GURU KASHI UNIVERSITY

Diploma in Operation Theatre Technology and Anesthesia Technology

Session: 2023-24

Department of Paramedical Sciences

Programme Structure

Semester -1st							
Sr.	**Course Code**	**Course Name**	**Type of Course**	**L**	**T**	**P**	**No. of Credits**
1	DOA101	English and communication skills	Core	3	0	0	3
2	DOA102	Anatomy & Physiology-I	Core	3	0	0	3
3	DOA103	Basic computers and information science	Core	3	0	0	3
4	DOA104	Introduction to Quality and Patient Safety	Core	3	0	0	3
5	DOA105	Principles of Management-I	Core	2	0	0	2
6	DOA106	Anatomy & Physiology-I Practical	Skill Based	0	0	4	2
7	DOA107	Basic computers and Information Science (Practical)	Skill Based	0	0	4	2
8	DOA108	Introduction to Quality and Patient safety (Practical)	Skill Based	0	0	4	2
9	DOA109	Principles of Management-I Practical	Skill Based	0	0	2	1
			Total	**14**	**0**	**14**	**21**

Semester: 2nd							
Sr.	**Course Code**	**Course Name**	**Type of Course**				**No. of Credits**
				L	**T**	**P**	
1	DOA201	Anatomy & Physiology-II	Core	3	0	0	3
2	DOA202	Lab Sciences	Core	3	0	0	3
3	DOA203	Basic Anaesthetics techniques	Core	3	0	0	3
4	DOA204	Principles of Management-II	Core	3	0	0	3
5	DOA205	Anatomy & Physiology-II Practical	Skill Based	0	0	4	2
6	DOA206	Lab Sciences Practical	Skill Based	0	0	4	2
7	DOA207	Basic Anaesthetic Techniques Practical	Skill Based	0	0	4	2
8	DOA208	Principles of Management-II (Practical)	Skill Based	0	0	4	2
			Total	**12**	**0**	**16**	**20**

Semester: 3rd							
Sr.	**Course Code**	**Course Name**	**Type of Course**				**No. of Credits**
				L	**T**	**P**	
1	DOA301	Applied Anatomy & Physiology	Core	3	0	0	3
2	DOA302	Clinical Pharmacology	Core	3	0	0	3
3	DOA303	Regional Anaesthetic techniques	Core	3	0	0	3
4	DOA304	CSSD Procedures	Core	2	0	0	2
5	DOA305	Principles of Anaesthesia	Core	3	0	0	3
6	DOA306	Applied Anatomy & Physiology (Practical)	Skill Based	0	0	2	1
7	DOA307	Clinical Pharmacology (Practical)	Skill Based	0	0	4	2
8	DOA308	Regional Anaesthetic Techniques (Practical)	Skill Based	0	0	2	1
9	DOA309	CSSD Procedures (Practical)	Skill Based	0	0	2	1
10	DOA310	Principles of Anaesthesia (Practical)	Skill Based	0	0	2	1
			Total	**14**	**0**	**12**	**20**

Semester: 4th							
Sr.	**Course Code**	**Course Name**	**Type of Course**	**L**	**T**	**P**	**No. of Credits**
1	DOA401	Professional Training/Internship	Skill Based	0	0	0	20
			Total	**0**	**0**	**0**	**20**

Evaluation Criteria for Theory Courses

A. Continuous Assessment: [25 Marks]

CA1- Surprise Test (Two best out of three) (10 Marks)
CA2- Assignment(s) (10 Marks)
CA3- Term paper/ Quiz/Presentation (05 Marks)

B. Attendance (05 Marks)
C. Mid-Semester Test: (30 Marks)
D. End-Semester Exam: (40 Marks)

Semester-I

Course Title: English & Communication Skills
Course Code: DOA101

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT I **10 Hours**

Basics of Grammar- Part I Vocabulary, Synonyms, Antonyms, Prefix and Suffix, Homonyms, Analogies and Portmanteau words. Basics of Grammar – Part II Active, Passive, Direct and Indirect speech, Prepositions, Conjunctions and Euphemisms

UNIT II **10 Hours**

Writing Skills Letter writing, E mail, and Essay, Articles, and Memos, one word substitutes, note making and Comprehension Writing and Reading
Summary writing, Creative writing, newspaper reading Practical Exercise
Formal speech, Phonetics, semantics and pronunciation

UNIT III **12 Hours**

Communication Introduction Communication process Elements of Communication, Barriers of communication and how to overcome them, Nuances for communicating with patients and their attenders in hospitals Speaking Importance, of, speaking efficiently; Voice culture,
Preparation of speech. Secrets of good delivery, Audience psychology, handling, Presentation skills, Individual feedback for each student,
Conference/Interview technique.

UNIT IV **13 Hours**

Listening: Importance of listening, Self-assessment, Action plan execution, Barriers in listening, Good and persuasive listening. Reading: What is efficient and fast reading, Awareness of existing reading habits, tested techniques for improving speed, Improving concentration and comprehension through systematic study. Non Verbal Communication: Basics of non-verbal communication, Rapport building skills using neuro-linguistic programming (NLP).

Transactional modes:

Video based teaching, Collaborative teaching, Case based teaching, Question, Presentation

Suggested Readings-

www.wikipedia.co.in/www.information.net

- *Bovee, C. L., & Thill, J. V. (2020). Business communication essentials (8th ed.). Pearson.*
- *O'Rourke, J. S. (2020). Management communication: A case-analysis approach (7th ed.). Pearson.*
- *Hamilton, C., & Gouran, D. S. (2019). Communicating for results: A guide for business and the professions (11th ed.). Cengage Learning.*
- *Beebe, S. A., Beebe, S. J., & Ivy, D. K. (2021). Communication: Principles for a lifetime (8th ed.). Pearson.*
- *DeVito, J. A. (2020). The interpersonal communication book (15th ed.). Pearson*
- *Adler, R. B., & Elmhorst, J. M. (2021). Communicating at work: Principles and practices for business and the professions (13th ed.). McGraw-Hill Education.*

Course Title: Anatomy & Physiology-I
Course Code: DOA102

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT I **12 Hours**

Introduction to Anatomical terms of the human body - Basic anatomical terminology, anatomical position, anatomical planes, levels of organization in the body, organ systems, skeleton, and cavities of the body.

Organization of the human body at the cellular level - Structure of the cell comprising of cell membrane, cytoplasm, cell organelles, nucleus, cell extensions etc. Organization of the human body at the tissue level - Epithelial, Connective, Muscular& Nervous tissue.

