A.D.M COLLEGE FOR WOMEN (AUTONOMOUS), NAGAPATTINAM
DEPARTMENT OF BIOCHEMISTRY

ODD SEMESTER – 2021-2022

TEACHING PLAN

A. GENERAL INFORMATION

Name of the Faculty : Dr.G.Sabithira

Department : Biochemistry

Programme : B.Sc

Programme Code : BBH

Name of the Paper : BIOENERGETICS AND METABOLISM

Lecture Hours / Practical Hours : 5 Hrs / Week / Lecture Hours

B.ABOUT THE COURSE:

COURSE OBJECTIVES	**COURSE OUTCOMES**	**TEACHING METHODOLOGY**
• To enable the differences between anabolic and catabolic processes in metabolism • Use knowledge mechanism to follow metabolic pathways • Understand the fundamentals of cellular metabolism of carbohydrates, protein, lipids, porphyrins, aminoacids and nucleic acids and their association with various metabolic diseases. • Be able to describe how	• Describe the structure of amino acids, proteins, enzymes, chemical messengers, carbohydrates, lipids and nucleic acids. • Explain the function of the above listed biomolecules. • Explain how biochemical energy is generated in the cells using principles of thermodynamics (free energy, enthalpy). Write coupled reactions to show how an endergonic reaction can occur by coupling it with a very exergonic reaction. • Write the chemical reactions involved in biochemical pathways that produce ATP,such as citric acid cycle and electron transport.	• Class room Chalk and Talk • Power point. • e- Module • Classes through Practical demonstration. • Showing models to the students to make them understand.

anabolic and catabolic processes are coupled to energetics from ATP hydrolysis • Understand redox and electron transfer reactions in biological systems • Understand that reaction coordinate diagrams are useful for thermodynamics of coupling anabolic and catabolic processes in metabolism.	• Describe the metabolism of carbohydrates, lipids, proteins and amino acids. Write chemical reactions for the individual steps in each pathway.	

C.PLAN OF THE WORK

Unit /Modules	Topic to be covered	Proposed Date	Lecture Hours	Practical Hours	Remark
UNIT –I Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	• Bioenergetics, free energy • Entropy and enthalpy changes in biological system • Coupling of endergonic and exergonic • High energy phosphate compound • Biological oxidation • Cytochrome P450 monooxygenases system	09.08.2021 to 31.08.2021	3 hrs 2 hrs 3 hrs 2 hrs 3 hrs 2 hrs	-	-

UNIT-II Content- 15 Hrs, Assessment -3 Hrs Total - 18 Hrs	• Oxidative phosphorylation • Chemiosmotic theory • Uncouplers • Inhibitors inophores • Electron transport chain • Malate and glycerophosphate shuttle	01.09.2021 to 30.09.2021	4 hrs 2 hrs 2 hrs 2 hrs 3 hrs 2 hrs		
UNIT-III Content- 15 Hrs, Assessment -3 Hrs Total - 18 Hrs	• Glycolysis • Gluconeogenesis • Oxidation of pyruvate to acetyl co A • TCA cycle • Hexose monosephosphate pathway • Glycogenesis, glucuronic acid pathway • Glyoxylate cycle • Metabolism of galactose and fructose	01.10.2021 to 28.10.2021	2 hrs 2 hrs 2 hrs 2 hrs 2 hrs 2 hrs 2 hrs 1 hrs		
UNIT-IV Content- 15 Hrs, Assessment -3 Hrs Total - 18 Hrs	• Biosynthesis of fatty acid • Biosynthesis and catabolism of triglycerides and phospholipids • Glycolipids • Oxidation of fatty acids • Cholesterol synthesis • Ketogenesis • Plasma lipoprotein	29.10.2021 to 24.11.2021	2 hrs 2hrs 2 hrs 3 hrs 3 hrs 1 hrs 2 hrs		

UNIT –V Content- 15 Hrs, Assessment -3 Hrs Total - 18 Hrs	• Protein, Nucleic acid • Porphyrin • Catabolism of aminoacids • Urea biosynthesis • Purine and pyrimidine metabolism • Heme biosynthesis	25.11.2021 to 10.12.2021	3 hrs 2 hrs 3 hrs 3 hrs 2 hrs 2 hrs		

