-style-type: none">Strength and weaknesses of the review					
	<ul style="list-style-type: none">Any implications					
	Total Marks					

Remark: _____

Date & Signature of the Students

Date & Signature of the Preceptor



MGM Institute of Health Sciences

MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

FIRST YEAR MSc NURSING (NPCC)

Journal club outline

1. Introduction-Background knowledge
2. Overview of article-selection and its significance
3. Content review and critical appraisal of content (Research paper-problem, objectives, methods, results, discussion and future implications for critical care nursing practice and relevant research)
4. Conclusion

Outline for Journal Club Presentation-Research paper

I. Introduction

- A. Study objective/purpose
 - Is the purpose of the study clearly stated?
- B. Hypotheses
 - Is the research question or hypothesis clearly stated?

II. Methodology/Study Design

- A. Design of the experiment/trial
 - Is it a clinical trial, cohort, case-control, cross-sectional, or case-series?
- B. Population/sample
 1. What are the criteria for inclusion and exclusion of subjects?
 2. What limitations result?
- C. Treatment allocation
 1. How are subjects chosen or recruited? Randomly?
 2. If not:
 - a. Are they representative of the population?
 - b. How were patients selected for the study to avoid bias?
 - c. If historical controls were used, were methods and criteria the same for the experimental group, and were cases and controls compared on prognostic factors?
 3. If there is a control group, how is it chosen?
 4. How are patients followed up? Who are the dropouts, and how many are there? Were the circumstances for patients dropping out explained by the authors?
 5. Do the authors explain or give a reference to any unusual method used in the study?

Continued.....



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- D. Outcome measures
 - 1. Are there multiple endpoints?
 - 2. Are subgroup analyses performed and, if so, reported appropriately?

- E. Statistical analysis
 - 1. Are the statistical methods used in the study specified in sufficient detail?
 - 2. Is there a statement about the sample size or power?
(Statements on power are especially critical in a negative study).
 - 3. Do the statistical tests answer the research questions? Are all relevant outcomes reported?
 - 4. Were repeated measures made over time, and if so, were they analyzed appropriately?

III. Results

- A. Do the results relate to research questions proposed in the study objectives?
- B. Are actual values reported (e.g., means, standard deviations, proportions), not just the results of statistical tests?
- C. In paired designs, is the magnitude and range of the differences reported?
- D. Are group similar on baseline measures? If not, were appropriated analyses done to take differences into consideration?
- E. Are appropriate graphics used to present results clearly?

IV. Study Discussion/Students' Conclusions

- A. Interpretation of results
 - 1. Are the questions posed in the study adequately addressed?
 - 2. Are the conclusions justified from the data?
 - 3. Does the student reflect on the clinical and statistical significance of results from the study?
- B. Does the student compare results from the study to those of similar studies performed?

- C. Discuss study limitations
 - 1. Are shortcomings of the study addressed and constructive suggestions given for the future research?

- D. Applicability of results
 - 1. Do the authors extrapolate beyond the data?



MGM Institute of Health Sciences

MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

FIRST YEAR MSc NURSING (NPCC)

JOURNAL CLUB EVALUATION

NAME OF THE STUDENT:.....

COURSE : YEAR I/II:.....

TOPIC : DATE :

S.No.	Paper selection and Presentation skills	Marks allotted	Marks obtained
1.	Paper selection (From peer reviewed journal and current knowledge relevant to critical care nursing practice)	4	
2.	Quality of research (Research question, objectives, methods, results & discussion) / content reviewed	4	
3.	Critical appraisal of the content/results of research	4	
4.	Interesting and creative, Use of AV aids-organization and clarity	2	
5.	Group involvement & effective handling of questions	2	
6.	Organization, clarity and credibility in presentation	2	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
TOTAL		20 Marks	

Remarks:-

Signature of preceptor

Signature of faculty



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MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

FIRST YEAR MSc NURSING (NPCC)

EVALUATION CRITERIA-RESEARCH INSTRUMENT

Name of the Student: - _____

Batch :- _____ Date:- _____

Topics:- _____

Name of the Supervisor:- _____

Total Marks – 50

Marks obtained:- _____

Sr.No.	Criteria	Marks Assigned	Marks Obtained
1	Content		
	Adequacy	5	
	Appropriateness to objectives	5	
	Appropriateness to design	5	
	Relevance	5	
	Clarity	5	
	Comprehensiveness	5	
	Construction of Item	5	
2	Organization	5	
3	Illustration	5	
4	Resources Used-Literature Review	5	
	Total Marks	50	

Remarks:

Date & Signature of the Supervisor



MGM Institute of Health Sciences

MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

Advanced skills in Leadership, Management and Teaching

Placement – First Year

Theory: 56 Hrs

Practical: 24Hrs (Lab/Skill lab)

Clinical :- 192 Hrs (4 weeks)

Course Description

This course is designed to assist the students to develop a broad understanding of Principles, concepts, trends and issues related to leadership and management in critical care units. It would also provide opportunity to students to understand, appreciate and acquire skills in budgetary planning, supervision and management of manpower and supplies in critical care units. Further it would enable the students to understand the basic principles of education, and acquire skill in teaching.

Competencies

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 and 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



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Course Content

Unit	Theory Hours	Topic	Practical Hours	Teaching Learning Activities	Method of Assessment
1	2	Theories, styles of leadership and current trends			
2	2	Theories, styles of management and current trends			
3	4	Principles of leadership and management applied to critical care settings			
4	4	Stress management and conflict management - principles and application to critical care		Seminar	
5	4	Quality improvement and audit	2 2	Patient care audit Preparation of nursing care standards and protocols	
6	5	Problem solving, critical thinking and decision making, communication skills applied to critical care nursing practice	2	Monitoring, evaluation, and writing report of infection control practices	Term Paper ICU work place violence
7	2	Team building, motivating and mentoring within ICU set up		Seminar	
8	5	Budgeting and management of resources including human resources - ICU budget, material management, staffing, assignments	1 1 2 2	Preparation of staff patient assignment Preparation of staff duty roster Preparation of unit budget Management of equipment and supplies	
9	2	Change and innovation		Seminar	
10	6	Staff performance, and evaluation (performance appraisals)		Assignment	
11	2	Teaching - Learning theories and principles applied to Critical Care Nursing	2	Exercise Development of teaching plan	



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Unit	Theory Hours	Topic	Practical Hours	Teaching Learning Activities	Method of Assessment
12	2	Competency based education and outcome based education	2 2 2		
13	8	Teaching methods / strategies, media: educating patients and staff in Critical Care settings		Preparation of teaching method and media for patients and staff	
14	4	Staff education and use of tools in evaluation	4	Micro teaching / patient education sessions Planning and conducting OSCE/OSPE Construction of tests	Micro teaching for staff Construction of Test
15	2	APN - Roles as a teacher		Clinical Conference	
16	2	Advocacy roles in critical care environment		Clinical Conference	
Total	56 hrs.		24 hrs		

CLINICAL PLACEMENT

S. No	Area	Duration
1	Medical ICU	1 week
2	Surgical ICU	1 week
3	Cardio /cardiothoracic ICU	1 week
4	Emergency ICU	1 week
	Total	4 weeks



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INTERNAL ASSESSMENT

Sl. No	Items	Marks	Weightage in %	Marks out of 30
1.	Examination			
	First term Examination	50	50	15
	Second term Examination	70		
2.	Assignments			
	Journal Club (Trends in Leadership ,Management and Teaching)-2	20x2=40	50	5
	Term Paper - ICU work place violence	50		5
	Microteaching for Staff (1)	20		5
	Total	230	100	30

UNIVERSITY EXAMINATION

Theory Marks			Practical Marks		
Duration (Hours)	Internal	External	Hours	Internal	External
3	30	70	NIL		

Bibliography:

Bastable, S. B. (2010). Nurse as educator: Principles of teaching and learning for nursing practice (3rd ed.). New Delhi: Jones & Bartlett Publishers

Billings, D. M., & Halstead, J. A. (2009). Teaching in nursing: A guide for faculty (3rd ed.). St. Louis, Missouri: Saunders Elsevier.

Clark, C. C. (2010). Creative nursing leadership and management. New Delhi: Jones and Bartlett Publishers.

McConnel. (2008). Management principles for health professionals. Sudbury, M. A: Jones and Bartlett Publishers.

Roussel, L., & Swansburg, R. C. (2010). Management and leadership for nurse administrators (5th ed.). New Delhi: Jones and Bartlett Publishers.



MGM Institute of Health Sciences

MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

FIRST YEAR MSc NURSING (NPCC)

Advanced skills in Leadership, Management and Teaching

QUESTION PAPER FORMAT (FIRST TERM EXAMINATION)

Marks: 50

Time: 2hours

(20 marks)

Q 1. Write Short Answers on any 4 out of 5

- a)
- b)
- c)
- d)
- e)

Q 2. Long Answer Questions: Any 2 out of 3

(30 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |



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MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

FIRST YEAR MSc NURSING (NPCC)

Advanced skills in Leadership, Management and Teaching

QUESTION PAPER FORMAT (UNIVERSITY EXAMINATION)

Marks: 70

Time: 3 hours

Q 1. Write Short Answers on any 5 out of 6

(25 marks)

- a)
- b)
- c)
- d)
- e)
- f)

Q 2. Long Answer Questions: Any 3 out of 4

(45 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |
| d. i | (2) |
| ii | (5) |
| iii | (8) |



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FIRST YEAR MSc NURSING (NPCC)

Guidelines for Construction of Test

Steps:

1. Planning for the test
 - Subject
 - Marks
 - Time
 - Type of Examination
 - Topics
 - Difficulty level

2. Designing the test
 - Weightage to the content
 - Weightage to the objectives
 - Weightage to the form of objectives
 - Weightage to the difficulty level
 - Scheme of options

3. Preparation of blue print

4. Writing of items

5. Question wise analysis

6. Editing of question paper

7. Answer Key



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MGM Educational Campus, Plot No. 1 and 2, Sector 1, Kamothe, Navi Mumbai

FIRST YEAR MSc NURSING (NPCC)

TEACHING / MICRO TEACHING EVALUATION (Family/student education)

NAME OF THE STUDENT:.....

COURSE: YEAR I/II:

TOPIC:DATE.....

AUDIENCE.....DURATION.....

S.No.	Particulars	Marks allotted	Marks obtained
I.	PREPARATION OF TEACHING PLAN	3	
	Objectives		
	Content (appropriate, adequate, organization, recent updates)		
	References		
II.	PREPARATION OF SETTING	2	
	Seating, lighting, ventilation, cleanliness, availability of resources		
III.	PRESENTATION	10	
	Learning outcomes/objectives made clear to the audience		
	Clarity in presentation		
	Organization of content		
	Confidence in presentation		
	Appropriate eye contact, posture, Language, manners and discipline		
	Group involvement & Sustaining the interest of the group		
	Keeping the interest of the group		
	Clarifying doubts and leading discussions		
	Use of appropriate illustrations		
	Time management		
IV	TEACHING AID	3	
	Appropriate and effective use		
	Creativity & clarity		
	ASSIGNMENT/PLAN FOR FOLLOW UP	2	
	Relevant & Achievable		
	Total	20	

Remarks:

Signature of preceptor

Signature of faculty



MGM Institute of Health Sciences

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ADVANCED PRACTICE COURSES

ADVANCED PATHOPHYSIOLOGY APPLIED TO CRITICAL CARE NURSING

Placement : First Year

Theory – 60 hours
Practical – 336 hours

Course description:

The course is designed to enhance advanced knowledge on pathophysiology and the adaptive responses that will support clinical decision making about the diagnosis and treatment of acute and chronic disease conditions.