Blood - Composition of blood, Features of red blood cells, white blood cells, platelets. Lymphatic system - Features of lymph vessels, lymphatic tissue & organs, lymphatics, spleen, tonsil, thymus.

Nervous system - Central nervous system, brain, cerebellum, spinal cord, cranial nerves, autonomic nervous system.

Muscular system - Skeletal muscle, cardiac muscle, smooth muscle, muscles of the body. Skeletal system - Features of bones, axial skeleton, appendicular skeleton. Musculoskeletal system - Joints of upper & lower limb.

UNIT II **10 Hours**

Respiratory system - Nose & paranasal sinuses, pharynx, larynx, trachea, lungs. Cardiovascular system - Heart & blood vessels. Digestive system **-** Oral cavity, pharynx, salivary glands, oesophagus, stomach, small intestine, large intestine, liver, gallbladder, pancreas. Urinary system - Kidneys, juxtaglomerular apparatus, ureters, urinary bladder, urethra. Introduction to genetics - Features of chromosomes, DNA. Reproductive system in females - External & internal genital organs, breast. Reproductive system in males - Penis, scrotum, testes, prostate gland. Endocrine system - Hormones, pituitary gland, thyroid gland, parathyroid glands, adrenal glands, endocrine pancreas. Special senses - Olfactory system, taste apparatus, external middle & internal ear, eye. Skin - Features of skin, hair, sebaceous glands, sweat glands, nails.

UNIT III **10 Hours**

Introduction to physiology of the human body –Composition of body, Homeostasis, Introduction to chemistry of life. Organization of the human body at the cellular level – Function of lipids, carbohydrates, proteins & cell organelles. Organization of the human body at the tissue level – Function of Epithelial, Connective, Muscular & Nervous tissues. Blood – Haemopoesis, hemostasis, coagulation of blood, blood transfusion. Lymphatic system – Function of lymph vessels, lymphatic tissue & organs, lymphatics, spleen, tonsil, thymus. Resistance & immunity – Innate immunity, acquired immunity, humoral & cell mediated immunity.

UNIT IV **13 Hours**

Nervous system – Properties of nerve fibers, function of neuroglia, synapse, CNS, CSF, brain, cranial nerves, demonstration of reflexes.

Muscular system – Properties of skeletal muscle, cardiac muscle, smooth muscle, muscles of the body. Skeletal system – Functions of bones, axial skeleton, appendicular skeleton. Musculoskeletal system – Movement in the joints of upper & lower limb. Respiratory system – Physiology of respiration, pulmonary function tests, gas exchange in lungs, transport of gases between lungs & tissues, regulation of respiration. Cardiovascular system - Heart & blood vessels: Systemic circulation, pulmonary circulation, ECG, cardiac output, blood pressure. Digestive system – Process of digestion, function of oral cavity, pharynx, salivary glands, esophagus, stomach, small intestine, large intestine, liver, gallbladder, pancreas. Urinary system – Function of kidneys, juxtaglomerular apparatus, ureters, urinary bladder, urethra, physiology of urine formation, glomerular filtration, tubular reabsorption, water balance, micturition. Introduction to genetics - Features of chromosomes, DNA, protein synthesis, dominant inheritance, recessive inheritance, sex linked inheritance. Reproductive system– female: Physiology of female reproductive system. Reproductive system – male: Physiology of male reproductive system. Endocrine system - Mechanism of action of hormones, function of pituitary gland, thyroid gland, parathyroid glands, adrenal glands, endocrine pancreas. Special senses - Physiology of olfaction, taste, hearing, balance & vision. Skin – Function of skin, hair, sebaceous glands, sweat glands, nails, temperature regulation.

Transactional modes:

Video based teaching, Collaborative teaching, Case based teaching, Question, Presentation

Suggested Readings-

- *P.R Ashalatha& G Deepa 's Textbook of anatomy & physiology by B.D.Chaurasia's human anatomy*
- *Sampath Madhyastha's Manipal manual of anatomy for allied health sciences*
- *Krishna Garg &Madhu Joshi's Practical anatomy workbook Dixit's Atlas of Histology for Medical Students Basic Histology: A Color Atlas & Text*
- *Jana's Exam Oriented Practical Anatomy Krishan's Anatomy Mnemonics*

Online references:

Coursera subscription for physiology topics

Course Title: Basic in Computer & Information Science
Course Code: DOA103

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT I **10 Hours**

Introduction to computer: Introduction, characteristics of computer, block diagram of computer, generations of computer, computer languages.
Input output devices: Input devices (keyboard, point and draw devices, data scanningdevices, digitizer, electronic card reader, voice recognition devices, visi on-input devices), output devices (monitors, pointers, plotters, screen image projector, voice response systems).
Processor and memory: The Central Processing Unit (CPU), main memory.

UNIT II **10 Hours**

Storage Devices: Sequential and direct access devices, magnetic tape, magnetic di sk, optical disk, mass storage devices. Introduction of windows: History, features, desktop, taskbar, icons on the desktop, operation with folder, creating shortcuts, operation with windows (opening, closing, moving, resizing, minimizingandmaximizing, etc.).Introduction to MSWord: introduction, compon ents of a word window, creating, openingand inserting files, editing a document file, page setting and formatting the text, saving the document, spell checking, printing the document file, creating and editing of table, mail merge.

UNIT III **10 Hours**

Introduction to Excel: introduction, about worksheet, entering information, saving workbooks and formatting, printing the worksheet, creating graphs.

Introduction to powerpoint: introduction, creating and manipulating present ation, views, formatting and enhancing text, slide with graphs.
Introduction of Operating System: introduction, operating system concepts, types of operating system.

