



INTEGRAL UNIVERSITY, LUCKNOW
INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES & RESEARCH

DEPARTMENT OF PARAMEDICAL SCIENCES

**BACHELOR OF SCIENCE IN ANESTHESIOLOGY
AND INTENSIVE CARE TECHNOLOGY
(B. Sc. AICT)**

SYLLABUS

YEAR/ SEMESTER: III/V



Integral University, Lucknow
Department of Paramedical Sciences
Study and Evaluation Scheme

Program: BAICT

Semester-V

S. N.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Sub. Total	Credit	Total Credits
				L	T	P	CT	TA	Total	ESE			
THEORIES													
1	AT301	Anesthesia for Patient with Medical Disorder	Core	2	1	0	40	20	60	40	100	2:1:0	3
2	AT302	Central Sterile Supply Department (CSSD)Procedures	Core	2	1	0	40	20	60	40	100	2:1:0	3
3	AT303	Basic Intensive Care	Core	3	1	0	40	20	60	40	100	3:1:0	4
4	AT304	Advance Anesthesia Technique	Core	3	1	0	40	20	60	40	100	3:1:0	4
PRACTICAL													
1	AT305	Seminar	Core	3	1	0	40	20	60	40	100	3:1:0	4
2	AT306	Central Sterile Supply Department (CSSD)Procedures Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
3	AT307	Advance Anesthesia Technique Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
4	AT308	OT Posting	Core	0	0	2	40	20	60	40	100	0:0:1	1
Total				13	06	06	320	160	480	320	800	21	21

S. N.	Course code	Course Title	Type of Paper	Attributes						United Nation Sustainable Development Goal (SDGs)	
				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value		Professional Ethics
THEORIES											
1	AT301	Anesthesia for Patient with Medical Disorder	Core	√	√	√			√	√	3,4
2	AT302	Central Sterile Supply Department (CSSD)Procedures	Core	√	√	√			√	√	3,4
3	AT303	Basic Intensive Care	Core	√	√	√			√	√	3,4
4	AT304	Advance Anesthesia Technique	Core	√	√	√			√	√	3,4
PRACTICAL											
1	AT305	Seminar	Core	√	√	√			√	√	3,4
2	AT306	Central Sterile Supply Department (CSSD)Procedures Lab	Core	√	√	√			√	√	3,4
3	AT307	Advance Anesthesia Technique Lab	Core	√	√	√			√	√	3,4
4	AT308	OT Posting	Core	√	√	√			√	√	3,4

L: Lecture **T:** Tutorials **P:** Practical **CT:** Class Test **TA:** Teacher Assessment **ESE:** End Semester Examination,
AE= Ability Enhancement, **DSE-** Discipline Specific Elective, **Sessional Total:** Class Test + Teacher Assessment **Subject Total:** Sessional Total + End Semester Examination (ESE)



Integral University, Lucknow

Effective from Session: 2024-25

Course Code	AT301	Title of the Course	ANESTHESIA FOR PATIENTS WITH MEDICAL DISORDERS	L	T	P	C
Year	III	Semester	V	2	1	0	3
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Acquire the knowledge of concepts of cell injury & changes produced thereby in different tissues & organs-; capacity of the body in healing process. Recall the etiopathogenesis, the pathological effects & the clinico-pathological correlation of common infections & noninfectious diseases						

Course Outcomes	
CO1	Students able to understand the Hypertension and Diabetes.
CO2	Students able to understand Respiratory Diseases.
CO3	Students able to understand Coronary Artery diseases.
CO4	Students able to understand about Thyroid Disorder and Obesity.
CO5	Students able to learn the Renal Failure.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	HYPERTENSION AND DIABETES	Hypertension -Hypertension-commonly used antihypertensive - losartan, amlodipine, telmisartan, atenolol, methods to reduce hypertension intraoperatively, complications of intraoperative hypertension. Diabetes Mellitus Diabetes -insulin preparations, methods to reduce blood sugar levels, complications of uncontrolled diabetes intraoperative.	6	CO1
2	RESPIRATORY DISEASES	Respiratory diseases, epilepsy, anemia- Bronchial asthma/COPD-complications and its management intraoperative, methods to avoid precipitating bronchospasm , Epilepsy-anesthesia drugs precipitating an epileptic attack, drugs used for treatment , Anemia-complications under anesthesia	6	CO2
3	CORONARY ARTERY DISEASE	Coronary artery diseases, thyroid diseases- Coronary artery disease-risk factors for having an myocardial/infarction under anesthesia, drugs used in their management, complications of ischemic heart disease patient undergoing non cardiac surgery	6	CO3
4	THYROID DISORDER AND OBESITY	Thyroid disorders-causes of hyper and hypothyroidism, challenges of anaesthetizing a thyroid patient, thyroid storm and its management, complications after thyroidectomy Obesity, Renal and Liver Failure-Obesity-challenges of anaesthetizing an obese patient.	6	CO4
5	RENAL FAILURE	Renal failure-anesthetic challenges in renal failure patient, intraoperative complications in renal failure patients and its management, important anesthetic challenges during renal transplant , Jaundice-intraoperative complications in a liver failure patient	6	CO5

Reference Books:

1. Comparative pharmacology for anaesthetists- Vipin dhama.
2. Miller anaesthesia
3. Clinical Anaesthesiology – 6 th edition Morgan

e-Learning Source:

1. <https://www.youtube.com/watch?v=MnVgGTv6EW0>
2. <https://www.youtube.com/watch?v=sBoRKzc7pdY>
3. <https://www.youtube.com/watch?v=AuTlwFrelc>
4. <https://www.youtube.com/watch?v=S1kdYd4JGbg>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	3	-	2	-	-	1	2	-	1	3	-	1	1	-
CO2	3	3	-	2	-	2	-	-	2	3	-	1	3	-	1	1	-
CO3	3	3	-	3	-	2	-	-	1	2	-	1	3	-	2	2	-
CO4	3	3	-	3	-	2	-	-	1	2	-	1	3	-	1	1	-
CO5	3	3	-	2	-	2	-	-	1	3	-	1	3	-	1	1	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
AT301	ANESTHESIA FOR PATIENTS WITH MEDICAL DISORDERS	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4
		√	√	√			√	√	



Integral University, Lucknow

Effective from Session: 2024-25							
Course Code	AT302	Title of the Course	CENTRAL STERILE SUPPLY DEPARTMENT(CSSD)PROCEDURES	L	T	P	C
Year	III	Semester	V	2	1	0	3
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	At the end of the course, the candidate will have sound knowledge of the sterilization and techniques used in sterilization, surgical instruments, criteria for purchase and maintenance, Quality assurance programme, Use of disinfections sorting and classification of equipment for cleansing purposes, Cleaning process- Use of detergents, Special precautions while handling instruments linen and other items used for patients with HIV, HBV,HCV.						