Competencies:

1. Integrates the knowledge of pathophysiological process in critical conditions in developing diagnosis and plan of care
2. Applies the pathophysiological principles in symptom management and secondary prevention of critical illnesses
3. Analyzes the pathophysiological changes relevant to each critical illness recognizing the value of diagnosis, treatment, care and prognosis

Unit	Theory Hours	Content	Practical /lab hours	Teaching Learning Activities	Method of Assessment
1.	8	Cardiovascular function Advanced pathophysiological process of cardiovascular condition Hypertensive disorder <ul style="list-style-type: none">• Peripheral artery disorder• Venous disorders• Coronary artery diseases• Valvular heart disease• Cardiomyopathy and heart failure• Cardiac Tamponade• Arrhythmias• Cor pulmonale• Heart block and conduction Disturbances		<ul style="list-style-type: none">• Lecture cum discussion• Problem based learning ,• Nursing rounds• Clinical conference• One minute preceptorship	<ul style="list-style-type: none">• Case presentation• Seminar,• Case studies• Journal writing



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Unit	Theory Hours	Content	Practical /lab hours	Teaching Learning Activities	Method of Assessment
II	4	<p>Pulmonary function Advanced Pathophysiological process of pulmonary conditions Chronic obstructive pulmonary disease</p> <ul style="list-style-type: none"> Disorders of the pulmonary vasculature Infectious diseases Respiratory failure Chest trauma 		<ul style="list-style-type: none"> Lecture cum discussion Problem based learning , Nursing rounds Clinical conference One minute preceptors 	<ul style="list-style-type: none"> Case presentation Seminar, Case studies Journal writing
III	6	<p>Neurological functions Advanced Pathophysiological process of Neurological function Seizure disorder</p> <ul style="list-style-type: none"> Cerebrovascular disease Infections Spinal cord disorder Degenerative neurological diseases Neurological trauma Coma, unconsciousness 		<ul style="list-style-type: none"> Lecture cum discussion Problem based learning , Nursing rounds Clinical conference One minute preceptors 	<ul style="list-style-type: none"> Case presentation Seminar, Case studies Journal writing
IV	4	<p>Renal function Advanced Pathophysiological process of Renal function</p> <ul style="list-style-type: none"> Acute renal failure Chronic renal failure Bladder trauma Infections (Glomerulonephritis) Nephrotic syndrome 		<ul style="list-style-type: none"> Lecture cum discussion Problem based learning , Clinical conference One minute preceptors 	<ul style="list-style-type: none"> Case presentation Seminar, Case studies Journal writing
V	4	<p>Gastrointestinal and hepatobiliary Function Advanced Pathophysiological process of hepatobiliary conditions Gastrointestinal bleeding</p> <ul style="list-style-type: none"> Intestinal obstruction Pancreatitis, Hepatic failure Gastrointestinal perforation 		<ul style="list-style-type: none"> Lecture cum discussion Problem based learning , Clinical conference One minute preceptors 	<ul style="list-style-type: none"> Case presentation Seminar, Case studies Journal writing



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Unit	Theory Hours	Content	Practical /lab hours	Teaching Learning Activities	Method of Assessment
VI	4	Endocrine function Advanced Pathophysiological process of endocrine function <ul style="list-style-type: none"> • Diabetic keto acidosis • Hyperosmolar non ketotic coma • Hypoglycemia • Thyroid storm • Myxedema coma • Adrenal crisis • Syndrome of inappropriate antidiuretic hormone secretion 		<ul style="list-style-type: none"> • Lecture cum discussion • Problem based learning , • Nursing rounds • Clinical conference • One minute preceptors 	<ul style="list-style-type: none"> • Case presentation • Seminar, • Case studies • Journal writing
VII	8	Hematological function Advanced Pathophysiological process of Hematological conditions <ul style="list-style-type: none"> • Disorders of Red blood cells <ul style="list-style-type: none"> - Polycythemia - Anemia - Sickle cell diseases • Disorders of white blood cells <ul style="list-style-type: none"> - Leucopenia - Neoplastic disorders • Disorders of hemostasis <ul style="list-style-type: none"> - Platelet disorders - Coagulation disorders - Disseminated intravascular coagulation 		<ul style="list-style-type: none"> • Lecture cum discussion • Problem based learning , • Nursing rounds • Clinical conference • One minute preceptors 	Case presentation Seminar, Case studies Journal writing
VIII	2	Integumentary function Advanced Pathophysiological process of integumentary conditions Wound healing <ul style="list-style-type: none"> • Burns • Steven Johnson Syndrome 		<ul style="list-style-type: none"> • Lecture cum discussion • Problem based learning , • One minute preceptorship 	Case presentation Seminar, Case studies Journal writing



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Unit	Theory Hours	Content	Practical/ Lab Hours	Teaching Learning Activities	Method of Assessment
IX	8	<p>Multisystem dysfunction Advanced Pathophysiological process of Multi systeml conditions</p> <p>Shock</p> <ul style="list-style-type: none"> - Hypovolemic - Cardiogenic - Distributive <ul style="list-style-type: none"> • Systemic inflammatory syndrome • Multiple organ dysfunction syndrome • Trauma <ul style="list-style-type: none"> - Thoracic ,Abdominal - Musculoskeletal , maxillofacial • Drug overdose and poisoning • Envenomation 		<ul style="list-style-type: none"> • Lecture cum discussion • Problem based learning , • Nursing rounds • Clinical conference • One minute preceptorship 	<p>Case presentation Seminar, Case studies Journal writing</p>
X	6	<p>Specific infections Advanced Pathophysiological process of specific infections</p> <ul style="list-style-type: none"> • HIV ,Tetanus ,SARS • Rickettsiosis, Leptospirosis • Dengue, Malaria, Chickungunya • Rabies • Avian flu ,Swine flu 		<p>Lecture cum discussion Problem based learning , Nursing rounds Clinical conference One minute preceptorship</p>	<p>Case presentation Seminar, Case studies Journal writing</p>
XI	6	<p>Reproductive function Advanced Pathophysiological process of Reproductive conditions</p> <p>Ante partum hemorrhage</p> <ul style="list-style-type: none"> • Pregnancy induced hypertension • Obstructed labour, Ruptured uterus • Postpartum hemorrhage , Puerperal sepsis • Amniotic fluid embolism HELLP (hemolysis , Elevated Liver Enzymes ,low platelet count),Trauma 		<ul style="list-style-type: none"> • Lecture cum discussion • Problem based learning , • Nursing rounds • Clinical conference • One minute preceptorship 	<p>Case presentation Seminar, Case studies Journal writing</p>



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Bibliography

Huether, S. E., & McCance, K. L. (2012). *Understanding pathophysiology* (5th ed.). St. Louis, Missouri: Elsevier

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

Porth, C. M. (2007). *Essentials of pathophysiology: Concepts of altered health states* (2nd ed.). Philadelphia: Lippincott Williams and Wilkins.

Urden, L. D., Stacy, K. M., & Lough, M. E. (2014). *Critical Care Nursing- Diagnosis and management* (7th ed.). Elsevier: Missouri



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ADVANCED PHARMACOLOGY RELEVANT TO CRITICAL CARE NURSING

Placement : First Year

**Theory – 54 hours
Practical – 336 hours**

Course description:

This course is designed to enhance the advanced knowledge and clinical application of drug therapy with emphasis on mechanisms of drug actions, therapeutic effects, adverse effects, drug interactions with an integrated approach to pathophysiology and relevant considerations for illness management

Competencies:

- Applies the pharmacological principles in providing care to critically ill patients and families
- Analyzes pharmacotherapeutics and pharmacodynamics relevant to drugs used in treatment of critical care conditions
- Perform safe drug administration based on principles and institutional protocols
- Documents accurately and provides follow up care
- Applies sound knowledge of drug interactions in administration of drugs to critically ill patients in the critical care setting and guiding their families in self care management.



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ADVANCED PHARMACOLOGY RELEVANT TO CRITICAL CARE NURSING

Content

Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
I	2	Introduction to pharmacology in critical care : <ul style="list-style-type: none"> - History - Classification of drugs and schedules 		Lecture Group discussion	Written test
II	4	Pharmacokinetics & pharmacodynamics <ul style="list-style-type: none"> • Introduction • Absorption , Distribution, Metabolism, Distribution and Excretion in critical care area. • Plasma concentration ,half life • Loading and maintenance Dose • Therapeutic index and drug safety • Potency and efficacy • Principles of drug administration <ul style="list-style-type: none"> ○ The rights of drug administration ○ Systems of measurement ○ Enteral drug administration ○ Topical drug administration ○ Parenteral drug administration 		Lecture Seminar	Written test
III		Pharmacology and Cardiovascular alterations in critical care <ul style="list-style-type: none"> • Vasoactive medications <ul style="list-style-type: none"> ○ Vasodilator ○ Vasopressor ○ <u>Inotropes</u> <ul style="list-style-type: none"> - Cardiac glycosides- digoxin - Sympathomimetics- dopamine, Dobutamine, Epinephrine, isoproterenol, norepinephrine, pehenylephrine - Phosphodiesterase inhibitors – amrinone , milrinone 		Lecture, Group discussion Clinical conferences, Problem based Learning ,	Drug presentation\ Patient Rounds, Clinical Patient Log , Worksheets on case scenarios



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Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
III	5	<ul style="list-style-type: none"> • Antiarrhythmic Medications • Cardiac critical care condition <ul style="list-style-type: none"> ○ Medications to improve cardiac contractibility ○ Medications in the management of hypertension in critical care ○ 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, cardiomyopathy. ○ Medications in the management of Atherosclerotic disease of aorta and peripheral artery. ○ Medications in the management of Deep vein thrombosis • Institutional protocols /standing orders for cardiac critical care emergencies 			
IV	4	<p>Pharmacology and pulmonary alterations in critical care</p> <ul style="list-style-type: none"> • Mechanical ventilation <ul style="list-style-type: none"> ○ Introduction ○ Medications used on patients with mechanical ventilator ○ Mechanical ventilation impact on pharmacotherapy- sedation and analgesia, Neuromuscular blockade, Nutrition • Pulmonary critical care conditions <ul style="list-style-type: none"> ○ Medications in management of status asthmaticus ○ Medications in management of pulmonary edema ○ Medications in management of Pulmonary embolism 		Lecture, Group discussion Case presentation, Clinical conferences,	Drug presentation, Patient Rounds, Clinical Patient Log, Worksheets on case scenarios



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Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
		<ul style="list-style-type: none"> ○ Medications in management of Acute Respiratory failure & Acute Respiratory distress syndrome ○ Medications in management of Chest trauma. ○ Medications in management of Chronic Obstructive Pulmonary disease. ○ Medications in management of Pneumonia. ○ Medications in management of Pleural effusion. ○ Medications in management of Atelactasis ● Standing orders for pulmonary critical care emergencies 			
V	6	<p>Pharmacology and Neurological alterations in Critical care</p> <ul style="list-style-type: none"> ● Pain <ul style="list-style-type: none"> ○ NSAID ○ Opioids analgesia ● Sedation <ul style="list-style-type: none"> ○ Gamma amnio butyric acid stimulants ○ Dexmedetomidine ○ Analgosedation ● Delirium <ul style="list-style-type: none"> ○ Haloperidol ○ Atypical anti psychotics ● Medications used for local and general anesthesia <ul style="list-style-type: none"> ○ Local- amides, esters and miscellaneous agents ○ General- Gases, Volatile liquids, IV anesthetics ○ Non anesthethtic drugs adjuncts to surgery ● Paralytic Medications <ul style="list-style-type: none"> ○ Non depolarizing and ○ depolarizing agents ○ Anxiolytics 			



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Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
	6	<ul style="list-style-type: none"> • Autonomic drugs <ul style="list-style-type: none"> ○ Adrenergic agents /Sympathomimetics ○ Adrenergic blocking agents ○ Cholinergic agents ○ Anticholinergic agents • Medications in the management of <ul style="list-style-type: none"> - ○ Anxiety and Insomnia ○ Antidepressants ○ Benzodiazepines ○ Barbiturates • Neurological critical care conditions <ul style="list-style-type: none"> ○ Medications in the management of Psychoses ○ Medications in the management of acute head injury and spinal cord injury with elevated intracranial pressure ○ Medications in the management of muscle spasm ○ Medications in the management of spasticity ○ Medications in the management of cerebrovascular disease and cerebrovascular 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 safe guard patient • Standing orders for neurology critical care emergencies 		<p>Clinical conferences,</p> <p>Problem based Learning ,</p> <p>One minute preceptorship</p>	<p>Drug presentation,</p> <p>Patient Rounds,</p> <p>Clinical Patient Log ,</p> <p>Worksheets on case scenarios</p>



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Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
VI	5	<p>Pharmacology and Nephrology alterations in critical care</p> <ul style="list-style-type: none"> • Diuretics • Fluid replacement <ul style="list-style-type: none"> ○ Crystalloids ○ Colloids • Electrolytes <ul style="list-style-type: none"> ○ Sodium ○ Potassium ○ Calcium ○ Magnesium ○ Phosphorous • Nephrology critical care conditions <ul style="list-style-type: none"> ○ Medication in the management of Acute /chronic renal failure ○ Medication in the management of Acute tubular necrosis ○ Medication in the management of Bladder trauma ○ Medication in the management of Electrolyte imbalances ○ Medication in the management of Acid base balances ○ Medication in the management of Dialysis • Standing orders for nephrology critical care emergencies 		<p>Problem based Learning ,</p> <p>One minute preceptorship</p>	<p>Drug presentation,</p> <p>Patient Rounds,</p> <p>Clinical Patient Log ,</p> <p>Worksheets on case scenarios</p>
VII	5	<p>Pharmacology and gastrointestinal alterations in critical care</p> <ul style="list-style-type: none"> • Antiulcer drugs • Antidiarrheals • Antiemetic • Pancreatic enzymes • Nutritional supplements, vitamins and minerals 			



