

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)

COIMBATORE-641029

DEPARTMENT OF BIOCHEMISTRY (PG & RESEARCH)

COURSE OUTCOMES (CO)

ACADEMIC YEAR 2026-27

Sub. Code: 26PBC101

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core paper 1 - Chemistry of Biomolecules				
Batch	Hours/week	Total Hours	Credits	Employability/skill development/Entrepreneurship
2026-2028	5	75	4	

Course Objectives

1. To learn about the chemistry and structures of Biomolecules
2. To know the properties of different Biomolecules
3. To know the physiological functions of Biomolecules

Course Outcomes (CO)

K1 TO	CO1	Correlate the classification and functions of Biomolecules in energy Production.
	CO2	Apply the link between the structure and function of amino acids and Proteins in biological system.
	CO3	Able to know about execute of Biomolecules in human health
	CO4	Analyze and study the chemical and biochemical properties pharmacogenetics field
K5	CO5	Apply the structural studies to biological processes like replication, transcription and translation.

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper 2 – Bio analytical Techniques				
Batch	Hours/week	Total Hours	Credits	Employability/skill development
2026-2028	5	75	4	

Course Objectives

1. To learn the principle and instrumentation of various separation techniques
2. To know the applications of various separation techniques in biological fields
3. To learn the concept of radioactivity and explore its role in various fields.

Course Outcomes (CO)

K1	CO1	Recall the principle and applications of bioinstrumentation
	CO2	The students will discern the principle, Instrumentation of different types of Bio analytical techniques
TO	CO3	The students also discern about applying the instrumentation techniques of Centrifugation, Electrophoresis and Chromatography in various research
	CO4	The students will determine the knowledge and practice concerning modern analytical instrumentation and students can able to enter into large scale Industries.
K5	CO5	Appreciate the principle, instrumentation and difference between various spectroscopic methods.

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper 3 – Enzymes and Enzyme Technology				
Batch	Hours/week	Total Hours	Credits	Employability/skill development
2026-2028	5	75	4	

Course Objectives

1. To know the classification and properties of enzymes
2. To learn about the mechanism of enzyme action
3. To know the applications of enzymes in clinical and diagnostic fields

Course Outcomes (CO)

K1 TO	CO1	Remember the fundamentals of enzyme properties
	CO2	Conceive the different procedures involved in enzyme technology
	CO3	Able to assay the enzyme and their kinetics and also apply to this in the industry and other technological field
	CO4	Estimate enzyme technology for the commercialization purpose of biotechnological products
K5	CO5	Apply purification techniques of enzymes and immobilization techniques.

Sub. Code: 26PBC104

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper 4 – Cellular Biochemistry				
Batch	Hours/week	Total Hours	Credits	Employability/skill
2026-2028	5	75	4	development/Entrepreneurship

Course Objectives

1. To learn the models and functions of biological membrane
2. To learn about the structure and functions of cytoplasmic organelles
3. To learn the mechanism of membrane transport in cells

Course Outcomes (CO)

K1	CO1	Recall the basic concepts of cells.
	CO2	Understand the knowledge of cell structure and function
TO	CO3	Employ their knowledge of cell biology to selected examples of changes or Losses in cell function.
	CO4	Analyze the cell structure, cell signaling and cell functions
K5	CO5	Decipher the intracellular signaling modes in mitochondria

Sub.Code: 26PBC1CL

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Practical 1 – Lab in Biomolecules, Bioinstrumentation, Enzymology and Cell Biology				
Batch	Hours/week	Total Hours	Credits	Employability/skill development/Entrepreneurship
2026-2028	5	75	4	

Course Objectives

1. To get practical experience in analyzing the biochemical metabolites in biological samples, bioinstrumentation, enzyme technology and cell biology techniques
2. To have hands on experience on chromatography, electrophoresis, enzyme and cell biology techniques
3. To develop familiarity with bioanalytical techniques and applications of enzyme and cell biology in research and industries

Course Outcomes (CO)

K3	CO1	Reproduce various concepts in Biomolecules, Enzyme and Cell biology.
	CO2	Conceive the amount of Biomolecules, isolation, determination of enzyme, preparation of buccal smears purification
TO	CO3	Apply the enzyme technology and cell biology skill in basic research projects
	CO4	Assign the principles of Biomolecules, enzyme and cell biology techniques to discovery novel drug development
K5	CO5	Be competent to perform various biochemical analysis.