Course Outcomes	
CO1	Students able to understand Sterilization and Techniques of sterilization.
CO2	
CO3	Students able to understand about surgical instrument and maintenance
CO4	Students able to understand use of disinfectant.
CO5	Students able to understand use of detergent and cleaning process.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	STRILZATION AND TECHNIQUES	General observations and principle of sterilization, Moist heat Sterilization, Dry heat sterilization, E2O gas sterilization, H2O2 gas plasma vapor sterilization. Calculation of capacity requirement of sterilizer.	6	CO1
2		Sterilize operation, Sterilize basic trouble shooting methods, Sterilization recommended practices or Flash Sterilization, Cell back system in case of detection of Failure. Complete decontamination technique, Confirmation of cleaning process, Monitoring Techniques, Quality Assurance program.	6	CO2
3	SURGICAL INSTRUMENT	Surgical Instruments, Criteria for Purchase and Maintenance, Preparation and Supplies for Terminal Sterilization, Endoscopes and its sterilization, Surgical Procedures.	6	CO3
4	DISINFECTION USE	Collection of used items from user area, reception protective clothing and disinfections sage guards, Use of disinfections sorting and classification of equipment for cleansing purposes, sharps, blunt lighted etc. contaminated high risk baby care- delicate instruments or hot care instruments.	6	CO4
5	CLEANING PROCESS	Cleaning process- Use of detergents, Mechanical cleaning apparatus, Cleaning instruments, cleaning jars, receivers bowls etc. trays, basins and similar hand are utensils, Cleaning of catheters and tubing, cleaning glass ware, cleaning syringes and needles. Special precautions while handling instruments linen and other items used for patients with HIV, HBV,HCV.	6	CO5

Reference Books:	
1.	Know your instruments Losper Joan M
2.	
e-Learning Source:	
1.	https://www.youtube.com/watch?v=LEiN-pkYeRs
2.	https://www.youtube.com/watch?v=keXNin9IJSE
3.	https://www.youtube.com/watch?v=k_lxtI_9PMA
4.	https://www.youtube.com/watch?v=kJ3VsW4gnO0

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																		
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	3	3	-	1	-	1	-	-	1	1	-	1	2	-	1	1	-	3
CO2	2	3	-	2	-	2	-	-	-	1	-	2	3	-	2	2	-	2
CO3	3	3	-	1	-	1	-	-	1	1	-	1	2	-	1	1	-	3
CO4	2	3	-	1	-	2	-	-	-	1	-	2	2	-	1	1	-	2
CO5	2	3	-	1	-	2	-	-	-	1	-	2	3	-	1	1	-	2

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
AT302	CENTRAL STERILE SUPPLY DEPARTMENT(CSSD) PROCEDURES	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4
		√	√	√	√		√	√	



Integral University, Lucknow

Effective from Session: 2024-25

Course Code	AT303	Title of the Course	BASIC INTENSIVE CARE	L	T	P	C
Year	III	Semester	V	3	1	0	4
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	This course deals with fundamentals of basic intensive care.						

Course Outcomes: After the successful course completion, learners will develop following attributes:

CO1	Students will be able to learn about respirator system.
CO2	Students will be able to learn about cardiovascular system.
CO3	Students will be able to learn about CNS.
CO4	Students will be able to learn about nutritional monitoring.
CO5	Students will be able to learn about care and maintenance of Intensive care unit..

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	RESPIRATORY SYSTEM	Monitoring lung and chest wall mechanics , Compliance , Resistance , Pressures , Auto PEEP Volumes, Monitoring muscle strength, work of breathing, Maximum inspiratory and expiratory pressures, Monitoring patient ventilator system, Graphics monitoring ,Bedside PFT	8	CO1
2	CARDIOVASCULAR SYSTEM	Assessment of Preload responsiveness static and dynamic parameters, Basic Echocardiography in ICU/ Ultrasound in Critical Care, Defibrillator and Cardio version ,PICCO ,Monitoring tissue perfusion ,Pulmonary artery catheters ,Temporary pacemaker	8	CO2
3	CNS	Monitoring brain stem function Unit 2: Sedation and analgesia scoring	8	CO3
4	NUTRITIONAL MONITORING	Functional nutritional assessment (history and physical examination) ,Metabolic assessment ,Estimating nutritional requirements	8	CO4
5	CARE AND MAINTAINACE OF ICU	Mechanical Ventilators & Non-invasive ventilators, Pumps: Infusion, syringe ,Monitors: Stand-alone & multi-parameter, Cardiac Output monitors. ,ECG machine Unit 5: ABG machine ,Defibrillator ,Ultrasound machine ,Bronchoscope	8	CO5

Reference Books:

1. Egan’s Fundamentals of Respiratory Care – Robert L. Wikins, James K Stoller,
2. The ICU Book – Paul L Marino (Lippincott, Williams & Wilkins)
3. Practical Methods for Respiratory Care – Raymond Sibberson (Mosby)
4. Critical Care Secrets: Parsons, Wiener – Kronish, Jaypee Brothers

e-Learning Source:

1. <https://www.youtube.com/watch?v=-tvDLg-5Qy8>
2. <https://www.youtube.com/watch?v=XfVqnlkU3ZY>
3. <https://www.youtube.com/watch?v=vGh7VVk9Oeg>
4. https://www.youtube.com/watch?v=Wu18mpI_62s

Course Articulation Matrix: (Mapping of COs with POs and PSOs)

PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	2	2	-	-	-	1	2	1	-	2	2	1	-	1	-
CO2	1	3	1	3	-	-	-	2	3	-	-	3	3	2	-	2	-
CO3	1	3	1	2	-	-	-	1	2	2	-	2	3	1	-	1	-
CO4	1	3	1	2	-	-	-	1	3	-	-	3	2	1	-	1	-
CO5	1	3	1	2	-	-	-	1	2	1	-	2	2	1	-	1	-

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
AT303	BASIC INTENSIVE CARE	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4
		√	√	√	√		√	√	



Integral University, Lucknow

Effective from Session: 2024-25							
Course Code	AT304	Title of the Course	ADVANCE ANESTHESIA TECHNIQUE	L	T	P	C
Year	III	Semester	V	3	1	0	4
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	The course will provide training in basic type of anesthetic and anesthetic procedure.						

Course Outcomes: After the successful course completion, learners will develop following attributes:	
CO1	Student will able to learn about neuro anaesthesia .
CO2	Student will able to learn about obstetric anaesthesia.
CO3	Student will able to learn about pediatric anaesthesia.
CO4	Student will able to learn about cardiac anaesthesia .
CO5	Student will able to learn about geriatric anaesthesia .