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Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
		<ul style="list-style-type: none"> • Gastrointestinal critical care conditions <ul style="list-style-type: none"> ○ Acute GI bleeding, Hepatic failure, acute pancreatitis ○ Abdominal injury ○ hepatic encephalopathy ○ acute intestinal obstruction ○ Perforative peritonitis ○ Gastro intestinal surgeries and Liver transplant • Standing orders for gastrointestinal critical care emergencies. 		Lecture, Group discussion Case presentation, Clinical conferences,	Drug presentation, Worksheets on case scenarios
VIII	4	Pharmacology and endocrine alterations in critical care <ul style="list-style-type: none"> • Hormonal therapy • Insulin and other hypoglycemic agents • Endocrine critical care Conditions <ul style="list-style-type: none"> ○ Medications in the management of Diabetic keto acidosis, Hyperosmolar non ketotic coma ○ Medications in the management of Hypoglycemia ○ Medications in the management of Thyroid storm ○ Medications in the management of Myxedema Coma ○ Medications in the management of Adrenal crisis ○ Medications in the management of SIADH • Standing orders for endocrine critical care emergencies 		<ul style="list-style-type: none"> • Problem based Learning , • One minute preceptorship 	Drug presentation, Patient Rounds,
IX		Pharmacology and hematology alterations in critical care <ul style="list-style-type: none"> • Anticoagulants • Antiplatelets drugs • Thrombolytics • Hemostatics/ antifibrinolytics 		Lecture, Group discussion Case presentation, Problem based Learning , Visit to blood bank	Drug presentation, Patient Rounds, Worksheets on case scenarios



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Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
	5	<ul style="list-style-type: none"> • Hemopoietic growth factors <ul style="list-style-type: none"> ○ Erythropoietin ○ Colony stimulating factors ○ Platelet enhancers • Blood and blood products <ul style="list-style-type: none"> ○ Whole blood, packed red blood cells, leukocyte –reduced red cells, washed red blood cells, fresh frozen plasma, cryoprecipitate ○ Albumin ○ Transfusion reactions, transfusion administration process ○ Vaccines ○ Immuno stimulants ○ Immunosuppressants ○ Chemotherapeutic drugs- Alkylating agents, antimetabolites, antitumor antibiotics, alkaloids, hormones and hormone antagonist, corticosteroids, gonadal hormones, antiestrogens, androgen anatagonists, biologic response modifiers • Hematology critical care conditions <ul style="list-style-type: none"> ○ Medications in the management of Anemia in critical illness. ○ Medications in the management of DIC. ○ Medications in the management of Thrombocytopenia and acute leukemia ○ Medications in the management of Heparin induced thrombocytopenia ○ Medications in the management of Sickle cell anemia ○ Medications in the management of Tumor lysis syndrome • Standing orders for hematology critical care emergencies 			



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Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
X	3	<p>Pharmacology and skin alterations in critical care Medications in the management of</p> <ul style="list-style-type: none"> ○ Medications in the management of Burn management ○ Medications in the management of Wound management ● Standing orders for skin critical care emergencies 		Case presentation, Clinical conferences,	Drug presentation, Patient Rounds, Clinical Patient Log Worksheets on case scenarios
XI	5	<p>Pharmacology and multisystem alterations in critical care</p> <ul style="list-style-type: none"> ○ Medications in the management of Shock, sepsis, multiple organ dysfunction, systemic inflammatory response syndrome, anaphylaxis. ○ Medications in the management of Trauma, injuries (heat, electrical, near hanging, near drowning). ○ Medications in the management of bites, drug overdose and poisoning ● Management of Fever <ul style="list-style-type: none"> ○ Antipyretics ○ NSAIDS ○ Corticosteroids ● Standing orders for multisystem critical care emergencies 		Lecture, Group discussion Case presentation, Clinical conferences,	Drug presentation, Patient Rounds, Worksheets on case scenarios
XII	6	<p>Pharmacology and infections in critical care</p> <p>Antibacterial drugs</p> <ul style="list-style-type: none"> ○ Introduction ○ Beta lactams- pencillins, cephalosporins, monobactams, carbapenams ○ Aminoglycosides ○ Anti MRSA ○ Quinolones 		Lecture, Group discussion Clinical conferences, Problem based Learning ,	Drug presentation, Patient Rounds, Worksheets on case scenarios



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Unit	Theory Hours	Content	Practical hours	Teaching Learning Activities	Method of Assessment
		<ul style="list-style-type: none"> ○ Miscellaneous- Lincosamide group nitromidazole, tetracycline and chloramphenicol, polymyxins, antimalarials, anti fungals , antivirals ● Anti fungal drugs ● Antiprotozoal drugs ● Anti viral drugs ● Choice of antimicrobials ● Infectious critical Care conditions <ul style="list-style-type: none"> ○ 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 			

CLINICAL PLACEMENT

Advanced Pathophysiology – 7 weeks

Advanced Pharmacology - 7 weeks

S. No	Area	Duration
1	Medical ICU	4 weeks
2	Surgical ICU	4 weeks
3	Cardio /cardiothoracic ICU	2 weeks
4	Emergency ICU	1 week
5	Casualty	1 week
6	Burns	1 week
7	Dialysis	1 week
	Total	14 weeks



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ADVANCED PHARMACOLOGY AND PATHOPHYSIOLOGY RELEVANT TO CRITICAL CARE NURSING

Internal Assessment - Theory

S.No	Item	Marks allotted	Weightage	Out of 30 Marks
1.	Examination			
	First term Examination	50	50%	15
	Pre final Examination	70		
2.	Assignments			
	Drug study Presentation	20	25%	7.5
	Drug Study Report	20		
	Case Study	20	25%	7.5
	Case presentation	20		
	Total	200	100	30

UNIVERSITY EXAMINATION:

Theory Marks			Practical Marks		
Duration (Hours)	Internal	External	Hours	Internal	External
3	30	70		Nil	



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FIRST YEAR MSc NURSING (NPCC)

DRUG STUDY PRESENTATION

NAME OF THE STUDENT: _____

COURSE: _____

YEAR I/II: _____

TOPIC: _____

DATE: _____

S.No.	Presentation skills	Marks allotted	Marks obtained
1.	Coverage of content -12		
1.1	Drug name –generic with dosage, therapeutic ranges & route of administration	3	
1.2	Mechanism of Action, metabolism and excretion	2	
1.3	Side effects, adverse reactions, drug interactions and management incl. anaphylaxis management	3	
1.4	Precautions and monitoring	1	
1.5	Patient's response to drug treatment	1	
1.6	Overdose-symptoms & treatment	2	
2.	Clarity and credibility in presentation	1	
3.	Well organized	1	
4.	Interesting and creative, use of illustrations	2	
5.	Group involvement & effective handling of questions	1	
6.	Confidence and resourcefulness	1	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
	TOTAL	20	

REMARKS:

Signature of preceptor

Signature of faculty



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FIRST YEAR MSc NURSING (NPCC)

DRUG STUDY REPORT

S.No.	Particulars	Marks allotted	Marks obtained
1.	Drug name –generic with dosage, therapeutic ranges & route of administration	3	
2	Mechanism of Action, metabolism and excretion	2	
3	Side effects, adverse reactions, drug interactions and management incl. anaphylaxis management	3	
4	Precautions and monitoring	1	
5	Patient's response to drug treatment	1	
6	Overdose-symptoms & treatment	2	
7	Discussion and conclusion	2	
8	Organization in presenting the written content	2	
9	Use of illustrations	2	
10	References	2	
	Total	20	

REMARKS:-

Signature of preceptor

Signature of faculty



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FIRST YEAR MSc NURSING (NPCC)

CLINICAL PRESENTATION EVALUATION

(PATHOPHYSIOLOGY)

NAME OF THE STUDENT:

COURSE: YEAR I/II:

TOPIC:

DATE:

S. No.	Presentation skills	Marks allotted	Marks obtained
1.	Coverage of content -12		
1.1	Brief patient presentation	4	
1.2	Relevant normal physiology and abnormal physiological changes/processes related to critical condition	8	
2.	Clarity and credibility in presentation	1	
3.	Well organized	1	
4.	Interesting and creative, use of illustrations	2	
5.	Group involvement & effective handling of questions	1	
6.	Confidence and resourcefulness	1	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
	TOTAL	20	

REMARKS:-

Signature of preceptor

Signature of faculty



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FIRST YEAR MSc NURSING (NPCC)

CASE STUDY

PATHOPHYSIOLOGY

NAME OF THE STUDENT:.....

COURSE: YEAR I/II:.....

TOPIC:

DATE:.....

S.No.	Particulars	Marks allotted	Marks obtained
1.	Introduction of patient, history & physical examination, and Diagnostic tests – significant findings	5	
2.	Diagnosis and relevant pathophysiology	1	
3.	Management plan (Identification of outcomes & Development of plan for care/care pathway)	2	
4.	Management (Treatment and nursing interventions including family education and counseling) & Achievement of outcomes(Patients responses to treatment and interventions)	4	
5	Discussion and conclusion	2	
6	Organization in presenting the written content	2	
7	Use of illustrations	2	
8	References	2	
	Total	20	

REMARKS:-

Signature of preceptor with date

Signature of faculty with date



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FIRST YEAR MSc NURSING (NPCC)

QUESTION PAPER FORMAT (FIRST TERM EXAMINATION)

Marks : 50

Time : 2 hours

SECTION A

ADVANCED PATHOPHYSIOLOGY APPLIED TO CRITICAL CARE NURSING

Marks =25

Q1. Write short Notes on any 2 out of 3

2 x5 = 10 marks

- a.
- b.
- c.

Q 2 Long answer questions on any 1 out of 2

1x 15 = 15 marks

- a. i
- ii
- iii

(2)
(5)
(8)

- b. i
- ii
- iii

(2)
(5)
(8)

SECTION B

ADVANCED PHARMACOLOGY APPLIED TO CRITICAL CARE NURSING

Marks 25

Q3. Write short Notes on any 2 out of 3

2 x5 = 10 marks

- a.
- b.
- c.

Q4 Long answer questions on any 1 out of 2

1x 15 = 15 marks

- a. i
- ii
- iii

(2)
(5)
(8)

- b. i
- ii
- iii

(2)
(5)
(8)



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FIRST YEAR MSc NURSING (NPCC)

QUESTION PAPER FORMAT (UNIVERSITY EXAMINATION)

ADVANCED PATHOPHYSIOLOGY & ADVANCED PHARMACOLOGY
APPLIED TO CRITICAL CARE NURSING

Marks : 70

Time : 3 hours

SECTION A

ADVANCED PATHOPHYSIOLOGY APPLIED TO CRITICAL CARE NURSING

Marks =35

Q1. Write short Notes on any 4 out of 5

4 x5 = 20 marks

- a.
- b.
- c.
- d.
- e.

Q . 2 Long answer questions on any 1 out of 2

1x 15 = 15 marks

- a. i
- ii
- iii

(2)

(5)

(8)

b. i

(2)

ii

(5)

iii

(8)

SECTION B

ADVANCED PHARMACOLOGY APPLIED TO CRITICAL CARE NURSING

Marks 35

Q3. Write short Notes on any 4 out of 5

4 x5 = 20 marks

- a.
- b.
- c.
- d.
- e.

Q . 4 Long answer questions on any 1 out of 2

1x 15 = 15 marks

- a. i
- ii
- iii

(2)

(5)

(8)

b. i

(2)

ii

(5)

iii

(8)



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ADVANCED HEALTH / PHYSICAL ASSESSMENT IN CRITICAL CARE NURSING

Placement: First Year

Theory	: 70 Hours
Practical/ Lab Hrs	: 48 Hours
Clinical	: 576 Hrs

Course Description -The course is designed to develop advanced health assessment skills to identify critical conditions and carry out treatment /intervention to stabilize and restore patient's health.

