



**स्वामी राम हिमालयन विश्वविद्यालय**  
**Swami Rama Himalayan University**

## **Criterion 1 - Curricular Aspects**

### **1.1.1 Outcome Analysis of POs, COs**

**M.Sc. Nursing (Nurse Practitioner in Critical Care) (NPCC)**  
**(2020-2022)**

**Himalayan College of Nursing**

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**Swami Rama Nagar, Jolly Grant, Dehradun 248016, Uttarakhand, India**

## A. Program Outcomes

After successful completion of the program, graduating students/graduates will able to:

<b>PO1</b>	Assume responsibility and accountability to provide competent care to critically ill patients and appropriate family care in tertiary care centres.
<b>PO2</b>	Demonstrate clinical competence / expertise in providing critical care which includes diagnostic reasoning, complex monitoring and therapies.
<b>PO3</b>	Apply theoretical, pathos-physiological and pharmacological principles and evidence base in implementing therapies / interventions in critical care.
<b>PO4</b>	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.
<b>PO5</b>	Collaborate with other health care professionals in the critical care team, across the continuum of critical care.

## B. Course-wise CO-PO Mapping

Mapping factor or Correlational level between Course Outcome (CO) and Program Outcomes (PO) indicates to what extent the teaching and assessment method of CO correlates/contributes the PO at the level defined below:

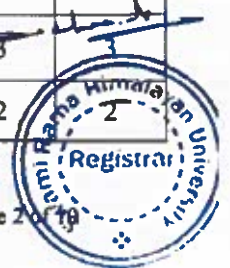
<b>Corelation Level</b>	<b>Particulars</b>
<b>3</b>	Substantial/high contribution of CO towards PO
<b>2</b>	Moderate contribution of CO towards PO
<b>1</b>	Slight/low contribution of CO towards PO




1.1.1 Outcome Analysis of POs, COs – NPCC (2020-2022)

Course Code	Course Title	CO-PO Mapping (Articulation Matrix)				
<b>NPC101</b>	<b>Advanced Health/Physical Assessment in Critical care Nursing</b>					
CO#	At the end of the course the students will be able to:	PO1	PO2	PO3	PO4	PO5
CO1	Applies the physical assessment principles in developing appropriate system wise examination skills	1	2	1	1	1
CO2	Uses advanced health assessment skills to differentiate between variations of normal and abnormal findings	1	3	1	3	1
CO3	Orders screening and diagnostic tests based on the examination findings	2	2	3	2	1
CO4	Analyzes the results of various investigations and works collaboratively for development of diagnoses	2	2	2	3	2
CO5	Documents assessment, diagnosis, and management and monitors follow up care in partnership with health care team members, patients, and families	3	1	1	2	3
<b>Course-wise PO Average</b>		<b>1.800</b>	<b>2.000</b>	<b>1.600</b>	<b>2.200</b>	<b>1.600</b>

Course Code	Course Title	CO-PO Mapping (Articulation Matrix)				
<b>NPC102</b>	<b>Advanced Pathophysiology &amp; Pharmacology Applied to Critical Care Nursing I &amp; II</b>					
CO#	At the end of the course the students will be able to:	PO1	PO2	PO3	PO4	PO5
CO1	Integrates the knowledge of pathophysiological process in critical conditions in developing diagnosis and plan of care	2	3	3	3	2
CO2	Applies the pathophysiological principles in symptom management and secondary prevention of critical illnesses	2	3	3	3	3
CO3	Analyzes the pathophysiological changes relevant to each critical illness recognizing the value of diagnosis, treatment, care and prognosis	2	3	3	3	3
CO4	Advanced Pharmacology Relevant to Critical Care Nursing	3	3	2	2	2



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<b>CO5</b>	Analyzes pharmaco-therapeutics and pharmacodynamics relevant to drugs used in the treatment of critical care conditions	2	3	3	3	2
<b>CO6</b>	Performs safe drug administration based on principles and institutional protocols	1	2	3	3	2
<b>CO7</b>	Documents accurately and provides follow up care	1	2	2	3	2
<b>CO8</b>	Applies sound knowledge of drug interactions in administration of drugs to critically ill patients in the critical care settings and guiding their families in self care management	1	1	1	3	1
<b>Course-wise PO Average</b>		<b>1.750</b>	<b>2.500</b>	<b>2.500</b>	<b>2.875</b>	<b>2.125</b>

