



स्वामी राम हिमालयन विश्वविद्यालय
Swami Rama Himalayan University

Criterion 1 - Curricular Aspects

1.1.1 Outcome Analysis of POs, COs **M.D. Anaesthesiology (2019-2022)**

Himalayan Institute of Medical Sciences

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A. Program Outcomes

After successful completion of the program, the student will be able to:

PO1	Competent Clinician who can render services in basic as well as advanced settings that will enable them to practice anaesthesiology independently in broad specialities with adequate knowledge and gain exposure in super specialities
PO2	Perioperative Physician with appropriate organizational and communication skills to function in a group as a leader in OR/ICU and member of hospital cardiopulmonary resuscitation committee who can organize and conduct the Hospital resuscitation practices
PO3	Researcher who can conduct collaborative research in the field of Anaesthesiology and its sub-specialities and develop skills for self directed learning and critical appraisal of medical literature
PO4	Communicator who can teach students effectively about the subject and should be familiar with various teaching and training methods
PO5	Efficient Professional who can execute communication with stake holders of health care system and identify needs of patients and society and provide cost effective care

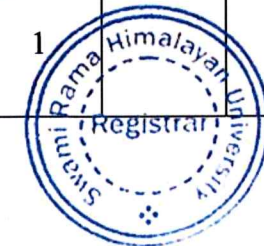



B. Course-wise CO-PO Mapping

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:

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

Course Name		Anaesthesiology				
Course Outcomes (COs)		CO-PO Mapping (Articulation Matrix)				
At the end of the course the students will be able to:		PO-1	PO-2	PO-3	PO-4	PO-5
CO1	Performance of preoperative assessment, risk stratification & preoperative preparation in normal patients or with controlled comorbid illness.	2			1	1
CO2	Performance of Preoperative assessment, risk stratification & preoperative preparation in patients with comorbidity and varying degrees of end organ damage.	3			1	1
CO3	Securing airway in patients with normal airway anatomy and difficult airway	2			1	1
CO4	Administering General Anaesthesia to patients of ASA I and II III and IV physical status.	2			1	1
CO5	Managing Central Neuraxial Blockade in patients with ASA I & II, III and IV physical status.	2	1	1	1	2
CO6	Performing Peripheral nerve/Fascial plane blocks	2	1		1	2
CO7	Providing Monitored Anaesthesia Care: To provide appropriate procedural sedation for surgical and non- surgical indication, inside and outside the operating suite, taking due consideration of airway, monitoring and application of discharge criteria. Recognize and manage complications.	2	1		1	2



CO8	Proficient in peripheral and central vascular access including invasive arterial access.	2	1		1	3
CO9	Acute pain disorders: To assess and diagnose commonly occurring ACUTE PAIN DISORDER (including post-operative pain) and formulate and execute a treatment plan. The treatment should be monitored and accordingly adjusted. Recognize and manage complications, related to acute pain management.	2	1		1	3
CO10	Assess and diagnose commonly occurring chronic pain disorders and formulate and execute a treatment plan. Monitor and adjust the treatment appropriately, recognize and manage complications	3	1		1	2
CO11	Assess, prepare and manage anaesthesia administration for patients undergoing cardiac surgeries. Includes management of cardiopulmonary bypass, pharmacological and mechanical hemodynamic support, recognise and manage complications occurring in these procedures and patients	3	1		1	3
CO12	Ability to conduct anaesthetic management for Thoracic Surgery: Assess, prepare and manage anaesthesia administration for patients undergoing thoracic surgeries, including lung isolation techniques and management of one lung ventilation, recognition and management of complications occurring in these patients	2	1	1	1	2
CO13	Ability to conduct anaesthetic management for Neurosurgery: Assess, prepare, and manage anaesthesia administration for neurosurgery patients, including ICP management, implementation cerebral protective strategies and adapt appropriate extubating protocol. Recognize and manage complications	2	3	1	2	1
CO14	Ability to conduct Anaesthetic management in Obstetrics patients: Assess, prepare and administer anaesthesia for obstetric patients. This includes appropriate OT preparation, implementation of aspiration prophylaxis, neonatal resuscitation, provide pain relief during labour, adapt resuscitation protocols for obstetric and non- obstetric surgeries.	3	2	2	2	3
CO15	Ability to conduct anaesthetic management for Paediatric patients: Assess, prepare and manage anaesthesia administration (general and regional) for paediatric/neonatal patients. This includes appropriate OT preparation, drug administration, fluid therapies, airway management, monitoring, postoperative pain and complication management strategies, specific to paediatric population.	3	1		1	3
CO16	Ability to manage the critically ill patient	2	1	1	1	2



CO17	Conversant in pedagogic and andragogic methods of teaching and learning	3	2	2	2	3
CO18	Proficient in formulating a protocol, literature search, data collection and analysis for conduct of research	3	2	2	2	3
Course-wise PO Average		2.389	1.056	0.556	1.222	2.111

C. Program outcome Reference Value:

Following table calculates the overall average of all POs of the Courses and is referred as average PO Reference values.

Course Title	PO-1	PO-2	PO-3	PO-4	PO-5
Anaesthesiology	2.389	1.056	0.556	1.222	2.111
Combined Average PO Reference values	2.389	1.056	0.556	1.222	2.111




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 University Examination (UE) individually. For the MD program the threshold percentage is set at 50% for University Examination.

Course Title	Attainment of COs	Derived Attainment of POs Course-wise				
		PO-1	PO-2	PO-3	PO-4	PO-5
Anaesthesiology	3.000	2.389	1.056	0.556	1.222	2.111
Average PO Achievement Through Results		2.389	1.056	0.556	1.222	2.111
Average PO Reference values		2.389	1.056	0.556	1.222	2.111
Percentage Attainment of PO's		100%	100%	100%	100%	100%

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 average PO achievement for each PO.

Calculate the percentage attainment of PO's as follows:

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