



R.K.D.F. UNIVERSITY, BHOPAL

DIPLOMA MEDICAL LAB TECHNICIAN (DMLT)

(SESSION 2022-2023 & ONWARDS) Diploma Medical Lab Technician (DMLT)

S.No	Subject Code	Subject	Sessional						
			Internal Assessment		Theory		Practical		Total
			Max marks	Min marks	Max marks	Min marks	Max marks	Min marks	Max marks
1.	DML101	Anatomy & Physiology	50	20	100	40	50	20	200
2.	DML102	Haematology, Blood Banking	50	20	100	40	50	20	200
3.	DML103	Medical Biochemistry	50	20	100	40	50	20	200
4.	DML104	Medical Microbiology	50	20	100	40	50	20	200
6.	DML105	Foundation English	50	20	100	40			150
Total			250	100	500	200	200	80	950



Branch	Subject Title	Subject Code
DMLT	Anatomy & Physiology	DML 101

Course Outcomes:

After completing this course satisfactorily a student will be able to understand the structure and function of the human body system, understand the resultant effect on physical performance, Gain an awareness of anatomical or physiological differences in the body

Course Contents

1. CELL AND TISSUE: Structure and functioning of the cell, epithelial, connective, muscular and nervous tissues.
2. BLOOD: Composition – function, coagulation, thrombosis, blood volume, blood groups and blood transfusion, Anaemia, Sickle cell anaemia – definition, symptoms Leukaemia, Haemolysis.
3. SKELETOL SYSTEM: Bone joint bone deformation (Brief study).
4. CARDIOVASCULAR SYSTEM: Anatomy of heart and blood vessels, heart rate, cardiac cycle, cardiac output, blood pressure, hypertension, radial pulse, ECG and its significance, varicose veins, Arteriosclerosis, Angina pectoris.
5. LYMPHATIC SYSTEM: Lymph gland and its functions. Spleen structure and function.
6. RESPIRATORY SYSTEM: Structure of respiratory system, Mechanism of respiration, chemical respiration, tissue respiration, regulation of respiration. Common diseases- Tuberculosis, Asthma, Pleurisy, Cough, hiccups.
7. DIGESTIVE SYSTEM: Organs of digestion, their functions, Digestive juices, digestion and adsorption of carbohydrates, protein and fats.
8. URINARY SYSTEM: Structure and functions of kidneys, Nephron,, Formation of urine. Normal and abnormal constituents of urine. Significance of urine examination.
9. ENDOCRINE GLAND: Endocrine glands- their structure and functions, disorders.
10. NERVOUS SYSTEM: Central nervous system and its functions. Peripheral nervous system and its function.



Reference Books:

1. Keela C.A. and Neil. E. (1978). Samson weights applied physiology. Oxford university press.
2. Torture G.J. and Anagnostakos (1984). Principles of anatomy and physiology. Harper and Row. Publishes New York.
3. Human physiology vol. 1 & 2 by C.C chatterji.



Branch	Subject Title	Subject Code
DMLT	Haematology and Blood banking	DML 102

Course Outcomes:

After completing this course satisfactorily a student will be able to understand the blood disorder, its lab diagnosis and various type of laboratory test, understand the basic components of haematology and routine clinical investigation of haematology laboratory, gain an awareness of the composition of blood and methods of estimating different components of blood

Course Contents:

Haematology

1. Introduction to haematology and laboratory Organisation. Lab Safety and Instrumentation.
2. Formation of Blood
3. Composition and function of Blood.
4. Various Anti-coagulants, their uses, mode of action and their merits and demerits
5. Collection and preservation of Blood for Various Haematological investigations
6. Physiological variations in Hb%, PCV, TLC and Platelets.
7. Normal and absolute values in Haematology.
8. Quality assurance in Haematology.
9. Haemoglobinometry, various methods of estimation of Hb, errors involved and standardization of Instruments for adaptation for estimation.
10. Haemocytometry, procedure for cell counts visual as well as electronic red cells, leucocytes and platelet counts. Errors involved and means minimize such errors
11. Romanowsky staining (Dyes), preparation and staining Procedure of Blood.
12. Morphology of normal blood cells and their identification.
13. Erythrocytes sedimentation rate, factors influencing ESR and Various Procedures for its estimation with their significance.
14. Haemocrit value by macro and micro methods their merits and demerits.
15. Routine examination of Urine.
16. Examination of Biological Fluids such as CSF etc.
17. Examination of Semen.