Sub Code: 26PBC205

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper 5–Plant Biochemistry				
Batch	Hours/week	Total Hours	Credits	Skill development
2026-2028	5	75	4	

Course Objectives

1. To learn the mechanism and importance of photosynthesis in plants
2. To learn the role of hormones in the growth metabolism of plants
3. To know the latest genetic engineering techniques for plant development

Course Outcomes (CO)

K1	CO1	Recall the biosynthesis of primary and secondary metabolites, nitrogen metabolism involved in plants
	CO2	Understand the concept of plant tissue culture and plant transformation techniques
TO	CO3	Know about applications of phytoconstituents in development of new drug
	CO4	Experiment on new technologies in plant biotechnology
K5	CO5	Evaluate various gene transfer techniques

Sub.Code: 26PBC206

Programme Code: 07	M.Sc Biochemistry			
Title of the paper: Core Paper 6 – Metabolism and Metabolic Regulation				
Batch	Hours/week	Total Hours	Credits	skill development
2026-2028	5	75	4	

Course Objectives

1. To learn the metabolism of various Biomolecules in our system
2. To provide a basic understanding of the biochemical reactions of molecules
3. To study the interrelationship of various metabolic pathways

Course Outcomes (CO)

K1	CO1	Remember commemorate the overall concept of cellular metabolism
	CO2	Explain the metabolism of various biochemical pathways
TO	CO3	Execute the diseases associated with defective nucleotide biosynthesis
	CO4	Analyze the role of fat in energy production and membrane synthesis
	CO5	Define and explain the metabolism in various nutritional status and starvation.

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper 7 –Molecular Biology				
Batch	Hours/week	Total Hours	Credits	Employability/skill
2026-2028	5	75	4	development/Entrepreneurship

Course Objectives

1. To understand the molecular organization of genes and chromosomes
2. To learn the process of DNA synthesis, repair and function
3. To learn the various molecular events occurring in DNA with proposed theories

Course Outcomes (CO)

K1	CO1	Able to define the basic concepts of gene
	CO2	Recognize the different processes involved in replication, transcription and Translation
TO	CO3	Integrate scientific and technological knowledge on the use of genetics and molecular biology for industrial products on the cell and process level
	CO4	Examine the molecular mechanisms behind DNA damage and repair
K5	CO5	Appraise the various concepts of regulation of genes.

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core paper 8 Pharmaceutical Biochemistry				
Batch	Hours/week	Total Hours	Credits	Employability/skill
2026-2028	5	75	4	development

Course Objectives

1. To learn the mechanism of drug action in various diseases
2. To learn about different drugs available for treatment
3. To learn about the designing mechanisms for drug development

Course Outcomes (CO)

K1	CO1	Repeat the concept of pharmacology
	CO2	Describe the mechanism of action of drug inside the system
	CO3	Employ the drug discovery and drug design procedures.
	CO4	Examine the treatment of various disorders using drug molecules
	CO5	Contribute in understanding the mode of action of antibiotics.
TO		
K5		

Sub.Code:26PBC2CM

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Practical 2 – L a b i n Plant Biochemistry, Microbiology and Molecular Biology				
Batch	Hours/week	Total Hours	Credits	Employability/skill development/Entrepreneurship
2026-2028	5	75	4	

Course Objectives

1. To learn the techniques of plant tissue culture
2. To get an hands-on-training on molecular techniques
3. To implement the applications of plant tissue culture, microbes, genetics and molecular techniques in research and industries

Course Outcomes (CO)

K1	CO1	Correlate the principles of plant biochemistry, microbes, molecular biology and genetic techniques
	CO2	Demonstrate the technical skills involved in plant tissue culture, counting cells, identification of gene and its expressions

K5	CO3	Develop and apply the modern technology of plant biochemistry, microbial techniques, molecular biology and genetics in industries and research
	CO4	Examine the results obtained using plant biochemistry, sterilization techniques, molecular biology and genetics
	CO5	Be competent in handling the microbial cultures and plant samples.