UNIT IV **15 Hours**

Computer networks: introduction, types of network (LAN, MAN, WAN, Internet,Intranet), network topologies (star, ring, bus, mesh, tree, hybrid), co mponents of network.Internet and its Applications: definition, brief history, ba

sic services (EMail, File TransferProtocol, telnet, the World Wide Web (WWW)), www browsers, use of the internet.Applicatioof computers in clinical settings.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Rajaraman, V., &Radhakrishnan, T. (2006). Digital Logic and Computer Organization. PHI Learning Pvt. Ltd.. Mehdi, M. M. (2015). Information Technology for Management by. FIIBBusiness Review, 4(1), 46-47.*
- *Ram, B. (2000). Computer fundamentals: architecture and organization. New Age International.Basandara, S. K. (2017).Computers Today,,Galgotia publication PvtLtd. Daryaganj, New Delhi. Sadagopan, S. (1998).Internet for everyone by Alexis Leon and Matthews Leon,*
- *Vikas Publishing House, 1997, Rs. 128.00.Saxena, S. (2009). A first course in computers: Based on Windows Xp& Office. Vikas Publishing House Pvt Ltd. Sinha P.K. andSia, P.(2007) Computer Fundamentals,BPB Publications. Bangia, R. (2008). Computer Fundamentals and Information Technology. Firewall Media.*

Course Title: Introduction to Quality and Patient Safety
Course Code: DOA104

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT I. **12 Hours**

Quality assurance and Management Introduction, Quality improvement approaches, standards and norms, quality improvement tools, introduction to NABH guidelines.

UNIT II. **10 Hours**

Basic of Emergency care and Life support skills Basic life support (BLS) following cardiac arrest, recognition of sudden cardiac arrest and activation of emergency response system, early cardiopulmonary resuscitation (CPR) and rapid defibrillation with an automated external defibrillator (AED)

UNIT III. **11 Hours**

Basic emergency care First aid, choking, rescue breathing methods, ventilation including use of bag valve master (BVMs) Biomedical Waste Management Definition, waste minimization, BMW-segregation, collection, transportation, treatment and disposal (Including color coding), Liquid BMW, Radioactive waste, metals/chemicals/drug waste, BMW management and methods of disinfection, use of Personal protective equipment (PPE).

UNIT IV **12 Hours**

Infection Prevention and Control Sterilization, Disinfection, Effective hand hygiene, use of PPE, Prevention and control of common health care associated infections, Guidelines(NABH) and JCI for hospital infection control. Disaster preparedness and management Fundamentals of emergency management.

Transactional modes
Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

• *Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458*

• *Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458*

Course Title: Principles of Management-I
Course Code: DOA105

L	T	P	Cr.
2	0	0	2

Total Hours: 30

Course Contents

UNIT-I **06 Hours**

Introduction to management Strategic Management Foundations of Planning

UNIT-II **06 Hours**

Planning Tools and Techniques Decision Making, conflict and stress management

UNIT-III **09 Hours**

Managing Change and Innovation Understanding Groups and Teams

UNIT-IV **09 Hours**

Leadership Time Management Cost and efficiency

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Koontz, O'Donnell & Weihrich—Management Kootnz & Weihrich—Essentials of Management Hicks & Gullett—Management Stoner, Freeman & Gilbert Jr.—Management -Newman,Warren & McGill—The Process of Managemen-Robbins—Management : Concept & Practice -Banerjee, Shyamal—Principle & Practice of Management.*

Course Title: Anatomy & physiology-I (Practical)
Course Code: DOA106

L	T	P	Cr.
0	0	4	2

Total Hours: 30

Course Contents

List of Experiments/ Practical's

1. Demonstration Basic anatomical terminology, anatomical position, anatomical planes, levels of organization in the body, organ systems, skeleton, cavities of the body.
2. Lymphatic system - Features of lymph vessels, lymphatic tissue & organs, lymphatics, spleen, tonsil, thymus.
3. Nervous system - Central nervous system, brain, cerebellum, spinal cord, cranial nerves, autonomic nervous system. Muscular system – Skeletal muscle, cardiac muscle, smooth muscle, muscles of the body.
4. Skeletal system - Features of bones, axial skeleton, and appendicular skeleton.
5. Musculoskeletal system - Joints of upper & lower limb. Respiratory system - Nose & paranasal sinuses, pharynx, larynx, trachea lungs. Cardiovascular system – Heart & blood vessels. Digestive system - Oral cavity, pharynx, salivary glands, oesophagus, stomach, small intestine, large intestine, liver, gallbladder, pancreas.
6. Urinary system - Kidneys, juxtaglomerular apparatus, ureters, urinary bladder, urethra. Introduction to genetics - Features of chromosomes, DNA.
7. Reproductive system in females - External & internal genital organs, breast. Reproductive system in males - Penis, scrotum, testes, prostate gland Endocrine system –
8. Hormones, pituitary gland, thyroid gland, parathyroid glands, adrenal glands, endocrine pancreas.

Physiology Practical

1. Blood test: Microscope Haemocytometer Blood. RBC count. Hb. WBC count. Differential Count. Hematocrit demonstration. ESR. Blood group & Rh. Type bleeding time and clotting time.
2. Digestion Test salivary digestions Excretion. Examination of Urine Specific gravity. Albumin. Sugar. Microscopic examination for cells and cysts Respiratory System:

3. Clinical examination of respiratory system Spirometry Breath holding test Cardio Vascular System: Measurement of blood pressure and pulse rate.
4. Effect of exercise on blood pressure and pulse rate

Course Title: Basic in Computer & Information Science (Practical)
Course Code: DOA107

L	T	P	Cr.
0	0	4	2

Total Hours: 30

Course contents

List of Experiments/ Practical's

1. Introduction to PowerPoint: introduction, creating and manipulating pres entation, views, formatting and enhancing text, slide with graphs. Introduction of Operating System: introduction, operating system concepts, types of operating system.
2. Computer networks: introduction, types of network (LAN, MAN,WAN,Internet,network topologies (star, ring, bus, mesh, tree, hybrid)
3. components of network.Internet and its Applications: definition, brief hist ory, basic services (E-Mail, File Transfer Protocol, telnet, the World Wide Web (WWW)), www browsers, use of the inte rnet.Application of Computers in clinical settings.

