

EKLAVYA

UNIVERSITY

ज्ञानप्राप्तये लक्ष्यसन्धानम्

Sagar Road, Damoh (M.P.), Bharat

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Eklavya University, Damoh (MP)

O.T.

Syllabus 2022-23

School of Nursing & Paramedical Science



EKLAVYA
UNIVERSITY

ज्ञान प्राप्ते लक्ष्य संधानम्

ESTD. by Marhya Pradesh Nij Vishwavidyalaya (Nishpana Aaram Sanchalanat Adhyadesh 2020)

School Of Nursing & Paramedical Science

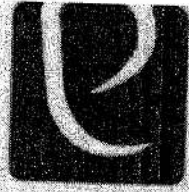
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**Department of
paramedical Science**

Syllabus

For

Certificate in Operation Theatre Technician



EKLAVYA
UNIVERSITY

ज्ञानं प्राप्स्ये लक्ष्यं संधानम्

Estd. by Madhya Pradesh Niji Vishwavidyalaya (Shekara) Awar, Bhopal, Madhya Pradesh, 2020

School Of Nursing & Paramedical Science

Certificate in Operation Theatre Technician

VISION STATEMENT OF EKLAVYA UNIVERSITY

Eklavya University, will transform lives and communities through learning.

MISSION STATEMENT OF EKLAVYA UNIVERSITY

- Nurture achievers in life and careers through a value based, industry relevant and future ready education.
- Emphasize research, interdisciplinary learning, and practical hands on education.
- Equip every student with the required social and technical skills to achieve employment generation.
- Provide a holistic education deeply rooted in the ways of the traditional Gurukul system.
- Bring quality education within the reach of every individual, by committing to the achievement and maintenance of excellence in education, research and innovation.
- Create and disseminate knowledge through research and creative inquiry.
- Serve students by teaching them problem solving, leadership and teamwork skills, lateral thinking, commitment to quality and ethical behaviour.
- Create a diverse community, open to the exchange of ideas, where discovery, creativity, and personal and professional development is encouraged and can flourish.
- Contribute to the social fabric and economic health of the Bundelkhand region, the state and

the country at large, by enhancing and facilitating economic empowerment, providing equal opportunities and employment generation.

VISION STATEMENT OF DEPARTMENT

To establish & develop world class self reliant institute for imparting Medical and other Health Science education at under-graduate, post-graduate & doctoral levels of the global competence.

To serve & educate the public, establish guidelines & treatment protocols to be followed by treating hospitals.

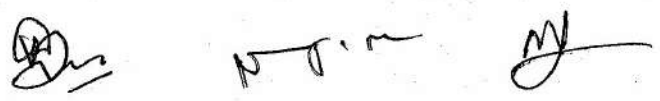
an operation theatre (OT) technologist forms an integral part of the operation theatre in any hospital and facilitates the surgical procedures, by preparing in the equipment that are necessary for any surgical procedures. He/she also looks after all the work and management of the operation theatre which includes managing the patients in and out of operation theatre, looking after all the surgical equipment, arrangement of operation theatre table, dressing table, anaesthesia table as well as management of the staff. The technologist is trained in various surgical branches such as General Surgery, OBG, Cardiac, Orthopaedics and Urology.

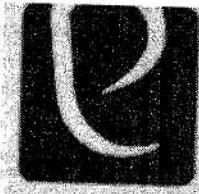
MISSION STATEMENT OF DEPARTMENT

To practice medicine ethically in line with the global standard protocols.

To inculcate high moral, ethical and professional standards among students and to improve their overall personality as well as to inculcate compassionate behavior.

The purpose of the programme is creation of knowledgeable human resources to work in government, semi-government, private and public sector owned hospitals and health care organizations and also to assume administrative positions. With further progression in education, graduates should be able to undertake teaching and research in colleges and universities as well as in scientific organizations.





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Estd. by Madhya Pradesh Nij Vishwavidyalaya (SUNepa Avam) Barchakamal Achhivedra, 2020

Certificate in Operation Theatre Technician

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

1. Students will understand the role and scope of the operation theatre technology in the healthcare setting with respect to preoperative and postoperative care of the patient.
2. Students will develop skills necessary to identify the treatment procedures and requirements based on various surgeries or operating procedures.
3. Students will be able to educate patients on strategies to prepare the patient coming for the operational procedures.
4. Students will develop continuous professional and technical growth so as to become a professional and successful team leader.
5. Students will be able to apply principles of safe practice in operation theatre technology.
6. Student will be able to demonstrate skills in maintenance of complete operation theatre room.
7. Demonstrate ability to prepare and maintain Operation Theatre
8. Demonstrate ability to maintain equipment support in an acute care environment
9. Identify and inspire to maintain a sterile field
10. Follow infection control policies and procedures
11. Manage and maintain theatre equipment
12. Demonstrate ability to prepare the patient for operative procedures
13. Provide intra-operative equipment and technical support
14. Demonstrate skills and knowledge to assist anaesthetist in handling emergencies outside of OT Room
15. Manage hazardous waste and follow biomedical waste disposal protocols.



