| Programme Outcomes (Pos) | **PO1: Problem Solving Skill**
Apply knowledge of Management theories and Human Resource practices to solve business problems through research in Global context.

PO2: Decision Making Skill
Foster analytical and critical thinking abilities for data-based decision-making.

PO3: Ethical Value
Ability to incorporate quality, ethical and legal value-based perspectives to all organizational activities.

PO4: Communication Skill
Ability to develop communication, managerial and interpersonal skills.

PO5: Individual and Team Leadership Skill
Capability to lead themselves and the team to achieve organizational goals.

PO6: Employability Skill
Inculcate contemporary business practices to enhance employability skills in the competitive environment.

PO7: Entrepreneurial Skill
Equip with skills and competencies to become an entrepreneur.

PO8: Contribution to Society
Succeed in career endeavors and contribute significantly to society.

PO 9 Multicultural competence
Possess knowledge of the values and beliefs of multiple cultures and a global perspective.

PO 10: Moral and ethical awareness/reasoning
Ability to embrace moral/ethical values in conducting one's life. |

Programme Specific Outcomes (PSOs)	**PSO1 – Placement** To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, beliefs and apply diverse frames of reference to decisions and actions. **PSO 2 - Entrepreneur** To create effective entrepreneurs by enhancing their critical thinking, problem solving, decision making and leadership skill that will facilitate startups and high potential organizations. **PSO3 – Research and Development** Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development. **PSO4 – Contribution to Business World** To produce employable, ethical and innovative professionals to sustain in the dynamic business world. **PSO 5 – Contribution to the Society** To contribute to the development of the society by collaborating with stakeholders for mutual benefit.

Core course I: Structure and function of Invertebrates

Course Objectives:	
The main objectives of this course are:	
1.	To understand the concept of classification and their characteristic features of major group of invertebrates.
2.	To realize the range of diversification of invertebrate animals.
3.	To enable the students to find out the ancestors or derivatives of any taxon.
4.	To know the functional morphology of system biology of invertebrates.

Expected Course Outcome:		
On the successful completion of the course, student will be able to:		
1.	Remember the general concepts and major groups in animal classification, origin, structure, functions and distribution of life in all its forms.	K1 & K2
2.	Understand the evolutionary process. All are linked in a sequence of life patterns.	K2 & K4
3.	Apply this for pre-professional work in agriculture and conservation of life forms.	K3 & K5
4.	Analyze what lies beyond our present knowledge of life process.	K4 & K6
5.	Evaluate and to create the perfect phylogenetic relationship in classification.	K5 & K6

K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

Mapping with Programme Outcomes*									
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S	S	M	S	S	S	M	S	S	S
CO2	S	S	M	M	S	S	M	M	S	S
CO3	S	M	S	M	S	S	M	M	S	S
CO4	S	M	S	M	S	S	M	M	S	M
CO5	S	M	S	M	S	S	M	M	S	M

*S - Strong; M - Medium; L - Low

Core Course II: Comparative Anatomy of Vertebrates

Course Objectives:	
The main objectives of this course are:	
1.	Exemplifying the vertebrate origin and the intermediary position of Prochordates between invertebrates and vertebrates.
2.	Acquires the knowledge on evolution and adaptive radiation of Agnatha and Pisces.
3.	Understanding knowledge about the first terrestrial vertebrates and the adaptive radiation of land animals
4.	Imparting conceptual knowledge about the animal life in the air and their behaviours.
5.	Understanding the origin and efficiency of mammals and evolutionary changes that occurred in the life of vertebrates.

Expected Course Outcome:		
On the successful completion of the course, student will be able to:		
1.	Remember the general concepts and major groups in animal classification, origin, structure, functions and distribution of life in all its forms.	K1 & K2
2.	Understand the evolutionary process. All are linked in a sequence of life patterns.	K2 & K4
3.	Apply this for pre-professional work in agriculture and conservation of life forms.	K3 & K5
4.	Analyze what lies beyond our present knowledge of life process.	K4 & K6
5.	Evaluate and to create the perfect phylogenetic relationship in classification.	K5 & K6

K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S	M	L	S	M	S	M	S	M	S
CO2	S	L	L	S	M	S	M	M	M	M
CO3	S	M	L	S	M	S	M	L	M	M
CO4	S	L	L	S	L	S	M	L	M	L
CO5	S	M	L	S	S	S	M	S	M	M

*S - Strong; M - Medium; L - Low

Core Course III: Lab course in Invertebrates & Vertebrates

Course Objectives:	
The main objectives of this course are:	
1.	Understanding the different systems in invertebrates & vertebrates.
2.	Learning about various animal species, their phylogenetic affinities and their adaptive features
3.	Imparting conceptual knowledge about the salient features and functional anatomy.
4.	Developing the skill in mounting techniques of the biological samples.
5.	Gaining fundamental knowledge on the skeletal system

Expected Course Outcome:		
On the successful completion of the course, student will be able to:		
1.	Understand the structure and functions of various systems in animals	K2 & K4
2.	Learn the adaptive features of different groups of animals	K1 & K2
3.	Learn the mounting techniques	K2 & K3
4.	Acquire strong knowledge on the animal skeletal system	K2 & K4

K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

Core Course IV: Cellular and Molecular Biology

Course Objectives:	
The main objectives of this course are:	
1.	To understand the ultra-structures and functions of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes and organelles.
2.	To realize involvement of various cellular components in accomplishing cell division.
3.	To enable a successful performance in cell biology component of CSIR-UGC NET.
4.	To understand the ultra-structures and functions of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes and organelles.