BLOOD BANKING



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Introduction, Human blood group antigens, ABO blood group system and incompatibility, Rh blood group system and incompatibility , Technique of grouping and cross matching , Commbs test, Direct, Indirect , Blood Transfusion Procedure, Complication of blood transfusion, Blood Collection, Selection and Screening of donors.

Collection of blood, Storage of blood, Cell separator and transfusion of various components of blood like Plasma and Platelet Separation, Organization, Operation and Administration of Blood Bank and anticoagulants.



Branch	Subject Title	Subject Code
DMLT	Medical Biochemistry	DML 103

Course Outcomes:

Understand the basic principal, mechanisms, procedures and types of various techniques commonly performed; understand the knowledge of apparatus, units, equipment, volumetric in laboratory

Course Contents:

1. **Acid, Base, Buffer:** Definition, Theories of acid base, example, pK , pH , Handerson-Hasselbach's equation.
2. **Photometry:** Principles of photometry (Lambert-Beer's Law, Flame photometry, Reflectance Fluorometry).
3. **Ion selective electrodes:** Nernst equation, pH electrode, Sodium, Potassium electrode, PCO_2 electrode.
4. **Chemistry of Carbohydrates:** Carbohydrate metabolism, Glycogenesis, Glyconeogenesis, glycogenolysis, citric acid cycle. Regulation of blood glucose levels.
5. **Chemistry of Lipids:** Oxidation of fatty acids, ketosis, cholesterol metabolism, Lipoproteins in the blood composition and their functions in brief.
6. **Chemistry of Amino acids and Proteins:** Structure of amino acids, Protein Metabolism, transamination, decarboxylation, entry of amino acids into TCA cycle, Urea cycle.
7. **Chemistry of Nucleic acid and Nucleotides:** Structure of nitrogen basis, nucleosides, DNA & RNA. Mechanism of DNA replication and transcription.
8. **Enzymes:** Definition, classification, chemical nature, coenzymes. Factors affecting role of enzyme action, enzyme inhibition.
9. **Electrophoresis:** Principle, types, application in clinical biochemistry, serum and haemoglobin electrophoresis.
10. **Detection of Drug and Toxic substances:** Principles of chromatography, paper &



thin layer chromatography, their application in detection of drug and toxic substances.

Reference Books:

1. Raw, K.R. (1986). Text book of biochemistry III edition, prentice hall of India Private Ltd. New Delhi.
2. Murray R.K. Granner, P.A. Mayes, V.W. Rodwell (1988).
3. Harpers Biochemistry 21st edition Prentice Hall.
4. Satyanarayan. Biochemistry.



Branch	Subject Title	Subject Code
DMLT	Medical Microbiology	DML 104

Course Outcomes:

Understand the, basics of microbiology and imparts knowledge about equipment used in microbiology.

Demonstrate theory and practical skills in microscopy and their handling techniques and staining procedures

Understand the basic microbial structure and function and study the comparative characteristics of prokaryotes and eukaryotes and also

Understand the structural similarities and differences among various physiological groups of bacteria/archaea Know various Culture media and their applications and also understand various physical and chemical means of sterilization

Course Contents:

1. Introduction and brief History of Microbiology.
2. Safety Measures Microbiology.
3. General characteristics and Classification of bacteria and Fungus.
4. Growth and Nutrition of microbes.
5. Care and maintenance of laboratory equipment's.
6. Care and Handling of Various Microscope- binocular, Phase contest, DGI, Fluorescence and Electron Microscope.
7. Principle and methods of Sterilization.
8. Uses and mode of action of antiseptic and disinfectants.
9. Handling and Clearing of Glassware apparatus Decontamination and disposable of contaminated material.
10. Preparation, Use and Standardization of Culture Media.
11. Principles of Staining methods and Preparation of reagents.
12. Aerobic and Anaerobic culture Methods.
13. General Character and Nature of Antigen and Antibodies.
14. Principals of Antigen and Antibody reaction.



15. Staining method, Gram stain, Ziehl- Nelson stain, Albert's stain etc.
16. Principles and mode of Action of Antibiotic and Chemotherapeutic agents for Bacteria and Fungi.
17. Care and Handling laboratory animals.
18. Motility preparations, hanging drop preparation, steps in bacterial identification of Coci, Corynebacteria, Diphtheria, Mycobacteria, Gram negative bacilli and Gram positive bacilli.