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	NEURO ANAESTHESIA	Glasgow coma scale, Premedication, Special investigation - CT, Angiography and MRI , Checklist , Induction of a patient, Reinforced Endotracheal tubes , Positioning in neuro surgery , Intracranial pressure (ICP) , Air embolism ,Reversal of the patient ,Transferring to I.C.U. / Ward	8	CO1
2	OBSTETRIC ANAESTHESIA	Differences between a pregnant and a normal lady, Risks for anaesthesia. ,Precautions to be taken , Check list, Regional vs general anaesthesia, Induction / maintenance and recovery , Resuscitation of the newborn, apgar score , Reversal and extubation , Emergencies - manual removal of placenta , Antepartum hemorrhage (APH) , Postpartum hemorrhage (PPH) ▪ Ruptured uterus , Ectopic Pregnanc	8	CO2
3	PEDIATRIC ANAESTHESIA	Theatre setting , Check list , Premedication - modes , Induction ,Intubation - Securing the EIT, Reversal & extubation – Problems , Transferring / ICU management , Pain management.	8	CO3
4	CARDIAC ANAESTHESIA	NYHA classification, Arrhythmias, Angina, Dyspnoea, Special investigations ,Echocardiography, Angiography,Premedication, Setting up of monitoring system , Monitoring - invasive and non – invasive, Getting ready for the case, Induction of cardiac patient, precautions to be taken , Cardiopulmonary bypass , Weaning of CPB , Transferring the patient to intensive care unit (ICU), Care to be taken,ICU management.,Chest tube management	8	CO4
5	GERIATRIC ANAESTHESIA	Physiological changes, Diseases of aging, Nervous system, Geriatric pharmacodynamics / pharmacokinetics ,Postoperative nervous system dysfunction	8	CO5

Reference Books:

1. Ajay Yadav Short Textbook of Anaesthesia Jaypee
2. Anshul Jain Essentials of Anaesthesia& Critical Care Jaypee
3. Principles of anaesthesia equipment's – Yasodhanandha arit
4. The Anaesthesia Technologist's Manual by Emily S Guimaraes, Matthew Davis, Jeffrey R Kirsch, Glenn Woodworth
5. Introduction to the Surgery by Marketa Duskova

e-Learning Source:

1. <https://www.youtube.com/watch?v=aXt1DbdeBXk>
2. <https://www.youtube.com/watch?v=esxafXkG6zk>
3. <https://www.youtube.com/watch?v=GDcoeWBxOjc>
4. <https://www.youtube.com/watch?v=vAL8H3idU6k>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	-	-	-	-	-	-	-	-	-	1	3	-	1	-	2
CO2	3	3	-	-	-	2	-	-	-	-	-	-	3	3	2	3	3
CO3	2	3	-	-	-	2	-	-	-	-	-	1	3	2	1	3	2
CO4	3	3	-	-	-	-	-	-	-	-	-	-	2	3	2	2	3
CO5	3	3	-	-	-	3	-	1	-	-	-	-	3	3	2	3	3

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
AT304	ADVANCE ANESTHESIA TECHNIQUE	√	√	√			√	√	3,4



Integral University, Lucknow

Effective from Session: 2023-2024

Course Code	AT305	Title of the Course	SEMINAR	L	T	P	C
Year	III	Semester	V	3	1	0	4
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives							

Course Outcomes

CO1	Student will able to learn about anesthesia for patient with medical disorder.
CO2	Student will able to learn about central sterile supply department (cssd) procedures.
CO3	Student will able to learn about basic intensive care.
CO4	Student will able to learn about advance anesthesia technique.
CO5	Student will able to learn about anesthesia for patient with medical disorder.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1.	ANESTHESIA FOR PATIENT WITH MEDICAL DISORDER	Seminar Topic will be given based on courses and will be decided by course teacher.	6	CO1
2.	CENTRAL STERILE SUPPLY DEPARTMENT (CSSD) PROCEDURES	Seminar Topic will be given based on courses and will be decided by course teacher.	6	CO2
3.	BASIC INTENSIVE CARE	Seminar Topic will be given based on courses and will be decided by course teacher.	6	CO3
4.	ADVANCE ANESTHESIA TECHNIQUE	Seminar Topic will be given based on courses and will be decided by course teacher.	6	CO4
5.	ANESTHESIA FOR PATIENT WITH MEDICAL DISORDER	Seminar Topic will be given based on courses and will be decided by course teacher.	6	CO5

Reference Books:

1. Ajay Yadav Short Textbook of Anaesthesia Jaypee
2. Anshul Jain Essentials of Anaesthesia & Critical Care Jaypee
3. Principles of anaesthesia equipment's – Yasodhanandha arit
4. The Anaesthesia Technologist's Manual by Emily S Guimaraes, Matthew Davis, Jeffrey R Kirsch, Glenn Woodworth
5. Introduction to the Surgery by Marketa Duskova

e-Learning Source:

1. <https://www.youtube.com/watch?v=aXt1DbdeBXk>
2. <https://www.youtube.com/watch?v=esxafXkG6zk>
3. <https://www.youtube.com/watch?v=GDcoeWBxOjc>
4. <https://www.youtube.com/watch?v=vAL8H3idU6k>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)

PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	1	-	1	-	-	1	1	-	1	2	-	1	1	-
CO2	2	3	-	2	-	2	-	-	-	1	-	2	3	-	2	2	-
CO3	3	3	-	1	-	1	-	-	1	1	-	1	2	-	1	1	-
CO4	2	3	-	1	-	2	-	-	-	1	-	2	2	-	1	1	-
CO5	2	3	-	1	-	2	-	-	-	1	-	2	3	-	1	1	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
AT305	SEMINAR	√	√	√			√	√	3,4



Integral University, Lucknow

Effective from Session: 2023-24							
Course Code	AT306	Title of the Course	CENTRAL STERILE SUPPLY DEPARTMENT(CSSD)PROCEDURES LAB	L	T	P	C
Year	III	Semester	V	0	0	2	1
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	The student will be able to demonstrate the practical knowledge in cssd.						