Expected Course Outcome:			
Upon completion of this course, students could			
	1.	Understand the general concepts of cell and molecular biology.	K2
	2.	Visualize the basic molecular processes in prokaryotic and eukaryotic cells, especially relevance of molecular and cellular structures influencing functional features.	K1 & K2
	3.	Perceive the importance of physical and chemical signals at the molecular level resulting in modulation of response of cellular responses.	K3 & K4
	4.	Updated the knowledge on the rapid advances in cell and molecular biology for a better understanding of onset of various diseases including cancer.	K5
	5.	Understand the general concepts of cell and molecular biology.	K2

K1- Remember; **K2**- Understand; **K3**- Apply; **K4**-Analyze; **K5**-Evaluate; **K6**- Create

Mapping with Programme Outcomes*										
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	L	L	L	L	S	S	S	M	M	M
CO2	M	M	M	S	S	S	S	M	S	M
CO3	S	S	S	M	M	S	M	M	L	S
CO4	M	M	S	L	S	S	L	M	S	S
CO5	S	M	M	S	S	S	S	M	S	S

*S - Strong; M - Medium; L - Low

Core Course V: Developmental Biology

Course Objectives:		
The main objectives of this course are:		
1.	Understand the process of gametogenesis, cleavage and gastrulation, embryonic development, extra embryonic membrane and placenta in various animals and human.	
2.	Learn the principles, methods and applications of cryo-preservation of gametes and embryo.	
Course	:	Core V
Course title	:	Developmental Biology

Expected Course Outcome:		
On the successful completion of the course, student will be able to		
1.	Define the concepts of embryonic development	K1
2.	Observe various stages of cell divisions under microscope	K2 & K3
3.	Understand the formation of zygote	K4
4.	Differentiate the blastula and gastrula stages	K4 & K5
5.	Learn the distinguishing features of three different germ layers and formation of various tissues and organs	K4

Mapping with Programme Outcomes*										
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S	S	M	S	S	L	S	M	L	M
CO2	S	S	S	S	S	L	S	S	S	S
CO3	S	M	S	S	S	S	S	L	L	M
CO4	S	S	S	S	S	M	S	S	S	L
CO5	S	S	S	M	S	S	S	L	L	M

*S - Strong; M - Medium; L – Low

Core Course VI: Lab Course in Cell Biology and Developmental Biology

Course Objectives:	
The main objectives of this course are:	
1.	Practical course aims at demonstrating significant cellular and molecular biological principles, quantitative and analytical approaches that enable the students to translate the theoretical foundation in cell biology, and developmental biology into practical understanding.
Course	:	Core VI
Course title	:	Lab Course in Cell Biology and Developmental Biology

Expected Course Outcome:		
Upon completion of this lab course, students		
1.	Acquire knowledge to differentiate the cells of various living organisms and become awares of physiological processes of cells e.g. cell divisions, various stages of fertilization and embryo development.	K2
2.	Understand and observe as well as correctly identify different cell types, cellular structures using different microscopic techniques.	K3
3.	Develop handling - skills through the wet-lab course.	K6
4.	Learn the method of culturing of *Drosophila* and identification of their wild and mutant strains	K1 & K2
5.	Acquire skills to perform human karyotyping and chromosome mapping to identify abnormalities	K1 & K2

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create

Elective Courses I: Molecules and their interaction relevant to Biology

Course Objectives:		
The main objectives of this course are:		
1.		Students should know the fundamentals of Biochemistry
Course	:	**Elective I**
Course title	:	**Molecules and their interaction relevant to Biology**
Credits	:	**3**

Pre-requisite:
Understanding fundamental properties of elements, atoms, molecules, chemical bonds, linkages and structure, composition, metabolism and functions of biomolecules.

Expected Course Outcome:		
On the successful completion of the course, student will be able to:		
I	Learn the structure, properties, metabolism, and bioenergetics of biomolecules	**K1 & K3**
II	Acquire knowledge on various classes and major types of enzymes, classification, their mechanism of action and regulation	**K1 & K2**
III	Understand the fundamentals of biophysical chemistry and biochemistry, importance, and applications of methods in conforming the structure of biopolymers	**K2 & K3**
IV	Comprehend the structural organization of and proteins, carbohydrates, nucleic acids and lipids	**K2 & K4**
V	Familiarize the use of methods for the identification, characterization, and conformation of biopolymer structures.	**K5 & K6**

K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

Mapping with Programme Outcomes*									
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	M	S	M	S	L	S	M	S	M	M
CO2	S	S	L	S	S	S	M	M	M	S
CO3	M	M	M	S	M	S	S	S	S	L
CO4	S	M	S	M	S	M	S	S	S	M
CO5	M	S	S	M	M	S	M	L	S	M