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DIPLOMA MEDICAL LAB TECHNICIAN (DMLT)

Branch	Subject Title	Subject Code
DMLT	Foundation English	DML 105

Course Outcomes:

After completing this course satisfactorily a student will be able to understand and apply knowledge of human communication and language processes. Students will develop knowledge, skills, and judgment around human communication that facilitate their ability to work collaboratively with others. Students will be able to communicate effectively orally and in writing.

Course Contents:

Unit- I

Communication: Meaning & importance of communication, elements of human communication, barriers to effective communication, channels of communication, language as a tool of communication, 7C's of communication, tips for effective communication.

Unit –II

Comprehension

Unit-III

Composition and Paragraph Writing (Based on expansion of an idea).

Unit-IV

Basic Language Skills: Vocabulary – Synonyms, Antonyms, Word Formation, Prefixes and Suffixes, Words likely to be confused and Misused, Words similar in Meaning or Form, Distinction between Similar Expressions, Speech Skills

Unit-V

Basic Language Skills: Grammar and usage – The Tense Forms, Propositions, Determiners and Countable/Uncountable Nouns, Verb, Articles, Adverbs. Adjective, Voice (active and Passive)



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DIPLOMA MEDICAL LAB TECHNICIAN (DMLT)

- **Recommended Books:**

English Language and I

Indian Culture, Published by M.P. Hindi Grant Academy.

NOTE:

Eight questions to be set from unit-1 and four to be attempted.



Year I Anatomy & Physiology (Practical)

Course Code: DML101

1. Haemoglobinometry.
2. White Blood Cell Count.
3. Red Blood Count.
4. Determination of Blood Groups.
5. Blood pressure Recording.
6. Auscultation for Heart Sounds.
7. Artificial Respiration.
8. Demonstration of parts of urinary system, Histology of kidney, ureter, urinary bladder, Radiographs of abdomen-IVP, retrograde cystogram.
9. Histology of types of epithelium, Histology of serous, mucous & mixed salivary gland.
10. Histology of the 3 types of cartilage, Demo of all bones showing parts, radiographs of normal bones & joints, Histology of compact bone (TS & LS), Demonstration of all muscles of the body, Histology of skeletal (TS & LS), smooth & cardiac muscle.
11. Demonstration of heart and vessels in the body, Histology of large artery, medium sized artery & vein, large vein, Microscopic appearance of large artery, medium sized artery & vein, large vein, pericardium, Histology of lymph node, spleen, tonsil & thymus, Normal chest radiograph showing heart shadows, Normal angiograms.
12. Demonstration of parts of respiratory system, Normal radiographs of chest, Histology of lung and trachea.
13. Demonstration of the glands, Histology of pituitary, thyroid, parathyroid, suprarenal glands.



Year I Haematology, Blood banking (Practical)

Course Code: DML102

1. Analysis of Urine for routine and others tests.
2. Urine microscopic examination.
3. Faeces occult blood test.
4. Seminal fluid analysis.
5. Analysis of aspiration fluids.
6. Staining and examination of different smears.
7. Use of Microscope, care and Maintenance.
8. Haemoglobin estimation –Sahali's
9. Demonstration of colorimetric Hb estimation.
10. Total RBC Count.
11. Total Leukocyte Count.
12. Differential count of Leucocytes.
13. Reticulocyte
14. Total platelet count, Direct, Indirect
15. Absolute Eosnophil count, Direct , Indirect
16. Bleeding time and clotting time.
17. Examination of Blood Parasites., Malaria Parasite, Microfilaria



Year I Medical Biochemistry (Practical)

COURSE CODE: DML103

1. Laboratory safety, Glass ware cleaning.
2. Identification of glucose, fructose, maltose, lactose, sucrose, starch.
3. Colour reaction of cholesterol.
4. Pipettes, record maintenance.
5. Tests for Carbohydrate.
6. Tests for Proteins & Amino Acids.
7. Glucose estimation by Benedict method.
8. Tests for Iron, Calcium, Iodine, Fluorine, etc.
9. Identification of normal and abnormal constituents in Urine.



Year I

Medical Microbiology (Practical)

COURSE CODE: DML104

1. Compound Microscope.
2. Demonstration and sterilization of equipments – Hot Air Oven, Autoclave, Bacterial Filters.
3. Demonstration of commonly used culture media, Broth, and different agars.
4. Antibiotic sensitivity test.
5. Demonstration of common serological tests – Vidal, VRDL, ELISA Techniques.
6. Grams staining.
7. Acid fast staining.
8. Colony characteristics and Microscopic examination of Candida, Cryptococcus, Trichophyton, Microsporum, Aspergillus niger, Asp fumigatus, Rhizopus, Fusarium, Penicillium.