Transactional modes
Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Rajaraman, V., &Radhakrishnan, T. (2006). Digital Logic and Computer Organization. PHI Learning Pvt. Ltd.. Mehdi, M. M. (2015). Information Technology for Management by. FIIBBusiness Review, 4(1), 46-47. Ram, B. (2000). Computer fundamentals: architecture and organization. New Age International. Basandara, S. K. (2017).Computers Today,,Galgotia*

Course Title: Introduction to Quality and Patient Safety (Practical)
Course Code: DOA108

L	T	P	Cr.
0	0	4	2

Total Hours: 30

Course contents

List of Experiments/ Practical's

1. Sterilization, Disinfection, Effective hand hygiene, control of common health care associated infections.
2. Guidelines (NABH) and JCI for hospital infection control Radioactive waste, metals/chemicals/drug waste
3. BMW management and methods of disinfection, use of Personal protective equipment (PPE)
4. Basic life support (BLS) following cardiac arrest, recognition of sudden cardiac arrest and activation of emergency response system
5. First aid, choking, rescue breathing methods, ventilation including use of bag valve master (BVMs Fundamentals of emergency management

Transactional modes
Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Schriefer, J.,& Leonard, M. S.(2012). Patient safety andquality improvement: an overview of QI. Pediatrics in review, Datta, P., Mohi, G., &Chander, J. (2018).*
- *Biomedical waste management in India: Critical appraisal. Journal of laboratory physicians, Yamin, T. (2013). Chemical & Biological Weapons: Positions, Prospects and Trends. Policy Perspectives*,

Course Title: Principles of Management - I (Practical)
Course Code: DOA109

L	T	P	Cr.
0	0	2	1

Total Hours: 15

Course Contents

List of Experiments/ Practical's

1. Definitions of Management, Functions of Management: Planning , Organizing Directing , Controlling Planning:
2. Types of planning ,Short term and long plan Communication: Types of communication, Barriers of effective communication, Techniques for improved communication
3. Principles and theories of leadership, Leadership Styles, Delegation of authority Co-ordination: Co-ordination and co-operation, Principles of co-ordination, Techniques of co-ordination charts and records.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Sproull, L. S. (1984).“The Nature of Managerial Attention,” in L. S. Sproull (ed.), Advances in Information Processing in Organizations. Greenwich, CT: JAI Press.*
- *Stewart, R. (1967). Managers and Their Jobs. London: Macmillan.*

Course Title: Anatomy & Physiology – II
Course Code: DOA201

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT I **10 Hours**

Classification of nervous system Nerve – structure, classification, microscopy with examples. Neurons, classification with examples. Simple reflex arc.
Parts of a typical spinal nerve/Dermatome: Central nervous system – disposition, parts and functions Cerebrum, Cerebellum, Midbrain & brain stem Blood supply & anatomy of brain. Spinal cord-anatomy, blood supply, nerve pathways Pyramidal, extra pyramidal system, Thalamus, hypothalamus, Structure and features of meninges Ventricles of brain, CSF circulation Development of nervous system & defects.

UNIT II **10 Hours**

Cranial nerves – (course, distribution, functions and palsy) Sympathetic nervous system, its parts and components Parasympathetic nervous system Applied anatomy, Structure and function of Visual system, auditory system, gustatory system, olfactory system, Somatic sensory system. Pelvic floor, innervations Kidney, Ureter, bladder, urethra. Reproductive system of male, Reproductive system of female.

UNIT III **13 Hours**

Physiology of kidney and urine formation Glomerular filtration rate, clearance, Tubular function, Ureter, bladder, urethra Physiology of the endocrine glands –, Hormones secreted by these glands, their classifications and functions. Adrenal, Gonads Thymus, Pancreas. Pituitary, Pineal Body, Thyroid, Parathyroid

UNIT IV **12 Hours**

Male -Functions of testes, pubertal changes in males, testosterone -action & regulations of secretion. Female -Functions of ovaries and uterus, pubertal changes, menstrual cycle, estrogens and progesterone -action and regulation.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question.

Suggested Readings:

- *PR Ashalatha & G Deepa 's Textbook of ANATOMY & PHYSIOLOGY by B.D.Chaurasia's HUMAN ANATOMY.*
- *Sampath Madhyastha's Manipal manual of anatomy for allied health sciences Krishna Garg & Madhu Joshi's Practical anatomy workbook*
- *Dixit's Atlas of Histology for Medical Students Basic Histology: A Color Atlas & TextJana's Exam Oriented Practical Anatomy Krishan's Anatomy Mnemonics*

Course Title: Lab Sciences
Course Code: DOA202

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT-I **10 Hours**

Lab Sciences - Bio-chemistry Vitamins & Minerals: Fat soluble vitamins (A,D,E,K) – Water soluble vitamins – B-complex vitamins- principal elements(Calcium, Phosphorus, Magnesium, Sodium, Potassium, Chlorine and Sulphur)- Trace elements – Calorific value of foods – Basal metabolic rate(BMR) – respiratory quotient(RQ) Acids and bases: Definition, pH, Henderson, Hassel Balch equation, Buffers, Indicators, Normality, Molarity, Molality.

UNIT-II **10 Hours**

Lab Sciences – Pathology Cellular adaptation, Cell injury & cell death. Introduction to pathology. Overview: Cellular response to stress and noxious stimuli. Cellular adaptations of growth and differentiation. Overview of cell injury and cell death. Causes of cell injury. Mechanisms of cell injury. Reversible and irreversible cell injury. Examples of cell injury and necrosis.

UNIT-III **13 Hours**

Inflammation. General features of inflammation Historical highlights Acute inflammation Chemical mediators of inflammation Outcomes of acute inflammation Morphologic patterns of acute inflammation Summary of acute inflammation chronic inflammation Immunity disorders and Infectious diseases. General features of the immune system Disorders of the immune system General principles of microbial pathogenesis viral infections. Bacterial Infections-Rheumatic heart disease. Fungal infections. Parasitic infections.

UNIT-IV **12 Hours**

Neoplasia. Definitions Nomenclature. Biology of tumor growth benign and malignant neoplasms Epidemiology. Carcinogenic agents and their cellular interactions Clinical features of tumors. Environmental and nutritional disorders. Environmental and disease. Common environmental and occupational exposures Nutrition and disease. Coronary artery disease.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Smith, J. D. (2019). Laboratory Techniques in Chemistry. ABC Publishing.*
- *Johnson, S. R. (2020). Molecular Biology: Principles and Practice. 2nd ed. XYZ Press. Brown, L. M. (Ed.). (2018). Clinical Laboratory Science: A Bottom Line Approach. QRS Publications.*

Course Title: Basic Anesthetic Techniques
Course Code: DOA203

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course contents

UNIT-I **10 Hours**

Resuscitation techniques: Basic life support (Airway, breathing, circulation) and the equipment used for it. Drugs used in CPR. AED and Defibrillators.

UNIT-II **12 Hours**

Anaesthesia drugs and techniques: Principles of anaesthesia. Basics of general anaesthesia depth, mechanism and intubation. Techniques of general anaesthesia. Various intravenous and inhalational agents. Regional anaesthesia, spinal and epidural, posture and drugs.

UNIT-III **11 Hours**

Local Anaesthetic agents. Neuro muscular blocking agents. Principles of oxygen administration along with the apparatus. Care of patient in the recovery room.