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School Of Nursing & Paramedical Science

ज्ञान प्राप्तये लक्ष्य संधानम्

Established by Madhya Pradesh Niji Vicharvidyalaya (Shiksha Avam Sanchalanal Adhyadesh), 2020

Certificate in Operation Theatre Technician

PROGRAMME OUTCOMES (POs)

Upon the completion of the course student will be able to:

- Apply the knowledge and skills of handling operation theatre room to provide safe and effective care to individual undergoing operational procedures.
- Demonstrate relative knowledge and understanding of vital parameters to be maintained during respective operations.
- Skills to access, analyze and evaluate the information gathered during the treatment.
- Demonstrate the ability to plan, organize and report different diagnosis related to treatment.
- Assesses the patient for any complications with an understanding of the problem and recognizes the need to report the complications to the surgery.
- Understand professional and ethical responsibilities in patient care.
- Responds effectively to the physical and emotional needs of the patient undergoing surgical treatment.
- Understanding of standard operating procedures and protocols for treatment/research work.
- Develop skills of good clinical practice as an individual and as a team member.
- Use of recent technologies to provide better healthcare services.
- Identify and apply the new development in operation theatre technology through continuing education and research.

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ज्ञानं प्राप्तये लक्ष्यं संस्थानम्

Estd. by Madhya Pradesh Nij Vishwavidyalaya (Siksha Pro. Anon. Sanctioned) Ahyadesh, 2020

School Of Nursing & Paramedical Science

Certificate in Operation Theatre Technician

PROGRAMME SPECIFIC OUTCOMES (PSOs)

The key outcomes planned in this undergraduate programme in are underpinned as follows:

1. Demonstrate ability to prepare and maintain Operation Theatre
2. Provide intra-operative equipment and technical support
3. Demonstrate skills and knowledge to assist anaesthetist in handling emergencies outside of OT Room
4. Manage hazardous waste and follow biomedical waste disposal protocols
5. Ensure availability of medical and diagnostic supplies
6. Monitor and assure quality
7. Work effectively as a team member
8. Maintain a safe, healthy, and secure working environment
9. The primary objective of this programme is to impart students with required adeptness in handling and shifting patients to wards and recovery room
10. Train students in managing the operation theatre and assisting anesthetists during procedures.
11. Train students about managing emergency situations and on the usage of life threatening procedures
12. Students will learn to perform tests that assist in the diagnosis and treatment of several diseases

09
13. Students will gain knowledge and skills requisite to handle advanced lab equipment and execute accurate laboratory tests. Students will be trained to perform these responsibilities with high precision

14. Students will be trained to be assistive to doctor to take care of patients in pre intra- and postoperative room

15. On completion of the course, students can begin working as an Operation Theatre Technician. They can be found playing various roles in the operation theatre, like Scrubbed Assistant or Anesthetist Helper. One can progress in this career path and may rise up the ladder by specializing in cardiac, fertility, cancer, orthopedics, or other surgical OTs.



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Est'd. by Madhya Pradesh Niji Vishwavidyalaya (Sheepna Avam Sanchalanai) Anbhyaresh, 2020

Department of Paramedical

SYLLABUS

Certificate in Operation Theatre Technician

ONE YEAR CERTIFICATE COURSE

Year	1st Year
Subject	ANATOMY & PHYSIOLOGY
Time	190Hrs.

ANATOMY & PHYSIOLOGY

Course Objectives:

1. Basic understanding of Ethics, Discipline, Layout, Equipment in OT
2. Technique of receiving, shifting and handling over patients to Wards and Recovery Room.
3. Basics of Anaesthesia related things- Equipments
4. Positioning of patients in different operations and anaesthesia
5. Principles of IV line, fluids, transfusion and C.P.R.
6. Laying out of instrument trolleys for different operations.

Course Outcome:

1. Construct an understanding of the history and underlying themes of biology, especially regarding evolution, organismal diversity, and ecology. Explore how the study of biology impacts quality of life.
2. Become acquainted with how scientific information is presented. Develop higher order written and oral communication.
3. Use the scientific method to analyze and evaluate problems and information.
4. Become acquainted, at an introductory level, with major physiological principles among animals.

Student Learning Outcomes (SLO):

1. Students will be able to demonstrate their ability to perform an appropriate primary/initial assessment of the ill or injured patient in the pre hospital setting.
2. Students will be able to demonstrate their ability to perform an appropriate secondary/focused history and physical exam of the trauma patient in the pre-hospital setting.
3. Students will be able to perform an appropriate secondary/focused history and physical exam for patients with medical complaints or signs and symptoms in the pre-hospital setting.
4. Students will be able to formulate an appropriate treatment plan to include administration of IV fluids and/or pharmacological medications for the trauma patient in the prehospital setting.