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper 9 – Immunology and Immunological Techniques				
Batch	Hours/week	Total Hours	Credits	Employability/skill
2026-2028	6	90	5	development/Entrepreneurship

Course Objectives

1. To learn about the various cells of immune system and their functions
2. To know about the specificity of antigen-antigen interaction and their possible mechanisms
3. To know the role of immunological cells in the treatment of different diseases

Course Outcomes (CO)

K1	CO1	Recall the types and functions of different immune cells
	CO2	Employ the mechanism of action of different immune cells and their resultant reaction responses
	CO3	Decipher the underlying causes of inherited or autoimmune diseases and

TO		consequences
	CO4	Experiment the new technologies involving immune cells in treating many diseases
	CO5	Contribute in understanding the important concepts of recombinant vaccine.
K5		

Sub.Code : 26PBC310

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper 10 – Research methodology, Biostatistics and Data science				
Batch	Hours/week	Total Hours	Credits	Employability/Entrepreneurship
2026-2028	6	90	4	

Course Objectives

1. To learn the different methods of collecting data and processing
2. To know about the different statistical methods to interpret the collected statistical data
3. To know the concept of article writing, report writing and thesis making so on

Course Outcomes (CO)

K1	CO1	State an idea on choosing the appropriate method of collecting data
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	CO2	Employ the statistical method and process the collected data
	CO3	Illustrate the device and standardize the statistical methods
TO	CO4	Discriminate the concept in preparing a report, publishing an article and writing a project thesis
K5	CO5	Contribute the research knowledge in report writing.

Sub.Code :26PBC311

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper11– Advanced Clinical Biochemistry				
Batch	Hours/week	Total Hours	Credits	Employability/skill
2026-2028	7	105	4	development/Entrepreneurship

Course Objectives

1. To learn the methodologies for the detection of abnormalities in blood
2. To learn the process of different sample collection and processing
3. To know about the markers in the various metabolic disorders like cancer

Course Outcomes (CO)

K1	CO1	Corelate the important laboratory biochemical tests
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TO	CO2	Employ the methods of specimen collection and processing and analyzing the results
	CO3	Investigate the role of enzymes in clinical diagnosis of diseases
	CO4	Critisize the diagnostic procedures for tumor development
K5	CO5	Evaluate the role of free radicals in various diseases.

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Practical 3 – Lab in Immunology, Genetic Engineering and Clinical Biochemistry				
Batch	Hours/week	Total Hours	Credits	Employability/skill
2026-2028	5	75	4	development/Entrepreneurship

Course Objectives

1. To enhance the students to have practical experience on techniques in immunological tests
2. To learn the methods of estimation of clinical parameters
3. To have hands on experience in genetic engineering

Course Outcomes (CO)

K1 TO	CO1	Recall the basic principles involved in immunology, clinical biochemistry and genetic engineering
	CO2	Demonstrate the techniques involved in immunology, clinical biochemistry and genetic engineering
	CO3	Develop and apply the recent technology involved in diagnostic techniques of immunology, clinical biochemistry and genetic
	CO4	Examine and analyze the results involved in immune techniques, clinical biochemistry and genetic engineering
K5	CO5	Be competent in handling the blood and urine samples.

Sub.Code:26PBC412

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core Paper 12 – Hormonal Biochemistry				
Batch	Hours/week	Total Hours	Credits	Employability/skill
2026-2028	5	75	5	development/Entrepreneurship

Course Objectives

- 1.To learn about the system of hormonal functioning in biological systems
- 2.To know the regulation and action of different hormones at different conditions
- 3.To get an in depth knowledge on diabetes mellitus

Course Outcomes (CO)

K1	CO1	List the diverse group of hormones and their specific mechanism of action in the bodily metabolism
	CO2	Understand the regulatory functions of various hormones and their interrelationship in the endocrine disorders
TO	CO3	Discuss the pathophysiology, diagnosis, treatment and management of endocrine disorders
K5	CO4	Differentiate the role of hormones in various biological organs
	CO5	Evaluate the biological action of different hormones .

Sub.Code:26PBC413

Programme Code: 07		M.Sc Biochemistry		
Title of the paper: Core paper 13- rDNA technology				
Batch 2026-2028	Hours/week 5	Total Hours 75	Credits 5	Employability/skill development/Entrepreneurship

Course Objectives

1. To enable the students to learn the principle and application of genetic engineering
2. To implement and transmission of a genetic material at molecular and cellular levels.