D.ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (June) Monthly Test - Unit-II (July) CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit)- 2 ½ Units (November) Monthly Test– Unit –IV (November) **27.12.2021 to 4.01.2021** CIA / Model Examination -Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units (October)
Assignment	Assignment I –Unit –I and Unit –II (October) Assignment II – Unit –III and Unit – IV (November)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (October)
Seminar	Unit –V (September and October)
Tutorial Ward Meeting	Monthly once

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TEACHING PLAN

A. General Information:

Name of the Faculty : Dr.G.Sabithira

Department : Biochemistry

Programme : B.Sc

Programme Code : **BBI**

Name of the Paper : PHARMACEUTICAL BIOCHEMISTRY

Lecture Hours / Practical Hours : 6 Hrs / Week / Lecture Hours

A. About the course

Course objectives	Course outcomes	Teaching Methodology
• To enable the students understanding the classification, metabolism, Chemo thrapeutic effect, Toxic effect of various drugs. • To understands drug distribution, absorption, elimination of drug. • To understand the chemical pathway of phase I and phase II reaction. • To enable the students understanding antibiotics. • To know about anaesthetics.	• Describe the history of pharmacy, development of pharmacy profession and industry in India. • Describe various routes of drug administration, concept of dosage forms, unit operations involved in preparation of these dosage forms. • Describes alternative system of medicines. • Explain the factors which influence the design of pharmaceutical dosage forms. • Summarize the factors influencing formulation of various dosage form like solution.	• Class room Chalk and Talk • Power point. • e- Module • Classes through Practical demonstration. • Showing models to the students to make them understand.

B. PLAN OF THE WORK

Unit /Modules	Topic to be covered	Proposed Date	Lecture Hours	Practical Hours	Remark
UNIT –I Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	• Classification of drugs • Mode of administration • Absorption of drugs • Drug distribution • Elimination of drugs	09.08.2021 to 31.08.2021	4 hrs 3 hrs 2 hrs 3 hrs 3 hrs	-	-
UNIT-II Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	• Drug metabolism • Role of cytochrome • Non microsomal reactions of drug metabolism • Drug metabolizing enzymes	01.09.2021 to 30.09.2021	4 hrs 3 hrs 5 hrs 3 hrs		
UNIT-III Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	• Chemotheraphy • Antibiotics • Alkaloids • Antiviral and anti-malarial agents • Drug resistence	01.10.2021 to 28.10.2021	4 hrs 4 hrs 3 hrs 3 hrs 1 hrs		
UNIT-IV Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	• Adverse response • Allergy • Drug intolerence • Drug addiction • Drug abuses	29.10.2021 to 24.11.2021	4 hrs 4 hrs 3 hrs 3 hrs 1 hrs		

UNIT-V Content- 15 hrs Assessment -3 Hrs Total - 18 Hrs	• Anesthetics • Halogenated hydrocarbon • Chloroform • Intravenous anesthetics • Antiseptic and disinfectant • Phenol and related compounds	25.11.2021 to 10.12.2021	3 hrs 2 hrs 3 hrs 3 hrs 3 hrs 1 hrs		

D. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (June) Monthly Test - Unit-II (July) CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit)- 2 ½ Units (August) Monthly Test– Unit –IV (September) **25.11.2021 to 15.12.2021** CIA / Model Examination -Unit-III(Second 1/2 Unit) – Unit-V- 2 ½ Units (October)
Assignment	Assignment I –Unit –I and Unit –II (August) Assignment II – Unit –III and Unit – IV (September)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (October)
Seminar	Unit –V (September and October)
Tutorial Ward Meeting	Monthly once