Unit – 1	38
Elementary Physics & Chemistry, Characteristics of Living Matter, Structure of Living Matter, The Tissues , Systems and Various Parts of Human Body.	
Unit – 2	38
Development & Types of Bones, Bones of Head & Trunk, Bones of the Limbs , Joints or Articulations , Structure and action of Muscles, The chief Muscles of the Body, The Brain.	
Unit – 3	38
The Heart and Blood Vessels, The Circulatory System , The Lymphatic System , The Respiratory System , The Digestive System, The Liver, Biliary System and Pancreas.	

Unit - 4

38

Nutrition & Metabolism , Endocrine Glands and Exocrine Glands. The Urinary System , The Nervous System.

Unit - 5

38

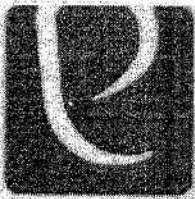
The ear , The Eye, The Skin. The Reproductive System.

Mode: Flipped Class Room, Case Discussion, Lectures.

Suggested Reading:

1. Anatomy & Physiology by Evelyn.C.Pearce
2. Synopsis of Medical Instruments by Arora&Yadav
3. Operation Theatre Technique by Rashmi.J.Patil
4. A text book of Social and Preventive Medicine by J.E.Park

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School Of Nursing & Paramedical Science

ज्ञानं प्राप्तये लक्ष्यं संधानम्

Estd. by Madhya Pradesh Jiji Vishwavidyalaya (Sithona Awar Sanchalana) Jabalpur, 2010.

Department of Paramedical

SYLLABUS

Diploma in O.T. Technician One YEAR Certificate COURSE

Year	1st Year
Subject	ANAESTHESIA
Time	55 Hrs.

ANAESTHESIA

Course Objectives:

1. To understand the safe anaesthesia technique.
2. To obtain knowledge the proper functioning of anesthetic equipments.
3. To understand emergency procedures in and out side the operation theatre.
4. Tounderstand procedure to handle anesthesia equipments.
5. Tounderstand pre and post operative safety of patients.

Course Outcome:

1. Student will be able to understand post operativerecovery .
2. Student will be able to monitor the anesthetize patient.
3. Student will be able to demonstrate patient's.
4. Student will bedemonstrate personal and professional integrity.
5. Student will beunderstand general factors help to determined anesthetic plan.

Student Learning Outcomes (SLO):

1. Student will be able to understand General Anesthesia.
2. Student will be able to understand Surgical Procedures & Monitoring, Safety for operation room personnel.
3. Student will be able to understand GynaecologicalAnd Obstetric Trays.
4. Student will be able to understand Basic orthopedic procedures tray.
5. Student will be able to understand Pediatric major procedures tray.

Unit - 1

11

(Including Different Methods and Procedures for Anaesthesia, Preparation of Patient for Anesthesia, Intensive Care etc.)

Anaesthesia: General information , General Anesthesia, Conduction.

General Anaesthesia: Conduction AnaesthesiaSpinal , Epidural, Caudal, Local Topical.

Unit - 2

11

METHODS FOR PREPARATION OF THE PATIENTS FOR ANAESTHESIA: Methods for Procedures (During & After Operation) Surgical Procedures And Monitoring, Operation Theatre Ethics/ Discipline, Safety For Operating Room Personnel, Preparation Of Instrumental Trays, National Health Programmes& Policy And Health Care Delivery System In The Country Etc.

Surgical Procedures & Monitoring, Safety for operation room personnel: In service education , Body mechanic, Fatigue factors , Radiation Safety Infection Control, Chemical hazards, Preparation of Instrumental Trays, Major procedures tray, Basic/ Minor procedures tray , Limited procedures tray, Thyroid tray, Long instruments tray, Biliary Tract procedures tray Choledochoscopy tray , Basic rigid Sigmoidoscopy tray, s - Gastrointestinal procedures tray ,

procedures tray, Thyroid tray, Long instruments tray, Biliary Tract procedures tray
 Choledochoscopy tray, Basic rigid Sigmoidoscopy tray, s - Gastrointestinal procedures tray,
 Rectal procedures tray.

Unit - 3

11

Gynaecological And Obstetric Trays - Dilatation of the cervix and curettage of the Uterus (D&C
 Tray) - Cervical cone tray - Laparoscopy - Abdominal Hysterectomy - Caesarian section tray -
 Vaginal Hysterectomy tray - Genito: Urinary Tray - Vasectomy tray - Open Prostatectomy -
 Kidney tray. Thoracic Trays: Mediastinoscopy tray - Thoractomy tray - Pacemaker
 tray. Cardiovascular trays - Vascular procedures tray - Vascular shunt tray - Cardiac procedures
 tray.