Course Outcomes	
CO1	To understand about the basic of pathological practical and also know the how to handle the equipment's.
CO2	
CO3	
CO4	
CO5	To understand about the basic of Quality Assurance Monitoring system.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	INVENTORY MAINTAINENCE AND STRILIZATION	<ol style="list-style-type: none"> How to maintain perfect inventory, Sterilization operation and monitoring. Basic trouble shooting methods. Practical knowledge on sterile storage and distribution, System of documentation, Sterilizer validation, Inventory management of surgical instruments. 	20	CO1-5
2	QUALITY ASSURANCE	Practical knowledge of quality assurance monitoring system, Physical/ chemical/ Biological indicators- Monitoring and record maintenance.	10	CO1-5

Reference Books:	
1.	Text book of Pathology - by Harsh Mohan
2.	Textbook of Pathology By Boyd
3.	General Pathology – by Bhende
4.	Pathologic basis of diseases by Cotran, Kumar, Robbins
5.	Textbook of Parasitology- K. D. Chatterjee (12 th Ed.)
6.	Text Book of Microbiology – Panikkar (9 th Ed.)
7.	Essentials of Medical Microbiology-Sastry Apurba Shankar (1 st Ed.)
8.	Textbook of Microbiology –P. Chakraborty

e-Learning Source:	
1.	https://www.youtube.com/watch?v=LEiN-pkYeRs
2.	https://www.youtube.com/watch?v=keXNin9IJSE
3.	https://www.youtube.com/watch?v=k_lxI_9PMA
4.	https://www.youtube.com/watch?v=kJ3Vsw4gnO0
5.	https://www.youtube.com/watch?v=LEiN-pkYeRs

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
	CO1	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1
CO2	1	3	1	3	-	-	-	1	3	-	-	3	-	2	-	2	-
CO3	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1	-
CO4	1	3	1	2	-	-	-	1	3	-	-	3	-	1	-	1	-
CO5	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
AT306	CENTRAL STERILE SUPPLY DEPARTMENT(CSSD)PROCEDURES LAB	√	√	√			√	√	3,4



Integral University, Lucknow

Effective from Session: 2023-2024							
Course Code	AT307	Title of the Course	ADVANCE ANESTHESIA TECHNIQUE LAB	L	T	P	C
Year	III	Semester	V	0	0	4	2
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives							

Course Outcomes	
CO1	Students will be able to learn about Picratemethod, Benedict's/ Uristixmethod
CO2	Students will be able to learn about Rothera Nitroprussidetest, Serum Amylase, Serum Lipase estimation
CO3	Students will be able to learn about Malloy–Evelyn method, BCG method
CO4	Students will be able to learn about Uricase/ PAP method
CO5	Students will be able to learn aboutSemi Autoanalyzer, Flame Photometer

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1.	NEURO ANAESTHESIA	<ul style="list-style-type: none"> Glasgow coma scale, CT, Angiography and MRI , Checklist , Induction of a patient. 	30	CO1
2.	OBSTETRIC ANAESTHESIA	<ul style="list-style-type: none"> Differences between a pregnant and a normal lady, anaesthesia. , Precautions to be taken , anaesthesia Check list, Regional vs general anaesthesia, Resuscitation of the newborn. 		CO2
3.	PEDIATRIC ANAESTHESIA	<ul style="list-style-type: none"> Check list , Premedication - modes , Induction ,Intubation - Securing the EIT. Reversal & extubation. Pain management. 		CO3
4.	CARDIAC ANAESTHESIA	<ul style="list-style-type: none"> NYHA classification. Setting up of monitoring system. Getting ready for the case. 		CO4

Reference Books:	
1.	Ajay Yadav Short Textbook of Anaesthesia Jaypee
2.	Anshul Jain Essentials of Anaesthesia& Critical Care Jaypee
3.	Principles of anaesthesia equipment's – Yasodhanandha arit
4.	The Anaesthesia Technologist's Manual by Emily S Guimaraes, Matthew Davis, Jeffrey R Kirsch, Glenn Woodworth
5.	Introduction to the Surgery by Marketa Duskova
e-Learning Source:	
5.	https://www.youtube.com/watch?v=aXt1DbdeBXk
6.	https://www.youtube.com/watch?v=esxafXkG6zk
7.	https://www.youtube.com/watch?v=GDcoeWBxOjc
8.	https://www.youtube.com/watch?v=vAL8H3idU6k

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
	CO1	1	3	2	2	-	-	-	1	2	1	-	2	-	2	2	1
CO2	1	3	1	3	-	-	-	2	3	-	-	3	-	1	1	1	-
CO3	1	3	1	2	-	-	-	1	2	2	-	2	-	1	1	1	-
CO4	1	3	1	2	-	-	-	1	3	-	-	3	-	1	2	1	-
CO5	1	3	1	2	-	-	-	1	2	1	-	2	-	1	1	1	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
AT307	ADVANCE ANESTHESIA TECHNIQUE LAB	√	√	√			√	√	3,4



Integral University, Lucknow

Effective from Session: 2023-24							
Course Code	AT308	Title of the Course	OT POSTING	L	T	P	C
Year	III	Semester	V	0	0	10	5
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Students will engage in clinical practice in Physiotherapy departments in the musculoskeletal, neurology, cardiopulmonary, sports settings to enhance their clinical skills and apply contemporary knowledge gained during teaching sessions.						

Course Outcomes	
CO1	To learn the punctuality and interaction with colleague and supporting staff during clinical training.
CO2	To develop assessment skills.
CO3	To develop appropriate treatment protocol.
CO4	To understand the importance of documentation of the case record and case presentation.
CO5	To develop discipline and improve overall quality of clinical work.

CLINICAL POSTING ASSESSMENT FORM

Name of Student:		Session:	
Enrolment Number:		Date:	
Name of Subject:	OT POSTING	Subject code:	AT308
Topics:			

S. No.	Point to be Considered	Max. Marks	Marks Obtained
1.	Punctuality	4	
2.	Interaction with colleagues and supporting staff	2	
3.	Maintenance of case records	3	
4.	Presentation of case during rounds	2	
5.	Maintained OT records	2	
6.	OT Manners	2	
7.	Rapport with patients	2	
8.	Assistance during operative procedures	3	
9.	Discipline	2	
10.	Overall quality of clinical work	3	
TOTAL SCORE		25	

(Name and signature of In-charge)

(Head, Paramedical)

GUIDELINES FOR CLINICAL TRAINING PROGRAM

The students of Post Graduate BAICT program must spend above mentioned allotted time period in the hospital based clinical training for specified clinical experiences to meet the objectives of the training program. This period of practical and theoretical experience will enable the students to acquire competency and experience to perform as an independent practice and will enable to adjust to the real practical life in different units in the hospital settings.