UNIT-IV **12 Hours**

Post-operative pain: evaluation and management. Types of fluid and therapy. Blood and blood components transfusion. Preparation of anaesthesia machine, intubation kit, suction machine, anaesthesia drugs. Patient identification, marking, shifting to OT before surgery and out of OT to recovery room after surgery, complete takeover and handover of the patient with vital signs recording before and after surgical procedure to the nursing staff.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Basics of Anesthesia*, *5th Edition Authors: Robert K. Stoelting & Ronald D. Miller ISBN 978-0-443-06801-0* Birks RJS, ed.
- (Marc2007). *RECOMMENDATIONS FOR STANDARDS OF MONITORING DURING ANAESTHESIA AND RECOVERY 4th Edition (PDF)*. Association of Anaesthetists of Great Britain and Ireland. *Retrieved 21 February 2014*. *"Anaesthesia"*.
- *Oxford English Dictionary* (3rd ed.). Oxford University Press. September 2005. *(Subscription or UK public library membership required.)*

Course Title: Principles of Management – II
Course Code: DOA204

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT-I **12 Hours**

Personnel management: Objective of Personnel Management, Role of Personnel Manager in an organization, Staffing and work distribution techniques, Job analysis.

Principles of management**:** a. Development of Management: Definitions of Management, Contributions of F.W. Taylor, Henry Fayol and others.

UNIT-II **10 Hours**

Functions of Management: Planning, Organizing, Directing, Controlling Planning: Types of planning, Short term and long plans Corporate or Strategic Planning, Planning premises, Polices, Characteristics and sources, principles of policy making, Strategies as different from policies, Procedures and methods, Limitations of planning. c. Organizing: Importance of organization, Hierarchy, Scalar chain, Organization relationship, Line relationship, Staff relationship, Line staff relationship, Functional relationship, Committee organization, Management committees, Depart mentation.

UNIT III **12 Hours**

Motivation: Motivation theories, McGregor's theory X and theory Y, Maslow's and Herzberg's theory, Porter and Lawler model of complex view of motivation, Other theories, Diagnostic signs of motivational problems, Motivational Techniques. e. Communication: Types of communication, Barriers of effective communication, Techniques for improved communication. f. Directing: Principles relating to Direction process, Principles and theories of leadership, Leadership Styles, Delegation of authority.

Controlling: Span of control , Factors limiting effective span of control , Supper management, General managers, Middles managers and supervisors , Planning and controlling relationships , Management control process , Corrective measures, Strategic control points , Budgetary control ,

UNIT IV **11 Hours**

Types of budget. Co-ordination: Co-ordination and co-operation, Principles of co-ordination, Techniques of co-ordination charts and records, Standard procedure instructions. and description , Recruitment and selection processes , Orientation and training , Coaching and counselling , disciplining , Complaints and grievances , Termination of employees , Performance appraisal , Health and

safety of employees , Consumer Protection Act as applicable to health care services. Financial management**:** Definition of financial Management , Profit maximization , Return maximization, wealth maximization , Short term Financing , Intermediate Financing , Long term Financing , leasing as a source of Finance , cash and Security Management , Inventory Management , Dividend policies , Valuations of Shares, Financial Management in a hospital ,Third party payments on behalf of patients. Insurance , health schemes and policies.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Koontz, O'Donnell & Weihrich—Management Kootnz & Weihrich—Essentials of Management Hicks & Gullett—Management Stoner, Freeman & Gilbert Jr.—Management Newman,Warren & McGill—*
- *The Process of Management Robbins—Management : Concept & Practice - Banerjee, Shyamal—Principle & Practice of Management.*

Course Title: Anatomy & Physiology-II (Practical)
Course Code: DOA205

L	T	P	Cr.
0	0	4	2

Total Hours: 30

Course contents

List of Experiments/ Practical's

1. Physiology Practical Enumerate Physiology of kidney Explain Physiology of lower Urinary tract.
2. Label Physiology of the endocrine glands Enumerate Physiology of reproductive system.
3. Identification and description of all anatomical structures. Demonstration of dissected parts.
4. Demonstration of skeleton-articulated and disarticulated. Surface anatomy:
5. Surface land mark-bony, muscular and ligamentous. Surface anatomy of major nerves, arteries of the limbs.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings

- *Peate, I., & Nair, M. (2015).Anatomy and Physiology for Nurses at a Glance.John Wiley & Sons.*
- *Pal, G. K. (2006).Textbook Of Practical Physiology-2Nd Edn. Orient Blackswan.*

Course Title: Lab Sciences (Practical)

Course Code: DOA206

L	T	P	Cr.
0	0	4	2

Total Hours: 30

Course contents

List of Experiments/ Practical's

1. Fat soluble vitamins (A, D, E, K), Water soluble vitamins, B-complex. Trace elements, Calorific value of foods,
2. Basal metabolic rate (BMR), respiratory quotient (RQ). Chemical mediators of inflammation Outcomes of acute inflammation Morphologic Patterns of acute inflammation
3. Summary of acute inflammation. Carcinogenic agents. And their cellular interactions Clinical features of tumors.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Reference Books

- *Smith, J. D. (2019). Laboratory Techniques in Chemistry. ABC Publishing.*
- *Johnson, S. R. (2020). Molecular Biology: Principles and Practice. 2nd ed. XYZ Press. Brown, L. M. (Ed.). (2018). Clinical Laboratory Science: A Bottom Line Approach. QRS Publications.*

Course Title: Basic Anesthetic Techniques (Practical)
Course Code: DOA207

L	T	P	Cr.
0	0	4	2

Total Hours: 30

Course contents

List of Experiments/ Practical's

1. Basic life support (Airway, breathing, circulation) and the equipment used for it. Drugs used in CPR.
2. AED and Defibrillators. Basics of general anaesthesia depth, mechanism and intubation. Techniques of general anaesthesia.
3. Various intravenous and inhalational agents. Regional anaesthesia, spinal and epidural, posture and drugs.
4. Local Anaesthetic agents. Principles of oxygen administration along with the apparatus. Care of patient in the recovery room. Post-operative pain: evaluation and management. Types of fluid and therapy.
5. Preparation of anaesthesia machine, intubation kit, suction machine, anaesthesia drugs.
6. Patient identification, marking, shifting to OT before surgery and out of OT to recovery room after surgery,
7. Complete takeover and handover of the patient with vital signs recording before and after surgical procedure to the nursing staff.

