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

EVEN SEMESTER – 2021-2022

TEACHING PLAN

A. GENERAL INFORMATION

Name of the Faculty : Dr.G.Sabithira

Department : Biochemistry

Programme : III B.Sc, Biochemistry

Programme Code : UBK

Name of the Paper : Clinical biochemistry

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

B.ABOUT THE COURSE:

COURSE OBJECTIVES	COURSE OUTCOMES	TEACHING METHODOLOGY
• To enable the students can get knowledge about the disease caused due to disorders of various metabolic reaction in living cells. • To use basic laboratory skills and apparatus to obtain reproducible data from biochemical experiments; • To implement experimental protocols, and adapt them to plan and carry	• To clinically assess the laboratory indicators of physiologic conditions and diseases • To know the biochemical and molecular tools needed to accomplish preventive, diagnostic and therapeutic intervention on hereditary and acquired disorders Course contents • Assessment of the diagnostic performance of laboratory tests according to the clinical setting and prevalence of disease. • Determine various substances including substrates, enzymes, hormones, etc and their use in diagnosis and monitoring of disease are applied • Evaluate the abnormalities which	• Class room Chalk and Talk • Power point. • e- Module • Classes through Practical demonstration. • Showing models to the students to make them understand.

out simple investigations; • To analyse, interpret and participate in reporting to their peers on the results of their laboratory experiments; • To participate in and report orally on team work investigations of problem-based assignments; • To build on their knowledge and understanding in tackling more advanced and specialised courses, and more widely to pursue independent, self-directed and critical learning.	commonly occur in the clinical field • Review the information from each category of tests and develop a protocol for disease diagnosis	

C.PLAN OF THE WORK

Unit /Modules	Topic to be covered	Proposed Date	Lecture Hours	Practical Hours	Remark
UNIT –I Content- 15Hrs Assessment -3Hrs Total - 18 Hrs	➢ Disorder of fluids ➢ Disorder involving H+ Concentration ➢ Water Toxicity, dehydration ➢ Renal function Test	21.02.2022 to 01.03.2022	2 hrs 1 hrs 2 hrs 2 hrs	-	-

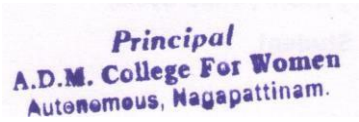
	➢ Normal and Abnormal constituents of urine ➢ Blood clotting mechanism ➢ Haemophilia ➢ Porphyria ➢ Anticoagulants		3 hrs 2 hrs 2hrs 1hrs		
UNIT-II Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	➢ maintenance of blood sugar ➢ hypoglycemia, hyperglycemia, Glycouria ➢ Renal threshold value ➢ Diabetes mellitus ➢ Glucose tolerance test ➢ Diabetic coma, Diabetic ketoacidosis ➢ Glycogen storage disease ➢ Fructosuria, galactsemia, hypoglycemic agent	02.03.2022 to 18`03.2022	2 hrs 2 hrs 2 hrs 2hrs 2hrs 1 hrs 2hrs 2hrs		
UNIT-III Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	➢ Liver and adipose disease ➢ Plasma lipoproteins ➢ Cholesterol ➢ Fatty liver, atherosclerosis ➢ Lipid storage disease ➢ Hypolipoproteinemia, hyperlipoproteinemia	21.03.2022 to 31.03.2022	2 hrs 3hrs 2hrs 3hrs 2hrs 3hrs		
UNIT-IV Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	➢ Plasma proteins ➢ Nitrogen balance, proteinuria ➢ Multiple myeloma,Wilson disease	01.04.2022 to 18.04.2022	2 hrs 2hrs 2 hrs 2hrs 1hrs 1hrs		

	➢ Liver function test ➢ Jaundice ➢ Phenyl ketoneuria, alkaptanuria, tyrosinemia, albinism, ➢ Gout-complications ➢ Lesch nyhan synthrome ➢ Oroticaciduria		2hrs 1hrs 1hrs 1hrs		
UNIT –V Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	➢ Thyroid disorder ➢ Pituitary disorder ➢ Adrenal medulla ➢ Sex hormones	23.04.2022 to 12.04.2022	4hrs 4hrs 4hrs 3hrs		