S.No.	Program Name	Year/Semester	Duration of Training
1.	BAICT	II Year/ V Semester	4 Months
2.		II Year/ V Semester	4 Months
3.		III Year/ V Semester	4 Months
4.		III Year/ V Semester	4 Months

By the successful completion of this clinical training period, the student is expected to fulfil the objectives of the program and will be examination as given below:

S.No.	Program Name	Year/Semester	Case file	Practical on Case	Voice/Viva	Attendance
1.	BAICT	II Year/ V Semester	10 Marks	10 Marks (1 Long Case and 2 Short Case)	25 Marks	5 Marks
2.		II Year/ V Semester				
3.		III Year/ V Semester				
4.		III Year/ V Semester				

EVALUATION OF CLINICAL POSTING

BAICT- Students has to prepare 1 long case and 2 short cases during their clinical posting. The evaluation for internal clinical examination of 50 marks will be distributed:

Cases during clinical posting=**25 marks.**

Viva voce =**20 marks**

Attendance=**5 marks**

PO-PSO CO	Course Articulation Matrix: (Mapping of COs with POs and PSOs)																
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	3	2	3	2	3	1	2	1	-	-	3	2	3	3	2
CO2	3	3	3	3	2	2	3	2	1	3	-	-	2	2	3	2	3
CO3	3	3	3	3	2	2	3	2	1	3	-	-	3	2	2	2	3
CO4	3	3	3	3	2	2	3	2	1	3	-	-	2	3	2	2	3
CO5	3	3	3	3	2	2	3	2	1	3	-	-	3	2	3	3	2

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
AT308	OT POSTING	√	√	√			√	√	3,4,11



INTEGRAL UNIVERSITY, LUCKNOW
INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES & RESEARCH

DEPARTMENT OF PARAMEDICAL SCIENCES

**BACHELOR OF SCIENCE IN ANESTHESIOLOGY AND INTENSIVE CARE
TECHNOLOGY
(B. Sc. AICT)**

SYLLABUS

YEAR/ SEMESTER: III/VI



Integral University, Lucknow
Department of Paramedical Sciences
Study and Evaluation Scheme

Program: BAICT

Semester-VI

S. N.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Sub. Total	Credit	Total Credits
				L	T	P	CT	TA	Total	ESE			
THEORIES													
1	AT309	Advanced Surgical Procedures	Core	3	1	0	40	20	60	40	100	3:1:0	4
2	AT310	Advanced Intensive Care	Core	3	1	0	40	20	60	40	100	3:1:0	4
3	AT311	Specialized Anesthesia	Core	3	1	0	40	20	60	40	100	3:1:0	4
PRACTICAL													
1	AT312	Advanced Surgical Procedures Lab	Core	0	0	4	40	20	60	40	100	0:0:2	2
2	AT313	Advanced Intensive Care Lab	Core	0	0	4	40	20	60	40	100	0:0:2	2
3	AT314	OT Posting	Core	0	0	8	40	20	60	40	100	0:0:4	4
4	AT315	Dissertation	Core	0	0	10	40	20	60	40	100	0:0:5	5
Total				09	03	26	280	140	420	280	700	25	25

S. N.	Course code	Course Title	Type of Paper	Attributes							United Nation Sustainable Development Goal (SDGs)
				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
THEORIES											
1	AT309	Advanced Surgical Procedures	Core	√	√	√			√	√	3,4
2	AT310	Advanced Intensive Care	Core	√	√	√			√	√	3,4
3	AT311	Specialized Anesthesia	Core	√	√	√			√	√	3,4
PRACTICAL											
1	AT312	Advanced Surgical Procedures Lab	Core	√	√	√			√	√	3,4
2	AT313	Advanced Intensive Care Lab	Core	√	√	√			√	√	3,4
3	AT314	OT Posting	Core	√	√	√			√	√	3,4
4	AT315	Dissertation	Core	√	√	√			√	√	3,4

L: Lecture

T: Tutorials

P: Practical

CT: Class Test

TA: Teacher Assessment

ESE: End Semester Examination, **AE=** Ability Enhancement, **DSE-** Discipline Specific Elective, **Sessional**



Integral University, Lucknow

Effective from Session: 2024-25							
Course Code	AT309	Title of the Course	ADVANCED SURGICAL PROCEDURES	L	T	P	C
Year	III	Semester	VI	2	1	0	3
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Acquire the knowledge of concepts of basic and advanced surgical procedures. Pre-Operative and Post-operative care and functioning of operation theatre.						

Course Outcomes	
CO1	Students able to understand the basics of surgery.
CO2	Students able to understand the pre-operative and post-operative care of surgical patients.
CO3	Students able to understand operation tables and diathermy.
CO4	Students able to understand operation lights and endoscopy equipment.
CO5	Students able to learn about operative microscope.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	BASICS OF SURGERY	Basics of surgery – History of Surgery, role of the surgeon, importance of teamwork and anticipating the needs of surgeons; stresses that may arise during operative procedure - surgical terminology, types of incision and indications for the use of incision; - Hemorrhage-signs and symptoms of internal and external; classification and management; - identification of types of tourniquets reasons for use and duration of application, dangers of use.	8	CO1
2	PRE-OPERATIVE AND POST-OPERATIVE CARE	Wounds, types, process of healing, treatment and complications; inflammation; wound infections, causes and treatment; incision and drainage of abscess; importance of personal cleanliness and aseptic techniques; - Pre-operative and post-operative care of the surgical patient; Emergency procedures; - Knowledge of surgical asepsis, skin preparation for invasive procedures	8	CO2
3	OPERATION TABLES AND DIATHERMY/CAUTERY MACHINES	Operation tables - Features, material used in fabrication and advantages of the material. - Care, maintenance and uses. - Controls-Hydraulic system, Electrical System. Diathermy/Cautery Machines: - Different types of diathermy and cautery machines, monopolar, - Bipolar and underwater working. - Structural features of diathermy and cautery machines. - Types of active and passive electrodes. - Care, maintenance and uses. - Prevention of hazards.	8	CO3
4	OPERATION LIGHTS AND ENDOSCOPY EQUIPMENT	Operation Lights: - Types of Operation Lights and other Light sources. - Structural features, care cleaning carbolisation, maintenance and uses. Endoscopy Equipment - Types of endoscopes, Rigid & fiber - optic scopes i.e. Bronchoscope, Oesophago – gastro - I scope, laproscopes, Cystoscopes and ephroscope etc. - Their structural features, uses care maintenance.	8	CO4
5	OPERATING MICROSCOPE	Operating Microscope: Types and features. - Principle structural features operating microscope - microscopic photography and cameras used - Care, maintenance and uses - Glasses used and property	8	CO5

Reference Books:

- Kapur. Introduction to Surgical Instruments & Procedures for Undergraduates, 2e Paperback – 1 January 2009.
- C J S Thompson. The History and Evolution of Surgical Instruments Hardcover – Import, 30 March 2010.
- R S Saha and A Mandal. A Practical Guide to Surgical Instrument and Procedure: A Practical Guide to Surgical Instrument and Procedure, 91pages, 2022.
- Rajendra Singh Sewta. Manual of Surgical Equipment. 384pages, Jaypee Publications. 2010.
- Prof Puneet. Roshan Lall Gupta's Recent Advances in Surgery (Volume 18), 314pages, Jaypee Publications. 2024.