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DIPLOMA MEDICAL LAB TECHNICIAN (DMLT)

(SESSION 2022-2023 & ONWARDS)

Study and Evaluation Scheme

Programme: Diploma Medical Lab Technician (DMLT)

Year II

			Internal Assessment		Theory		Practical		Total
			Max marks	Min marks	Max marks	Min marks	Max marks	Min marks	Max marks
1.	DML201	Immunology	50	20	100	40	--	--	150
2.	DML202	Histopathology	50	20	100	40	50	20	200
3.	DML203	Bacteriology & Virology	50	20	100	40	50	20	200
4.	DML204	Parasitology & Mycology	50	20	100	40	--	--	150
5.	DML205	Basics of Computer	50	20	100	40	50	20	200
6.	DML256	Hospital Posting					100	40	100
Total			250	100	500	200	250	100	1000



SECOND YEAR

Branch	Subject Title	Subject Code
DMLT	Immunology	DML 201

Course Outcomes:

After completing this course satisfactorily a student will be able to Demonstrate an understanding of genetics as it applies to Immunohematology by interpreting a Punnett square. State the characteristics of the ABO, Rh, and other blood group system antigens and antibodies. Demonstrate problem solving by recognizing discrepant results and providing potential resolution of the problem. List the methods used to identify the most commonly encountered blood group antibodies, Developing a working knowledge of the principles and procedures of blood bank testing.

Course Contents:

Unit – I

Immune response: Immunity, Type (Innate & adaptive immune response) Organs of Immune System: Primary and Secondary lymphoid organ. Ontogeny and phylogeny of Lymphocytes: T and B Lymphocytes.

Unit – II

Cell of Immune System: Mononuclear cell and granulocytes, Antigen Presenting cell. Antigen, Haptens: Factors affecting immunogenicity epitopes. (Properties of it), Antibodies: Structure, Types and function.

Unit – III

Complement System: Role of complement system in immune response, Complements and Components and activation Pathways. Monoclonal antibodies: Production characterization and applications in diagnosis, therapy and basic research. Antigen-Antibody interaction, avidity & affinity measurement.



Unit – IV

Hypersensitivity: Definition, factor causing hypersensitivity Common hypersensitivity reaction, types, and classification based on the time taken for reaction Auto Immune disease.

Unit – V

Immunodiagnosics: Precipitation techniques, Agglutination, Fluorescence techniques. ELISA, RIA, Double diffusion and Immune-electrophoresis. Immunidiagnosics: VDRL test, Widal test, RA factor, Blood grouping, Rh typing, and Comb's test.

Unit-VI

Introduction, Human blood group antigens, ABO blood group system and incompatibility, Blood Transfusion Procedure, Complication of blood transfusion, Blood Collection, Selection and Screening of donors., Collection of blood, Storage of blood, Cell separator and transfusion of various components of blood like Plasma and Platelet Separation , Organization, Operation and Administration of Blood Bank and anticoagulants.



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DIPLOMA MEDICAL LAB TECHNICIAN (DMLT)

Branch	Subject Title	Subject Code
DMLT	Histopathology	DML 202

Course Outcomes:

After completing this course satisfactorily a student will be able to identify and describe in detail the microscopic structure of the major organs, tissues and cells of the body. be able to explain the theoretical background to surgical cutup, tissue fixation, tissue processing, microtomy and staining using routine and specialised techniques, able to interpret light- and electron-microscopic histologic images and identify the tissue source and structures.

Course Contents:

Unit – I

Theory of Histopathology, Reception of specimens, Histopathology of Tumor cell. Histopathology of Liver, Kidney, Adrenal, Ovary, Testies. Method of preparing stains & Fixatives.

Unit – II

Theory of Tissue processing and embedding. Theory of H & E staining, Use of Microtome, Tissue section cutting.

Unit – III

Embedding and preparation of blocks. Fixation of Tissue with DPX mount. Theory of frozen section preparation.

Unit – IV

Preparation of smear for Fine needle aspiration cytology. Pap's smear theory and identification of cells in a normal vaginal smear. Stool examination: normal, abnormal constituent.

Unit – V

Normal and abnormal constituent of Urine.