D.ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (March)
	Monthly Test - Unit-II (March)
	CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit)- 2 ½ Units (April)
	Monthly Test– Unit –IV (April)
	26.05.2022 to 31.05.2022
	CIA / Model Examination -Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units
Assignment	(October)
	Assignment I –Unit –I and Unit –II (April)
Quiz	Assignment II – Unit –III and Unit – IV (March)
Seminar	Two Mark Quiz Test - Unit I – Unit – V (May)
Tutorial Ward Meeting	Unit –V (April)
	Monthly once

PRINCIPAL



TEACHING PLAN

A. GENERAL INFORMATION

Name of the Faculty : Dr.G.Sabithira

Department : Biochemistry

Programme : III B.Sc, Biochemistry

Programme Code : UBL

Name of the Paper : Immunology

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

B.ABOUT THE COURSE:

COURSE OBJECTIVES	COURSE OUTCOMES	TEACHING METHODOLOGY
• To enable the students can get knowledge about the, immune system, immune response and allergic reaction. • The students will be able to identify the cellular and molecular basis of immune responsiveness. • The students will be able to describe the roles of the immune system in both maintaining health and contributing to disease. • The students will be able to describe immunological response and how it is triggered and regulated.	• To clinically assess the laboratory indicators of physiologic conditions and diseases • To know the biochemical and molecular tools needed to accomplish preventive, diagnostic and therapeutic intervention on hereditary and acquired disorders Course contents • Assessment of the diagnostic performance of laboratory tests according to the clinical setting and prevalence of disease. • Determine various substances including substrates, enzymes, hormones, etc and their use in diagnosis and monitoring of disease are applied • Evaluate the abnormalities which commonly occur in the clinical field • Review the information from each category of tests and develop a protocol	• Class room Chalk and Talk • Power point. • e- Module • Classes through Practical demonstration • Showing models to the students to make them understand.

• The students will be able to demonstrate a capacity for problem-solving about immune responsiveness.	for disease diagnosis	

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	• Lymphocytes • Types of immunity • Primary and lymphoid organ • Immune response • Antigen presenting cells • classification of complement • Immune tolerance	21.02.2022 to 01.03.2022	2 hrs 2 hrs 2 hrs 4 hrs 3 hrs 1 hrs 1 hrs	-	-
UNIT-II Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	• Structure of immunoglobulins • Monoclonal antibodies • Antigen antibody interaction • Antitoxin, agglutination	02.03.2022 to 18`03.2022	4 hrs 4 hrs 4 hrs 3hrs		
UNIT-III	• Production of antisera	21.03.2022	2 hrs		

Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	• Immuno electrophoresis • Immuno diffusion. • Immuno electrophoresis • Radio immunoassay • Immuno flurescene • Complement fixation • ELISA	to 31.03.2022	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	• Blood group antigen • Rhesus imcompatablity • Major Histo compablity • HLA-Immune response • Pathogenesis of autoimmune disease	01.04.2022 to 18.04.2022	3 hrs 2hrs 3hrs 3 hrs 3hrs		
UNIT –V Content- 15 Hrs Assessment -3 Hrs Total - 18 Hrs	• Hyper sensivity • Macrophage activation • Transplantation • Immunosuppressive drug	23.04.2022 to 12.04.2022	4 hrs 4 hrs 4 hrs 3 hrs		

D.ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (March) Monthly Test - Unit-II (April) CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit)- 2 ½ Units (April) Monthly Test– Unit –IV (April)
Assignment	**26.05.2022 to 31.05.2022** CIA / Model Examination -Unit-III(Second 1/2 Unit) – Unit-V- 2 ½ Units (May) Assignment I –Unit –I and Unit –II (April) Assignment II – Unit –III and Unit – IV (March)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (May)
Seminar	Unit –V (April)
Tutorial Ward Meeting	Monthly once

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Autonomous, Nagapattinam.

TEACHING PLAN

A. GENERAL INFORMATION

Name of the Faculty	:	Dr.G.Sabithira
Department	:	Biochemistry
Programme	:	B.Sc
Programme Code	:	**BBEY**
Name of the Paper	:	Major Practical II
Lecture Hours / Practical Hours	:	3Hrs / Week / Practical Hours

B. ABOUT THE COURSE

Course Objectives	Course Outcomes	Practical Methodology
• To understand preparation of buffer. • To estimate the DNA and RNA. • To learn about the separation procedure. • Isolation of DNA methods. • Demonstrate of electrophoresis	• The student gets knowledge about the principles in various analytical techniques. • To understand the different types of buffer preparation and measurement of pH. • To estimate the RNA and DNA used in specific methods. • To learn the different types chromatography in separation of amino acid and sugar. • To understand the isolating the DNA from animal tissue.	• The student gets knowledge about the principles in various analytical techniques. • To understand the different types of buffer preparation and measurement of pH. • To estimate the RNA and DNA used in specific methods. • To learn the different types chromatography in separation of amino acid and sugar. • To understand the isolating the DNA from animal tissue.