e-Learning Source:

- <https://pmc.ncbi.nlm.nih.gov/articles/PMC1964625/>
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC2628030/>
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC2605303/>
- https://iris.who.int/bitstream/handle/10665/44185/9789241598552_eng.pdf

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	3	-	2	-	-	1	2	-	1	3	-	1	1	-
CO2	3	3	-	2	-	2	-	-	2	3	-	1	3	-	1	1	-
CO3	3	3	-	3	-	2	-	-	1	2	-	1	3	-	2	2	-
CO4	3	3	-	3	-	2	-	-	1	2	-	1	3	-	1	1	-
CO5	3	3	-	2	-	2	-	-	1	3	-	1	3	-	1	1	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
AT309	ADVANCED SURGICAL PROCEDURES	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4
		√	√	√			√	√	



Integral University, Lucknow

Effective from Session: 2024-25							
Course Code	AT310	Title of the Course	ADVANCED INTENSIVE CARE	L	T	P	C
Year	III	Semester	VI	2	1	0	3
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	At the end of the course, the candidate will have sound knowledge of ventilation, modes of ventilation, weaning and extubation, airway assistance and able to give life support therapy.						

Course Outcomes	
CO1	Students able to understand the mechanism of ventilation.
CO2	Students able to understand the modes of ventilation.
CO3	Students able to understand the weaning and extubation.
CO4	Students able to understand the airway assistance.
CO5	Students able to give life support.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	BASIC CONCEPT OF MECHANICS OF VENTILATION	1. Basic Concept of Mechanics of ventilation. 2. Mechanics of exhalation 3. Work of breathing 4. Distribution of ventilation 5. Efficiency and effectiveness of ventilation Indications 6. Mechanical Ventilators How ventilators work, Operator interface Types of ventilators	6	CO1
2	MODES OF MECHANICAL VENTILATION	1. Modes of Mechanical Ventilation: Basic and newer modes Ventilator initiation 2. Initial ventilator settings 3. Adjusting ventilatory settings 4. Oxygenation 5. Ventilation: Timing – Inspiratory of gas / Expiratory, inspiratory hold Flow 6. Tidal volume 7. Pressure- Peak /Plateau PEEP, POP – OFF, Pressure support, Proximal airway (VS) distal FiO2	6	CO2
3	WEANING AND EXTUBATION	1. Weaning; Definitions 2. Reasons for ventilator dependence Patient evaluation. 3. Preparing patient Methods. 4. Newer techniques for facilitating ventilator discontinuance Selecting an approach Monitoring the patient during weaning. 5. Chronically, ventilator dependent on patients & difficulty in weaning. 6. Terminal Weaning 7. Extubation; Indications Procedure, Post extubation care	6	CO3
4	AIRWAY ASSISTANCE	1. Tracheal intubation (oral, nasal) – Insertion of ICD. 2. Cricothyrotomy. 3. Open/percutaneous tracheostomy. 4. Fiberoptic bronchoscopy Section 1: FOB Intubation 63 Section 1: Therapeutic BAL Decannulation of tracheostomy.	6	CO4
5	LIFE SUPPORT	1. Basic life support • AED, Mask ventilation, Chest compression. 2. Advanced cardiac life support • Drugs, defibrillation. 3. Trauma life support A –Airway and cervical spine stabilization B – Breathing C –Circulation and hemorrhage control D –Disability E-Exposure D Manual in line stabilization on Basic care of surgical wounds and fractures. 4. Burns Assessment Section 1: History and physical assessment Section 2: Assessment of burns and fluid and electrolyte loss Section3: Etiology classification, Pathophysiology, clinical manifestations, Diagnosis, treatment modalities	6	CO5

Reference Books:

1. Deepak Malviya, Soumya Sankar Nath, Prabhat K Singh, Mukesh Tripathi, Dinesh K Singh, Soniya Nityanand, Rajesh Misra. Handbook of Critical Care Perfect, Paras Medical Publisher; 1st Edition 2022 (1 January 2022)
2. S K Kabra Rakesh Lodha. Paediatrics Intensive Care protocol AIIMS By Indian Journal (31 December 2022); Indian Journal of Pediatrics.
3. Dr. Vandana P. Patil Ms. Reshma R. Patil, Ms. Ashwini R. Patil, Ms. Renuka B. Dhakne. Textbook of Procedures in Emergency Care. IP Innovative Publication Pvt. Ltd; First Edition (31 December 2022); 011 2324 3015
4. Anthony McLean, Stephen Huang, and Andrew Hilton. Oxford Textbook of Advanced Critical Care Echocardiography. 12 May 2020, 392 Pages.
5. Suveer Singh, Paolo Pelosi, and Andrew Conway Morris. Oxford Textbook of Respiratory Critical Care. 13 January 2024, 584 Pages

e-Learning Source:

1. <https://jintensivecare.biomedcentral.com/articles/10.1186/s40560-019-0402-4>
2. <https://pubmed.ncbi.nlm.nih.gov/articles/PMC8495525/>
3. <https://pubmed.ncbi.nlm.nih.gov/articles/PMC7877163/>
4. <https://pubmed.ncbi.nlm.nih.gov/articles/PMC5956686/>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																		
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	3	3	-	1	-	1	-	-	1	1	-	1	2	-	1	1	-	3
CO2	2	3	-	2	-	2	-	-	-	1	-	2	3	-	2	2	-	2
CO3	3	3	-	1	-	1	-	-	1	1	-	1	2	-	1	1	-	3
CO4	2	3	-	1	-	2	-	-	-	1	-	2	2	-	1	1	-	2
CO5	2	3	-	1	-	2	-	-	-	1	-	2	3	-	1	1	-	2



Integral University, Lucknow

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
AT310	ADVANCED INTENSIVE CARE	√	√	√	√		√	√	3,4



Integral University, Lucknow

Effective from Session: 2024-25							
Course Code	AT311	Title of the Course	SPECIALIZED ANESTHESIA	L	T	P	C
Year	III	Semester	VI	3	1	0	4
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	This course deals with specialized anesthesia such as neuro-anesthesia, pediatric anesthesia, ENT anesthesia, cardiac anesthesia, and anesthesia outside the operation room and day care anesthesia.						