Competencies:

- 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
- Analyzes 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



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Placement: First Year

Theory : 70 Hours
Practical/ Lab Hrs : 48 Hours

CONTENT

Unit	Theory Hrs	Theory	Practical/ Lab Hrs	Teaching learning activities	Method of Assessment
I	4	Introduction <ul style="list-style-type: none"> History taking Physical examination 	3	•Faculty demonstration (clinical) Comprehensive Health history Physical assessment (General)	Return demonstration
II	6	Cardiovascular system <ul style="list-style-type: none"> Cardiac history Physical examination Cardiac laboratory studies - biochemical markers, hematological studies Cardiac diagnostic studies - Electrocardiogram, echocardiography, stress testing, radiological imaging 	5	Faculty demonstration (clinical) Focused Health history Cardiovascular system assessment Demonstrations on <ul style="list-style-type: none"> Invasive BP monitoring Witnessing Procedures <ul style="list-style-type: none"> ECG Echocardiogram Stress Test Interpretation of <ul style="list-style-type: none"> Cardiac laboratory studies biochemical markers, hematological studies PiCCO Peripheral vascular status 	Return demonstration
III	6	Respiratory system <ul style="list-style-type: none"> History Physical examination Respiratory monitoring - Arterial blood gases, pulse oximetry, end-tidal carbon dioxide monitoring 		Faculty demonstration (clinical) Focused Health history Respiratory system assessment	Return demonstration



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Unit	Theory Hrs	Theory	Practical/ Lab Hrs	Teaching learning activities	Method of Assessment
		<ul style="list-style-type: none"> Respiratory Diagnostic tests - Chest radiography, ventilation perfusion scanning, pulmonary angiography, bronchoscopy, thoracentesis, sputum culture, pulmonary function test 	5	<p>Demonstrations on</p> <ul style="list-style-type: none"> Collection of blood sample Collection of sputum for culture <p>Assisting Procedures</p> <ul style="list-style-type: none"> Bronchoscopy Pulmonary angiography Thoracentesis <p>Witnessing Procedures</p> <ul style="list-style-type: none"> Chest X-ray Ventilation perfusion scanning <p>Interpretation of</p> <ul style="list-style-type: none"> ABG pulse oximetry, End-tidal carbon dioxide monitoring Ventilation perfusion scanning Pulmonary function test 	
IV	6	<p>Nervous system</p> <ul style="list-style-type: none"> Neurological history General physical examination Assessment of cognitive function Assessment of cranial nerve function Motor assessment - muscle strength, power, and reflexes Sensory assessment - dermatome assessment Neuro diagnostic studies - CT scan, MRI, PET 	5	<p>Faculty demonstration (clinical)</p> <ul style="list-style-type: none"> Focused Health history Nervous system assessment <p>Demonstrations on</p> <ul style="list-style-type: none"> Glasgow coma scale Motor assessment Sensory assessment Cranial Nerve Assessment Pain and sedation score <p>Assisting Procedures</p> <ul style="list-style-type: none"> Lumbar puncture PET scan ICP monitoring <p>Interpretation of CT scan, MRI, PET</p>	Return demonstration



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Unit	Theory Hrs	Theory	Practical/ Lab Hrs	Teaching learning activities	Method of Assessment
V	6	Renal system <ul style="list-style-type: none"> • History • Physical examination • Assessment of renal function • Assessment of electrolytes and acid base balance • Assessment of fluid balance 	4	<ul style="list-style-type: none"> • Faculty demonstration (clinical) • Focused Health history • Renal system assessment • Assisting Procedures <ul style="list-style-type: none"> - Renal Biopsy • Interpretation of <ul style="list-style-type: none"> - Renal Function test - Interpretation of fluid and electrolyte balance - Acid base abnormalities 	Return demonstration
VI	4	Gastrointestinal system <ul style="list-style-type: none"> • History • Physical examination • Nutritional assessment • Laboratory studies – Liver function studies, blood parameters, stool test • Diagnostic studies – radiological and imaging studies, endoscopic studies 	3	<ul style="list-style-type: none"> • Faculty demonstration • Focused Health history • Gastrointestinal system assessment • Demonstrations on <ul style="list-style-type: none"> - Collection of blood samples • Assisting Procedures <ul style="list-style-type: none"> - Liver Biopsy • Witnessing Procedures <ul style="list-style-type: none"> - ERCP -Endoscopy - CT Scan, Ultrasound • Interpretation of <ul style="list-style-type: none"> ○ Bowel Sounds ○ Abdominal pressure, ○ Residual gastric volume, ○ - Liver function test 	Return demonstration
VII	4	Endocrine system <ul style="list-style-type: none"> • History, physical examination, laboratory studies, and diagnostic studies of • Hypothalamus and pituitary gland • Thyroid gland • Parathyroid gland • Endocrine gland • Adrenal gland 	3	<ul style="list-style-type: none"> • Faculty demonstration • Focused Health history • Endocrine system assessment • Interpretation of Laboratory studies, and diagnostic studies of <ul style="list-style-type: none"> • Hypothalamus and pituitary gland • Thyroid gland • Parathyroid gland • Endocrine gland • Adrenal gland 	Return demonstration



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Unit	Theory Hrs	Theory	Practical/ Lab Hrs	Teaching learning activities	Method of Assessment
VIII	4	Hematological system <ul style="list-style-type: none"> • History • Physical examination • Laboratory studies - blood parameters • Diagnostic studies - bone marrow aspiration 	2	<ul style="list-style-type: none"> • Faculty demonstration • Focused Health history • Hematologic system assessments Assisting Procedures - Bone marrow aspiration Interpretation of Laboratory studies - blood parameters	Return demonstration
IX	3	Integumentary system <ul style="list-style-type: none"> • History • Physical examination • Pathological examination - tissue examination 	2	Faculty demonstration <ul style="list-style-type: none"> • Focused Health history • Integumentary system assessment Demonstrations on -Collection of blood samples Assisting Procedures - Pathological examination - tissue examination	Return demonstration
X	6	Musculoskeletal system <ul style="list-style-type: none"> • History • Physical examination - gait assessment, joint assessment, • Laboratory studies – blood parameters (inflammatory enzymes, uric acid) • Diagnostic studies - Radiological and imaging studies, endoscopic studies 	2	<ul style="list-style-type: none"> • Faculty demonstration • Focused Health history Musculoskeletal system assessment Demonstrations on - Collection of blood samples Witnessing Procedures - EMG Interpretation of <ul style="list-style-type: none"> • Laboratory studies • Diagnostic studies 	Return demonstration
XI	5	Reproductive system (Male & Female) <ul style="list-style-type: none"> • History • Physical examination • Laboratory studies • Diagnostic studies 	2	Faculty demonstration <ul style="list-style-type: none"> • Focused Health history • Reproductive system assessment Interpretation of <ul style="list-style-type: none"> • Laboratory studies • Diagnostic studies • 	Return demonstration



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Unit	Theory Hrs	Theory	Practical/ Lab Hrs	Teaching learning activities	Method of Assessment
XII	4	Sensory Organs <ul style="list-style-type: none"> History Physical examination Laboratory studies Diagnostic studies - Radiological and imaging studies, endoscopic studies 	3	Faculty demonstration <ul style="list-style-type: none"> Focused Health history Sensory organ assessment Interpretation of Laboratory studies Diagnostic studies 	Return demonstration
XIII	6	Assessment of children <ul style="list-style-type: none"> Growth and development Nutritional assessment Specific system assessment 	4	Faculty demonstration <ul style="list-style-type: none"> Focused Health history Assessment of children <ul style="list-style-type: none"> -Growth and development of each age group -Specific system assessment 	Return demonstration Group discussion
XIV	6	Assessment of older adults <ul style="list-style-type: none"> History Physical assessment Psychological assessment Assessment of pregnant women	3	Faculty demonstration <ul style="list-style-type: none"> Focused Health history older adult's assessment 	Return demonstration <ul style="list-style-type: none"> Seminar

CLINICAL PLACEMENT

S.No	Area	Duration
1	Medical ICU	3 weeks
2	Surgical ICU	3 weeks
3	Cardio /cardiothoracic ICU	2 weeks
4	Emergency ICU	1 week
5	Casualty	1 week
6	Burns	1 week
7	Dialysis	1 week
	Total	12 weeks



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SCHEME OF EVALUATION

ADVANCED HEALTH / PHYSICAL ASSESSMENT IN CRITICAL CARE NURSING

INTERNAL ASSESSMENT

THEORY:

SR NO	ITEM	TOTAL MARKS	WEIGHTAGE (%)	MARKS OUT OF 30
1	Examination			
	First term	50	50	15
	Pre Final	70		
2.	Written Assignment – (Diagnostic and Investigatory Reports –Interpretation and analysis of findings)	50	50	15
	GRAND TOTAL		100	30

PRACTICAL

SR NO	ITEM	TOTAL MARKS	WEIGHTAGE (%)	MARKS
1	Clinical Performance Evaluation	100x4=400	20	10
2.	Assignment			
	Case Presentation	20	10	5
	Case Study report	20		
3	End of Posting OSCE	25x 2=50	20	10
4	Internal Practical Exam -OSCE	50	50	25
	GRAND TOTAL	540	100	50

UNIVERSITY EXAMINATION

Time – 3 Hours

Theory Marks			Practical Marks		
Hours	Internal	External	Hours	Internal	External
3	30	70		50	50



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First Year M.Sc Nursing (NPCC)

CLINICAL PRESENTATION

(HEALTH ASSESSMENT)

NAME OF THE STUDENT:.....

COURSE:YEAR I/II:.....

TOPIC:.....

DATE:.....

S.No.	Presentation skills	Marks	Marks
		allotted	obtained
1.	Coverage of content -12		
1.1	ABCDE initial assessment of critically ill	3	
1.2	Focused History	3	
1.3	Focused physical examination	3	
1.4	Diagnostic /lab tests and interpretation & probable diagnosis	3	
2.	Clarity and credibility in presentation	1	
3.	Well organized	1	
4.	Interesting and creative, use of illustrations	2	
5.	Group involvement & effective handling of questions	1	
6.	Confidence and resourcefulness	1	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
	TOTAL	20	

Remarks:

Signature of preceptor with date

Signature of faculty with date



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First Year M.Sc Nursing (NPCC)

CASE STUDY REPORT (HEALTH ASSESSMENT)

NAME OF THE STUDENT:.....

COURSE:YEAR I/II:.....

TOPIC:.....

DATE:.....

S.No.	Particulars	Marks allotted	Marks obtained
1.	Patient history & significant findings (includes ABCDE initial assessment)	6	
2.	Physical examination & significant findings	3	
3.	Diagnostic /lab tests and interpretation	3	
4.	Discussion and conclusion of findings with probable diagnosis	2	
5	Organization in presenting the written content	2	
6	Use of illustrations	2	
7	References	2	
	Total	20	

Remarks:

Signature of preceptor with date

Signature of faculty with date



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First Year M.Sc Nursing (NPCC)

End of posting practical examination (Medical ICU/Surgical ICU)

Marks allotted-10 marks

Station	Core competency Domains (Duration & Marks)			
	Health assessment (Focused History and Physical Examination) Adult	Interpretation of History /physical exam findings and Lab results & Identification of health diagnosis/monitoring skills	Plan of care /therapeutic management (interventions – procedural competencies including drug administration)	Family education & counseling
I	10 minutes (4 marks)			
II		10 minutes (2 marks)		
III			10 minutes (4 marks)	
IV				10 minutes (2 marks)
V	Rest station (5/10 minutes)			

OSCE – 16 marks

ORAL EXAMINATION – 04 marks

Total 20/2 = 10 marks



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First Year M.Sc Nursing (NPCC)

HEALTH ASSESSMENT

a. INTERNAL PRACTICAL exam- OSCE (Marks allotted- 25 marks)

Stations (5)	Core competency Domains (Duration & Marks)			
	Health assessment (Focused History and Physical Examination) Adult	Health assessment (Focused History and Physical Examination) Pediatric	Interpretation of History /physical exam findings and Lab results & Identification of health diagnosis	Monitoring clinical parameters (competencies)
I	10 minutes (5 marks)			
II		10 minutes (5 marks)		
III			10 minutes (5 marks)	
IV				10 minutes (5 marks)
V	Rest station (5/10 minutes)			

OSCE – 20 marks (4x5)

ORAL EXAMINATION – 5 marks

TOTAL – 25 marks

{End of posting can follow the same as above having 5 stations with 5 minute duration each station
(marks- 4x4=16, oral exam-4 marks, total=20/2=10 marks)}



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EXTERNAL PRACTICAL EXAM- OSCE (Marks allotted- 50 marks)

Station (10)	Core competency Domains (Time Duration in minutes & Marks)							
	Health assessment (History Taking)		Health assessment (Physical Examination)		Interpretation of findings and health diagnosis		Monitoring clinical parameters (Procedural competencies)	
	Focused History (Adult)	Focused History (Pediatric)	Physical Examination (Adult)	Physical Examination (Pediatric)	History & Physical Exam	Diagnostic tests	1	2
I	10 min (5 marks)							
II		10 min (5 marks)						
III			10 min (5 marks)					
IV				10 min (5 marks)				
V	Rest station 1 (5/10 minutes)							
VI					10 min (5 marks)			
VII						10 min (5 marks)		
VIII							10 min (5 marks)	
IX								10 min (5 marks)
X	Rest Station 2 (5/10 minutes)							

On completion of procedural competencies in log book and clinical requirements, the NP student is qualified to appear for final practical examination

OSCE-40

ORAL EXAMINATION – 10 marks

TOTAL – 50 marks



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First Year M.Sc Nursing (NPCC)

COMPETENCY BASED CLINICAL PERFORMANCE EVALUTION

NAME OF THE STUDENT:.....

ICU /UNITYEAR I/II:.....

DATE: FROMTO.....