C. PLAN OF THE WORK

Unit / Modules	Topic to be covered	Proposed date	Lecture Hours	Practical Hours	Remarks
PRACTICAL	Preparation of phosphate buffer and citrate buffer and measurement of PH	25.02.2022		3 Hrs	
	Estimation of DNA by Diphenylamine methods	07.03.2022		3hrs	
	Estimation of RNA by Orcinol method	15.03.2022	-	3 hrs	-
	Separation of amino acid by paper chromatography	23.03.2022		3hrs	
	Separation of sugar by paper chromatography	31`03.2022		3hrs	
	Separation of amino acid by thin layer chromatography	30.04.2022		3hrs	
	Mitosis (onion root tip)	30.04 2022		3hrs	
	Isolation of DNA from Animal tissue	09.05.2022		3hrs	
	Demonstration of Agarose gel electrophoresis	09.05.2022		3hrs	
	Titration curve of an aminoacid	09.05.2022		3hrs	

D. ACTIVITIES

Activities Name	Details
Repetition Class Observation Correction Record Correction Mid Semester Model Practical	10.05.2022 to 15.05.2022.

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TEACHING PLAN

A. GENERAL INFORMATION

Name of the Faculty : Dr.G.Sabithira

Department : Biochemistry

Programme : B.Sc

Programme Code : **BBUY**

Name of the Paper : Major Practical I

Lecture Hours / Practical Hours : 3Hrs / Week / Practical Hours

B. ABOUT THE COURSE

Course Objectives	Course Outcomes	Practical Methodology
• To understand principle, theory and calculations of experiment. • To gain hands on preparation of all the solutions and to standardize solutions individually. • To enable the students can get practical knowledge about the qualitative analysis of biomolecules	• This paper introduces people to chemical reasoning and thinking, encouraging application of chemical rules and logic to problems. • Draw molecules and reaction mechanisms; understand experiments aimed at elucidating mechanism. • Students understand various identification tests for carbohydrates and amino acids. • Students acquire the skill to distinguish reducing and reducing sugars. • Students acquire skill to perform the experiment in the real lab	• This paper introduces people to chemical reasoning and thinking, encouraging application of chemical rules and logic to problems. • Draw molecules and reaction mechanisms, understand experiments aimed at elucidating mechanism. • Students understand various identification tests for carbohydrates and aminoacids. • Students acquire the skill to distinguish reducing and reducing sugars.

C. PLAN OF THE WORK

Unit / Modules	Topic to be covered	Proposed date	Lecture Hours	Practical Hours	Remarks
	I. QUALITATIVE ANALYSIS: **a. Carbohydrates** Glucose Fructose Lactose Sucrose Starch	23.02.2022 3.03.2022		3Hrs 3hrs 3hrs 3hrs 3hrs	
	a. Aminoacids Tryptophan Proline Histidine Arginine	21.03.2022 29.03.2022		3hrs 3hrs 3hrs 3hrs	
	A. Lipids Libermann-Burchard's test Aromatic Aliphatic test	06.04.2022	-	3 hrs	-
	I. QUANTITATIVE ANALYSIS a. Estimation of reducing sugar Benedict's quantitative method b. Estimation of Amino acids by Formal titration.	. 13.04.2022		3hrs 3hrs 3hrs	

	c. Estimation of Protein by Calometric Method. d. Estimation of Ascorbic acid by titrimetric method using 2, 6 dichlorophenl indophenoldye. e. Acid number, f. Iodine number g. Saponification number of lipids. h. Estimation of Calcium by titrimetric method.	05.05.022 23.05.022		3hrs 3hrs 3hrs 3hrs	

D. ACTIVITIES

Activities Name	Details
Repetition Class Observation Correction Record Correction Mid Semester Model Practical	10.05.2022 to 15.05.2022.