Course Outcomes: After the successful course completion, learners will develop the following attributes:	
CO1	Students will be able to learn about neuro-anesthesia.
CO2	Students will be able to learn about pediatric anesthesia.
CO3	Students will be able to learn about ENT anesthesia.
CO4	Students will be able to learn about cardiac anesthesia.
CO5	Students will be able to learn about anesthesia outside the operation room and day care anesthesia

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	NEURO ANAESTHESIA	NEURO ANAESTHESIA - Glassgow coma scale - Premedication - Special investigation - CT, Angiography and MRI - Checklist - Induction of a patient - Reinforced Endotracheal tubes - Positioning in neurosurgery - I.C.P. - Air embolism - Reversal of the patient - Transferring to I.C.U. / Ward	8	CO1
2	PAEDIATRIC ANAESTHESIA	PAEDIATRIC ANAESTHESIA - Theatre setting - Check list - Premedication – modes - Induction - Intubation - Securing the EIT - Reversal & extubation – Problems - Transferring / ICU management - Pain management	8	CO2
3	ENT ANAESTHESIA	ENT Anesthesia - Anesthesia for adenotonsillectomy - Anesthesia for mastoidectomy - Bronchoscopy and esophagoscopy.	8	CO3
4	CARDIAC ANAESTHESIA	CARDIAC ANAESTHESIA: - NYHA classification - Arrhythmias - Angina - Dyspnea - Special investigations - echo cardiography - angiography - Premedication - Setting up of monitoring system - Monitoring - invasive and non – invasive - Getting ready for the case - Induction of cardiac patient, precautions to be taken - Cardiopulmonary bypass - Weaning of CPB - Transferring the patient to ICU. - Care to be taken - I.C.U management. - Chest tube management	8	CO4
5	ANAESTHESIA OUTSIDE THE OPERATION ROOM AND DAY CARE ANAESTHESIA	ANAESTHESIA OUTSIDE THE Operation Room - Situations - Cath Lab - Radiology - E.C.T. - Short comings. DAY CARE ANAESTHESIA - Special features - Set up - Advantages - Disadvantages - Complications - Future	8	CO5

Reference Books:

1. Dwarkadas K Baheti Understanding Anesthetic Equipment & Procedures: A Practical Approach Paperback – 1 January 2021.
2. The ICU Book – Paul L Marino (Lippincott, Williams & Wilkins)
3. Rebecca Jacob, Vibhavari Naik. Understanding Paediatric Anaesthesia, 4ed Paperback – 1 January 2023.
4. Critical Care Secrets: Parsons, Wiener – Kronish, Jaypee Brothers
5. Malamed. Handbook of Local Anesthesia, 7e: South Asia Edition Paperback – 1 January 2019.

e-Learning Source:

1. <https://www.ncbi.nlm.nih.gov/sites/books/NBK606110/>
2. <https://www.ncbi.nlm.nih.gov/books/NBK542219/>
3. <https://pubmed.ncbi.nlm.nih.gov/30601216/>
4. <https://pubmed.ncbi.nlm.nih.gov/34144873/>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	2	2	-	-	-	1	2	1	-	2	2	1	-	1	-
CO2	1	3	1	3	-	-	-	2	3	-	-	3	3	2	-	2	-
CO3	1	3	1	2	-	-	-	1	2	2	-	2	3	1	-	1	-
CO4	1	3	1	2	-	-	-	1	3	-	-	3	2	1	-	1	-
CO5	1	3	1	2	-	-	-	1	2	1	-	2	2	1	-	1	-

1-Low Correlation; 2-Moderate Correlation; 3-Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
AT311	SPECIALIZED ANESTHESIA	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4
		√	√	√	√		√	√	



Integral University, Lucknow

Effective from Session: 2023-24							
Course Code	AT312	Title of the Course	ADVANCED SURGICAL PROCEDURES LAB	L	T	P	C
Year	III	Semester	VI	0	0	2	1
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	The student will be able to demonstrate practical knowledge in Operation Theatre.						

Course Outcomes	
CO1	To understand pre-operative and post-operative care.
CO2	
CO3	
CO4	To understand the advanced surgical procedures and know how to handle the equipment's related to surgery.
CO5	

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	PRE-OPERATIVE AND POST-OPERATIVE CARE	PRE-OP PREPARATION: 1. Pre-anesthetic assessment, History – past disease / Surgery / and personal history - Smoking / alcohol General physical assessment, systemic examination – CVS, RS, CNS. 2. Routine Investigation- Hematological - their significance - Urine - E.C.G. - Chest X – ray - Special Endocrine, hormonal assays - Echocardiography - Angiography - Liver function test - Renal function test - Others - Case acceptance: ASA grading - I, II, III, IV. V. POST-OPERATIVE CARE 1. Confirm the identification of the patient. 2. Monitoring – minimum - Noninvasive & Invasive monitoring. 3. Induction - drugs used - Endotracheal intubation - Maintenance of anesthesia. 4. Positioning of the patient. 5. Blood / fluid & electrolyte balance. 6. Reversal from anesthesia - drugs used – 7. Transferring the patient. 8. Recovery room – set up and things needed	20	CO1-5
2	HANDLE THE EQUIPMENT'S RELATED TO SURGERY	1. Operation Tables 2. Diathermy/Cautery Machines 3. Operation Lights 4. Endoscopy Equipment 5. Operating Microscope	10	CO1-5

Reference Books:

- Kapur. Introduction to Surgical Instruments & Procedures for Undergraduates, 2e Paperback – 1 January 2009.
- C J S Thompson. The History and Evolution of Surgical Instruments Hardcover – Import, 30 March 2010.
- R S Saha and A Mandal. A Practical Guide to Surgical Instrument and Procedure: A Practical Guide to Surgical Instrument and Procedure, 91pages, 2022.
- Rajendra Singh Sewta. Manual of Surgical Equipment. 384pages, Jaypee Publications. 2010.
- Prof Puneet. Roshan Lall Gupta's Recent Advances in Surgery (Volume 18), 314pages, Jaypee Publications. 2024.
- Kapur. Introduction to Surgical Instruments & Procedures for Undergraduates, 2e Paperback – 1 January 2009.
- C J S Thompson. The History and Evolution of Surgical Instruments Hardcover – Import, 30 March 2010.
- R S Saha and A Mandal. A Practical Guide to Surgical Instrument and Procedure: A Practical Guide to Surgical Instrument and Procedure, 91pages, 2022.

e-Learning Source:

- <https://pmc.ncbi.nlm.nih.gov/articles/PMC1964625/>
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC2628030/>
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC2605303/>
- https://iris.who.int/bitstream/handle/10665/44185/9789241598552_eng.pdf
- <https://pmc.ncbi.nlm.nih.gov/articles/PMC1964625/>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
	CO1	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1
CO2	1	3	1	3	-	-	-	1	3	-	-	3	-	2	-	2	-
CO3	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1	-
CO4	1	3	1	2	-	-	-	1	3	-	-	3	-	1	-	1	-
CO5	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.	
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics		
AT312	ADVANCED SURGICAL PROCEDURES LAB	√	√	√				√	√	3,4



Integral University, Lucknow

Effective from Session: 2023-2024							
Course Code	AT313	Title of the Course	ADVANCED INTENSIVE CARE LAB	L	T	P	C
Year	III	Semester	VI	0	0	4	2
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	At the end of the course, the candidate will have sound knowledge of ventilation, modes of ventilation, weaning and extubation, airway assistance and able to give life support therapy.						