*S - Strong; M - Medium; L-Low

Elective Course II: Biostatistics

Course Objectives:		
The main objectives of this course are:		
1.	Students should know basic concepts in Biostatistics.	
Course	:	**Elective II**
Course title	:	**Biostatistics**
Credits	:	**3**
Pre-requisite:		
Students should be aware of importance of analysis of quantitative and qualitative information from biological studies.		
Expected Course Outcome:		
Upon completion of this course, Students would have		
I	Clear understanding of design and application of biostatistics relevant to experimental and population studies.	**K2 & K3**
II	Acquired skills to perform various statistical analyses using modern statistical techniques and software.	**K3 & K4**
III	Knowledge on the merits and limitation of practical problems in biological/ health management study as well as to propose and implement appropriate statistical design/ methods of analysis.	**K5 & K6**

K1- Remember; **K2**- Understand; **K3**- Apply; **K4**-Analyze; **K5**-Evaluate; **K6**- Create

Mapping with Programme Outcomes*										
COs	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1	S	M	L	M	S	S	M	S	M	M
CO2	S	S	S	S	S	S	S	S	S	S
CO3	M	S	S	S	S	S	S	S	S	L
CO4	M	M	S	L	M	M	M	S	L	M
CO5	M	M	S	L	M	S	M	L	S	M

*S - Strong; M - Medium; L- Low

Elective Course III: Economic Entomology

Course Objectives:		
The main objectives of this course are:		
1.		Students should acquire a good understanding about the life of insects and their classification.
Course	:	**Elective III**
Course title	:	**Economic Entomology**
Credits	:	**3**

Pre-requisite:
The students with a basic background in biological sciences with a special emphasis on the study of insects including systematic, beneficial insects, destructive insects, integrated pest management and insects of medical and veterinary importance.

Expected Course Outcome:		
On the successful completion of the course, student will be able to		
I	Understand taxonomy, classification, and life of insects in the animal kingdom.	**K1 & K2**
II	Know the life cycle, rearing and management of diseases of beneficial insects.	**K2 & K3**
III	Know the type of harmful insects, life cycle, damage potential and management of pests including natural pest control	**K2 & K3**
IV	Recognize insects which act as vectors causing diseases in animals and human.	**K2 & K4**
	Overall understanding on the importance of insects in human life.	**K2 & K6**

K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** -Create

Mapping with Programme Outcomes*									
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	M	S	M	S	M	M	M	S	L	M
CO2	S	S	M	S	S	S	S	S	S	L
CO3	S	M	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	M	S	M	M
CO5	S	S	S	M	M	S	M	L	S	M

*S - Strong; M - Medium; L-Low

Elective Course IV: Research Methodology

Course Objectives:		
The main objectives of this course are:		
1.		Students understand the basic principles, methodology and applications of widely used instruments in biological sciences.
Course	:	**Elective IV**
Course title	:	**Research Methodology**
Credits	:	**3**
Pre-requisite:		
Students should know the fundamentals of basic methods employed in experimental biology.		
Expected Course Outcome:		
On the successful completion of the course, student will be able to		
1.	Understand the implications of GLP	**K1**
2.	Learn the working principles of different instruments	**K2**
3.	Gain the knowledge on techniques of histology and histochemistry	**K2 & K4**
4.	Acquire knowledge on the basic principle and application of various modules of light and electron microscopy	**K3 & K5**

K1 - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**- Create

Mapping with Programme Outcomes*										
COs	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1	M	S	M	S	M	S	M	S	M	M
CO2	S	S	M	S	S	S	M	M	M	S
CO3	S	M	S	S	S	S	S	S	S	L
CO4	S	S	S	S	S	M	S	S	S	M
CO5	S	S	S	M	M	S	M	L	S	M

*S - Strong; M - Medium; L-Low

Skill Enhancement Courses (SEC) I: Poultry Farming

Course Objectives:		
The main objectives of this course are:		
1.	Students should know basic concepts in Poultry Farming.	
Course I	**:**	**Skill Enhancement Course [SEC] - I**
Course title	**:**	**Poultry Farming**
Credits	**:**	**2**
Pre-requisite:		
Students should be aware of economic and cultural importance of Poultry farming.		
Expected Course Outcome:		
Upon completion of this course, Students would have		
I	To understand the various practices in Poultry farming. To know the needs for Poultry farming and the status of India in global market.	**K2 & K3**
II	To be able to apply the techniques and practices needed or Poultry farming.	**K1, K2 & K3**
III	To know the difficulties in Poultry farming and be able to propose plans against it.	**K5 & K6**

K1- Remember; **K2**- Understand; **K3**- Apply; **K4**-Analyze; **K5**-Evaluate; **K6**- Create

Mapping with Programme Outcomes*									
COs	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1	S	L	L	L	L	L	S	S	L	L
CO2	S	L	M	M	S	M	M	M	S	S
CO3	S	M	M	M	S	S	S	S	M	M
CO4	S	S	S	L	S	S	S	S	S	S
CO5	S	S	M	S	S	S	M	L	S	M

*S - Strong; M - Medium; L – Low