<b>Course Code</b>	<b>Course Title</b>	<b>CO-PO Mapping (Articulation Matrix)</b>				
<b>NPC103</b>	<b>Advanced Skills in Leadership Management and Teaching Skills</b>					
<b>CO#</b>	<b>At the end of the course the students will be able to:</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
<b>CO1</b>	Applies principles of leadership and management in critical care units	2	2	1	3	2
<b>CO2</b>	Manages stress and conflicts effectively in a critical care setting using sound knowledge of principles	1	1		1	1
<b>CO3</b>	Applies problem solving and decision making skills effectively	1	2	1	1	2
<b>CO4</b>	Uses critical thinking and communication skills in providing leadership and managing patient care in ICU	1	1	2	3	3
<b>CO5</b>	Builds teams and motivates others in ICU setting	1			3	2
<b>CO6</b>	Develops unit budget, manages supplies and staffing effectively	2	1		1	2
<b>CO7</b>	Participates appropriately in times of innovation and change	1	1	1	1	3
<b>CO8</b>	Uses effective teaching methods, media and evaluation based on sound principles of teaching	1	1			
<b>CO9</b>	Develops advocacy role in patient care, maintaining quality and ethics in ICU environment	2	2	2	2	



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CO10	Provides counseling to families and patients in crisis situations particularly end of life care	1	1	1	2	2
<b>Course-wise PO Average</b>		<b>1.300</b>	<b>1.200</b>	<b>0.800</b>	<b>1.700</b>	<b>2.300</b>

Course Code	Course Title	CO-PO Mapping (Articulation Matrix)				
<b>NPC104</b>	<b>Research Application and Evidence Based Practice in Critical Care</b>					
<b>CO#</b>	<b>At the end of the course the students will be able to:</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
<b>CO1</b>	Applies sound research knowledge and skills in conducting independent research in critical care setting	1	2	3	2	3
<b>CO2</b>	Participates in collaborative research to improve patient care quality	3	2	2	2	3
<b>CO3</b>	Interprets and uses research findings in advanced practice to produce EBP	3	2	2	3	3
<b>CO4</b>	Tests / Evaluates current practice to develop best practices and health outcomes and quality care in advanced practice	2	2	1	3	2
<b>CO5</b>	Analyzes the evidence for nursing interventions carried out in critical care nursing practice to promote safety and effectiveness of care	1	3	2	2	3
<b>CO6</b>	Develops skill in writing scientific research reports	1	1	1	1	3
<b>Course-wise PO Average</b>		<b>1.833</b>	<b>2.000</b>	<b>1.833</b>	<b>2.167</b>	<b>2.833</b>

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1.1.1 Outcome Analysis of POs, COs – NPCC (2020-2022)

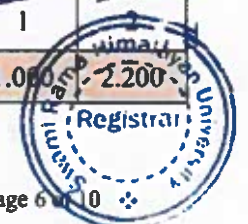
Course Code	Course Title	CO-PO Mapping (Articulation Matrix)				
<b>NPC105</b>	<b>Theoretical Basis for Advanced Practice Nursing</b>					
CO#	At the end of the course the students will be able to:	PO1	PO2	PO3	PO4	PO5
CO1	Analyses the global healthcare trends and challenges	2	1	1	1	1
CO2	Analyses the impact of Healthcare and Education policies in India on nursing consulting the documents available.	1	1	1	1	1
CO3	Develops in depth understanding of the healthcare delivery system in India, and its challenges	1	1	2	1	3
CO4	Applies economic principles relevant to delivery of healthcare services in critical care	2	1	1	1	1
CO5	Manages and transforms health information to effect health outcomes such as cost, quality, and satisfaction	2	1	1	1	1
CO6	Accepts the accountability and responsibility in practicing the Nurse practitioner's roles and competencies	3	2	1	2	1
CO7	Actively participates in collaborative practice involving all healthcare team members in critical care and performs the prescriptive roles within the authorized scope	3	1	1	1	2
CO8	Engages in ethical practice having a sound knowledge of law, ethics, and regulation of advanced nursing practice	1	1	1	1	1
CO9	Uses the training opportunities provided through well planned preceptorship and performs safe and competent care applying nursing process	1	2	1	1	1
CO10	Applies the knowledge of nursing theories in providing competent care to critically ill patients	1	1	1	1	1
CO11	Predicts future challenges of nurse practitioner's roles in variety of healthcare settings particularly in India	1	1	1	1	1
<b>Course-wise PO Average</b>		<b>1.636</b>	<b>1.182</b>	<b>1.091</b>	<b>1.091</b>	<b>1.273</b>