Sl.	COMPETENCIES	1	2	3	4	Rating	Score
I.	CLINICAL PRACTICE COMPETENCIES						
1.	Performs initial assessment of the critically ill patient (ABCDE approach) to identify need for emergency action					1.0	
2	Obtains comprehensive and focused age specific history of critically ill patient from patient/family members					1.0	
3.	Performs appropriate clinical/physical examination using correct techniques					1.0	
4.	Accurately interprets findings of history, physical examination and investigations					0.5	
5.	Works collaboratively with Intensivist for development of diagnosis for the presenting problem while prioritizing the care					0.5	
6.	Documents initial assessment and plan of care accurately					1.0	
7.	Applies the pathophysiological principles in developing diagnosis, plan of care, symptom management and secondary prevention of critical illnesses					0.5	
8	Uses invasive and noninvasive technology and advanced skills to assess, monitor and promote physiologic stability in the management of emergency situations as per institutional protocols					2.0	
9	Demonstrates critical thinking in clinical decision-making and selects appropriate interventions.					1.0	
10	Provides culturally safe and competent care applying nursing process/care pathways.					2.0	
11.	Performs safe drug administration based on pharmacological principles, sound knowledge of drug interactions and as per institutional standing orders					2.0	
12.	Documents drugs administered accurately and provides follow up care					0.5	
13.	Seeks appropriate assistance from preceptor to maintain patient and environment safety					0.5	
14.	Evaluates and documents patients' responses to care provided and the effectiveness of care.					0.5	
15	Provides anticipatory guidance and counseling to families and patients in crisis situations particularly end of life care					1.0	



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Sl.	COMPETENCIES	1	2	3	4	Rating	Score
II.	MANAGEMENT, TEACHING & RESEARCH COMPETENCIES:						
16.	Manages and transforms health information to effect health outcomes such as cost, quality and satisfaction					1.0	
17.	Applies problem solving, critical thinking and decision making skills effectively in managing patient care in ICU					1.0	
18.	Creates and maintains a safe therapeutic environment using risk management strategies and quality improvement					1.0	
19.	Provides education appropriate to age and needs of patients using effective teaching methods, media and evaluation					1.0	
20.	Analyzes the evidence for nursing interventions carried out in critical care nursing practice to promote safety and effectiveness of care					1.0	
III	PERSONAL AND PROFESSIONAL COMPETENCIES:						
21.	Assumes personal accountability and responsibility in practicing the Nurse practitioner's roles and competencies and articulates role to public and other health care professionals					1.0	
22.	Engages in ethical practice having a sound knowledge of law, ethics and regulation of advanced nursing practice					1.0	
23.	Actively participates in collaborative practice involving all critical care team members and performs the NP roles within the authorized scope					1.0	
24.	Builds effective interpersonal relationship and communication with patients, families and critical care team based on trust and respect and integrity					1.0	
25.	Assumes personal responsibility for professional development					1.0	
	TOTAL SCORE					25	100

Key: 4.Outstanding/excellent (90-100%) 3. Proficient/competent (75 to <90%) 2.Needs improvement (50 to <75%) 1.Unsatisfactory/unacceptable (25 to <50%)

Remarks by Preceptor: _____
 (Include general impressions, unusual incidents and justify scores 1 and 4)

Remarks by Faculty _____

Signature of Preceptor with Date

Signature of faculty with Date

Remarks by Student _____

Signature of student with date



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First Year M.Sc Nursing (NPCC)

QUESTION PAPER FORMAT (FIRST TERM EXAMINATION)

Marks: 50

Time: 2hours

Q 1. Write Short Answers on any 4 out of 5

(20 marks)

- a)
- b)
- c)
- d)
- e)

Q 2. Long Answer Questions any 2 out of 3

(30 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |



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First Year M.Sc Nursing (NPCC)

QUESTION PAPER FORMAT (UNIVERSITY EXAMINATION)

Marks: 70

Time: 3 hours

Q 1. Write Short Answers on any 5 out of 6

(25 marks)

- a)
- b)
- c)
- d)
- e)
- f)

Q 2. Long Answer Questions any 3 out of 4

(45 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |
| d. i | (2) |
| ii | (5) |
| iii | (8) |



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COURSE PLANNING

Second Year M.Sc Nursing (NPCC)



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CRITICAL CARE SPECIALTY COURSES

(Foundations of Critical Care Nursing Practice, Critical Care Nursing I
and Critical Care Nursing II)

Course Description: This course provides the student

This course is designed to assist students to appraise the diagnostic and monitoring requirements and management necessary to maintain homeostasis of critically ill patients and communicate their significance and possible consequences to relevant members of the multidisciplinary team and demonstrate skilled, safe, effective and sensitive practice in the care of critically ill patients

COMPETENCIES

- 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



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Foundations of Critical Care Nursing Practice

Placement – Second year

Theory : 96 hours,
 Practical/skill lab : 48 hours
 Clinical: 576 hrs

COURSE CONTENT

Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
I	10	Introduction to Critical Care Nursing <ul style="list-style-type: none"> • Introduction to the course • Review of anatomy and physiology of vital organs (Brain, Spinal Cord, Lungs, Heart, Kidney, Liver, Pancreas, Thyroid, Adrenal and Pituitary gland) • Historical review- Progressive patient care(PPC) • Concepts of critical care nursing • Principles of critical care nursing • Scope of critical care nursing • Critical care unit set up (including types of ICU, equipment, supplies, beds and accessories, use and care of various type of monitors & ventilators, Flow sheets, supply lines and the environment) • Personnel in ICU • Nursing staff • Doctors • Critical care technicians • Ancillary staff • Technology in critical care • Healthy work environment • Future challenges in critical care nursing 	Non invasive ventilation <ul style="list-style-type: none"> • 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 • Postural drainage Ventilation and ventilator support <p>Connecting to ventilator Weaning from ventilator Extubation Humidifiers Nebulizers - jet, ultrasonic Inhalation therapy - metered dose inhalers (MDI), dry powder inhalers (DPI)</p>	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
II	5	<p>Concept of Holistic care applied to critical care nursing practice</p> <ul style="list-style-type: none"> • Application of nursing process in the care of critically ill • Admission and progress in ICU- an overall view <p>Overview of ICU Management</p> <ul style="list-style-type: none"> • Ensure adequate tissue oxygenation • Maintain chemical environment • Maintain temperature • Organ protection • Nutritional support • Infection control • Physiotherapy and rehabilitation • Family visiting hours • Restraints in critical care - physical, chemical and alternatives to restraints • Death in 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 	<p>Devices to measure oxygen/oxygenation</p> <ul style="list-style-type: none"> ○ Fuel cell ○ Paramagnetic oxygen analyzer ○ PO₂ electrodes- Clark electrodes ○ Transcutaneous oxygen electrodes ○ Oximetry - Pulse oximetry, Venous oximetry ○ Capnography 	<p>Lecture, Discussion, Problem based learning Clinical conference, Demonstration</p>	<p>Written test Seminar Return demonstration</p>
III	10	<p>Appraisal of the critically ill Triage concept, process and principles</p> <p>Assessment of the critically ill</p> <ul style="list-style-type: none"> • General assessment 			



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
III	10	<ul style="list-style-type: none"> • Respiratory assessment • Cardiac assessment • Renal assessment • Neurological assessment • Gastrointestinal assessment • Endocrine assessment • Musculoskeletal assessment • Integumentary assessment <p>Monitoring of the critically ill</p> <ul style="list-style-type: none"> • Arterial blood gas (ABG) • Capnography • Hemodynamic • Electrocardiography (ECG) • Glasgow Coma Scale (GCS) • Richmond agitation sedation scale (RASS) • Pain score • Braden score <p>Evaluation of the critically ill</p> <ul style="list-style-type: none"> • 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 (MELD) 	Circulation and perfusion (including hemodynamic evaluation and waveform graphics) Invasive blood pressure monitoring Non-invasive BP monitoring Venous pressure (Peripheral, Central and Pulmonary artery occlusion pressure) Insertion and removal of arterial line Insertion and removal of central line Pulse index Continuous Cardiac output (PiCCO) Electrocardiography (ECG) -Waveforms	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
IV	14	<p>Advanced Concepts and Principles of Critical Care</p> <ul style="list-style-type: none"> 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 Circulation and perfusion (including hemodynamic evaluation and waveform 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/hypo-thermia Liberation from life support (Weaning) Glycemic control, care of patient with glycemic imbalances 	<ul style="list-style-type: none"> CPR (BLS and ACLS) Airway Management Laryngeal mask airway Cuff inflation and anchoring the tube Care of ET tube Tracheostomy care Suctioning - open/closed Chest physiotherapy Oxygenation and oximetry, care of patient with oxygen delivery devices <p>Fluids and electrolytes</p> <ul style="list-style-type: none"> Fluid calculation and administration (crystalloids and colloids) Administration of blood and blood products <p>Inotrope calculation, titration and administration</p> <p>Cardiac glycosides – Digoxin</p> <p>Sympathomimetics - Dopamine, dobutamine, epinephrine, isoproterenol, norepinephrine, phenylephrine</p> <p>Phosphodiesterase inhibitors - amrinone, milrinone</p>	<p>Lecture, Discussion, Problem based learning</p> <p>Clinical conference, Demonstration</p>	<p>Written test</p> <p>Seminar</p> <p>Return demonstration</p>



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
			Electrolyte correction (Sodium, potassium, calcium, phosphorous, magnesium) Use of fluid dispenser and infusion pumps Evaluation of acid base status - Arterial blood gas (ABG) Thermoregulation, care of patient with hyper/hypothermia Temperature probes Glycemic control, care of patient with glycemic imbalances Monitoring GRBS Insulin therapy (sliding scale and infusion) ,potassium supplementation Dextrose IV		
V	8	Pain and Management <ul style="list-style-type: none"> • Pain in Critically ill patients • 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, Tranquilizers, Neuromuscular blocking agents) • Nonpharmacological management • Transcutaneous electrical nerve stimulation(TENS) 	Calculation, loading and infusion of - Morphine, Fentanyl, Midazolam, Lorazepam, Diazepam, Propofol, Clonidine, Desmedetomidine, Haloperidol	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
			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		
VI	8	Psychosocial & spiritual alterations: Assessment and management <ul style="list-style-type: none"> • 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 	Counseling		



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
VII	4	Patient and family education and counseling <ul style="list-style-type: none"> • 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 • Counseling techniques 	Family education	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
VIII	5	Nutrition Alterations and Management in critical care <ul style="list-style-type: none"> • Nutrient metabolism and alterations • Assessing nutritional status • Nutrition support • Nutrition and systemic alterations • Care of patient on enteral and parenteral nutrition 		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
IX	4	Sleep alterations and management <ul style="list-style-type: none"> • Normal human sleep • Sleep pattern disturbance • Sleep apnea syndrome 		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
X	5	Infection control in critical care <ul style="list-style-type: none"> • Nosocomial infection in intensive care unit; methylresistant staphylococcus aureus (MRSA) and other recently identified strains • Disinfection, Sterilization, • Standard safety measures, • Prophylaxis for staff • Antimicrobial therapy- review 		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
XI	6	<p>Legal and ethical issues in critical care-Nurse's role</p> <p><u>Legal issues</u></p> <ul style="list-style-type: none"> • Issues giving raise to civil litigation • Related laws in India • Medical futility • Administrative law: Professional Regulation • Tort law: Negligence, professional malpractice, intentional torts, wrongful death, defamation, assault and battery • Constitutional Law: Patient decision making <p><u>Ethical Issues</u></p> <ul style="list-style-type: none"> • Difference between morals and ethics • Ethical principles, ethical decision making in critical care, Strategies for promoting ethical decision making • Ethical issues relevant to critical care : • withholding and withdrawing treatment, • Managing Scarce resource in critical care • Brain death, Organ donation & Counseling, • Do Not Resuscitate(DNR), Euthanasia, Living will • Nurses' Role 		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
XII	8	Quality assurance <ul style="list-style-type: none">• Design of ICU/CCU• Quality assurance models applicable to ICUs• Standards, Protocols, Policies, Procedures• Infection control policies and protocols• Standard safety measures• Nursing audit relevant to critical care• Staffing		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
XIII	3	Evidence based practice in critical care nursing <ul style="list-style-type: none">• Evidence based practice in critical care• Barriers to implementation• Strategies to promote implementation		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
	5	Class tests			
Total	96				



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Foundations of Critical Care Nursing Practice

Placement – Second year

Theory : 96 hours,
Practical/skill lab : 48 hours
Clinical: 576 hrs

List of skills to be practiced in the skill lab (46 hours include demonstration by the faculty and practice by the students)