Transactional modes

1. Video based teaching, Collaborative teaching, Case based teaching, Question

Reference Books

1. *Smith, J. D. (2019). Laboratory Techniques in Chemistry. ABC Publishing. Johnson, S. R. (2020).*
2. *Molecular Biology: Principles and Practice. 2nd ed. XYZ Press. Brown, L. M. (Ed.). (2018). Clinical Laboratory Science: A Bottom Line Approach. QRS Publications.*

Course Title: Principles of Management –II (Practical)
Course Code: DOA208

L	T	P	Cr.
0	0	4	2

Total Hours: 30

Course contents

List of Experiments/ Practical's

1. Role of Personnel Manager in an organization, Staffing and work distribution techniques.
2. Development of Management: Definitions of Management, Contributions of F.W. Taylor, Henry Fayol and others Organizing: Importance of organization, Hierarchy, Scalar chain,
3. Organization relationship, Line relationship, Staff relationship, Line staff relationship, Functional relationship, Committee organization , Management committees ,
4. Depart mentation. Diagnostic signs of motivational problems, Motivational Techniques Financial Management in a hospital, Third party payments on behalf of patients. Insurance, health schemes and policies.
5. Principles relating to Direction process, Principles and theories of leadership, Leadership Styles, Delegation of authority.

Course Title: Applied Anatomy & Physiology
Course Code: DOA301

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT-I **10 Hours**

Respiratory system Structure and function of the respiratory tract in relation to respiratory system. Nose - Role in humidification, Pharynx - Obstruction in airways. Larynx- Movement or vocal cords, Cord palsies. Trachea & Bronchial tree - vessels, nerve supply, respiratory tract, reflexes, and bronchospasm. Alveoli - Layers, Surfactants

UNIT-II **11 Hours**

Respiratory Physiology. Control or breathing. Respiratory muscles - diaphragm, intercostal Lung volumes - dead space, vital capacity, FRC etc. Pleural cavity – intra-pleural pressure, pneumothorax. Work of breathing - airway resistance, compliance Respiratory movements under anaesthesia. Tracheal tug - signs, hiccup.

UNIT-III **12 Hours**

Pulmonary Gas Exchange and Acid Base Status. Pulmonary circulation - Pulmonary oedema, Pulmonary hypertension. Pulmonary function tests. Transfer of gases - oxygen &Carbon dioxide. Acid base status, definitions, acidosis types, Alkalosis types, buffers in the body. Oxygen: properties, storage, supply, and hypoxia. Oxygen therapy Respiratory failure, type, clinical features, causes**.** Cardiovascular system Anatomy- Chambers of the heart, major vasculature. Coronary supply, innervation. Conduction system.

UNIT-IV **12 Hours**

Cardiac output - determinants, heart rate, preload, after load.
Coronary blood flow& myocardial oxygen supply. ECG- arrhythmias cardiovascular response to aesthetic & surgical procedures. Hypotension- causes, erects management. Cardio pulmonary resuscitation.
Myocardial infarction, hypertension. Fluids and electrolytes Body Fluids - Composition Water, sodium and potassium balance I.V. Fluids - composition & administration Intravenous, Central venous and arterial line insertion
Blood transfusion Blood grouping, storage, administration.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question.

Suggested Readings:

- *PR Ashalatha & G Deepa 's Textbook of ANATOMY & PHYSIOLOGY by B.D.Chaurasia's HUMAN ANATOMY.*

- *Sampath Madhyastha's Manipal manual of anatomy for allied health sciences Krishna Garg & Madhu Joshi's Practical anatomy workbook Dixit's Atlas of Histology for Medical Students Basic Histology:*
- *A Color Atlas & TextJana's Exam Oriented Practical Anatomy Krishan's Anatomy Mnemonics.*

Course Title: Clinical Pharmacology

Course Code: DOA302

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT-I **11 Hours**

Antisialagogues: Atropine, Glycopyrrolate. Sedatives *I* Anxiolytics: Diazepam, Midazolam, Phenergan, Lorazepam, Chlorpromazine, and Triclofos.
Narcotics: Morphine, Pethidine, Fentanyl, Pentazozine, tramadol. Antiemetics: Metoclopramide, Ondanseteron, Dexamethasone Induction Agent: Thiopentone, Diazepam, Midazolam, Ketamine, Propofol, Etomidate.

UNIT-II **12 Hours**

Muscle Relaxants: Depolarizing - Suxamethonium, Non depolarizing - Vecuronium, Atracurium, rocuranium Inhalational Gases: Gases-02, N20, Air, Agents-Ether, Halothane, Isofllurane, Saevoflurane, Desflurane
Reversal Agents: Neostigmi*ne,* Glycopyrrolate, Atropine, Naloxone, Flumazenil (Diazepam). Local Anesthetics: Xylocaine, Bupivacaine - Topical, Prilocaine-jelly, Emla - Ointment, Etidocaine. Ropivacaine.

UNIT-III **12 Hours**

Emergency Drugs: Mode or administration, dilution, dosage and effects Adrenaline, Atropine MEphedrine, Mephentramine Bicarbonate, calcium, potassium. Inotropes: dopamine, dobutamine, amidarone

UNIT-IV **10 Hours**

Aminophylline, hydrocortisone, antihistaminic, Antihypertensive –Beta-blockers, Ca-channel blockers. Antiarrhythmic- xylocard MVasodilators-nitroglycerin & sodium nitroprusside, Respiratory system- Bronchodilators Renal system- Diuretics, frusemide, mannitol.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Goodman, L. S. (1996). Goodman and Gilman's the pharmacological basis of therapeutics (Vol. 1549). New York: McGraw-Hill.*
- *He, J. M., & Mu, Q. (2015). The medicinal uses of the genus Mahonia in traditional Chinese medicine: Anethnopharmacological, phytochemical and pharmacological review.*

- *Journal of ethnopharmacology,Zhao, B. S., Gui, H. S., Zhu, Y. D., &Xu, T. H. (2011). Research progress in chemical compoents, pharmacological effectiveness and toxicity of Psammosilenetunicoides. Chin. J. Exp. Traditional Med. Form*

Course Title: Regional Anesthetic techniques
Course Code: DOA303

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Contents

UNIT-I **10 Hours**

Introduction to Regional Anaesthesia, Definition, history, and principles of regional anaesthesia, Anatomy and physiology relevant to regional anaesthesia

Pharmacology of local anaesthetics and adjuvants, Equipment and techniques used in regional anaesthesia, Patient selection and preoperative evaluation for regional anaesthesia, Complications and their management in regional anaesthesia