Unit - 4

11

Orthopedic tray - Basic orthopedic procedures tray - Minor orthopedic procedures tray - Bone
 holding instruments tray - Hip Retractor tray - Knee Arthrotomy tray - Knee or Ankle Anthroscopy
 tray.
 Neurologic Procedures Tray : Craniotomy tray - Laminectomy tray - Kerrison Rongeurs and
 Pituitary corceps tray.
 Otorhinolaryngologic (ENT) Tray - Basic ear procedures tray - Nasal procedures tray -
 Myringotomy tray - Tonsillectomy and Adenoidectomy tray - Trachestomy tray - Antral puncture
 tray.

Unit - 5

11

Ophthalmic Trays: Basic Eye procedures tray - Eyelid and Conjunctival procedures stray - Basic
 eye muscle procedures tray - Dacryocystorhinostomy tray - Corneal procedures tray - Cataract
 Extraction and Lens procedures tray - Glaucoma procedures tray - Basic eye procedures
 /Laparoscope tray - Retinal procedures tray .
 Pediatric Tray : Pediatric major procedures tray - Pediatric minor procedures tray - Pediatric
 gastrointestinal procedures tray (With special emphasis on National Health Programmes & Policies
 including Health Care delivery System of India.)

Mode: Flipped Class Room, Case Discussion, Lectures.

Suggested Reading:

1. Anatomy & Physiology by Evelyn.C.Pearce
2. Synopsis of Medical Instruments by Arora & Yadav
3. Operation Theatre Technique by Rashmi J.Patil
4. A text book of Social and Preventive Medicine by

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Colostomy ,Pediatric Colorectal Resection For Aganglionic megacolon /Hirschsprung's Disease ,
Repair of Imperforate Anus.

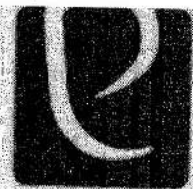
Mode: Flipped Class Room, Case Discussion, Lectures.

- Suggested Reading:
1. Hand book of medical instruments ,A.Bhowmik,G.Chatter,3rd edition.
 2. Mannual of instruments and operative surgery , A.K.Gvalani
 3. Differentiating surgical instruments, Colleen.J.Rutherford
 4. Text book of operation theatre technology, M.M.Ray

List Of Practical - COPTH20Y105

324Hrs.

1. Sterilization and O.T apparatus.
2. demonstration of part of body landmark on the surface .
3. Bones and joints .
4. Demonstration of anterior of thorax with organs insite .
5. Heart and great vessels.
6. demonstration and identification of various organs with the abdominal .
7. male genital system.
8. Female genital system.
9. Demonstration limbs with special reference to important vessel and muscle Central nervous system spinal level and site of lumbar puncture .
10. Demonstration of blood pressure recording and pulse.
11. Hb estimation haematocrit .
12. Anti coagulants.
13. Serum and plasma.
14. Monitoring and preparing of surgical instrument trays.



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ज्ञानं प्राप्नुये लक्ष्यं संशानम्

Estd. by Medhya Prakash Nil Yashwanthdyalaya (Siksha) Avam Sanshodhanal Akhpadesh, 2020

School Of Nursing & Paramedical Science

Department of Paramedical

SYLLABUS

Diploma in Operation Theatre Technician One Year Certificate Course

Year	1st Year
Subject	STERLIZATION AND OT APPARATUS
Time	95 Hrs.

STERILIZATION AND OT APPARATUS

Course Objectives:

1. To understand sterilization importance to patient care.
2. To describe sterilization method,used application,limitations and risk.
3. To understand procedures of assisting surgeon in operation theatre
4. To understand sterility methods of assisting in preparing instruments in operation theatre
5. To understand sterility methods of shifting of patient before and after surgery

Course Outcome:

1. Student will be sterility methods of preparation of patient for surgery
2. Student will be able to understand disinfection.
3. Student will be able to understand sterility of sharp instruments
4. Student will be describe sterilization method,used application,limitations and risk.
5. Student will be able to understand psychological support for surgical patients.

Student Learning Outcomes (SLO):

1. Student will be able to identify use of machines commonly used in operation theatre.
2. Student will be able to identify various positions of patients during surgery.
3. Student will be able to identify sterility methods of preparing operation theatre for surgery
4. Student will be able to identify sterility methods of pre and post operative care of patient.
5. Student will be able to identify emergencies and disasters in operation theatre.

Unit - 1

19

Sterilization & Disinfection, Disinfection, O.T. Fumigation, Ultraviolet, Sterilization, Sterilization of sharp instruments, Use of antiseptics Spirit, Cetavelon, savlon, dettol, carbolic Acid, Betadine, Autoclaving, Type of Autoclave, Working, Principles, Methods & detail of its use.

Unit - 2

19

Other Machines commonly used in O.T.: Cautery, O.T. Light, Suction, Cardiac Monitor, Emergency, Light, Pulse Oxymeter etc.

Unit - 3

19

Drugs commonly used in O.T.: -Anesthetic medicines chloroform, chloroform, Ether, Nitrous oxide, halogen etc. General medicines Analgesics, sedatives, I.V. Fluids, Antibiotics, Emergency drugs.