- CPR (BLS and ACLS)
- Airway Management
 - Laryngeal mask airway
 - Cuff inflation and anchoring the tube
 - Care of ET tube
 - Tracheostomy care
 - Suctioning - open/closed
 - Chest physiotherapy
- Oxygenation and oximetry, care of patient with oxygen delivery devices
 - Devices to measure oxygen/oxygenation
 - ✓ Fuel cell
 - ✓ Para magnetic oxygen analyzer
 - ✓ PO₂ electrodes-Clark electrodes
 - ✓ Transcutaneous oxygen electrodes
 - ✓ Oximetry - Pulse oximetry, Venous oximetry
 - Capnography
 - 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
 - Postural drainage



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Foundations of Critical Care Nursing Practice

Placement – Second year

List of skills to be practiced in the skill lab (46 hours include demonstration by the faculty and practice by the students)

- Ventilation and ventilator support
 - Connecting to ventilator
 - Weaning from ventilator
 - Extubation
 - Humidifiers
 - Nebulizers - jet, ultrasonic
 - Inhalation therapy - metered dose inhalers (MDI), dry powder inhalers (DPI)
- Circulation and perfusion (including hemodynamic evaluation and waveform graphics)
Invasive blood pressure monitoring
 - Non-invasive BP monitoring
 - Venous pressure (Peripheral, Central and Pulmonary artery occlusion pressure)
 - Insertion and removal of arterial line
 - Insertion and removal of central line
 - Pulse index Continuous Cardiac output (PiCCO)
 - Electrocardiography (ECG)
 - Waveforms
- Fluids and electrolytes
 - Fluid calculation and administration (crystalloids and colloids)
 - Administration of blood and blood products
 - Inotrope calculation, titration and administration
 - ✓ Cardiac glycosides - Digoxin
 - ✓ Sympathomimetics - Dopamine, dobutamine, epinephrine, isoproterenol, norepinephrine, phenylephrine
 - ✓ Phosphodiesterase inhibitors - amrinone, milrinone
 - Electrolyte correction (Sodium, potassium, calcium, phosphorus, magnesium)
 - Use of fluid dispenser and infusion pumps



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Evaluation of acid base status - Arterial blood gas (ABG)

- Thermoregulation, care of patient with hyper/hypothermia
 - Temperature probes
 - Critical care management of hyper and hypothermia
- Glycemic control, care of patient with glycemic imbalances

Monitoring GRBS

- Insulin therapy (sliding scale and infusion)
- Management of Hyperglycemia - IV fluids, insulin therapy, potassium supplementation
- Management of hypoglycemia - Dextrose IV
- **Pharmacological management of pain, sedation, agitation, and delirium**
 - Calculation, loading and infusion of - Morphine, Fentanyl, Midazolam, Lorazepam, Diazepam, Propofol, Clonidine, Desmedetomidine, Haloperidol
 - 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
- Family education

CLINICAL PLACEMENT

S.No	Area	Duration
1	Medical ICU	3 weeks
2	Surgical ICU	3weeks
3	Cardio /cardiothoracic ICU	3 weeks
4	Emergency ICU	3 week
	Total	12 weeks



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INTERNAL ASSESSMENT

Foundations of Critical Care Nursing Practice

THEORY

SR NO	ITEM	TOTAL MARKS	WEIGHTAGE (%)	MARKS OUT OF 30
1	Examination			
	First term	50	50	15
	Prefinal	70		
2	Assignments			
	Written Assignments (Protocols)	50	50	15
	GRAND TOTAL	170	100	30

PRACTICAL

SR NO	ITEM	TOTAL MARKS	WEIGHTAGE (%)	MARKS
1	Drug study Presentation	20	10%	10
2	Drug Study Report	20		
3	Case presentation & case Study Report (Family education /counseling)	20	5%	5
4	Case presentation (Application of clinical /Care Path way)	20	5%	5
5	Clinical Performance Evaluation	6x100=600	20%	20
6	End of Posting OSCE	25x2=50	10%	10
7	Internal Practical Exam -OSCE	50	50%	50
	GRAND TOTAL	350	100%	100

UNIVERSITY EXAMINATION

Duration	Theory Marks		Practical Marks		
	Internal	External	Hours	Internal	External
3 Hours	30	70		100	100



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SECOND YEAR M.Sc NURSING (NPCC)

FOUNDATIONS OF CRITICAL CARE NURSING

INTERNAL PRACTICAL EXAM- OSCE

(Marks allotted- 50 marks)

Stations (5)	Core competency Domains (Duration & Marks)			
	Health assessment (Focused History and Physical Examination) and interpretation	Monitoring competencies (invasive and Non invasive)	Therapeutic interventions - (emergency procedural competencies) including drug administration	Family Education and counseling
I	10 minutes (10marks)			
II		10 minutes (10marks)		
III			10 minutes (10marks)	
IV				10 minutes (10marks)
V	Rest station (5/10 minutes)			

OSCE – 40 marks (4x10)

ORAL Examination – 10 marks

TOTAL – 50 marks

{End of posting can follow the same as above having 5 stations with 5 minute duration each station (marks- 4x4=16, oral exam-4 marks, total=20/2=10 marks)}



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SECOND YEAR M.Sc NURSING (NPCC)

FOUNDATIONS OF CRITICAL CARE NURSING

EXTERNAL PRACTICAL EXAM- OSCE

Marks allotted- 100 marks

Station (10)	Core competency Domains (Time Duration in minutes & Marks)							
	Health assessment (Focused History and Physical Examination) and interpretation		Monitoring competencies- Invasive & Non invasive -2		Developmen t of plan of care	Family Education & counseling	Therapeutic interventions (Emergency procedural competencies) Including drug administration)-2	
	Adult	Pediatric	I	II			I	II
I	10 min (10 marks)							
II		10 min (10 marks)						
III			10 min (10 marks)					
IV				10 min (10 marks)				
V	Rest station 1 (5/10 minutes)							
VI					10 min (10 marks)			
VII						10 min (10 marks)		
VIII							10 min (10 marks)	
IX								10 min (10 marks)
X	Rest Station 2 (5/10 minutes)							

On completion of procedural competencies in log book and clinical requirements, the NP student is qualified to appear for final practical examination

OSCE-80

ORAL EXAMINATION – 20 marks

TOTAL – 100 marks



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SECOND YEAR M.Sc NURSING (NPCC)

ASSIGNMENT ON PROTOCOLS - EVALUTION CRITERIA

Name of the Student: - _____

Batch: - _____ Date:- _____

Topics:- _____

Name of the Supervisor:- _____

Total Marks – 50

Marks obtained:- _____

Sr.No.	Criteria	Marks Assigned	Marks Obtained
1	Content (Adequacy, Appropriateness, Clarity)	20	
2	Organization	5	
3	Illustration	20	
4	Resources Used	5	
	Total Marks	50	

Remarks:

Signature of preceptor with date

Signature of faculty with date



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SECOND YEAR M.Sc. NURSING (NPCC)

DRUG STUDY PRESENTATION

NAME OF THE STUDENT:

COURSE:..... YEAR I/II:.....

TOPIC:.....

DATE:.....

S.No.	Presentation skills	Marks allotted	Marks obtained
1.	Coverage of content -12		
1.1	Drug name –generic with dosage, therapeutic ranges & route of administration	3	
1.2	Mechanism of Action, metabolism and excretion	2	
1.3	Side effects, adverse reactions, drug interactions and management incl. anaphylaxis management	3	
1.4	Precautions and monitoring	1	
1.5	Patient's response to drug treatment	1	
1.6	Overdose-symptoms & treatment	2	
2.	Clarity and credibility in presentation	1	
3.	Well organized	1	
4.	Interesting and creative, use of illustrations	2	
5.	Group involvement & effective handling of questions	1	
6.	Confidence and resourcefulness	1	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
	TOTAL	20	

REMARKS:

Signature of preceptor & date

Signature of faculty & date



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SECOND YEAR M.Sc. NURSING (NPCC)

DRUG STUDY REPORT

S. No.	Particulars	Marks allotted	Marks obtained
1.	Drug name –generic with dosage, therapeutic ranges & route of administration	3	
2	Mechanism of Action, metabolism and excretion	2	
3	Side effects, adverse reactions, drug interactions and management incl. anaphylaxis management	3	
4	Precautions and monitoring	1	
5	Patient's response to drug treatment	1	
6	Overdose-symptoms & treatment	2	
7	Discussion and conclusion	2	
8	Organization in presenting the written content	2	
9	Use of illustrations	2	
10	References	2	
	Total	20	

REMARKS:-

Signature of preceptor & date

Signature of faculty & date



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SECOND YEAR M.Sc. NURSING (NPCC)

CLINICAL PRESENTATION EVALUATION

NAME OF THE STUDENT:.....

COURSE:..... YEAR I/II

TOPIC:.....

DATE:.....

S.No.	Presentation skills	Marks allotted	Marks obtained
1.	Coverage of content -12		
1.1	Brief patient presentation	4	
1.2	Relevant normal physiology and abnormal physiological	8	
1.3	Changes/processes related to critical condition		
2.	Clarity and credibility in presentation	1	
3.	Well organized	1	
4.	Interesting and creative, use of illustrations	2	
5.	Group involvement & effective handling of questions	1	
6.	Confidence and resourcefulness	1	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
	TOTAL	20	

REMARKS:

Signature of preceptor & date

Signature of faculty & date



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SECOND YEAR M.Sc. NURSING (NPCC)

CASE STUDY

NAME OF THE STUDENT:.....

COURSE: YEAR I/II.....

TOPIC.....

DATE:.....

S.No.	Particulars	Marks allotted	Marks obtained
1.	Introduction of patient, history & physical examination, and Diagnostic tests – significant findings	5	
2.	Diagnosis and relevant pathophysiology	1	
3.	Management plan (Identification of outcomes & Development of plan for care/care pathway)	2	
4.	Management (Treatment and nursing interventions including family education and counseling) & Achievement of outcomes(Patients responses to treatment and interventions)	4	
5	Discussion and conclusion	2	
6	Organization in presenting the written content	2	
7	Use of illustrations	2	
8	References	2	
	Total Marks	20	

REMARKS:.....
.....
.....

Signature of preceptor with date

Signature of faculty with date



MGM Institute of Health Sciences

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SECOND YEAR M.Sc. NURSING (NPCC)

Critical Care Nursing I

Placement – Second year

Hours of instruction: Theory : 96 hours,
Practical: 48hours
Clinical : 552 hours

Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
I	6	Introduction <ul style="list-style-type: none"> Review of anatomy and physiology of vital organs Review of assessment and monitoring of the critically ill 		Discussion	Written Test
II	16	Cardiovascular alterations <ul style="list-style-type: none"> Review of Clinical assessment, pathophysiology, and pharmacology Special diagnostic studies Cardiovascular conditions requiring critical care management- <ul style="list-style-type: none"> ✓ Hypertensive Crisis ✓ Cardiac Arrhythmias ✓ Heart block and conduction disturbances ✓ Coronary heart disease ✓ Myocardial infarction ✓ Pulmonary hypertension ✓ Valvular heart disease ✓ Atherosclerotic disease of aorta 	<ul style="list-style-type: none"> Thrombolytic therapy , Use of equipment and their settings Defibrillator, PiCCO), Pacemakers, Intra aortic balloon pump (IABP) 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
		<ul style="list-style-type: none"> ✓ Peripheral artery disease ✓ Cardiomyopathy ✓ Heart failure ✓ Deep vein thrombosis ✓ Congenital heart disease(cyanotic and acyanotic) • Cardiovascular therapeutic management <ul style="list-style-type: none"> ✓ 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 			