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TEACHING PLAN

A. GENERAL INFORMATION

Name of the Faculty : Dr.G.Sabithira

Department : Biochemistry

Programme : B.Sc

Programme Code : **BBS2Y**

Name of the Paper : Herbal medicine Practical

Lecture Hours / Practical Hours : 2Hrs / Week / Practical Hours

B. ABOUT THE COURSE

Course Objectives	Course Outcomes	Practical Methodology
• To enable the students can get the practical knowledge about the analysis of various phyto constituents present in materials. • Students to understand the soxhlet apparatus how to collect solvent sextracts. • Preparing TLC fingerprints of various plants extracts. • To understand the column chromatography. • To understand the separation of plant pigments using	• Demonstrating initiative by beginning work in a timely manner without being reminded • Exhibiting professional appearance by adhering to laboratory dress code • Organizing work flow and determining priorities • Producing accurate work within the allotted time • Demonstrating awareness of own limitations, and seeking help when needed	• Demonstrating initiative by beginning work in a timely manner without being reminded. • Exhibiting professional appearance by adhering to laboratory dress code. • Organizing work flow and determining priorities. • Producing accurate work within the allotted time. • Demonstrating awareness of own limitations, and seeking help when needed. • Handling stressful situations calmly and efficiently. • Demonstrates integrity when

column chromatography.		taking examinations, checking for mistakes, repeating questionable results and admitting and correcting mistakes • Adhering to all safety regulations in the laboratory

C. PLAN OF THE WORK

Unit / Modules	Topic to be covered	Proposed date	Lecture Hours	Practical Hours	Remarks
PRACTICAL	1. Phytochemical Screening of medicinal plants using chemical tests for various groups of Phyto constituents	08.08.2021		3 hrs	
	2. Preparation of alcoholic and other organic solvents extracts of medicinal plants by soxlet	18.08.2021		3 hrs	
	3. Preparing TLC fingerprint profile of various plants extracts.	26.08.2021	-	3 hrs	-
	4. Demonstration of column chromatography	2.09.2021		3 hrs	
	5. Estimation of Ascorbic acid	9.09.2021		3 hrs	
	6. Estimation of Alkaloids	30.09.2021		3 hrs	
	7. Separation of plant pigment by column chromatography	8.10.2021		3 hrs	

D. ACTIVITIES

Activities Name	Details
Repetition Class Observation Correction Record Correction Mid Semester Model Practical	09.08.2021 to 12.12.2021.

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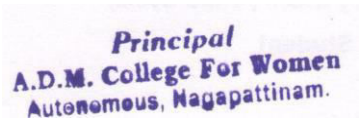

ODD SEMESTER 2021-2022

TEACHING PLAN

A. General Information:

Name of the Faculty	**:**	Ms. M. Bharathi
Department	**:**	Biochemistry
Programme	**:**	II – B.Sc, Biochemistry
Name of the Paper	**:**	HUMAN PHYSIOLOGY
Programme code	**:**	**BBD**
Lecture Hours	**:**	6 Hrs / Week / Lecture Hours-90 Hrs

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To enable the students can get knowledge about various physiological system and their function in human anatomy. • To learn the function of body fluid. • To study the concepts of digestive system. • To learn the structure if circulatory system. • To acquire knowledge about excretory, Nervous system and reproductive system.	• Ensure the students to acquire knowledge on composition and function of body fluid. • To understand the apply the various concepts of digestive system. • To understand the anatomy and physiology and cardiovascular and respiratory system. • To classify different type of muscle and anatomy of excretory and nervous system. • To understand the general anatomy and function of the male and female reproductive organs.	• Power point E-Modules • Chark and Talk method, • Lecture Method • Discussion Method • Study Assignment Method • Seminar Method

C. PLAN OF THE WORK:

Unit/ Modules	Topic to be Covered	Proposed date	Lecture Hours	Practical	Remarks
Unit – I Content- 15Hrs Assessment -3 Hrs Total - 18 Hrs	• Extra cellular fluid (plasma, interstitial and transcellular fluid). • Intracellular fluid (lymph and Blood) composition and function. • Osmolarity of body fluids, Ionic composition and Electrolytes, Body buffers. • Blood cells, Haemoglobin, Haemopoiesis. • Blood Coagulation and Blood Groups.	09.08.2021 to 27.08.2021	3 Hrs 4 Hrs 3 Hrs 3 Hrs 2 Hrs	-	-
Unit - II Content- 15Hrs Assessment -3 Hrs Total - 18 Hrs	• Anatomy of digestive system salivary, Gastric Secretions • Bile secretions - composition and functions. • Intestinal hormones. Movements in Gastro intestinal tract. • Digestion and absorption in the small intestine • Digestion and absorption in the small intestine. Large intestine	28.08.2021 to 14.09.2021	3 Hrs 2 Hrs 3 Hrs 3 Hrs 4 Hrs		
Unit – III Content- 15Hrs Assessment -3 Hrs	• Structure of Heart and blood vessels, cardiac cycles • Blood pressure, factors	25.09.2021 to 08.10.2021	4 Hrs 3 Hrs		