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Unit - 4	19
Pre-Operative Considerations: Physiological support of the surgical patient.	
Unit - 5	19
Protection of the patient in surgery: - Admission procedure transfer procedure various positions during operations, lithotomy position, ante-tendelengreg's position, Kidney Position Environmental Controls, electro-sergery, operative record counting procedure, sterilization, emergencies and disasters.	
# Mode: Flipped Class Room, Case Discussion, Lectures.	
Suggested Reading:	
<ol style="list-style-type: none"> 1. Perkins, John J, principles and methods of Sterilization in Health Sciences, 2nd edition, Charles C. Thomas, 1983 2. Tilton Gayla and Kaufman, Myrna; sterilization a review of the basics, managing infection control, 2004. 3. Text book for operation theatre, Neelamrai & Arpitravindra Lal 1st edition 2017. 4. Chinmay's hand book for O.T Technician vol.1 	

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Protection of the Patient in Surgery: Admission Process, Transfer Procedure Position, Environmental Controls, Electro Surgery, Operative Records, Counting Procedure, Sterilization, Emergencies & Disasters.

Unit - 2

26

Surgical Instruments: Instruments for General Surgery, Operation of Face & Neck, Operation of Nose, Throat and accessory Nasal Sinuses, Ophthalmic Surgery, Sinuses, Ear and Throat, Operations on the Chest, Operations on the Genito-Urinary Tract Gynaecological & Obstetric Operations, Orthopedic Operations, Neuro-Surgical Operations, Operations on the Vascular System, Radium Insertion Traumatic Surgery

Surgical procedures: Neck Surgery, Thyroidectomy, Parathyroidectomy, Thyroglossal Cystectomy, Breast Procedures, Breast Biopsy, Mastectomy

Abdominal Extra intestinal Surgery: Abdominal Laprotomy, Abdominal Hernlography, Cholecystectomy, Drainage of Pancreatic Cyst(Pseudo Cyst), Pancreaticoduodectomy(Whipples procedure), Pancreatectomy, Drainage of Abscess(es)in the region of Liver Hepatic Resection, Splenectomy.

Unit - 3

26

Gastrointestinal Surgery: Eosophagoscopy, Gastroscopy, Colonoscopy, Sigmoidoscopy, Vagotomy & Pyloroplasty, Gastrostomy, Gastrectomy, Small Bowel Resection, Cutaneous Ileostomy, Appendectomy, Colostomy - Closure of Colostomy, Right Hemincolectomy, Transverse Colectomy, Anterior Resection of the Sigmoid Colon and Rectum Haemorrhoidectomy, Pilonidal Cystectomy and Sinusectomy, Theirsch Procedure, Ripstein Procedure(Prosacral Rectopexy)

Gynaecological and Obstetric Surgery: Dilatation of the Cervix and Curettage of the Uterus(D&C), Conization of the Uterine Cervix, Therapeutic Abortion by Suction Curettage, Marsupialization of Bartholin's Duct Cyst, Abdominal Ligation (Different Procedures), Culdoscopy, Vaginal Hysterectomy, Anterior and /or Posterior Colporraphy, Laparoscopy - Total Abdominal Hysterectomy, Salpingo-Oophorectomy, Tuboplasty of the Fallopian Tubes, Pelvic Exenteration, Caesarian Section Genito-

Urinary Surgery: Hypospadias Repair, Epispadias Repair, Penile Implant, Marshall-Marchetti-Krantz Procedure, Hydrocoelectomy, Vasectomy, Vasovasostomy, Cutaneous Vasostomy, Spermatocelectomy, Orchectomy, Cystoscopy, Cystoscopy, Transurethral Resection of the Prostate

TURP and /or Lesions of the Bladder or Bladder Neck(TURB): Open Prostatectomy, Nephrectomy, Upper Tract Urolithotomy, Ureterolithotomy, Phelolithotomy, Nephrolithotomy, Cutaneous Vreterstomy Illeal Condukt, Adronalectomy, Extracorporeal Shock Wave Lithotripsy (ESWL), Ultrasonic Lithotripsy, Electrohydraulic Lithotripsy

Unit - 4

26

Thoracic Procedures: Bronchoscopy, Mediastioscopy -Segment Resection of the Lung, Wedge Resection of the Lung, Pulmonary Lobectomy, Pneumonectomy, Decortication of the Lung Insertion of Transvenous Endocardial Pacemaker, Correction of Pectus, Excavatum, Thymectomy

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Cardiovascular Surgery: Carotid Endarterectomy , Abdominal Aortic Procedures, Abdominal Aortic Aneurysmectomy, Abdominal Aortic Endarterectomy with Aortic Graft , Femoropopliteal bypass , Greater Saphenous Vein Ligation and Stripping , Portacaval Shunt , Arteriovenous Shunt , Arteriovenous Fistula , Cardiac Procedures , Bypass Surgery (Different Procedures)

