

**TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE WOMEN
SURYAPET**

DEPARTMENT OF ZOOLOGY

COURSE OUT COMES MAPPING 2018-2019

SEMESTER –I

COURSE TITLE: ANIMAL DIVERSITY- INVERTIBRATES

COURSE CODE: BS105

CREDITS: 4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	To classify phylum protozoa ,porifera with taxonomic keys	Understanding(II)
CO2	To describe the coelenterate and its polymorphism	Understanding(II)
CO3	To identify the given Mollusca with respect to economic importance	Understanding(II)
CO4	To describe the general characters of Arthropoda and metamorphosis	Applying (III)
CO5	To explain the general characters ,classification of Echinodermata And Hemichordata	Remembering(I)

SEMESTER-II**COURSE TITLE: ECOLOGY ZOOGEOGRAPHY,ANIMAL BEHAVIOUR****COURSE CODE: BS205****CREDITS: 4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	To describe environmental pollution and its control measures	REMEMBER(I)
CO2	To understand methods of wild life and conservation and endangered species	UNDERSTAND(II)
CO3	To describe innate & acquired types of behaviour	REMEMBER(I)
CO4	To develop zoo geographical regions with their climatic and faunal peculiarities	APPLY(III)
CO5	To develop social behaviour, communication	III(Apply)

SEMESTER-III**COURSE TITLE: ANIMAL DIVERSITY- VERTIBRATES&DEVELOPMENTAL BIOLOGY****COURSE CODE: BS305****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the diversity & phylogeny of vertebrate phylum	I(Remember)
CO2	Understand the nomenclature & classification of the major vertebrate phyla	II(Understand)
CO3	Describe the morphology & anatomy of various vertebrates through type study	II(Understand)
CO4	Correlating the evolutionary importance of temporal fossae in reptiles	IV(Analysing)
CO5	Determine about the significance of various types of adaptation in different Embryo development	III(Apply)

SEMESTER-IV

COURSE TITLE: CELL BIOLOGY, GENETICS &EVOLUTION

COURSE CODE: BS405

CREDITS: 4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Describe the composition of prokaryotic& eukaryotic cells	II(Understand)
CO2	Identify the structure of cells & cell organelles in relation to their functional aspects	I(Remember)
CO3	Explaining the structure and functions of Nucleic acids and their role in protein synthesis	IV(Analyse)
CO4	Apply the various concepts of Genetics in problem solving	III(Apply)
CO5	Explain causes and role of extinction in evolution	II(Understand)

COURSE OUT COMES MAPPING 2019-2020

SEMESTER-I

COURSE TITLE: ANIMAL DIVERSITY-INVERTIBRATES

COURSE CODE; BS105

CREDITS:4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	To classify phylum protozoa ,porifera with taxonomic keys	Understanding(II)
CO2	To describe the coelenterate and its polymorphism	Understanding(II)
CO3	To identify the given Mollusca with respect to economic importance	Understanding(II)
CO4	To describe the general characters of Arthropoda and metamorphosis	Applying (III)
CO5	To explain the general characters ,classification of Echinodermata And Hemichordata	Remembering(I)

SEMESTER-II**COURSE TITLE: ANIMAL DIVERSITY- VERTIBRATES****COURSE CODE; BS305****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the diversity & phylogeny of vertebrate phylum	I(Remember)
CO2	Understand the nomenclature & classification of the major vertebrate phyla	II(Understand)
CO3	Describe the morphology & anatomy of various vertebrates through type study	II(Understand)
CO4	Correlating the evolutionary importance of temporal fossae in reptiles	IV(Analysing)
CO5	Determine about Aquatic adaptations in mammalia	III(Apply)

SEMESTER:III**COURSE TITLE: ANIMAL DIVERSITY-VERTIBRATES&DEVELOPMENTAL BIOLOGY****COURSE CODE: BS305****CREDITS: 4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the diversity & phylogeny of vertebrate phylum	I(Remember)
CO2	Understand the nomenclature & classification of the major vertebrate phyla	II(Understand)
CO3	Describe the morphology & anatomy of various vertebrates through type study	II(Understand)
CO4	Correlating the evolutionary importance of temporal fossae in reptiles	IV(Analysing)
CO5	Determine about the significance of various types of adaptation in different Embryo development	III(Apply)

SEMESTER-IV**COURSE TITLE: CELL BIOLOGY, GENETICS & EVOLUTION****COURSE CODE; BS405****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Describe the composition of prokaryotic & eukaryotic cells	II(Understand)
CO2	Identify the structure of cells & cell organelles in relation to their functional aspects	I(Remember)
CO3	Explaining the structure and functions of Nucleic acids and their role in protein synthesis	IV(Analyse)
CO4	Apply the various concepts of Genetics in problem solving	III(Apply)
CO5	Explain causes and role of extinction in evolution	II(Understand)