Total - 18 Hrs	affecting Blood pressure • Electrocardiogram. • Respiration: Anatomy and physiology of respiration exchange of gases between lungs and blood, blood and tissues • Role of lungs in acid - base balance.		2 Hrs 4 Hrs 2 Hrs		
Unit – IV Content- 15Hrs Assessment -3 Hrs Total - 18 Hrs	• Structure of Kidney, Nephron composition and formation of urine. • Renal regulation of acid – base balance. • Muscles : types of muscles structure, mechanism of muscle contraction. • Nervous system : structure of brain, neuron, nerve impulse, synapse. • Cerebrospinal fluid and blood brain barrier.	09.10.2021 to 23.10.2021 17.11.2021 to 23.11.2021	4 Hrs 3 Hrs 3 Hrs 3 Hrs 2 Hrs		
Unit – V Content- 15Hrs Assessment -3 Hrs Total - 18 Hrs	• General anatomy of the male and female reproductive organs. • Testis, ovary, Uterus, • Menstrual cycle, physiological changes • Spermatogenesis, ovulation, • Physiology of pregnancy-metabolic changes during pregnancy.	24.11.2021 to 15.12.2021	3 Hrs 4 Hrs 3 Hrs 3 Hrs 2 Hrs		

D. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (June) Monthly Test - Unit-II (July) CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit)- 2 ½ Units (August) Monthly Test– Unit –IV (September) CIA / Model Examination -Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units (October)
Assignment	Assignment I –Unit –I and Unit –II (August) Assignment II – Unit –III and Unit – IV (September)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (October)
Seminar	Unit –V (September and October)
Tutorial Ward Meeting	Monthly once
Mentor Mentee Meeting	Weekly Once

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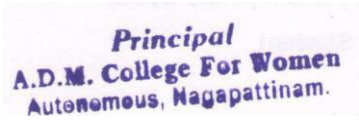

Teaching Plan

A. General Information

Name of the Faculty : Ms. M. Bharathi

Department : Biochemistry

Programme : II – YEARS

Name of the Paper : WOMEN AND HEALTH

Programme code : **BBE1**

Lecture Hours : 2 Hrs / Week / Lecture Hours-30 Hrs

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To learn the female reproductive system and diseases. • To understand the vaccines for during pregnancy. • To study of different types of parturition. • To learn the health problem in women. • To enable the students can get knowledge about balanced diet for women.	• Ensure the students to acquire knowledge on anatomy of female reproductive system and related diseases. • To understand the concepts of vaccines and genetic complication during the pregnancy. • To understand acquire knowledge on different types of parturition and vaccination for infants. • Ensure the students to understand acquire knowledge on	• Power point E-Modules • Chalk and Talk method, • Lecture Method • Discussion Method • Study Assignment Method • Seminar Method

	diagnosis and treatment in health problem for women • Ensure the students to understand acquire knowledge on balanced diet and physical activity for women	

C. PLAN OF THE WORK:

Unit/ Modules	Topic to be Covered	Proposed date	Lecture Hours	Practical	Remarks
Unit – I Content- 4Hrs Assessment -2 Hrs Total - 6 Hrs	• Study of the female reproductive system, female hormones, menarche, menstrual cycle. Menopause, associated problem's • Premenstrual syndrome, amenorrhoea, dysmenorrhoea. • Polycystic ovarian diseases (PCOD).Fallopian tube obstruction, nutrition during adolescence.	10.08.2021 to 11.08.2021 17.08.2021 to 18.08.2021	2 Hrs 1 Hrs 1 Hrs	-	-
	• Pregnancy, vaccines				