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Course Code	Course Title	CO-PO Mapping (Articulation Matrix)				
<b>NPC201</b>	<b>Critical Care Nursing - I</b>					
CO#	At the end of the course the students will be able to:	PO1	PO2	PO3	PO4	PO5
CO1	Uses advanced skills in complex and unstable environments	3	3	3	3	1
CO2	Applies ethically sound solutions to complex issues related to individuals, populations and systems of care	3	2	2	2	1
CO3	Practices principles of infection control relevant to critical care	3	2	1	1	2
CO4	Practices independently within the legal framework of the country towards the interest of patients, families and communities	3	2	2	3	1
CO5	Develops practice that is based on scientific evidence	3	3	3	3	1
<b>Course-wise PO Average</b>		<b>3.000</b>	<b>2.400</b>	<b>2.200</b>	<b>2.400</b>	<b>1.200</b>

Course Code	Course Title	CO-PO Mapping (Articulation Matrix)				
<b>NPC202</b>	<b>Critical Care Nursing - II</b>					
CO#	At the end of the course the students will be able to:	PO1	PO2	PO3	PO4	PO5
CO1	Practices independently within the legal framework of the country towards the interest of patients, families, and communities	1	2	1	1	3
CO2	Develops practice that is based on scientific evidence		2	1	1	2
CO3	Uses applicable communication, counseling, advocacy, and interpersonal skills to initiate, develop and discontinue therapeutic relationships	3	2	1	1	1
CO4	Creates and maintains a safe therapeutic environment using risk management strategies and quality improvement	1	3		1	3
CO5	Adapts practice to the social, cultural, and contextual milieu	1	1	3	1	
<b>Course-wise PO Average</b>		<b>1.200</b>	<b>2.000</b>	<b>1.400</b>	<b>1.000</b>	<b>2.200</b>



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Course Code	Course Title	CO-PO Mapping (Articulation Matrix)				
<b>NPC203</b>	<b>Foundations of Critical Care Nursing Practice</b>					
CO#	At the end of the course the students will be able to:	PO1	PO2	PO3	PO4	PO5
CO1	Applies advanced concepts of critical care nursing based on sound knowledge of these concepts	2	2	2	1	1
CO2	Uses invasive and noninvasive technology and interventions to assess, monitor and promote physiologic stability	1	3	1	2	1
CO3	Works in collaboration with other healthcare team members	1	1	1	3	3
CO4	Consults with and is consulted by other health care professionals	0	1	1	2	3
CO5	Provides nursing care related to health protection, disease prevention, anticipatory guidance, counseling, management of critical illness, palliative care and end of life care	3	1	2	2	2
<b>Course-wise PO Average</b>		<b>1.400</b>	<b>1.600</b>	<b>1.400</b>	<b>2.000</b>	<b>2.000</b>

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**C. Program Outcome Reference Values:**

Following table calculates the overall average of all POs of the Courses and is referred as Course-wise Average of POs Reference values.