Practical : DML 202

1. Paraffin section cutting
2. Staining by Hematoxylin & Eosin and other special stains
3. Determination of Haemoglobin and Hematocrit
4. Red blood cell count
5. Total white blood cell count
6. Platelet count
7. Differential count of white blood cells
8. Absolute Eosinophil count
9. Reticulocyte count
10. Calculation of red cell indices



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DIPLOMA MEDICAL LAB TECHNICIAN (DMLT)

Branch	Subject Title	Subject Code
DMLT	Bacteriology & Virology	DML 203

Course Outcomes:

After completing this course satisfactorily a student will be able to Explain the basic principles of microbiology, the study of microbes, and how microbes are classified, Evaluate the requirements necessary to promote the growth and multiplication of bacterial and bacteria-like organisms, Describe the mechanisms by which microorganisms cause disease and analyze the normal immunological methods and the chemotherapeutic methods used to combat these mechanisms, Identify a variety of types of pathogenic microorganisms and the diseases they produce in the host.

Course Contents:

Unit – I

Introduction, history and scope of microbiology, Contribution of Anatomy Von Leeuwenhook, Louis Pasteur, Alexander Fleming in the development of Microbiology. Morphology and ultrastructure of bacterial cell wall of eubacteria and archaeobacteria cell membranes – structure, composition and properties.

Unit – II

Bacterial Nutrition: Nutritional groups, common nutritional requirements, growth factors. Growth of bacteria under extreme conditions: Psychrophiles, thermophiles, halophiles and acidophiles. Bacterial reproduction: Binary fission and endospore formation.

Unit – III

Mycoplasmas: General characteristics, structure and reproduction Cyanobacteria: General characteristics, structure, reproduction and economic importance, Bacterial growth curve, generation time, growth Kinetics – Synchronous, Batch and continuous cultures Measurement of growth and factors affecting growth.

Unit – IV

Chemical control of microorganisms: Heat, Filtration and radiation, Sterilization of soaps, detergents and dyes. Chemical control of microorganisms: halogens, phenol and phenolic compounds, heavy metals, alcohols, ethylene oxide, aldehydes and hydrogen peroxide.



Unit – V

Basis of microbial classification. Classification and salient features of bacteria according to Bergey's manual of determinative bacteriology. Kingdom fungi: Structure, reproduction and classification of fungi General characteristics and life cycle of: Zygomycetes, Ascomycetes, Basidiomycetes and Deuteromycetes.

Unit – VI

General morphology and ultra structure of Viruses: Capsids- Helical Symmetry, icosahedral symmetry and complex symmetry. Envelope: Glycoprotein and matrix protein. Viral genome: their types and structure.

Unit – VII

Cultivation of Viruses in embryonated eggs, experimental animals and cellculture: primary and secondary cell culture, suspension cell culture and monolayer cell cultures. Assays of viruses: physical and chemical methods of assays (protein nucleic acid, radioactivity traces, electron microscopy, plaque method, pock counting method, end point method and infectivity of plant viruses).

Unit – VIII

Bacteriophages: Classification, Morphology and ultrastructure, One step growth curve (Latent period, eclipse period and burst size) Life cycle: Lytic and Lysogenic cycles of bacteriophages.

Unit-IX

Animal viruses; classification and nomenclature. Life cycles and other details of DNA viruses: herpes, adeno and SV40, Life cycle and other details of RNA viruses: Retroviruses, oncogenic viruses, (HIV), picorna, orthomyxo and paramyxo.



Practical : DML 203

Bacteriology:

1. Compound Microscope.
2. Demonstration and sterilization of equipment's – Hot Air Oven, Autoclave, Bacterial filters.
3. Demonstration of commonly used culture media, Broth, and different agars.
4. Antibiotic sensitivity test.
5. Demonstration of common serological tests – Vidal, VRDL, ELISA Techniques.
6. Grams staining.
7. Acid fast staining.

Virology

1. Demonstration of embryonated egg inoculation
2. Virology exercise:
 - a) Spots test, ELISA (HBV, HCV, HIV), HI, Paul Bunnell test
 - b) Applied exercise – Rabies, Infantile Diarrhoea, Herpes, HBV, HIV, and Influenza.



Branch	Subject Title	Subject Code
DMLT	Parasitology & Mycology	DML 204

Course Outcomes:

After completing this course satisfactorily a student will be able to Explain viruses, fungi and parasites including their classification, morphology, and laboratory diagnosis and prevention measures, Perform laboratory investigations for the diagnosis of infectious diseases caused by viruses, fungi and parasites, Discuss various viral, fungal and parasitic diseases of human.