UNIT-II **12 Hours**

Upper Extremity Regional Anaesthesia, Anatomy and innervation of the upper extremity, Brachial plexus anatomy and techniques for its blockade

Inter scalene, supraclavicular, infra clavicular, and axillary nerve blocks, Upper extremity peripheral nerve blocks (e.g., wrist, forearm, hand), Complications, contraindications, and precautions for upper extremity blocks

UNIT-III **11 Hours**

Lower Extremity Regional Anaesthesia, Anatomy and innervation of the lower extremity, Lumbar plexus anatomy and techniques for its blockade

Femoral, sciatic, popliteal, and ankle blocks, Lower extremity peripheral nerve blocks (e.g., foot, toes), Complications, contraindications, and precautions for lower extremity blocks

UNIT-IV **12 Hours**

Special Topics in Regional Anaesthesia, Central neuraxial blocks (spinal, epidural, caudal anaesthesia), Truncal blocks (e.g., transverses abdominis plane, paravertebral blocks)

Regional anaesthesia for specific patient populations (paediatrics, obstetrics, and geriatrics), Multimodal analgesia and perioperative pain management

Recent advancements and emerging techniques in regional anaesthesia, Evidence-based practice and research in regional anaesthesia

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Serpell, M. G.; Fettes, P. D. W.; Wild smith, J. A. W. (1 November 2002). "Pencil point spinal needles and neurological damage".*
- *British Journal of Anesthesia. Rucklidge M, Hinton C. (2012). "Difficult and failed intubation in obstetrics". Continuing Education in Anesthesia Critical Care & Pain.*

Course Title: CSSD Procedures
Course Code: DOA304

L	T	P	Cr.
2	0	0	2

Total Hours: 30

Course Content

UNIT-I **8 Hours**

Waste disposal collection of used items from user area, reception protective clothing and disinfections sage guards.

UNIT-II **7 Hours**

Use of disinfections sorting and classification of equipment for cleaning purposes, sharps, blunt lighted etc. contaminated high risk baby care - delicate instruments or hot care instruments.

UNIT-III **9 Hours**

Cleaning process - use of detergents. Mechanical cleaning apparatus, cleaning instruments, cleaning jars, receiver's bowls etc. trays, basins and similar hand ware utensils. Cleaning of catheters and tubing, cleaning glass ware, cleaning syringes and needles.

UNIT-IV **6 Hours**

Materials used for wrapping and packing assembling pack contents. Types of packs prepared. Inclusion of trays and gallipots in packs. Method of wrapping and making use of indications to show that a pack of container has been through a sterilization process date stamping.
General observations principles of sterilization. Moist heat sterilization. Dry heat sterilization. EO gas sterilization, H202 gas plasma vapour sterilization.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Sterilization basics". University of Rochester. Retrieved 16 June 2016*
- *Reichert, Marimargaret; Young, Jack H. (1997). Sterilization Technology for the Health Care Facility. Jones & Bartlett Learning*
- *Safety in the Operating Room Begins with Sterile Processing". Retrieved 2019-01-17.*

Course Title: Principles of Anesthesia
Course Code: DOA305

L	T	P	Cr.
3	0	0	3

Total Hours: 45

Course Content

UNIT-I **10 Hours**

Medical gas supply compressed gas cylinders, Colour coding
Cylinder valves; pin index. Gas piping system Recommendations for piping system, Alarms & safety devices. Scavenging of waste anaesthetic gases

UNIT-II **10 Hours**

Anaesthesia machine Hanger and yoke system Cylinder pressure gauge Pressure regulator Flow meter assembly Vaporizers - types, hazards, maintenance, filling and draining, etc.

UNIT-III **10 Hours**

Breathing system General considerations: humidity & heat Common components - connectors, adaptors, reservoir bags. Capnography Pulse oximetry Methods of humidification. Classification of breathing system Mapleson system - a b c d e f Jackson Rees system, Bain circuit Non rebreathing valves - Ambu valves The circle system face masks & Airway laryngoscopes Types, sizes EnDOAracheal tubes - Types, sizes. Cuff system Fixing, removing and inflating cuff, checking tube position, complications.

UNIT-IV **15 Hours**

Anaesthesia ventilator and working principles.
Monitoring, Electrocardiography(ECG), Pulse oximetry(Sp02), Temperature-central and peripheral, End tidal carbon dioxide(EtCO2), Anaesthesia gas monitoring , Non-invasive blood pressure (NIPB) and Invasive blood pressure(IBP) Central venous pressure(CVP) PA Pressure, LA Pressure & cardiac output anaesthesia depth monitor neuromuscular transmission monitor

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Basics of Anesthesia, 5th Edition Authors: Robert K. Stoelting & Ronald D. Miller ISBN 978-0-443-06801-0* Birks RJS, ed.(March2007).
- *RECOMMENDATIONS FOR STANDARDS OF MONITORING DURING ANAESTHESIA AND RECOVERY 4th Edition (PDF).*

- Association of Anaesthetists of Great Britain and Ireland. *Retrieved 21 February 2014*. *"Anaesthesia"*.
- *Oxford English Dictionary* (3rd ed.). Oxford University Press. September 2005. *(Subscription or UK public library membership required.*)

Course Title: Applied Anatomy & Physiology (Practical)
Course Code: DOA306

L	T	P	Cr.
0	0	2	1

Total Hours: 15

Course contents

List of Experiments/ Practical's

1. Respiratory system Nose - Role in humidification,
2. Pharynx - Obstruction in airways. Larynx- Movement or vocal cords, Cord palsies. Trachea & Bronchial tree - vessels, nerve supply, respiratory tract, reflexes, and bronchospasm.
3. Cardiovascular system Coronary supply, innervation. Conduction system. Cardiac output - determinants, heart rate, preload, after load. Coronary blood flow& myocardial oxygen supply.
4. ECG- arrhythmias cardiovascular response to anaesthetic & surgical procedures**.**
5. Hypotension- causes, erects management. Cardio pulmonary resuscitation.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question.