Orthopedic Surgery: Open Reduction of Carpal Bone Fracture , Excision of a Ganglion , Carpal Tunnel Release , Open Reduction of the Humerus , Open Reduction of the radius and / or Ulna , Open Reduction of an Olecranon Process Fracture, Repair of Recurrent Anterior Dislocation of the Shoulder , Open Reduction of Fracture of the Humerus Head(Including Humeral Head Prosthesis), Internal Fixation of the Hip, Femoral Head Prosthetic Replacement, Total Hip Replacement, Open Reduction of the Femoral Shaft, Triple Arthrodesis of the Ankle, Total Ankle Joint Replacement, Open Reduction of Ankle, Arthrotomy of the Knee , Excision of Popliteal (Baker's)Cyst , Total Knee Replacement, Open Reduction of the Tibial Shaft, Bunionectomy, Correction of Hammer Toe Deformity with intraphalangeal Fusion, Volar Head Resection, Procedure for Correction of Scoliosis, Amputation of Lower Extremity

Neurological Surgery: Craniotomy, Cranioplasty, Transphenoidal, Hypophysectomy , Ventricular Shunts - Laminectomy , Excision of Cervical Intervertebral Disc with Fusion , Anterior Approach.

Unit - 5

26

Plastic Surgery: Cleft Lip Repair , Cleft Palate Repair , Reduction of Nasal Fracture, Reduction of Mandibular Fracture , Reduction of Zygomatic Fracture , Open Reduction of an Orbital Floor Fracture, Rhinoplasty , Mentoplasty Augmentation Blepharoplasty , Rhytidectomy , Dermabrasion , Otoplasty , Repair of Syndactyly , Digital Flexor tendon repair , Peripheral nerve repair, Palmar fasciectomy , Reduction Mamoplasty , Abdominoplasty/ Abdominal Liposuction , Liposuction

Otorhinolaryngologic (ENT) Surgery : Myringotomy , Mastoidectomy , Tympanoplasty , Stapedectomy , Submucous resection of nasal septum/ Septoplasty , Intranasal Antrostomy/Intranasal fenestration of nasoastral wall , Nasoastral Wall , Caldwell- Luc procedure (Radical Drainage of the Antrum of the Maxillary Sinuses) , Nasal Polypectomy Drainage of the Frontal Sinus , Tonsillectomy and adenoidectomy(T and A) Laryngectomy , Radical Neck Dissection , Excision of lesions of the oral Cavity (Partial Glossectomy with Marginal Resection of the Mandible)

Ophthalmic Surgery: General Information , Excision of a Chalazion , Canthotomy , Correction Of Ectropion , Blepharoptosis Repair , Lacrimal Duct Probing Dacryocystostomy , Correction of Strabismus , Enucleation of the Globe , Orbital Exenteration, Corneal Transplant/Ekeratoplasty , Cataract Extraction , Iridectomy , Trabeculectomy Excision of a Pterygium , Repair of Retinal Detachment/Scleral Bucking Vitrectomy , Refractive Keratoplasty

Pediatric Procedures: Pediatric General Information , Pediatric Sinusotomy , Repair of Congenital Diaphragmatic Hernia , Omphalocele repair , Pediatric Umbilical Herniography , Repair Of Congenital Atresia of the Esophagus , Insertion of a central Venous Catheter (Pediatric), Pyloromy for Congenital Hypertrophic Pyloric Stenosis, Pediatric Gastrostomy, Relief Of Intestinal Obstruction (Pediatric) , Reduction of Pediatric intussusception -Pediatric









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School Of Nursing & Paramedical Science

ज्ञान प्राप्तये लक्ष्य संधानम्

Esttd. by Madhya Pradesh Niji Vishwavidyalaya (Sthapna Achari Sanchalanat Adhyakshan, 2008)

Department of Paramedical

SYLLABUS

Certificate in O.T. Technician

One year certificate course

Year	1st Year
Subject	SURGICAL INSTRUMENTS AND PROCEDURES
Time	130 Hrs.

SURGICAL INSTRUMENTS AND PROCEDURES

Course Objectives:

1. Routine care and maintenance of surgical instruments, equipments, endoscopes Anesthetic Machines, Monitors etc.
2. Sterilization of OT Room, Instruments, Endoscopes, CSSD.
3. Disposal of waste, collection and sending of different samples for examination from OT.
4. Providing assistance to Surgeons, Anesthesiologists and Nurses.
5. Book Keeping and Stock Maintenance.
6. Data collection and information computation.

Course Outcome:

1. Student will be able to understand thoracic surgery procedures and equipments in operation theatre.
2. Student will be able to understand instruments for General Surgery.
3. Student will be able to understand Protection of the Patient in Surgery: Admission Process, Transfer Procedure Position.
4. Student will be able to understand different Surgical procedures.
5. Student will be able to understand Cardiovascular Surgery.