Course Outcomes (CO)

K1	CO1	Enshrine the principles of genetic engineering and the vectors used in cloning and expression
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TO	CO2	Grasp the different cloning strategies and their expression
	CO3	Demonstrate about implementation of genetic engineering for different purposes
	CO4	Investigate the different strategies of rDNA technology and resolve the problems encountered
K5	CO5	Analyse the various techniques of gene therapy.

Sub.Code:26PBC4Z1

Programme Code: 07	M.Sc Biochemistry		
Title of the paper : Project and Viva-voce			
Batch 2026-2028	Semester IV	Credits 3	Employability/skill development/Entrepreneurship

Course Objectives

1. The student will be able to choose an appropriate topic for study and will be able to clearly formulate and state the research problem. For a selected research topic, student will be able to compile the relevant literature and frame hypotheses for research as applicable.
2. Based on the analysis and interpretation of the data collected, student will be able to arrive and propose suitable recommendations on the research problem

3. Student will be able to create a logically coherent project report and will be able to defend his / her work in front of a panel of examiner.

Course Outcomes (CO)

K1	CO1	Choose an appropriate research topic
	CO2	Summarize the findings through the literature survey
TO	CO3	State exactly the problem of the experimental study/ research undertaken
	CO4	Interpret the results of the research using the statistical tools.
K5	CO5	Evaluate the research outcomes and present them in oral presentation

Programme Code: 07	M.Sc Biochemistry			
Title of the paper:	Major Elective: Nanobiotechnology			
Batch 2026-2028	Hours / Week	Total Hours	Credits	Skill development
	5	75	5	

Course Objectives

1. To get an idea about the application of nanotechnology in biological research
2. To learn the properties and functions of nanomaterials in biological systems
3. To learn the applications of nanomaterials in drug delivery and treatment

Course Outcomes (CO)

K1	CO1	Insight about the nanotechnology concepts
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TO K5	CO2	Explain the methods of nanoparticle synthesis
	CO3	Use properties of nanoparticles
	CO4	Apply the knowledge of nanotechnology in biological research
	CO5	Employ and apply the knowledge of nanotechnology in wastewater treatment, agriculture and diseases.

Programme Code: 07	M.Sc Biochemistry			
Title of the paper	Major Elective: Microbial Technology			
Batch 2026-2028	Hours/ Week	Total Hours	Credits	Employability/skill development/Entrepreneurship
	5	75	5	

Course Objectives

1. To learn about the microbiological techniques for microbial studies
2. To learn the energy process taking place in microbes
3. To learn about the food poisoning and pathogenicity of microbes

Course Outcomes (CO)

K1	CO1	Commemorate the general bacteriology and microbial techniques.
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TO	CO2	Understand the basic microbial structure and function
	CO3	Implement the handling techniques and staining procedures in laboratory
	CO4	Resolve the microbial techniques and its applications
K5	CO5	Employ the role of microbes in pathogenesis.

Programme Code: 07	M.Sc Biochemistry			
Title of the paper	Major Elective: Bioinformatics			
Batch 2026-2028	Hours / week 5	Total Hours 75	Credits 5	Employability/skill development/Entrepreneurship

Course Objectives

1. To learn the role of computer programmes in studying the biological processes
2. To know about the different software's for data analysis
3. To learn about the methods of data retrieval from various databases

Course Outcomes (CO)

K1 TO	CO1	Learn about the basics and beginning developments in computer usage
	CO2	Employ the basics of bioinformatics
	CO3	Differentiate various bioinformatics softwares
	CO4	Apply the role bioinformatics in biological science research
K5	CO5	Apply bio informatics in proteomics and human genome project.

Programme Code: 07	M.Sc Biochemistry			
Title of the paper	Major Elective: Bioethics, Biosafety and IPR			
Batch 2026-2028	Hours / Week 5	Total Hours 75	Credits 5	Employability/skill development/Entrepreneurship

Course Objectives

1. To learn about the demerits of biotechnological applications in recent research
2. To know the ethical issues to be concerned in the course of biological research
3. To know about the intellectual property rights of individual researchers

Course Outcomes (CO)

K1 TO	CO1	Remember the ethical issues of scientific research
	CO2	Employ the various regulations in biosafety and bioethics
	CO3	Decipher the awareness of the intellectual property rights
	CO4	Experiment the secured and ethical way of research
K5	CO5	Contribute the knowledge in filing the patents.