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
III	15	<p>Pulmonary alterations</p> <ul style="list-style-type: none"> • Review of Clinical assessment, pathophysiology, and pharmacology • Special diagnostic studies • Pulmonary conditions requiring critical care management <ul style="list-style-type: none"> ✓ Status asthmaticus ✓ Pulmonary edema ✓ Pulmonary embolism ✓ Acute respiratory failure ✓ Acute respiratory distress Syndrome ✓ Chest trauma ✓ Chronic obstructive pulmonary disease ✓ Pneumonia ✓ Pleural effusion ✓ Atelectasis ✓ Long term mechanical ventilator dependence • Pulmonary therapeutic management <ul style="list-style-type: none"> ✓ 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 	<ul style="list-style-type: none"> ○ Tracheostomy Care ○ Nebulization ○ Chest physiotherapy ○ Chest tube insertion ○ Chest drainage 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
IV	15	<p>Neurological alterations</p> <ul style="list-style-type: none"> • Review of Clinical assessment, pathophysiology, and pharmacology • Special diagnostic studies • Neurological conditions requiring critical care management <ul style="list-style-type: none"> ✓ 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 <ul style="list-style-type: none"> ✓ Intracranial pressure ✓ Assessment and management of intracranial hypertension ✓ Craniotomy • Recent advances and development 	<ul style="list-style-type: none"> ○ Monitoring GCS ○ Conscious and coma monitoring ○ Monitoring ICP ○ Sedation score ○ Brain Death Evaluation 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
V	15	Nephrology alterations <ul style="list-style-type: none"> • Review of Clinical assessment, pathophysiology, and pharmacology • Special diagnostic studies • Nephrology conditions requiring critical care management <ul style="list-style-type: none"> ✓ Acute renal failure ✓ Chronic renal failure ✓ Acute tubular necrosis ✓ Bladder trauma • Nephrology therapeutic management • Renal Replacement therapy: Dialysis • Renal transplant • Recent advances and development 	<ul style="list-style-type: none"> ○ Priming of dialysis machine ○ Preparing patient for dialysis, ○ Cannulating for dialysis ○ Starting and closing dialysis 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
VI	12	Gastrointestinal alterations <ul style="list-style-type: none"> • Review of Clinical assessment, pathophysiology, and pharmacology • Special diagnostic studies • Gastrointestinal conditions requiring critical care management • Acute GI bleeding • Hepatic failure • Acute pancreatitis • Abdominal injury • Hepatic encephalopathy • Acute intestinal obstruction • Perforative peritonitis • Gastrointestinal therapeutic management <ul style="list-style-type: none"> ✓ Gastrointestinal surgeries ✓ Liver transplant • Recent advances & development 	<ul style="list-style-type: none"> ○ Abdominal pressure Monitoring ○ Calculation of calorie and protein requirements, ○ Special diets - Sepsis, Respiratory failure, Renal failure, Hepatic failure, Cardiac failure, Weaning, Pancreatitis ○ Enteral feeding NG / Gastrostomy / Pharyngeal/ Jejunostomy feeds ○ Total parenteral nutrition 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
VII	12	Endocrine alterations <ul style="list-style-type: none"> • Review of Clinical assessment, pathophysiology, and pharmacology • Special diagnostic studies • Endocrine conditions requiring critical care management <ul style="list-style-type: none"> ✓ Neuroendocrinology of stress and critical illness ✓ Diabetic ketoacidosis, Hyperosmolar non ketotic coma ✓ hypoglycemia ✓ Thyroid storm ✓ Myxedema coma ✓ Adrenal crisis ✓ SIADH • Endocrine therapeutic management • Recent advances and development 	Collection of blood samples for cortisol levels, sugar levels, and thyroid hormone levels, Calculation and administration of corticosteroids , Calculation and administration of Insulin - Review	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
	5	Class tests			
Total	96 Hours				



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List of skills to be practiced in the skill lab (69 hour include demonstration by the faculty and practice by the students).

Cardiovascular alterations

- Thrombolytic therapy
- Use of equipment and their settings - Defibrillator, PiCCO), Pace makers, Intra aortic ballon pump (IABP)

Pulmonary alterations

- Tracheostomy Care
- Nebulization
- Chest physiotherapy
- Chest tube insertion
- Chest drainage

Neurological alterations

- Monitoring GCS
- Conscious and coma monitoring
- Monitoring ICP
- Sedation score
- Brain Death Evaluation

Nephrology alterations

- Dialysis
 - ✓ Priming of dialysis machine
 - ✓ Preparing patient for dialysis
 - ✓ Cannulating for dialysis
 - ✓ Starting and closing dialysis

Gastrointestinal alterations

- Abdominal pressure Monitoring
- Calculation of calorie and protein requirements
- Special diets - sepsis, respiratory failure, renal failure, hepatic failure, cardiac failure, weaning, pancreatitis
- Enteral feeding - NG/Gastrostomy/ Pharyngeal/Jejunostomy feeds
- Total parenteral nutrition

Endocrine alterations

- Collection of blood samples for cortisol levels, sugar levels, and thyroid hormone levels
- Calculation and administration of corticosteroids
- Calculation and administration of Insulin - Review



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CLINICAL PLACEMENT

S.No	Area	Duration
1	Catherization Laboratory /CCU	4 weeks
2	Casualty	4 weeks
3	Dialysis	4 weeks
	Total	12 weeks

SCHEME OF EVALUATION

THEORY

SR NO	ITEM	TOTAL MARKS	WEIGHTAGE (%)	MARKS OUT OF 30
1	Examination			
	First term	50	50	15
	Pre final	70		
2	Assignments			
	Clinical Seminar	7x10=70	50	15
	Journal club	2X 20=40		
	GRAND TOTAL	220	100	30

PRACTICAL

SR NO	ITEM	TOTAL MARKS	WEIGHTAGE (%)	MARKS
1	Clinical presentation	20 x 2	10%	10
2	Case study report	20	20%	10
3	Clinical Performance Evaluation	6x100=600	20%	20
4	End of Posting OSCE	25x2=50	10%	10
5	Internal Practical Exam -OSCE	50	50%	50
	GRAND TOTAL	350	100%	100

UNIVERSITY EXAMIATIONS

Theory Marks			Practical Marks		
Duration (Hours)	Internal	External	Hours	Internal	External
3	30	70		100	100



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CASE PRESENTATION/CASE STUDY OUTLINE

(CRITICAL CARE NURSING I & II)

1. Introduction (Introductory sentence about the patient)
2. Initial assessment-ABCDE approach
 - 2.1. Airways-Voice, breath sounds
 - 2.2. Breathing- Respiratory rate, chest wall movements, chest percussion, lung auscultation, pulse oximetry
 - 2.3. Circulation- skin color, sweating, capillary refill, palpable pulse rate, heart auscultation, BP, ECG
 - 2.4. Disability-Level of consciousness using AVPU (alert, voice responsive, pain responsive, unresponsive), limb movements, blood glucose, pupillary light reflexes
 - 2.5. Exposure-expose skin, temperature
3. History-Chief complaints/history of present illness
 - 3.1. Nature-location, intensity, associated symptoms
 - 3.2. Time of onset, circumstances, evolution of complaints
 - 3.3. Relieving and aggravating factors
 - 3.4. Treatment received for the present complaint
 - 3.5. Other past medical history-associated illnesses
 - 3.6. Medication, allergies, substance use
 - 3.7. Family history
 - 3.8. Relevant social history
4. Physical examination (Focused/system-wise)
 - 4.1. General appearance (description)
 - 4.2. Vital signs
 - 4.3. Skin
 - 4.4. Head, Eye, ENT
 - 4.5. Respiratory system
 - 4.6. Cardiovascular system
 - 4.7. Neurological
 - 4.8. GI
 - 4.9. Abdomen
 - 4.10. Genitourinary system
 - 4.11. Extremities
 - 4.12. Significant positive and negative findings

Continued.....



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CASE PRESENTATION/CASE STUDY OUTLINE

5. Interpretation of lab and other diagnostic tests
6. Summary and probable health diagnosis
7. Management and Outcome
 - 7.1 Management plan-outcome identification
 - 7.2 Medical and Nursing/integrated plan
 - 7.3 Management provided-treatments-drugs, surgery, emergency procedures, Ventilator 7.4 support, nutritional and fluid support, nursing measures
 - 7.4 Patient's progress-objective measures
 - 7.5 Resolution of care-improvement or deterioration
8. Discussion-summarize the case and lessons learned
9. References



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CLINICAL CONFERENCE

OUTLINE:

1. Conceptualization (Pathophysiology/case study)
2. Assessment
3. Integration with treatment
4. Clinical data
5. Treatment of treatment progress
6. Application for the future
7. Ethical questions

CARE PATHWAY/INTEGRATED CLINICAL PATHWAY (For specific disease or symptom eg. Chest pain, heart failure, acute respiratory failure, poly trauma, CABG)

OUTLINE (On admission, Day 1, Day 2, Day 3, Day 4, Discharge/Referral)

ASSESSMENT

1. Initial assessment on admission-ABCDE assessment-Findings
2. Focused history and physical examination findings
3. Lab tests and other diagnostic tests-clinical data and significant findings
4. Baseline data

DIAGNOSIS

5. Differential/Final medical diagnosis
6. Nursing diagnoses

PLAN OF CARE/CARE PATHWAY

Therapeutic interventions with objective outcomes (measurable)

7. Lifesaving measures (eg. intubation)
8. Respiratory support
9. Nutritional/Circulatory support/Fluid challenge
10. Medication treatment
11. Surgery/invasive treatment procedures
12. Pain relief measures
13. Elimination
14. Pressure ulcer preventive measures
15. Risk prevention measures
16. Ongoing assessment/monitoring and documentation in flow sheets-ABG, Vital signs, SPO₂, hemodynamic parameters
17. Patient/family education and counseling
18. Discharge plan
19. Referral/Transfer
20. End of life care in case of impending death



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OUTCOME EVALUATION (VARIANCE TRACKING) -FOLLOW UP

Name of the critical care team members and their signature against their activity/interventions

Essential records of the hospital can be substituted in places required(Eg. fall risk prevention format, pressure ulcer prevention, sedation score, pain score, medication record)

NB. The institution can follow their own pathways if available or others can make their own using the above guide based on institution's protocols/policies.



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CRITICAL CARE NURSING I

INTERNAL PRACTICAL EXAM -OSCE Marks allotted- 50 marks

Station (5)	Core competency Domains (Duration & Marks)			
	Health assessment (Focused History and Physical Examination) and interpretation	Monitoring competencies (invasive and Non invasive)	Development of care plan /Care path way	Therapeutic interventions - (emergency procedural competencies) including drug administration)
I	10 minutes (10 marks)			
II		10 minutes (10 marks)		
III			10 minutes (10 marks)	
IV				10 minutes (10 marks)
V	Rest station (5/10 minutes)			

OSCE – 40 marks (4x10)

ORAL EXAMINATION – 10 marks

TOTAL – 50 marks

{End of posting can follow the same as above having 5 stations with 5 minute duration each station (marks- 4x4=16, oral exam-4 marks, total=20/2=10 marks)}



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SECOND YEAR M.Sc. NURSING (NPCC)

CRITICAL CARE NURSING I

EXTERNAL PRACTICAL EXAM- OSCE - Marks allotted- 100 marks

Station (10)	Core competency Domains (Time Duration in minutes & Marks)							
	Health assessment (Focused History and Physical Examination) and interpretation		Monitoring competencies- Invasive & Non invasive	Development of plan of care/ care pathway	Family Education & counseling	Including drug administration	Therapeutic interventions (Emergency procedural competencies)-2	
	Adult	Pediatric					I	II
I	10 min (10 marks)							
II		10 min (10 marks)						
III			10 min (10 marks)					
IV				10 min (10 marks)				
V	Rest station 1 (5/10 minutes)							
VI					10 min (10 marks)			
VII						10 min (10 marks)		
VIII							10 min (10 marks)	
IX								10 min (10 marks)
X	Rest Station 2 (5/10 minutes)							

On completion of procedural competencies in log book and clinical requirements, the NP student is qualified to appear for final practical examination

OSCE - 80

ORAL EXAMINATION - 20 marks

TOTAL – 100 marks



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SECOND YEAR M.Sc. NURSING (NPCC)

QUESTION PAPER FORMAT (FIRST TERM EXAMINATION)

Critical Care Nursing I

Marks : 50

Time : 2hours

Q 1. Write Short Answers on any 4 out of 5

(20 marks)

- a)
- b)
- c)
- d)
- e)

Q 2. Long Answer Questions: Any 2 out of 3

(30 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |



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SECOND YEAR M.Sc. NURSING (NPCC)

QUESTION PAPER FORMAT (UNIVERSITY EXAMINATION)

Critical Care Nursing I

Marks : 70

Time : 3 hours

Q 1. Write Short Answers on any 5 out of 6

(25 marks)

- a)
- b)
- c)
- d)
- e)
- f)

Q 2. Long Answer Questions: Any 3 out of 4

(45 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |
| d. i | (2) |
| ii | (5) |
| iii | (8) |



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SECOND YEAR M.Sc. NURSING (NPCC)