SEMESTER-V, PAPER-I**COURSE TITLE: ANIMAL PHYSIOLOGY AND BIO CHEMISTRY****COURSE CODE: BS504****CREDITS:3+2**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Understand the composition of food and mechanism of digestion, absorption, assimilation	II(Understand)
CO2	Memorise the mechanism of circulation and composition and functions of blood	I(Remember)
CO3	Correlate of Neuro muscles coordination and mechanism of osmoregulation in animals	IV(Analyse)
CO4	Teach the process of respiration and excretion and mechanism of transport of gases	III(Apply)
CO5	Evaluate the enzymes, mechanism of enzyme action and factors affinity the enzyme activity	V(Evaluate)

SEMESTER- V,PAPER –II**COURSE TITLE: APPLIED ZOOLOGY****COURSE CODE: BS507****CREDITS:3+2**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Understand process of fisheries, sericulture, along with crop pest management techniques.	II(Understand)
CO2	Memorise the process of life cycle of bombyx mori	I(Remember)
CO3	Use of products of Apiculture industry	III(Apply)
CO4	Illustrate the vermicomposting and vermiculture techniques.	IV(Analyze)
CO5	Explain the Dairy farm and poultry farm management	II(Understand)

SEMESTER-VI, PAPER-I**COURSE TITLE: IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY****COURSE CODE: BS604****CREDITS:3+2**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Imparts in depth knowledge of tissues, cells and molecules mechanisms.	I (Remember)
CO2	Understanding of types of immunity.	II(Understand)
CO3	Teach the Interactions of antigens antibodies, complements and other immune components.	III(Apply)
CO4	Correlate of animal cell in culture, growth of cell lines.	IV (Analyze)
CO5	Use in recombinant DNA technology, genetic manipulations and in a variety of industrial process.	III(Apply)

SEMESTER-VI, PAPER-II

COURSE TITLE: AQUATIC BIOLOGY

COURSE CODE; BS607

CREDITS: 3+2

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the various types of aquatic biomes.	I(Remember)
CO2	Understand the physicochemical characteristics of different freshwater bodies.	II(Understand)
CO3	Learn about the origin, diversity and different ecological aspects of fresh water bodies.	III(Apply)
CO4	Indepth knowledge regarding the various adaptaions of marine organisms.	I(Remember)
CO5	Apply the concepts of aquatic biology in management and conservation of aquatic resources.	III(Apply)

COURSE OUT COMES MAPPING 2020-2021

SEMESTER-I

COURSE TITLE: ANIMAL DIVERSITY-INVERTIBRATES

CREDITS:4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	To classify phylum protozoa ,porifera with taxonomic keys	Understanding(II)
CO2	To describe the coelenterate and its polymorphism	Understanding(II)
CO3	To identify the given Mollusca with respect to economic importance	Understanding(II)
CO4	To describe the general characters of Arthropoda and metamorphosis	Applying (III)
CO5	To explain the general characters ,classification of Echinodermata And Hemichordata	Remembering(I)

SEMESTER-II

COURSE TITLE: ANIMAL DIVERSITY- VERTIBRATES

CREDITS:4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the diversity & phylogeny of vertebrate phylum	I(Remember)
CO2	Understand the nomenclature & classification of the major vertebrate phyla	II(Understand)
CO3	Describe the morphology & anatomy of various vertebrates through type study	II(Understand)
CO4	Correlating the evolutionary importance of temporal fossae in reptiles	IV(Analysing)
CO5	Determine about Aquatic adaptations in mammalia	III(Apply)

SEMESTER:III**COURSE TITLE: ANIMAL DIVERSITY-VERTIBRATES&DEVELOPMENTAL BIOLOGY****CREDITS: 4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the diversity & phylogeny of vertebrate phylum	I(Remember)
CO2	Understand the nomenclature & classification of the major vertebrate phyla	II(Understand)
CO3	Describe the morphology & anatomy of various vertebrates through type study	II(Understand)
CO4	Correlating the evolutionary importance of temporal fossae in reptiles	IV(Analysing)
CO5	Determine about the significance of various types of adaptation in different Embryo development	III(Apply)

SEMESTER-IV**COURSE TITLE: CELL BIOLOGY,GENETICS&EVOLUTION****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Describe the composition of prokaryotic& eukaryotic cells	II(Understand)
CO2	Identify the structure of cells & cell organelles in relation to their functional aspects	I(Remember)
CO3	Explaining the structure and functions of Nucleic acids and their role in protein synthesis	IV(Analyse)
CO4	Apply the various concepts of Genetics in problem solving	III(Apply)
CO5	To Determine about the significance of various types of adaptation in different Embryo developmennt	III(Apply)