Programme Code: 07	M.Sc Biochemistry			
Title of the paper	Major Elective: Environmental management			
Batch 2026-2028	Hours / week 5	Total Hours 75	Credits 5	Employability/skill development/Entrepreneurship

Course Objectives

1. To learn the various issues pertaining to the environment
2. To combat the environmental issues with efficient strategies
3. To assess the various existing environmental risk issues

Course Outcomes (CO)

K1 TO	CO1	Remember the environmental related issues
	CO2	Employ the various human risk assessment
	CO3	Decipher the awareness of the environmental risk assessments
	CO4	Experiment the secured and environmental economics
K5	CO5	Contribute the knowledge about the environmental education and communication.

Programme Code: 07	M.Sc Biochemistry			
Title of the paper	Major Elective: Biopharmaceuticals			
Batch 2026-2028	Hours / week 5	Total Hours 75	Credits 5	Employability/skill development/Entrepreneurship

Course Objectives

1. To demonstrate the basics of biopharmaceutical to the under graduate students.
2. To motivate the undergraduate students in analyzing the drug metabolism and mode of action.
3. To elaborate basic of formulations of drugs and to apply them in clinical trials.

Course Outcomes (CO)

K1	CO1	Acquire knowledge on drug development, principles, mechanism of actions of drugs
	CO2	Outline on preparation of biotechnology oriented pharmaceutical products.
	CO3	Quality control tests and manufacturing, packaging of drugs
to	CO4	Help them to analyze the pharmaceutical products available in the market and Evaluate the recent advances in drug manufacturing
K5	CO5	Relate the regulations in clinical trial and management.

Programme Code: 07	M.Sc Biochemistry			
Course Code: 26PGI4N2	Non-Major Elective Paper : Fundamentals of Information Security			
Batch 2026-2027	Hours / Week 4	Total Hours 60	Credits 4	Employability / Skill Development

Course Objectives

1. To introduce the fundamentals of Information Security systems.
2. To appraise on the concepts of Cryptography and security systems.
3. To explore the nuances of vulnerable systems and their preventive methods.
4. To sensitize the students on the current Cyber laws.

Course Outcomes(CO)

K1 To K5	CO1	Comprehend the issues pertaining to Security at workplace.
	CO2	Establish methods of protecting data and data sets from attacks.
	CO3	Introduce a robust data compliance model.
	CO4	Adopt novel methods of data/information protection through policies.
	CO5	Implement and appraise the existing Cyber Laws to appropriate Stakeholders.

Programme Code: 07		M.Sc Biochemistry		
Title of the paper		Non Major Elective – Competitive Science		
Batch	Hours / Week	Total Hours	Credits	skill development
2026-2028	4	60	4	

Course Objectives

1. To insist the various facts of life sciences in detail
2. To learn the various information regarding the biological processes
3. To expose the students to the online examination

Course Outcomes (CO)

K1	CO1	Recall all concepts of biochemistry in detail
	CO2	Explain the consolidated view of life science subjects
	CO3	Develop the analytical capability by learning the objective type questions
	CO4	Undertake competitive examinations will necessary preparation
K5	CO5	Apply the knowledge of various fields of biochemistry.

Programme Code: 07		M.Sc Biochemistry		
Title of the paper		Non Major Elective – Bioprocess Technology		
Batch 2026-2028	Hours / Week 4	Total Hours 60	Credits 4	Employability/skill development/Entrepreneurship

Course Objectives

1. To understand the basics of fermentation techniques
2. To learn the concepts of screening, optimization and maintenance of cultures
3. To provide the basics of bioprocess technology

Course Outcomes (CO)

K1 TO K4	CO1	Remember the basics of bioreactors
	CO2	Understanding of the various aspects of bioprocess techniques
	CO3	Employ in biotechnological industries
	CO4	Distinguish the fermentation process and its kinetics
	CO5	Appraise the role of bioreactors in various industries.