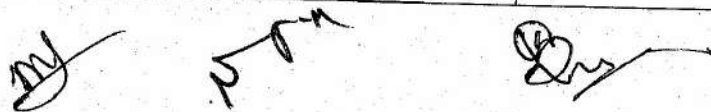
Student Learning Outcomes (SLO):

1. Student will be able to identify and inspire to maintain a sterile field .
2. Student will be able to follow infection control policies and procedures.
3. Student will be able to manage and maintain theatre equipment.
4. Student will be able to demonstrate ability to prepare the patient for operative procedures.
5. Student will be able to understand surgical equipments in operation theatre.

Unit - 1

(Including Sterilization and Disinfection, Different Methods, Protection of Patients in Surgery, Preparation of Patients)

Preoperative Consideration: Psychological Support of the Surgical Patient.



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Protection of the Patient in Surgery: Admission Process, Transfer Procedure Position, Environmental Controls, Electro Surgery, Operative Records, Counting Procedure, Sterilization, Emergencies & Disasters.

Unit - 2

Surgical Instruments: Instruments for General Surgery, Operation of Face & Neck, Operation of Nose, Throat and accessory Nasal Sinuses, Ophthalmic Surgery, Sinuses, Ear and Throat, Operations on the Chest, Operations on the Genito-Urinary Tract Gynaecological & Obstetric Operations, Orthopedic Operations, Neuro-Surgical Operations, Operations on the Vascular System, Radium Insertion Traumatic Surgery

Surgical procedures: Neck Surgery, Thyroidectomy, Parathyroidectomy, Thyroglossal Cystectomy, Breast Procedures, Breast Biopsy, Mastectomy

Abdominal Extra intestinal Surgery: Abdominal Laprotomy, Abdominal Herniography, Cholecystectomy, Drainage of Pancreatic Cyst (Pseudo Cyst), Pancreaticoduodenectomy (Whipple's procedure), Pancreatectomy, Drainage of Abscess(es) in the region of Liver Hepatic Resection, Splenectomy.

Unit - 3

Gastrointestinal Surgery: Esophagoscopy, Gastroscopy, Colonoscopy, Sigmoidoscopy, Vagotomy & Pyloroplasty, Gastrostomy, Gastrectomy, Small Bowel Resection, Cutaneous Ileostomy, Appendectomy, Colostomy - Closure of Colostomy, Right Hemicolectomy, Transverse Colectomy, Anterior Resection of the Sigmoid Colon and Rectum Haemorrhoidectomy, Pilonidal Cystectomy and Sinusotomy, Theirsch Procedure, Ripstein Procedure (Prosacral Rectopexy)

Gynaecological and Obstetric Surgery: Dilatation of the Cervix and Curettage of the Uterus (D&C), Conization of the Uterine Cervix, Therapeutic Abortion by Suction Curettage, Marsupialization of Bartholin's Duct Cyst, Abdominal Ligation (Different Procedures), Culdoscopy, Vaginal Hysterectomy, Anterior and/or Posterior Colporrhaphy, Laparoscopy - Total Abdominal Hysterectomy, Salpingo-Oophorectomy, Tuboplasty of the Fallopian Tubes, Pelvic Exenteration, Caesarian Section Genito-

Urinary Surgery: Hypospadias Repair, Epispadias Repair, Penile Implant, Marshall-Marchetti-Krantz Procedure, Hydrocoelectomy, Vasectomy, Vasovasostomy, Cutaneous Vasostomy, Spermatocelectomy, Orchiectomy, Cystoscopy, Cystostomy, Transurethral Resection of the Prostate

TURP and/or Lesions of the Bladder or Bladder Neck (TURB): Open Prostatectomy, Nephrectomy, Upper Tract Urolithotomy, Ureterolithotomy, Phelolithotomy, Nephrolithotomy, Cutaneous Ureterostomy, Ileal Conduit, Adrenalectomy, Extracorporeal Shock Wave Lithotripsy (ESWL), Ultrasonic Lithotripsy, Electrohydraulic Lithotripsy

Handwritten signatures and initials:
1. A signature that appears to be "my" with a long horizontal line extending to the right.
2. The initials "P T H" written in a stylized, spaced-out font.
3. A signature that appears to be "Dr" with a horizontal line underneath.