SEMESTER-V, PAPER-I**COURSE TITLE: ANIMAL PHYSIOLOGY AND BIO CHEMISTRY****COURSE CODE: BS504****CREDITS:3+2**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Understand the composition of food and mechanism of digestion, absorption, assimilation	II(Understand)
CO2	Memorise the mechanism of circulation and composition and functions of blood	I(Remember)
CO3	Correlate of Neuro muscles coordination and mechanism of osmoregulation in animals	IV(Analyse)
CO4	Teach the process of respiration and excretion and mechanism of transport of gases	III(Apply)
CO5	Evaluate the enzymes, mechanism of enzyme action and factors affinity the enzyme activity	V(Evaluate)

SEMESTER- V,PAPER –II**COURSE TITLE: APPLIED ZOOLOGY****COURSE CODE:BS507****CREDITS:3+2**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Understand process of fisheries, sericulture, along with crop pest management techniques.	II(Understand)
CO2	Memorise the process of life cycle of bombyx mori	I(Remember)
CO3	Use of products of Apiculture industry	III(Apply)
CO4	Illustrate the vermicomposting and vermiculture techniques.	IV(Analyze)
CO5	Explain the Dairy farm and poultry farm management	II(Understand)

SEMESTER-VI, PAPER-I**COURSE TITLE: IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY****COURSE CODE:BS604****CREDITS:3+2**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Imparts in depth knowledge of tissues, cells and molecules mechanisms.	I (Remember)
CO2	Understanding of types of immunity.	II(Understand)
CO3	Teach the Interactions of antigens antibodies, complements and other immune components.	III(Apply)
CO4	Correlate of animal cell in culture, growth of cell lines.	IV (Analyse)
CO5	Use in recombinant DNA technology, genetic manipulations and in a variety of industrial process.	III(Apply)

SEMESTER-VI, PAPER-II**COURSE TITLE: AQUATIC BIOLOGY****COURSE CODE;BS607****CREDITS: 3+2**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the various types of aquatic biomes.	I(Remember)
CO2	Understand the physicochemical characteristics of different freshwater bodies.	II(Understand)
CO3	Learn about the origin, diversity and different ecological aspects of fresh water bodies.	III(Apply)
CO4	Indepth knowledge regarding the various adaptaions of marine organisms.	I(Remember)
CO5	Apply the concepts of aquatic biology in management and conservation of aquatic resources.	III(Apply)

COURSE OUT COMES MAPPING 2021-2022

SEMESTER-I

COURSE TITLE: ANIMAL DIVERSITY-INVERTIBRATES

CREDITS:4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	To classify phylum protozoa ,porifera with taxonomic keys	Understanding(II)
CO2	To describe the coelenterate and its polymorphism	Understanding(II)
CO3	To identify the given Mollusca with respect to economic importance	Understanding(II)
CO4	To describe the general characters of Arthropoda and metamorphosis	Applying (III)
CO5	To explain the general characters ,classification of Echinodermata And Hemichordata	Remembering(I)

SEMESTER-II

COURSE TITLE: ANIMAL DIVERSITY- VERTIBRATES

CREDITS:4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the diversity & phylogeny of vertebrate phylum	I(Remember)
CO2	Understand the nomenclature & classification of the major vertebrate phyla	II(Understand)
CO3	Describe the morphology & anatomy of various vertebrates through type study	II(Understand)
CO4	Correlating the evolutionary importance of temporal fossae in reptiles	IV(Analysing)
CO5	Determine about Aquatic adaptations in mammalia	III(Apply)

SEMESTER:III**COURSE TITLE: ANIMAL PHYSIOLOGY& ANIMAL BEHAVIOUR****CREDITS: 4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Understand the composition of food and mechanism of digestion, absorption, assimilation	II(Understand)
CO2	Memorise the mechanism of circulation and composition and functions of blood	I(Remember)
CO3	Correlate of Neuro muscles coordination and mechanism of osmoregulation in animals	IV(Analyse)
CO4	Teach the process of respiration and excretion and mechanism of transport of gases	III(Apply)
CO5	Evaluate the types of learning ,trial and error learning imprinting	V(Evaluate)

SEMESTER-IV**COURSE TITLE: CELL BIOLOGY,GENETICS&DEVELOPMENTAL BIOLOGY****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Describe the composition of prokaryotic& eukaryotic cells	II(Understand)
CO2	Identify the structure of cells & cell organelles in relation to their functional aspects	I(Remember)
CO3	Explaining the structure and functions of Nucleic acids and their role in protein synthesis	IV(Analyse)
CO4	Apply the various concepts of Genetics in problem solving	III(Apply)
CO5	To Determine about the significance of various types of adaptation in different Embryo development	III(Apply)