Programme Code: 07	M.Sc Biochemistry			
Title of the paper	Non Major Elective – Cancer Biology			
Batch 2026-2028	Hours / Week 4	Total Hours 60	Credits 4	Employability/skill development/Entrepreneurship

Course Objectives

1. To know the biology of cancer development
2. To know the features of various cancer types
3. To know about the mechanism of cancer cell cycle

Course Outcomes (CO)

K1	CO1	Remember the basic knowledge on cancer development
	CO2	Understand the molecular mechanisms of cancer cell cycle
	CO3	Apply the techniques for diagnosis of various cancers
K5	CO4	Contribute the role of different treatment strategies and its application
	CO5	Employ various strategies in the treatment of cancer

Programme Code: 07		For all PG Degree students		
Title of the paper		EDC – Nutritional Biochemistry		
Batch	Hours / Week	Total Hours	Credits	Employability/skill development/Entrepreneurship
2026-2028	2	30	2	

Course Objectives

1. To impart the knowledge on historical overview of nutrition, essential nutrients for metabolism
2. To provide an overview of the major macro and micronutrients relevant to human health
3. To discuss the scientific rationale for defining nutritional requirements in healthy individuals and populations, with reference to specific conditions such as pregnancy, lactation, and older age

Course Outcomes (CO)

K1	CO1	Assess the nutritional status of community in order to determine the type magnitude and distribution of malnutrition
	CO2	Describe the biochemical and physiological functions of the nutrients and their integrated role.
	CO3	Evaluate the therapeutic role of key nutrients in maintaining health.
K5	CO4	Discriminate the diseases caused due to protein deficiency
	CO5	Employ the role of diet in various diseases.

Programme Code: 07	Programme Title: M.Sc Biochemistry			
Title of the paper JOC –Bio-Entrepreneurship				
Batch 2026-2028	Hours / Week 4	Total Hours 60	Credits 2	Employability

Course Objectives

1. To learn about the concepts of entrepreneurship
2. To study the various opportunities in launching and running a business
3. To know the various strategies of effective entrepreneurship

Course Outcomes (CO)

K1 TO K5	CO1	List the concepts of entrepreneurship
	CO2	Report the different strategies adopted for a better entrepreneurship
	CO3	Discriminate the various biological entrepreneurship programmes
	CO4	Apply the quipped enough to become an entrepreneur
	CO5	Employ in understanding about the marketing of products.

Programme Code: 07		Programme Title: M.Sc Biochemistry		
Title of the paper JOC - Food Safety and Quality Control				
Batch	Hours / Week	Total Hours	Credits	Employability
2026-2028	4	60	2	

Course Objectives

1. To learn the principles of food quality control
2. To learn the methodologies to standardize and ensuring food safety
3. To gain knowledge on the framed food safety regulations

Course Outcomes (CO)

TO	K1	CO1	Repeat the various steps in the quality control of food items
		CO2	Classify the various food standards
		CO3	Illustrate the various methods to determine the quality of foods
		CO4	Examine the various regulations concerned with the food quality issues
K5		CO5	Evaluate the methods in standardization of quality control of foods.

Programme Code: 07		Programme Title: M.Sc Biochemistry		
Title of the paper JOC –Clinical and Therapeutic Nutrition				
Batch	Hours / Week	Total Hours	Credits	Employability
2026-2028	4	60	2	

Course Objectives

1. To enable the basic principles of clinical nutrition
2. To understand the clinical significance of biochemical findings
3. To develop skills in planning and preparation of therapeutic diets for various diseases

Course Outcomes (CO)

K1	CO1	Commemorate the basics of nutritional care
	CO2	Explain the relation between nutrition and health
TO	CO3	Interpret the lifestyle and nutritional assessment techniques
	CO4	Analyze the main nutrients and its functions in the body
K5	CO5	Appraise the role of probiotics in diet.

Sub code: **26PBCOD1**

Programme Code: 07	Programme Title: M.Sc Biochemistry	
Title of the paper: ALC – Forensic Science		
Batch 2026-2028	Credits 2	Employability

Course Objectives

1. To deals with the forensic aspects like legal procedures and types of trauma.
2. To prop up and develops regulation in forensic science
3. To give students with a sound basis in forensic science

Course Outcomes (CO)

K1 TO	CO1	Define the basic concepts of forensic science
	CO2	Understand the identification procedures employed under forensics Science
	CO3	Apply the fingerprint analysis and interpretations in research fields
K5	CO4	Examine and analyze the results involved in fingerprinting technique
	CO5	Evaluate the physical analysis and injuries.