Critical Care Nursing - II

Hours of instruction: Theory: 96 hours,
Practical: 48 hours
Clinical: 624 hours

Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
I	12	Hematological alterations <ul style="list-style-type: none"> • Review of Clinical assessment, pathophysiology, and pharmacology • Special diagnostic studies • Hematology conditions requiring critical care management <ul style="list-style-type: none"> ○ DIC ○ Thrombocytopenia ○ Heparin induced thrombocytopenia ○ Sickle cell anemia ○ Tumor lysis syndrome ○ Anemia in critical illness • Hematology therapeutic management <ul style="list-style-type: none"> ○ Autologous blood transfusion ○ bone marrow transplantation • Recent advances and development 	<ul style="list-style-type: none"> ○ Blood transfusion ○ Bone marrow transplantation ○ Care of Catheter site Bone marrow aspiration 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
II	8	Skin alterations <ul style="list-style-type: none"> • Review of Clinical assessment, pathophysiology, and pharmacology • Special diagnostic studies • Conditions requiring critical care management <ul style="list-style-type: none"> ✓ Burns ✓ Wounds • Therapeutic management <ul style="list-style-type: none"> ○ Reconstructive surgeries for burns ○ Management of wounds • Recent advances and development 	<ul style="list-style-type: none"> ○ Burn fluid resuscitation ○ Burn feeds calculation ○ Burn dressing ○ Burns bath ○ Wound dressing 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
III	12	Multi system alterations requiring critical care <ul style="list-style-type: none"> • Trauma • Sepsis • Shock • Multiple Organ Dysfunction • Anaphylaxis • DIC • Other injuries (Heat, Electrical, Near Hanging, Near drowning) • Envenomation • Drug overdose • Poisoning 	<ul style="list-style-type: none"> ○ Triage ○ Trauma team activation ○ Administration of anti snake venom ○ Antidotes 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
IV	10	Specific infections in critical care <ul style="list-style-type: none"> • HIV • Tetanus • SARS • Rickettsiosis • Leptospirosis • Dengue • Malaria • Chickungunya • Rabies • Avian flu • Swine flu 	<ul style="list-style-type: none"> ○ Isolation precautions ○ Disinfection and disposal of equipment 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
V	9	Critical care in Obstetrics <ul style="list-style-type: none"> • Physiological changes in pregnancy • Conditions requiring critical care <ul style="list-style-type: none"> ○ Antepartum hemorrhage ○ PIH ○ Obstructed labor ○ Ruptured uterus ○ PPH ○ Puerperal Sepsis ○ Obstetrical shock ○ HELLP syndrome ○ DIC ○ Amniotic fluid embolism ○ ADRS ○ Trauma 	<ul style="list-style-type: none"> ○ partogram ○ equipments - incubators, warmers 	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
VI	10	<p>Critical care in children</p> <ul style="list-style-type: none"> • Prominent anatomical and physiological differences and implications • Conditions requiring critical care <ul style="list-style-type: none"> ✓ Asphyxia neonatarum ✓ Metabolic disorders ✓ Intracranial hemorrhage ✓ Neonatal sepsis ✓ Dehydration ✓ ARDS ✓ Poisoning ✓ Foreign bodies ✓ Seizures ✓ Cyanotic heart disease ✓ Congenital hypertrophic Pyloric stenosis • Selected pediatric challenges <ul style="list-style-type: none"> ✓ Ventilator issue ✓ Medication administration ✓ Pain Management • Interaction with children and families 		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
VII	10	Critical Care in Older Adult <ul style="list-style-type: none">• Normal psycho biological characteristics of aging<ul style="list-style-type: none">✓ Biological issues✓ Psychological issues✓ Concepts and theories of ageing✓ Stress & coping in older adults✓ Common Health Problems & Nursing Management• Physical challenges<ul style="list-style-type: none">✓ Auditory changes✓ Visual changes✓ Other sensory changes✓ Skin changes✓ Cardiovascular changes✓ Respiratory changes✓ Renal changes✓ Gastro intestinal changes✓ Musculoskeletal changes✓ Endocrine changes✓ Immunological changes• Psychological challenges<ul style="list-style-type: none">✓ Cognitive changes✓ Abuse of the older person✓ Alcohol abuse		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
		<ul style="list-style-type: none"> • Challenges in medication use <ul style="list-style-type: none"> ✓ 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 			
		<p>Critical Care in Perianesthetic period</p> <ul style="list-style-type: none"> • Selection of anesthesia • General anesthesia • Anesthetic agents • Perianesthesia assessment and care • Post anesthesia problems and emergencies requiring critical care <ul style="list-style-type: none"> Respiratory-Airway obstruction, Laryngeal edema, Laryngospasm, Bronchospasm, Noncardiogenic pulmonary edema, Aspiration, Hypoxia, Hypoventilation 	<ul style="list-style-type: none"> ○ Assisting with planned intubation ○ Monitoring of patients under anesthesia ○ Administration of nerve blocks ○ Titration of drugs - Ephedrine, Atropine, Naloxone, Avil, Ondansetron ○ Sensory and motor block assessment for patients on epidural analgesia. ○ Technical troubleshooting of syringe / infusion pumps. 		



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Unit	Theory Hours	Topic	Practical /Lab Lab	Teaching Learning activity	Method of Assessment
VIII	10	<ul style="list-style-type: none"> ✓ Cardiovascular - Effects of anesthesia on cardiac function, Myocardial dysfunction, Dysrhythmias, postoperative hypertension, post operative hypotension ✓ Thermoregulatory - Hypothermia, shivering, hyperthermia, malignant hyperthermia ✓ Neurology- Delayed emergence, emergence delirium, ✓ Nausea and vomiting 		Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
IX	10	<p>Other special situations in critical care</p> <ul style="list-style-type: none"> ✓ 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 	Disaster preparedness and protocols	Lecture, Discussion, Problem based learning Clinical conference, Demonstration	Written test Seminar Return demonstration
	5	Class tests			
Total	96 Hours				



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List of skills to be practiced in the skill lab (69 hours include demonstration by the faculty and practice by the students).

Hematological alterations

- Blood transfusion
- Bone marrow transplantation
- Care of Catheter site
- Bone marrow aspiration
- Skin alterations
- Burn fluid resuscitation
- Burn feeds calculation
- Burn dressing
- Burns bath
- Wound dressing

Multi system alterations requiring critical care

- Triage
- Trauma team activation
- Administration of anti snake venom
- Antidotes

Specific infections in critical care

- Isolation precautions
- Disinfection and disposal of equipment

Critical care in Obstetrics, children, and Older Adult

- Partogram
- Equipments - incubators, warmers

Critical Care in Perianesthetic period

- Assisting with planned intubation
- Monitoring of patients under anesthesia
- Administration of nerve blocks
- Titration of drugs - Ephedrine, Atropine, Naloxone, Avil, Ondansetron
- Sensory and motor block assessment for patients on epidural analgesia.
- Technical troubleshooting of syringe / infusion pumps.

Other special situations in critical care

- Disaster preparedness and protocols



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CLINICAL PLACEMENT

S.No	Area	Duration
1	OT	6 week
2	PICU	2 weeks
3	Burns	2 weeks
4	Casualty	3 weeks
	Total	13 weeks

INTERNAL ASSESSMENT

THEORY

SR NO	ITEM	TOTAL MARKS	WEIGHTAGE (%)	MARKS OUT OF 30
1	Examination			
	First term	50	50	15
	Prefinal	70		
2	Assignment			
	Clinical Seminar	7x10=70	50	15
	GRAND TOTAL	220	100	30

PRACTICAL

SR NO	ITEM	TOTAL MARKS	WEIGHTAGE (%)	MARKS
1	Clinical presentation	20 x 2	10%	10
2	Case study report (Developed Clinical /Care Pathway)	20	20%	10
3	Clinical Performance Evaluation	6x100=600	20%	20
4	End of Posting OSCE	25x2=50	10%	10
5	Internal Practical Exam -OSCE	50	50%	50
	GRAND TOTAL	350	100%	100

UNIVERSITY EXAMINATIONS

Theory Marks			Practical Marks		
Duration (Hours)	Internal	External	Hours	Internal	External
3	30	70		100	100



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SECOND YEAR NURSE PRACTITIONER (CRITICAL CARE NURSING I&II)

NAME OF THE STUDENT:

COURSE : YEAR I/II:

TOPIC :

DATE

CLINICAL PRESENTATION

S.No.	Presentation skills	Marks allotted	Marks obtained
1.	Coverage of content -12		
	1.1. Introduction or chief complaint	1	
	1.2. History of present illness	2	
	1.3. Physical examination	2	
	1.4. Diagnostic tests	1	
	1.5. Diagnosis & relevant pathophysiology	1	
	1.6. Management and outcomes	4	
	1.7. Summary	1	
2.	Clarity and credibility in presentation	1	
3.	Well organized	1	
4.	Interesting and creative, use of illustrations	2	
5.	Group involvement & effective handling of questions	1	
6.	Confidence and resourcefulness	1	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
	TOTAL	20	

REMARKS:-

Signature of preceptor & Date

Signature of faculty & Date



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SECOND YEAR NURSE PRACTITIONER (CRITICAL CARE NURSING I&II)

CASE STUDY REPORT (CRITICAL CARE NURSING I & II)

NAME OF THE STUDENT:

COURSE : YEAR I/II:

TOPIC : DATE

S. No.	Particulars	Marks allotted	Marks obtained
1.	Introduction of patient, history & physical examination, and Diagnostic tests – significant findings	5	
2.	Diagnosis and relevant pathophysiology	1	
3.	Management plan (Identification of outcomes & Development of plan for care/care pathway)	2	
4.	Management (Treatment and nursing interventions including family education and counseling) & Achievement of outcomes(Patients responses to treatment and interventions)	4	
5	Discussion and conclusion	2	
6	Organization in presenting the written content	2	
7	Use of illustrations	2	
8	References	2	
	Total	20	

REMARKS:-

Signature of preceptor & Date

Signature of faculty & Date



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SECOND YEAR NURSE PRACTITIONER (CRITICAL CARE NURSING I&I)

SEMINAR EVALUATION

NAME OF THE STUDENT:

YEAR I/II:

TOPIC :

DATE :

S.No	Presentation skills	Marks allotted	Marks obtained
1.	Coverage of content (Relevant and current knowledge)	10	
2.	Clarity and credibility in presentation	2	
3.	Well organized	2	
4.	Interesting and creative	1	
5.	Group involvement & effective handling of questions	2	
6.	Confidence and resourcefulness	1	
7.	Professional outlook-poise, emotional stability	1	
8.	Time management	1	
	TOTAL	20	
	WRITING SKILLS		
9	Content coverage (Relevant and current knowledge)	5	
10	Organization in presenting the content (Introduction, text and conclusion)	3	
11	Use of illustrations	1	
12	References	1	
	TOTAL	10	

REMARKS:-

Signature of preceptor & Date

Signature of faculty & Date



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CRITICAL CARE NURSING II

INTERNAL PRACTICAL EXAM -OSCE

Marks allotted- 50 marks

Station (5)	Core competency Domains (Duration &Marks)			
	Health assessment (Focused History and Physical Examination) and interpretation	Monitoring competencies (invasive and Non invasive)	Development of care plan /Care path way	Therapeutic interventions - (emergency procedural competencies) including drug administration)
I	10 minutes (10 marks)			
II		10 minutes (10 marks)		
III			10 minutes (10 marks)	
IV				10 minutes (10 marks)
V	Rest station (5/10 minutes)			

OSCE – 40 marks (4x10)

ORAL EXAMINATION – 10 marks

TOTAL – 50 marks

{End of posting can follow the same as above having 5 stations with 5 minute duration each station (marks- 4x4=16, oral exam-4 marks, total=20/2=10 marks)}



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CRITICAL CARE NURSING II EXTERNAL PRACTICAL EXAM- OSCE

Marks allotted- 100 marks

Station (10)	Core competency Domains (Time Duration in minutes & Marks)							
	Health assessment (Focused History and Physical Examination) and interpretation		Monitoring competencies Invasive & Non invasive	Development of plan of care/ care pathway	Family Education & counseling	Drug administration	Therapeutic interventions (Emergency procedural competencies)-2	
	Adult	Pediatric					I	II
I	10 min (10 marks)							
II		10 min (10 marks)						
III			10 min (10 marks)					
IV				10 min (10 marks)				
V	Rest station 1 (5/10 minutes)							
VI					10 min (10 marks)			
VII						10 min (10 marks)		
VIII							10 min (10 marks)	
IX								10 min (10 marks)
X	Rest Station 2 (5/10 minutes)							

On completion of procedural competencies in log book and clinical requirements, the NP student is qualified to appear for final practical examination

OSCE-80

ORAL EXAMINATION – 20 marks

TOTAL – 100 marks



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QUESTION PAPER FORMAT (FIRST TERM EXAMINATION)

Critical Care Nursing II

Marks: 50

Time: 2hours

Q 1. Write Short Answers on any 4 out of 5

(20 marks)

- a)
- b)
- c)
- d)
- e)

Q 2. Long Answer Questions: Any 2 out of 3

(30 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |



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QUESTION PAPER FORMAT (UNIVERSITY EXAMINATION)

Critical Care Nursing II

Marks: 70

Time: 3 hours

Q 1. Write Short Answers on any 5 out of 6

(25 marks)

- a)
- b)
- c)
- d)
- e)
- f)

Q 2. Long Answer Questions: Any 3 out of 4

(45 marks)

- | | |
|------|-----|
| a. i | (2) |
| ii | (5) |
| iii | (8) |
| b. i | (2) |
| ii | (5) |
| iii | (8) |
| c. i | (2) |
| ii | (5) |
| iii | (8) |
| d. i | (2) |
| ii | (5) |
| iii | (8) |