Unit - II Content- 4Hrs Assessment -2 Hrs Total - 6 Hrs	and diagnosis test during pregnancy. • Foetal testing – amniocentesis and other tests for genetic abnormalities. • Genetic counselling complications associated with pregnancy. Gestational diabetes, ectopic pregnancy, miscarriage, nutrition during pregnancy.	26.08.2021 27.08.2021 04.09.2021 to 13.09.2021	1 Hrs 1 Hrs 2 Hrs	-	-
Unit – III Content- 4Hrs Assessment -2 Hrs Total - 6 Hrs	• Parturition – different types, significance of breast feeding. • Nutrition during lactation, vaccination for infants. • Contraceptive methods, sexually transmitted diseases.	14.09.2021 20.09.2021 to 21.09.2021 27.09.2021 to 28.09.2021	1 Hrs 2 Hrs 1Hrs	-	-
Unit – IV Content- 4Hrs Assessment -2 Hrs	• Health problems in women. Cancer breast cancer, cervical cancer	04.10.2021 to 05.10.2021	2 Hrs		

Total - 6 Hrs	ovarian cancer diagnosis and treatment. • Menopause associated problems. • Hormones replacement therapy	11.10.2021 to 12.10.2021 22.10.2021	2 Hrs 1 Hrs	-	-
Unit – V Content- 4Hrs Assessment -2 Hrs Total - 6 Hrs	• Balanced diet for women – carbohydrate, lipids sources and deficiency disorders. • Proteins vitamins and minerals - sources and deficiency disorders. • Physicals activity – calorie expenditure for various activities, aerobics and yoga**.**	23.10.2021 20.11.2021 to 21.11.2021 30.11.2021	1 Hrs 2 Hrs 1 Hrs	-	-

D. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (June) Monthly Test - Unit-II (July) CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit)- 2 ½ Units (August)

	Monthly Test– Unit –IV (September) CIA / Model Examination -Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units (October)
Assignment	Assignment I –Unit –I and Unit –II (August) Assignment II – Unit –III and Unit – IV (September)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (October)
Seminar	Unit –V (September and October)
Tutorial Ward Meeting	Monthly once
Mentor Mentee Meeting	Weekly Once

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TEACHING PLAN

A. General Information:

Name of the Faculty : Ms. M. Bharathi

Department : Biochemistry

Programme : III – B.Sc, Biochemistry

Name of the Paper : Introduction to Enzymology

Programme code : **BBG**

Lecture Hours : 5 Hrs / Week / Lecture Hours-75 Hrs

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To enable the students can get knowledge about the classification of enzymes • To study the Isolation and purification of enzymes • To understand the enzymes in lock and key hypothesis • To know about the concept of enzymes involved in pharmaceutical of medicine • To learn about the application of enzyme in food.	• Plan and execute an enzyme assay • Analyze enzyme kinetic data. • Analyze kinetic inhibition data and to determine the mechanism of inhibition. • Perform library research on a specific enzyme topic • To study about application of enzyme in different industries.	• Power point E-Modules • Chalk and Talk method, • Lecture Method • Discussion Method • Study Assignment Method • Seminar Method

C. PLAN OF THE WORK:

Unit/ Modules	Topic to be Covered	Proposed date	Lecture Hours	Practical	Remarks
Unit – I Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Definition, Nomenclature and classification of enzymes. • Properties and enzymes as biological catalyst. • Specificity of enzymes, assay of enzymes. • Structure and functions of coenzymes. • Units of enzyme activity turn over number	09.08.2021 to 27.08.2021	2 Hrs 2 Hrs 3 Hrs 3 Hrs 2 Hrs	–	–
Unit - II Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Isolation and purification of enzymes. • Classical Methods of purification • Crystallization methods. • Separation procedures based on molecular size, solubility difference and electric charge and selection adsorption. • Criteria of purity.	28.08.2021 to 13.09.2021 27.09.2021 to 31.09.2021	2 Hrs 3 Hrs 2 Hrs 4 Hrs 2 Hrs	–	–
Unit – III Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Mechanism of enzyme action- active site definition, lock and key hypothesis, induced fit hypothesis. • Mechanism of enzyme catalysis.	01.10.2021 to 23.10.2021	3 Hrs 1 Hrs 2 Hrs 3 Hrs	–	–