Sub code: **26PBCOD2**

Programme Code: 07	Programme Title: M.Sc Biochemistry	
Title of the paper ALC – Nutraceuticals and Functional Foods		
Batch	Credits	Employability
2026-2028	2	

Course Objectives

1. To learn the concept of nutraceuticals and functional foods
2. To know the available biochemical compounds in our system
3. To prepare functional foods from nutraceutical compounds

Course Outcomes (CO)

K1	CO1	Remember the complete history of nutraceuticals
	CO2	Classify the different nutraceuticals
TO	CO3	Illustrate the formulation methods of functional foods
	CO4	Distinguish the role of functional foods in disease prevention and management
K5	CO5	Employ the role of nutraceuticals in various disorders.

Sub Code: 26PBCOD3

Programme Code: 07	Programme Title: M.Sc Biochemistry	
Title of the paper ALC –Stem Cell Biology		
Batch	Credits	Employability
2026-2028	2	

Course Objectives

1. To learn about the technology of stem cells preparation
2. To learn the properties of stem cells
3. To prepare stem cells for gene therapy

Course Outcomes (CO)

K1	CO1	Recall the different types of stem cells and its applications
TO	CO2	Explain the importance of gene therapy in various diseases
	CO3	Interpret implement the stem cell in therapies
K5	CO4	Examine the molecular concepts of stem cell
	CO5	Appraise the role of stem cells in various disorders.

Sub code: 26CCL101

Programme Code: 07		Programme Title: Certificate course on medical laboratory technology	
Course Code: 26CCL101		Title: Paper I-Biochemistry	
Batch	Hours / Week	Total Hours	Credits
2026-28	2	30	2

Course Objectives

1. To acquire the knowledge on laboratory safety and measures
2. To know the techniques of biochemistry and clinical chemistry
3. To obtain information about various enzymes analysis and analytical techniques

Sub code: 26CCL102

Programme Code: 07		Programme Title: Certificate Course on Medical Laboratory Technology	
Course Code: 26CCL102		Title: Paper II-Clinical Pathology and Microbiology	
Batch	Hours / Week	Total Hours	Credits
2026-28	2	30	2

Course Objectives

1. To acquire the knowledge on microbial techniques
2. To know the techniques of serological procedures
3. To obtain information on hematological processing

Programme Code: 07		Programme Title: Certificate Course on Medical Laboratory Technology	
Course Code:26CCL1CL		Title: Clinical Biochemistry Practical- I	
Batch	Hours / Week	Total Hours	Credits
2026-28	2	30	2

Course Objectives

1. To attain the knowledge on serum and urine analysis
2. To know the principles and techniques of microbiology
3. To acquire knowledge on pathological techniques

Programme Code: 07		Programme Title: Certificate course on Baking science and Technology	
Course Code: 26CBS101		Title: Paper I-FACTS OF BAKING SCIENCE	
Batch	Hours / Week	Total Hours	Credits
2026-28	2	30	2

Course Objectives

1. To acquire the knowledge on bakery science
2. To know the techniques of in baking and its products
3. To obtain information about various raw materials and its effects

Programme Code: 07		Programme Title: Certificate course on Baking science and Technology	
Course Code: 26CBS102		Title: Paper II-HYGIENE AND BAKERY SETUP	
Batch	Hours / Week	Total Hours	Credits
2026-28	2	30	2

Course Objectives

1. To acquire the knowledge on laws
2. To know the techniques of in maintaining hygiene and sanitary procedures
3. To obtain information about various safety authorities and costing

Programme Code: 07		Programme Title: Certificate course on Baking science and Technology	
Course Code: 26CBS103		Title: Practical I: BAKERY TECHNOLOGY PRACTICALS	
Batch	Hours / Week	Total Hours	Credits
2026-28	2	30	2

Course Objectives

1. To acquire the protocols of dough making
2. To know the techniques of baking
3. To obtain information about packaging