Course Contents:

Unit I

- (i) General principle of host parasite interaction and definitions of terms in this connection.
- (ii) Classification of the parasitic protozoans.
- (iii) Introduction to parasite host and Vectors. Morphology, life cycle and lab diagnosis of E. coli, Trichomonas and Leishmania.

Unit II

- (i) Classification of parasitic helminthes.
- (ii) Morphology, life cycle and lab diagnosis of malarial parasite.
- (iii) Morphology, life cycle and lab diagnosis of Ascaris and Taenia.

MYCOLOGY

1. Classification of Fungi
2. Growth and isolation
3. Mycoses (all types)
4. Laboratory diagnosis of mycotic diseases.
5. Immunity in fungal diseases and value of immuno diagnosis.
6. Role of mycotoxin
7. Antifungal agents
8. Epidemiology of fungal diseases.



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DIPLOMA MEDICAL LAB TECHNICIAN (DMLT)

Branch	Subject Title	Subject Code
DMLT	Basics of computers	DML 205

Course Outcomes:

After completing this course satisfactorily a student will be able to demonstrate a basic understanding of computer hardware and software. Demonstrate problem-solving skills. Apply logical skills to programming in a variety of languages.

Course Contents:

UNIT 1

Objective, Introduction, Generations of computer, First generation, Second generation, third generation, Fourth generation, types of computers, Minicomputers, Mainframe computers, Supercomputers, Numbers or Numerals, Characters, Organization of a computer, CPU, Motherboard, System Bus, Input Devices, Output Devices.

UNIT 2

Hardware, Computer Language, Machine Language, Assembly Language, High Level languages, Operating Systems and their Applications, Disk Operating System, Unix Operating System, Windows Operating System,

UNIT 3

Software-Concept, software-Classification, What is Operating system? History of Operating system, Operating System Concepts, Disk Drives and directories.

UNIT 4

MS Office packages – Word, Excel, PowerPoint, basic skills in using these tools.

UNIT 5

Accessing the internet, Getting an internet account, Getting connected to internet, World Wide Web, Web page, Net surfing, Beginnings of Email, Email settings, Web browser, web Servers, HTTP.



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DIPLOMA MEDICAL LAB TECHNICIAN (DMLT)

Practical : DML 205

Course Contents:

Unit I

Concept in Computer: Definition of Computer, History of Computer, Generations, Characteristic and Application of Computers, Classification of Computers, Computer Hardware, CPU, Various Types of I/O devices, Peripherals Devices, Storage Devices. Management Introductory concepts in operating system, textual Vs GUI Interface, Introduction to DOS

Unit II

Starting MS WORD, Creating and formatting a document, Changing fonts and point size, Table Creation and operations, Autocorrect, Auto text, spell Check, Word Art, Inserting objects, Page setup, Page Preview, Printing a document, MailMerge.

Unit III

Starting Excel, Work sheet, cell inserting Data into Rows/ Columns, Alignment, Text wrapping, Sorting data, Auto Sum, Use of functions, referencing formula cells in other formulae, Naming cells, Generating graphs, Worksheet data and charts with WORD, Creating Hyperlink to a WORD document, Page set up, Print Preview, Printing Worksheets.

Unit IV

Starting MS–Power Point,, Creating a presentation using auto content Wizard, Blank Presentation, creating, saving and printing a presentation, Adding a slide to presentation, Navigating through a presentation, slide sorter, slide show, editing slides, Using Clipart, Word art gallery, Adding Transition and Animation effects, setting timings for slide show, preparing note pages, preparing audience handouts, printing presentation documents, MS- Access, Creating tables and database, Internet, Use of Internet (Mailing, Browsing, Surfing).

Text Books:

1. Sinha P. K., Computer Fundamentals.
2. Bruck Bill, The Essentials Office 2000 Book.

Reference Books:

1. Leon A and Leon M., Introduction to Computers.
2. Norton's Peter, Introduction to Computers.

* Latest editions of all the suggested books are recommended.



Hospital Postings

Course Code: DML256

Course Contents:

Students shall be deputed to various practical training of handling patients, body fluids samples.

Labs of Pathology department wherein they shall undergo collection and processing of blood, urine, sputum stool and

Identification of patient's particulars based on CR number, Lab Number and transfer of samples from collection to different labs.

Process of performing various tests in different labs.

Each student is required to maintain a logbook of the various posting. Student's performance shall be evaluated on continuous basis by the faculty posted in various sections. The faculty shall submit the assessment records of each student posted in his/her section on monthly basis to the HOD. Marks will be awarded out of 50.