	• Enzyme substrate complexes, formation. • Mechanism of bisubstrate reactions. • Allosteric enzymes, feedback inhibition.		3 Hrs		
Unit – IV Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Factors influencing enzyme activity. • Derivation of Michalis - Menton equation. • Line weaver - Burk plot • Enzyme activators. • Inhibitor kinetics (competitive, un and non - competitive)	01.10.2021 to 20.10.2021	3 Hrs 2 Hrs 2 Hrs 2 Hrs 3 Hrs	–	–
Unit – V Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Enzymes of clinical importance. • Application of enzyme in food. • Pharmaceuticals and medicine. • Immobilized enzymes- principals and application. • Industrial application of enzymes.	17.11.2021 to 06.12.2021	2 Hrs 3 Hrs 3 Hrs 2 Hrs 2 Hrs	–	–

D. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (June) Monthly Test - Unit-II (July) CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit)- 2 ½ Units (August) Monthly Test– Unit –IV (September) CIA / Model Examination -Unit-III(Second 1/2 Unit) – Unit-V- 2 ½ Units (October)
Assignment	Assignment I –Unit –I and Unit –II (August) Assignment II – Unit –III and Unit – IV (September)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (October)
Seminar	Unit –V (September and October)
Tutorial Ward Meeting	Monthly once
Mentor Mentee Meeting	Weekly Once

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TEACHING PLAN

A. General Information:

Name of the Faculty	**:**	Ms. M. Bharathi
Department	**:**	Biochemistry
Programme	**:**	III – B.Sc, Biochemistry
Name of the Paper	**:**	Medical Lab Techniques
Programme code	**:**	**BBE3**
Lecture Hours	**:**	5 Hrs / Week / Lecture Hours-75 Hrs

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To enable the students understanding the various diagnostics method for identifying the disease. • The role of medical laboratory technology in the healthcare industry. • Communication in the Laboratory setting. • Accuracy, attention to detail, organization and quality control. • Safe and accurate performance of laboratory procedures. • How to collect the specimen and preservation for test.	• Recognize the role of medical laboratory technology in the context of providing quality patient healthcare. • Perform basic clinical laboratory procedures using appropriate laboratory techniques and instrumentation in accordance with current laboratory safety protocol. • Calculate and properly report laboratory data. • Interpret laboratory results in accordance to laboratory protocol. • Use effective written and verbal communication that represents	• Power point E-Modules • Chalk and Talk method, • Lecture Method • Discussion Method • Study Assignment Method • Seminar Method

	competence and professionalism in the clinical laboratory setting.	

C. PLAN OF THE WORK:

Unit/ Modules	Topic to be Covered	Proposed date	Lecture Hours	Practical	Remarks
Unit – I Content-12Hrs, Assessment -3 Hrs Total - 15 Hrs	• Introduction to medical laboratory science. • Safety in the laboratory • General Laboratory instruments • General Laboratory equipments.	11.08.2021 to 14.08.2021 18.08.2021 to 24.08.2021 27.08.2021 to 01.09.2021	3 Hrs 3 Hrs 3 Hrs 3 Hrs	–	–
Unit - II Content-12Hrs, Assessment -3 Hrs Total - 15 Hrs	• Collection of specimen and preservation, • Composition of weight, • Measuring liquids and solids. • Culture media and inoculation. • Biochemical	04.09.2021 to 08.09.2021 14.09.2021 to 17.09.2021	2 Hrs 2 Hrs 2 Hrs 2 Hrs 2 Hrs	–	–