SR. No.	Course Code	Course Title	PO1	PO2	PO3	PO4	PO5
1	NPC101	Advanced Health/Physical Assessment in Critical care Nursing	1.800	2.000	1.600	2.200	1.600
2	NPC102	Advanced Pathophysiology & Pharmacology Applied to Critical Care Nursing I & II	1.750	2.500	2.500	2.875	2.125
3	NPC103	Advanced Skills in Leadership Management and Teaching Skills	1.300	1.200	0.800	1.700	2.300
4	NPC104	Research Application and Evidence Based Practice in Critical Care	1.833	2.000	1.833	2.167	2.833
5	NPC105	Theoretical Basis for Advanced Practice Nursing	1.636	1.182	1.091	1.091	1.273
6	NPC201	Critical Care Nursing - I	3.000	2.400	2.200	2.400	1.200
7	NPC202	Critical Care Nursing - II	1.200	2.000	1.400	1.000	2.200
8	NPC203	Foundations of Critical Care Nursing Practice	1.400	1.600	1.400	2.000	2.000
<b>Combined Course-wise Average of POs Reference values</b>			<b>1.391</b>	<b>1.431</b>	<b>0.878</b>	<b>0.509</b>	<b>0.726</b>



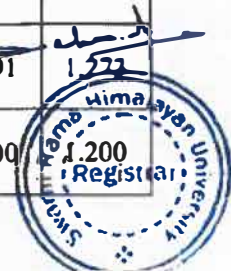

**D. Assessment of CO and PO Attainment Value**

The attainment of the course outcome is measured at the level of 3 as follows:

Attainment Levels	Criteria
3	If 80% of student achieves marks greater than threshold percentage of the total score of assessment
2	If 70% of student achieves marks greater than threshold percentage of the total score of assessment
1	If 60% of student achieves marks greater than threshold percentage of the total score of assessment
0	If 60% of student achieves marks less than threshold percentage of the total score of assessment

Attainment level of COs is measured through direct attainment of COs depending on the performance of the students in Internal Assessment (IA) and University Examination (UE) individually. The average attainment level of both assessment is calculated depending marks distribution of the assessment. For the program the threshold percentage is set at 50% for IA and 50% for UE Assessments.

Sr. No.	Course Code	Course Title	Attainment of COs	Derived Attainment of POs Course-wise				
				PO1	PO2	PO3	PO4	PO5
1	NPC101	Advanced Health/Physical Assessment in Critical care Nursing	3.000	1.800	2.000	1.600	2.200	1.600
2	NPC102	Advanced Pathophysiology & Pharmacology Applied to Critical Care Nursing I & II	2.100	1.225	1.750	1.750	2.013	1.488
3	NPC103	Advanced Skills in Leadership Management and Teaching Skills	3.000	1.300	1.200	0.800	1.700	2.300
4	NPC104	Research Application and Evidence Based Practice in Critical Care	2.700	1.650	1.800	1.650	1.950	2.550
5	NPC105	Theoretical Basis for Advanced Practice Nursing	3.000	1.636	1.182	1.091	1.091	1.572
6	NPC201	Critical Care Nursing - I	3.000	3.000	2.400	2.200	2.400	1.200



1.1.1 Outcome Analysis of POs, COs – NPCC (2020-2022)

7	NPC202	Critical Care Nursing - II	3.000	1.200	2.000	1.400	1.000	2.200
8	NPC203	Foundations of Critical Care Nursing Practice	3.000	1.400	1.600	1.400	2.000	2.000
<b>Course-wise Average of POs Achievement Through Results</b>				1.651	1.742	1.486	1.794	1.826
<b>Course-wise Average of POs Reference values</b>				1.740	1.860	1.603	1.929	1.941
<b>Percentage Attainment of PO's</b>				94.9%	93.6%	92.7%	93.0%	94.1%

From the Attainment level of CO, the Derived PO's value for course is calculated as follows:

$$\text{Derived PO Value} = \frac{\text{CO attainment} \times \text{respective PO average}}{3}$$

Depending on derived PO values of the courses, calculate the Course-wise Average of POs achievement for each PO.

Calculate the percentage attainment of PO's as follows:

$$\text{Percentage attainment of PO's} = \frac{\text{Average PO Attainment through}}{\text{average PO refrence value}} \times 100$$

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