Course Outcomes	
CO1	Students will be able to learn about monitoring and diagnostic procedures in ICU.
CO2	Students will be able to learn about infectious diseases in ICU.
CO3	Students will be able to learn about cardiovascular failure.
CO4	Students will be able to learn about ventilators.
CO5	Students will be able to learn about regional anesthesia techniques.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1.	MONITORING AND DIAGNOSTIC PROCEDURES IN I.C.U.	1. Central Venous access. 2. ECG monitoring. 3. Invasive hemodynamic monitoring	30	CO1
2.	INFECTIOUS DISEASES IN I.C.U.	1. Antibiotics in I.C.D. 2. Oxygen therapy 3. Mechanical ventilation		CO2
3.	CARDIOVASCULAR FAILURE	1. Inotropic support. 2. Vaso dilator drugs.		CO3
4.	VENTILATORS	1. Principles of working of different ventilators. 2. Volume cycles ventilators. 3. Time cycle ventilators. 4. Pressure cycles ventilators. 5. High Frequency ventilators etc.		CO4
5.	REGIONAL ANAESTHETIC TECHNIQUES	1. Local anesthetic technique - Nerve blocks. 2. Spinal Anesthesia - Epidural anesthesia. 3. Ultrasound guided nerve blocks.		CO5

Reference Books:	
1. Ajay Yadav Short Textbook of Anesthesia Jaypee	
2. Anshul Jain Essentials of Anesthesia & Critical Care Jaypee	
3. Principles of anesthesia equipment 's – Yasodhanandha arit	
4. The Anesthesia Technologist's Manual by Emily S Guimaraes, Matthew Davis, Jeffrey R Kirsch, Glenn Woodworth	
5. Introduction to the Surgery by Marketa Duskova	
e-Learning Source:	
1. https://www.ncbi.nlm.nih.gov/sites/books/NBK606110/	
2. https://www.ncbi.nlm.nih.gov/books/NBK542219/	
3. https://pubmed.ncbi.nlm.nih.gov/30601216/	
4. https://pubmed.ncbi.nlm.nih.gov/34144873/	

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																		
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	1	3	2	2	-	-	-	1	2	1	-	2	-	2	2	1	-	
CO2	1	3	1	3	-	-	-	2	3	-	-	3	-	1	1	1	-	
CO3	1	3	1	2	-	-	-	1	2	2	-	2	-	1	1	1	-	
CO4	1	3	1	2	-	-	-	1	3	-	-	3	-	1	2	1	-	
CO5	1	3	1	2	-	-	-	1	2	1	-	2	-	1	1	1	-	

1-

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.	
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics		
AT313	ADVANCED INTENSIVE CARE LAB	√	√	√				√	√	3,4



Integral University, Lucknow

Effective from Session: 2023-24							
Course Code	AT314	Title of the Course	OT POSTING	L	T	P	C
Year	III	Semester	VI	0	0	10	5
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Students will engage in clinical practice in Anesthesia and Operation Theatre departments in the ICU/NICU/SICU, Dialysis Unit, Emergency Department and CSSD to enhance their clinical skills and apply contemporary knowledge gained during teaching and practical sessions.						

Course Outcomes	
CO1	To learn punctuality and interaction with colleagues and support staff during clinical training.
CO2	To develop assessment skills.
CO3	To develop appropriate treatment protocol.
CO4	To understand the importance of documentation of the case record and case presentation.
CO5	To develop discipline and improve overall quality of clinical work.

CLINICAL POSTING ASSESSMENT FORM

Name of Student:		Session:	
Enrolment Number:		Date:	
Name of Subject:	OT POSTING	Subject code:	AT308
Topics:			

S. No.	Point to be Considered	Max. Marks	Marks Obtained
1.	Punctuality	4	
2.	Interaction with colleagues and supporting staff	2	
3.	Maintenance of case records	3	
4.	Presentation of case during rounds	2	
5.	Maintained OT records	2	
6.	OT Manners	2	
7.	Report with patients	2	
8.	Assistance during operatives' procedures	3	
9.	Discipline	2	
10.	Overall quality of clinical work	3	
TOTAL SCORE		25	

(Name and signature of In-charge)

(Head, Paramedical)

GUIDELINES FOR CLINICAL TRAINING PROGRAM

The students of the Post Graduate BAICT program must spend the above-mentioned allotted time period in the hospital based clinical training for specified clinical experiences to meet the objectives of the training program. This period of practical and theoretical experience will enable the students to acquire competency and experience to perform as independent practice and will enable to adjust to the real practical life in different units in the hospital settings.

S.No.	Program Name	Year/Semester	Duration of Training
1.	BAICT	IInd Year/ IIIrd Semester	4 Months
2.		IInd Year/ IVth Semester	4 Months
3.		IIIrd Year/ Vth Semester	4 Months
4.		IIIrd Year/ VIth Semester	4 Months

By the successful completion of this clinical training period, the student is expected to fulfil the objectives of the program and will be examination as given below:

S.No.	Program Name	Year/Semester	Case file	Practical on Case	Voice/Viva	Attendance
1.	BAICT	IInd Year/ IIIrd Semester	10 Marks	10 Marks (1 Long Case and 2 Short Case)	25 Marks	5 Marks
2.		IInd Year/ IV th Semester				
3.		IIIrd Year/ Vth Semester				
4.		IIIrd Year/ VIth Semester				

EVALUATION OF CLINICAL POSTING

BAICT- Students must prepare 1 long case and 2 short cases during their clinical posting. The evaluation for internal clinical examination of 50 marks will be distributed:

Cases during clinical posting=**25 marks.**

Viva voce =**20 marks**

Attendance=**5 marks**

PO-PSO CO	Course Articulation Matrix: (Mapping of COs with POs and PSOs)																
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	3	2	3	2	3	1	2	1	-	-	3	2	3	3	2
CO2	3	3	3	3	2	2	3	2	1	3	-	-	2	2	3	2	3
CO3	3	3	3	3	2	2	3	2	1	3	-	-	3	2	2	2	3
CO4	3	3	3	3	2	2	3	2	1	3	-	-	2	3	2	2	3
CO5	3	3	3	3	2	2	3	2	1	3	-	-	3	2	3	3	2

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.	
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics		
AT314	OT POSTING	√	√	√				√	√	3,4,11