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EVEN 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 : CELL AND MOLECULAR BIOLOGY

Programme code : **BBF**

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

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To bring understanding of structure and function of cells. • To study about cell organelles. • To know about replication of DNA • To learn about Eukaryotic and prokaryotic transcription. • To learn the mechanism of translation.	• To understand the cell and types of signal transduction system. • Ensure the students to understand structure and function of plant and animal cell organelles. • To study the basic types of replication and replication mechanism. • To understand the different stage of mechanism if transcription. • Ensure the students to understand acquire knowledge on prokaryotic and eukaryotic translation	• 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	• Cell wall - structure, components and functions. • Cell surface, function , surface receptor, surface carbohydrate and surface recognition and lectins. • Signal transduction system-types of transport across membrane receptor • GPCR, Second messenger – CAMP,IP3,Ca+. • Cell division and cell cycle.	24.02.2022 to 14.03.2022	2 Hrs 3 Hrs 3 Hrs 2 Hrs 2 Hrs	-	-
Unit - II Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Structure and functions of Endoplasmic recticulam, • Golgi apparatus Lysosomes, Mitochondria, • Ribosome's,	05.03.2022 to 31.03.2022	2 Hrs 3 Hrs 2 Hrs 3 Hrs	-	-

	Chloroplast, centrosomes, • Vacuoles, Nucleus and nucleoli. • Chromatin structure and function.		2 Hrs		
Unit – III Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Evidences of DNA as genetic material. • Types of replication- Mechanism of replication- • Enzymes and accessory proteins involved in replication, • DNA repair mechanism.	01.04.2022 to 13.04.2022	3 Hrs 3 Hrs 3 Hrs 3 Hrs	-	-
Unit – IV Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Prokaryotic transcription- Mechanism of initiation, elongation and termination of transcription. • Eukaryotic transcription-	27.04.2022 to 07.05.20221	3 Hrs 3 Hrs	-	-

	Mechanism of initiation, elongation • Post transcriptional modification • Inhibitors of transcription- Jacob and Monad concept- Regulation of transcription.		3 Hrs 3 Hrs		
Unit – V Content- 12Hrs Assessment -3 Hrs Total - 15 Hrs	• Prokaryotic mechanism of translation, • Eukaryotic translation mechanism • Post translational modification. • Genetic code and its characteristic features.	11.05.2022 to 20.05.2022	3 Hrs 3 Hrs 3 Hrs 3 Hrs	-	-

D. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (March) Monthly Test - Unit-II (April) CIA / Mid Semester (**18.04.2022 to 26.04.2022)** – Unit-I - Unit-III (First 1/2 Unit) - 2 ½ Units (February) Monthly Test– Unit –IV (March) CIA / Model Examination **(23.05.2022 to 31.05.2022**) - Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units (April)
Assignment	Assignment I –Unit –I and Unit –II (March) Assignment II –Unit –III and Unit – IV (April)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (April)
Seminar	Unit –V (May)
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 – B.Sc, Biochemistry

Name of the Paper : COSMETOLOGY

Programme code : **BBE2**

Lecture Hours : 3 Hrs / Week / Lecture Hours-30 Hrs

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To learn the scope of beauty culture and health care. • To understand the able to perform skills. • To introduce the hair analysis. • To acquire knowledge about cosmetic allergy. • To learn about the health care.	• To ensure the students basic concepts of beauty culture and health care. • To understand the skill in the areas of skin, make up, manicuring • To study about the hair analysis such as hair cutting, colouring, styling • To understand the cosmetic allergy for skin ,hair and nail. • To ensure the student understand the physical, mental and health care.	• 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- 4Hrs Assessment -2 Hrs Total - 6 Hrs	• Scope of beauty culture and health care. • Career opportunity in beauty culture, Hotels and cosmetics industry.	02.03.2022 to 03.03.2022 10.03.2022 to 11.03.2022	2 Hrs 2 Hrs	-	-
Unit - II Content- 4Hrs Assessment -2 Hrs Total - 6 Hrs	• Manicure, pedicure and basic facials, electrology. • Professional ethics and Communication skills. Home care recipes for skin and hair.	18.03.2022 to 21.03.2022 28.03.2022 to 29.03.2022	2 Hrs 2 Hrs	-	-
Unit – III Content- 4Hrs Assessment -2 Hrs Total - 6 Hrs	• Factors influencing hair loss, hair analysis and treatments, hair cuts, coloring and dyeing, • hair rebonding,	05.04.2022 to 06.04.2022 13.04.2022 to 14.04.2022	2 Hrs	-	-

	transplantation, body and facial hair removals.		2 Hrs		
Unit – IV Content- 4Hrs Assessment -2 Hrs Total - 6 Hrs	• Definition of Cosmetology, Cosmetics allergy, • Skin analysis and care of various types of skin, body and nail art.	04.05.2022 to 05.05.2022	2 Hrs 2 Hrs	-	-
Unit – V Content- 4Hrs Assessment -2 Hrs Total - 6 Hrs	• Definition of physical and mental health. Social health and beauty with respect to care. • Balanced diet for better beauty and health care. Sources and role of natural Antioxidant.	12.05.2022 to 13.05.2022 20.05.2022	2 Hrs 2 Hrs	-	-

D. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (March) Monthly Test - Unit-II (April) CIA / Mid Semester (**18.04.2022 to 26.04.2022)** – Unit-I - Unit-III (First 1/2 Unit) - 2 ½ Units (February) Monthly Test– Unit –IV (March) CIA / Model Examination **(23.05.2022 to 31.05.2022**) - Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units (April)
Assignment	Assignment I –Unit –I and Unit –II (March) Assignment II –Unit –III and Unit – IV (April)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (April)
Seminar	Unit –V (May)
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 – B.Sc, Biochemistry

Name of the Paper : HERBAL MEDICINE

Programme code : **BBS1**

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

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To learn the history of herbal medicine. • To understand the source of herbal materials. • To learn the drug yielding. • To understand the physical and chemical constants. • To learn the plant morphology.	• CO1: To ensure the students scope and application of herbal medicine. • CO2: To understand the raw materials of herbal medicine. • CO3: To study about the drug yielding in fungi and algae. • CO4: To understand the determination of physical and chemical constants. • CO5: To study about the botanical description of various plants.	• 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- 4 Hrs Assessment -2 Hrs Total - 6 Hrs	• Definition, Brief history, scope and application of herbal medicine. • Study of various systems of drugs of plant origin in Allopathy, Ayurveda, Unani, Siddha, Homeopathy and Aromapathy.	24.02.2022 to 01.03.2022 04.03.2022 to 09.03.2022	2 Hrs 2 Hrs	-	-
Unit - II Content- 4 Hrs Assessment -2 Hrs Total - 6 Hrs	• Source of herbal raw materials, identification, collection • Processing of herbal drugs and authentication.	14.03.2022 to 17.03.2022 22.03.2022	2 Hrs 2 Hrs	-	-
Unit – III Content- 4 Hrs Assessment -2 Hrs Total - 6 Hrs	• Study of selected drug yielding microbial and groups (With reference to drug only). Actinomycetes, • Fungi- Actinomycetes, gymnosperms, • Algae, Lichens and Bryophytes.	25.03.2022 to 01.04.2022 07.04.2022 12.04.2022	2 Hrs 2 Hrs	-	-
Unit – IV Content- 4 Hrs Assessment -2 Hrs	• Determination of physical and chemical constants such as	27.04.2022	2 Hrs	-	-

Total - 6 Hrs	extractive values, • Moisture content, volatile oil content, ash values and bitterness value.	02.05.2022 to 06.05.2022	2 Hrs		
Unit – V Content- 4 Hrs Assessment -2 Hrs Total - 6 Hrs	• Plant morphology – Botanical description of various plants parts used as drugs such as root, Rhizome, stolon, bulb, bark, leaf, flower, fruits, and seed. • Biological importance of phytochemicals.	11.05.2022 14.05.2022	2 Hrs 2 Hrs	-	-

D. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (March) Monthly Test - Unit-II (April) CIA / Mid Semester (**18.04.2022 to 26.04.2022)** – Unit-I - Unit-III (First 1/2 Unit) - 2 ½ Units (February) Monthly Test– Unit –IV (March) CIA / Model Examination **(23.05.2022 to 31.05.2022**) - Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units (April)
Assignment	Assignment I –Unit –I and Unit –II (March) Assignment II –Unit –III and Unit – IV (April)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (April)
Seminar	Unit –V (May)
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 : Bioinformatics

Programme code : **BBE5**

Lecture Hours : 6 Hrs / Week / Lecture Hours-90 Hrs

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To understand the students can get knowledge about sequence alignment phylogenenetic studies. • To set up a collaborative development environment to avoid redundancy and to facilitate future bioinformatics developments across organizations. • To provide training in bioinformatics and support for bioinformatics projects hosted on the ARCAD platform.	• To get introduced to the basic concepts of Bioinformatics and its significance in Biological data analysis. • Describe the history, scope and importance of Bioinformatics and role of internet in Bioinformatics. • Explain about the methods to characterize and manage the different types of Biological data. • Classify different types of Biological Databases. • Introduction to the basics of sequence alignment and analysis.	• Power point E-Modules • Chark and Talk method, • Lecture Method • Discussion Method • Study Assignment Method • Seminar Method

• To collaborate (share software, workshop, mailing lists, and good practices) with other national as well as international bioinformatics platforms. • To ensure quality control in bioinformatics research though a scientific user committee, documentation, data traceability and reliability, CECILL licenses, indicate or measurement.		