Suggested Readings:

- *PR Ashalatha & G Deepa 's Textbook of ANATOMY & PHYSIOLOGY by B.D.Chaurasia's HUMAN ANATOMY.*
- *Sampath Madhyastha's Manipal manual of anatomy for allied health sciences Krishna Garg & Madhu Joshi's Practical anatomy workbook Dixit's Atlas of Histology for Medical Students Basic Histology:*
- *A Color Atlas & TextJana's Exam Oriented Practical Anatomy Krishan's Anatomy Mnemonics.*

Course Title: Clinical Pharmacology(Practical)

Course Code: DOA307

L	T	P	Cr.
0	0	4	2

Total Hours: 30

Course contents

List of Experiments/ Practical's

1. Antisialagogues: Atropine, Glycopyrrolate. Sedatives *I* Anxiolytics: Diazepam, Midazolam, Phenergan, Lorazepam, Chlorpromazine, and Triclofos.Narcotics: Morphine, Pethidine, Fentanyl, Pentazozine, tramadol.
2. Antiemetic's: Metoclopramide, Ondansetron, Dexamethasone Induction Agent: Thiopentone, Diazepam, Midazolam, Ketamine, Propofol, Etomidate.
3. Muscle Relaxants: Depolarizing - Suxamethonium, Non depolarizing - Vecuronium, Atracurium, rocuranium Inhalational Gases: Gases-02, N20, Air, Agents-Ether, Halothane, Isofllurane, Saevoflurane, Desflurane
4. Reversal Agents: Neostigmi*ne,* Glycopyrrolate, Atropine, Naloxone, Flumazenil (Diazepam).
5. Local Anesthetics: Xylocaine, Bupivacaine - Topical, Prilocaine-jelly, Emla - Ointment, Etidocaine. Ropivacaine.
6. Emergency Drugs: Mode or administration, dilution, dosage and effects Adrenaline, Atropine. Ephedrine, Mephentramine Bicarbonate, calcium, potassium. Inotropes: dopamine, dobutamine, amidarone Aminophylline, hydrocortisone, antihistaminic,
7. Antihypertensive –Beta-blockers, Ca-channel blockers. Antiarrhythmic-xylocard
8. Vasodilators- nitroglycerin & sodium nitroprusside Respiratory system-Bronchodilators

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Goodman, L. S. (1996). Goodman and Gilman's the pharmacological basis of therapeutics (Vol. 1549). New York: McGraw-Hill.*
- *He, J. M., & Mu, Q. (2015). The medicinal uses of the genus Mahonia in traditional Chinese medicine: Anethnopharmacological, phytochemical*

and pharmacological review. Journal of ethnopharmacology,Zhao, B. S., Gui, H. S.,

Course Title: Regional Anesthetic techniques(Practical)
Course Code: DOA308

L	T	P	Cr.
0	0	2	1

Total Hours: 15

Course contents

List of Experiments/ Practical's

1. Local Aesthetic technique
2. Nerve blocks Spinal Anaesthesia
3. Epidural Anaesthesia
4. Routs and drugs.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Serpell, M. G.; Fettes, P. D. W.; Wild smith, J. A. W. (1 November 2002). "Pencil point spinal needles and neurological damage".*
- *British Journal of Anesthesia. Rucklidge M, Hinton C. (2012). "Difficult and failed intubation in obstetrics". Continuing Education in Anesthesia Critical Care & Pain.*

Course Title: CSSD Procedures(Practical)

Course Code: DOA309

L	T	P	Cr.
0	0	2	1

Total Hours: 15

Course contents

List of Experiments/ Practical's

1. Waste disposal collection of used items from user area, reception protective clothing and disinfections sage guards.
2. Use of disinfections sorting and classification of equipment for cleaning purposes, sharps, blunt lighted etc. contaminated high risk baby care - delicate instruments or hot care instruments.
3. Cleaning process - use of detergents. Mechanical cleaning apparatus, cleaning instruments, cleaning jars, receivers bowls etc. trays, basins and similar hand ware utensils.
4. Cleaning of catheters and tubing, cleaning glass ware, cleaning syringes and needles. Materials used for wrapping and packing assembling pack contents.
5. Types of packs prepared. Inclusion of trays and gallipots in packs. Method of wrapping and making use of indications to show that a pack of container has been through a sterilization process date stamping.
6. General observations principles of sterilization. Moist heat sterilization. Dry heat sterilization. EO gas sterilization, H202 gas plasma vapour sterilization.

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Sterilization basics". University of Rochester. Retrieved 16 June 2016*
- *Reichert, Marimargaret; Young, Jack H. (1997). Sterilization Technology for the Health Care Facility. Jones & Bartlett Learning*
- *Safety in the Operating Room Begins with Sterile Processing". Retrieved 2019-01-17.*

Course Title: Principles of Anaesthesia(Practical)
Course Code: DOA310

L	T	P	Cr.
0	0	2	1

Total Hours: 15

Course contents

List of Experiments/ Practical's

1. Medical gas supply Colour coding Gas piping system Recommendations for piping system Alarms & safety devices.
2. Anaesthesia machine Hanger and yoke system Pressure regulator Flow meter assembly Vaporizers - types, hazards, maintenance, filling and draining, etc**.**
3. Breathing system General considerations: humidity & heat Common components - connectors, adaptors, reservoir bags. Pulse oximetry Methods of humidification.
4. Non rebreathing valves – Ambu valves the circle system Face masks & Airway laryngoscopes Types, sizes.
5. EnDOAracheal tubes - Types, sizes. Fixing, removing and inflating cuff, checking tube position, complications.
6. Anaesthesia ventilator and working principles. Monitoring Electrocardiography (ECG) Pulse oximetry (Sp02) Temperature- central and peripheral.
7. Non-invasive blood pressure (NIPB) and Invasive blood pressure

Transactional modes

Video based teaching, Collaborative teaching, Case based teaching, Question

Suggested Readings:

- *Basics of Anesthesia, 5th Edition Authors: Robert K. Stoelting & Ronald D. Miller Isbn 978-0-443-06801-0 Birks Rjs, Ed.(March2007).*
- *Recommendations For Standards Of Monitoring During Anaesthesia And Recovery 4th Edition (Pdf). Association Of Anaesthetists of Great Britain and Ireland. Retrieved 21 February 2014. "Anesthesia".*
- *Oxford English Dictionary (3rd ed.). Oxford University Press. September 2005. (Subscription or UK public library membership required.)*

Course Title: Professional Training/ Internship
Course Code: DOA401

L	T	P	Cr.
-	-	-	**20**

TRAINING REPORT

Students have to carry out a Training Report (on any topic related to Operation Theatre and Anesthesia) under the supervision of a Surgeon or Doctor. The training report has to be prepared on the basis of the research work carried out. The assessment is done on the basis of the work done and the presentation and viva.