	reaction, • Antibiotic sensitivity test.	21.09.2021 to 22.09.2021	2 Hrs		
Unit – III Content-12Hrs, Assessment -3 Hrs Total - 15 Hrs	• Development of blood cells. • Methods of estimation of haemoglobin. • Blood sugar level. • Blood urea level. • Bleeding time, clotting time.	23.09.2021 to 24.09.2021 28.09.2021 to 31.09.2021 05.10.2021 to 08.10.2021	3 Hrs 3 Hrs 2Hrs 2 Hrs 2 Hrs	–	–
Unit – IV Content-12Hrs, Assessment -3 Hrs Total - 15 Hrs	• Cholesterol test, HDL cholesterol, • Bilirubin test, • Pregnancy test, • Albumin and globulin ratio- • Total cholesterol, lipoproteins-HDL,LDL, VLDL.	12.10.2021 to 13.10.2021 18.10.2021 and 20.10.2021 21.10.2021 to 24.10.2021 01.12.2021 to 06.12.2021	3 Hrs 2 Hrs 2Hrs 2 Hrs 3Hrs	–	–
Unit – V Content-12Hrs, Assessment -3 Hrs Total - 15 Hrs	• VDRL test, Widal test. • Clinically diagnostics Enzymes-liver-AST, ALT, GT. • Heart-AST,	08.12.2021 to 14.12.2021 20.12.2021	2 Hrs 3 Hrs 3 Hrs 2 Hrs	–	–

	LDH, CK. • Bone- Alkaline Phosphatase. • Muscle-CPK. • CRP test, HIV test, A.S.O test.	to 24.12.2021	2 Hrs		

E. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (June) Monthly Test - Unit-II (July) CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit)- 2 ½ Units (August) Monthly Test– Unit –IV (September) **27.11.2020 to 08.12.2020** CIA / Model Examination -Unit-III(Second 1/2 Unit) – Unit-V- 2 ½ Units (October)
Assignment	Assignment I –Unit –I and Unit –II (August) Assignment II – Unit –III and Unit – IV (September)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (October)
Seminar	Unit –V (September and October)
Tutorial Ward Meeting	Monthly once
Mentor Mentee Meeting	Weekly Once

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TEACHING PLAN

A. General Information:

Name of the Faculty	**:**	Ms. M. Bharathi
Department	**:**	Biochemistry
Programme	**:**	III – B.Sc, Biochemistry
Name of the Paper	**:**	MAJOR PRACTICAL - III
Programme code	**:**	**UBJY**
Lecture Hours	**:**	3 Hrs / Week / Lecture Hours-45 Hrs

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To enable the students can get the practical knowledge about the moisture content, ash. Content, analysis of micro nutrient and enzymes in food sample by specific method. • To understand the experiments of Carbohydrate, Protein, Fat content in food materials. • To enable the iron, phosphorous experiments. • To study to calcium in milk. • To determine the pH, salivary amylase.	• Determination of ash and moisture content of food materials. • Determine carbohydrate, protein and fat content analysis. • Estimation of iron and phosphorous in standard procedure. • Estimation of calcium in milk. • Doing estimation of specific activity pH of salivary amylase and alkaline phosphates.	• Students has to be in time for the laboratory • Students are not allowed into the lab without prepared Observation Note. • A student has to complete the practical and calculations at the stipulated time give to them. • Students have to receive the signature in the observation note on the same day or on or before entering the next practical class.

C. PLAN OF THE WORK:

Unit/ Modules	Topic to be Covered	Proposed date	Lecture Hours	Practical	Remarks
Content- 6Hrs Assessment -3 Hrs Total - 6 Hrs	1. Moisture content of food materials 2. Ash content of food materials	10-08-2021	–	3 Hrs	–
	3. Estimation of carbohydrate by Anthrone method 4. Estimation of protein by Lowry's Method	17-08-2021	–	3 Hrs	–
	5. Estimation of Fat content in food materials 6. Estimation of iron – Dipyridyl Method.	26-08-2021 & 03-09-2020	–	3 Hrs 3 Hrs	–
	7. Estimation of phosphorous- Sub marrow Method. 8. Estimation of calcium in Milk	13-09-2021 & 27-09-2021	–	3 Hrs 3 Hrs	–
	9. Determination of specific activity, effect of temperature and pH of alkaline phosphatases activity . 10. Determination of specific activity, effect of temperature and pH of Salivary amylase activity.	04-10-2021 11.10.2021	–	3 Hrs 3 Hrs	–

D. ACTIVITIES

Activities Name	Details
Repetition Class Observation Correction Record Correction Mid Semester Model Practical	11.10.2021 to 21.10.2021

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