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	• Introduction to bioinformatics • History and scope of bioinformatics • Computer operating system. • Internet • Bioinformatics sites on World Wide Web	24.02.2022 to 14.03.2022	2 Hrs 4 Hrs 3 Hrs 2 Hrs 4 Hrs	-	-
Unit - II	• Importance of		3 Hrs		

Content- 15Hrs, Assessment -3 Hrs Total - 18 Hrs	data bases. • Architecture of data bases. • Types of databases • Biological Nucleic acid and protein structure database. • Application of data bases.	05.03.2022 to 31.03.2022	3 Hrs 2 Hrs 4 Hrs 3 Hrs	-	-
Unit – III Content- 15Hrs, Assessment -3 Hrs Total - 18 Hrs	• Algorithm- Goals and type of alignment. • Similarly studies scoring – Deletion and Substitution. • Para wise alignment • Multiple sequence Alignment • Identification of Domains- Sequence search.	01.04.2022 to 13.04.2022	3 Hrs 4 Hrs 2 Hrs 3 Hrs 3 Hrs	-	-
Unit – IV Content- 15Hrs, Assessment -3 Hrs Total - 18 Hrs	• Phylogenetic studies: phylogeny- homology • Similarities • Phylogenetic Tree • Tree Building methods. • Phylogenetic	27.04.2022 to 07.05.2022	4 Hrs 3 Hrs 2 Hrs 3 Hrs 3 Hrs	-	-

	analysis Databases.				
Unit – V Content- 15Hrs, Assessment -3 Hrs Total - 18 Hrs	• Applications of bioinformatics in Industry • Education • Pharmacology • Drug designing and Drug discovery- • Target and optimization.	11.05.2022 to 20.05.2022	3 Hrs 2 Hrs 3 Hrs 4 Hrs 3 Hrs	-	-

D. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (March) Monthly Test - Unit-II (April) CIA / Mid Semester (**18.04.2022 to 26.04.2022)** – Unit-I - Unit-III (First 1/2 Unit) - 2 ½ Units (February) Monthly Test– Unit –IV (March) CIA / Model Examination **(23.05.2022 to 31.05.2022**) - Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units (April)
Assignment	Assignment I –Unit –I and Unit –II (March) Assignment II –Unit –III and Unit – IV (April)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (April)
Seminar	Unit –V (May)
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 - IV

Programme code : **BBMY**

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 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- 12Hrs Assessment -3 Hrs Total - 15 Hrs	1. Qualitative tests of Urine, Normal, Abnormal constituents , sugar, protein (albumin) ketone bodies, bile pigments and bile salts	02.03.2022	–	4 Hrs	–
	2. Microscopic Examinations of urine – cast cells, crystals, pus cells.	10.03.2022	–	4 Hrs	–
	3. Quantitative estimations of sugar in urine –Benedict's method.	18.03.2022	–	4 Hrs	–
	4. Quantitative estimations of Glucose in Blood by Orthotoluidine method	28.03.2022	–	4 Hrs	–
	5. Quantitative Estimations of Cholesterol in Blood by Zak's method. 6. Estimations of Creatininein blood by Jaffe's method.	05.04.2022	–	4 Hrs	–

	7. Estimations of Urea in blood by DAM method. 8. Estimations of Protein in blood by Lowry's method	13.04.2022	–	4 Hrs	–
	9. Estimations of Bilirubin in blood by - Malloyevelyn method 10. Estimations of Uric acid in blood by Phosphotungstate method.	04.05.2022	–	4 Hrs	–
	11. TC/DC count, haemoglobin Estimation method , Sahli's method, ESR count. 12. Blood grouping , Rh typing and PCV.	12.05.2022	–	4 Hrs	–

D. ACTIVITIES

Activities Name	Details
Repetition Class Observation Correction Record Correction Mid Semester Model Practical	12.05.2022 to 19.05.2022

PRINCIPAL

Principal
A.D.M. College For Women
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