SEMESTER-V**COURSE TITLE: IMMUNOLOGY AND ANIMAL BIO TECHNOLOGY****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Imparts in depth knowledge of tissues, cells and molecules mechanisms.	I (Remember)
CO2	Understanding of types of immunity.	II(Understand)
CO3	Teach the Interactions of antigens antibodies, complements and other immune components.	III(Apply)
CO4	Correlate of animal cell in culture, growth of cell lines.	IV (Analyse)
CO5	Use in recombinant DNA technology, genetic manipulations and in a variety of industrial process.	III(Apply)

SEMESTER-VI**COURSE TITLE: ECOLOGY ZOOGEOGRAPHY, EVOLUTION****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	To describe environmental pollution and its control measures	REMEMBER(I)
CO2	To understand methods of wild life and conservation and endangered species	UNDERSTAND(II)
CO3	To describe innate & acquired types of behaviour	REMEMBER(I)
CO4	To develop zoo geographical regions with their climatic and faunal peculiarities	APPLY(III)
CO5	Explain causes and role of extinction in evolution	II(Understand)

COURSE OUT COMES MAPPING 2022-2023

SEMESTER-I

COURSE TITLE: ANIMAL DIVERSITY-INVERTIBRATES

CREDITS:4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	To classify phylum protozoa ,porifera with taxonomic keys	Understanding(II)
CO2	To describe the coelenterate and its polymorphism	Understanding(II)
CO3	To identify the given Mollusca with respect to economic importance	Understanding(II)
CO4	To describe the general characters of Arthropoda and metamorphosis	Applying (III)
CO5	To explain the general characters ,classification of Echinodermata And Hemichordata	Remembering(I)

SEMESTER-II

COURSE TITLE: ANIMAL DIVERSITY- VERTIBRATES

CREDITS:4+3

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Knowledge about the diversity & phylogeny of vertebrate phylum	I(Remember)
CO2	Understand the nomenclature & classification of the major vertebrate phyla	II(Understand)
CO3	Describe the morphology & anatomy of various vertebrates through type study	II(Understand)
CO4	Correlating the evolutionary importance of temporal fossae in reptiles	IV(Analysing)
CO5	Determine about Aquatic adaptations in mammalia	III(Apply)

SEMESTER:III**COURSE TITLE: ANIMAL PHYSIOLOGY& ANIMAL BEHAVIOUR****CREDITS: 4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Understand the composition of food and mechanism of digestion, absorption, assimilation	II(Understand)
CO2	Memorise the mechanism of circulation and composition and functions of blood	I(Remember)
CO3	Correlate of Neuro muscles coordination and mechanism of osmoregulation in animals	IV(Analyse)
CO4	Teach the process of respiration and excretion and mechanism of transport of gases	III(Apply)
CO5	Evaluate the types of learning ,trial and error learning imprinting	V(Evaluate)

SEMESTER-IV**COURSE TITLE: CELL BIOLOGY,GENETICS&DEVELOPMENTAL BIOLOGY****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Describe the composition of prokaryotic& eukaryotic cells	II(Understand)
CO2	Identify the structure of cells & cell organelles in relation to their functional aspects	I(Remember)
CO3	Explaining the structure and functions of Nucleic acids and their role in protein synthesis	IV(Analyse)
CO4	Apply the various concepts of Genetics in problem solving	III(Apply)
CO5	To Determine about the significance of various types of adaptation in different Embryo development	III(Apply)

SEMESTER-V**COURSE TITLE: IMMUNOLOGY AND ANIMAL BIO TECHNOLOGY****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	Imparts in depth knowledge of tissues, cells and molecules mechanisms.	I (Remember)
CO2	Understanding of types of immunity.	II(Understand)
CO3	Teach the Interactions of antigens antibodies, complements and other immune components.	III(Apply)
CO4	Correlate of animal cell in culture, growth of cell lines.	IV (Analyse)
CO5	Use in recombinant DNA technology, genetic manipulations and in a variety of industrial process.	III(Apply)

SEMESTER-VI**COURSE TITLE: ECOLOGY ZOO GEOGRAPHY, EVOLUTION****CREDITS:4+3**

	COURSE OUTCOMES	BLOOM'S TAXONOMY LEVEL
CO1	To describe environmental pollution and its control measures	REMEMBER(I)
CO2	To understand methods of wild life and conservation and endangered species	UNDERSTAND(II)
CO3	To describe innate & acquired types of behaviour	REMEMBER(I)
CO4	To develop zoo geographical regions with their climatic and faunal peculiarities	APPLY(III)
CO5	Explain causes and role of extinction in evolution	II(Understand)