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Unit - 4

Thoracic Procedures: Bronchoscopy , Mediastioscopy - Segment Resection of the Lung, Wedge Resection of the Lung , Pulmonary Lobectomy , Pneumonectomy, Decortication of the Lung Insertion of Transvenous Endocardial Pacemaker, Correction of Pectus, Excavatum , Thymectomy

Cardiovascular Surgery: Carotid Endarterectomy , Abdominal Aortic Procedures, Abdominal Aortic Aneurysmectomy, Abdominal Aortic Endarterectomy with Aortic Graft , Femoropopliteal bypass , Greater Saphenous Vein Ligation and Stripping , Portacaval Shunt , Arteriovenous Shunt , Arteriovenous Fistula , Cardiac Procedures , Bypass Surgery (Different Procedures)

Orthopedic Surgery: Open Reduction of Carpal Bone Fracture , Excision of a Ganglion , Carpal Tunnel Release , Open Reduction of the Humerus , Open Reduction of the radius and / or Ulna , Open Reduction of an Olecranon Process Fracture, Repair of Recurrent Anterior Dislocation of the Shoulder , Open Reduction of Fracture of the Humerus Head (Including Humeral Head Prosthesis), Internal Fixation of the Hip, Femoral Head Prosthetic Replacement, Total Hip Replacement, Open Reduction of the Femoral Shaft, Triple Arthrodesis of the Ankle, Total Ankle Joint Replacement, Open Reduction of Ankle, Arthrotomy of the Knee , Excision of Popliteal (Baker's) Cyst , Total Knee Replacement, Open Reduction of the Tibial Shaft, Bunionectomy, Correction of Hammer Toe Deformity with intraphalangeal Fusion, Volar Head Resection, Procedure for Correction of Scoliosis, Amputation of Lower Extremity

Neurological Surgery: Craniotomy, Cranioplasty, Transphenoidal, Hypophysectomy , Ventricular Shunts - Laminectomy , Excision of Cervical Intervertebral Disc with Fusion , Anterior Approach.

Unit - 5

Plastic Surgery: Cleft Lip Repair , Cleft Palate Repair , Reduction of Nasal Fracture, Reduction of Mandibular Fracture , Reduction of Zygomatic Fracture , Open Reduction of an Orbital Floor Fracture, Rhinoplasty , Mentoplasty Augmentation Blepharoplasty , Rhytidectomy , Dermabrasion , Otoplasty , Repair of Syndactyly , Digital Flexor tendon repair , Peripheral nerve repair, Palmar fasciectomy , Reduction Mamoplasty , Abdominoplasty/ Abdominal Liposuction , Liposuction

Otorhinolaryngologic (ENT) Surgery : Myringotomy , Mastoidectomy , Tympanoplasty , Stapedectomy , Submucous resection of nasal septum/ Septoplasty , Intranasal Antrostomy/ Intranasal fenestration of nasoantral wall , Nasoantral Wall , Caldwell- Luc procedure (Radical Drainage of the Antrum of the Maxillary Sinuses) , Nasal Polypectomy Drainage of the Frontal Sinus , Tonsillectomy and adenoidectomy (T and A) Laryngectomy , Radical Neck Dissection , Excision of lesions of the oral Cavity (Partial Glossectomy with Marginal Resection of the Mandible)

Ophthalmic Surgery: General Information , Excision of a Chalazion , Canthotomy , Correction Of Entropion , Blepharoptosis Repair , Lacrimal Duct Probing Dacryocystostomy , Correction of Strabismus , Enucleation of Globe Enucleration of the Globe , Orbital Exenteration, Corneal

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Transplant/Ekeratoplasty , Cataract Extraction , Iridectomy , Trabeculectomy Excision of a Pterygium , Repair of Retinal Detachment/Scleral Bucking Vitrectomy , Refractive Keratoplasty

Pediatric Procedures: Pediatric General Information , Pediatric Sinusectomy , Repair of Congenital Diaphragmatic Hernia , Omphalocele repair , Pediatric Umbilical Herniography , Repair Of Congenital Artesia of the Esophagus , Insertion of a central Venous Catheter (Pediatric),Pyloromy for Congenital Hypertrophic Pyloric Stenosis, Pediatric Gastrostomy, Relief Of Intestinal Obstruction (Pediatric) , Reduction of Pediatric intususception –Pediatric Colostomy ,Pediatric Colorectal Resection For Aganglionicmegacolon /Hirschsprung's Disease , Repair of Imperforate Anus.

Mode: Flipped Class Room, Case Discussion, Lectures.

Suggested Reading:

1. Hand book of medical instruments ,A.Bhowmik,G.Chatter,3rd edition.
2. Mannual of instruments and operative surgery , A.K.Gvalani
3. Differentiating surgical instruments, Colleen.J.Rutherfoed .
4. Text book of operation theatre technology, M.M.Ray

List Of Practical - COPHT20Y105

324Hrs.

1. Sterilization and O.T apparatus.
2. demonstration of part of body landmark on the surface .
3. Bones and joints .
4. Demonstration of anterior of thorax with organs insite.
5. Heart and great vessels.
6. demonstration and identification of various organs with the abdominal .
7. male genital system.
8. Female genital system.
9. Demonstration limbs with special reference to important vessel and muscle Central nervous system spinal level and site of lumbar puncture .
10. Demonstration of blood pressure recording and pulse.
11. Hb estimation haematocrit.
12. Anti coagulants.
13. Serum and plasma.
14. Monitoring and preparing of surgical instrument trays.

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