

FATIMA COLLEGE (AUTONOMOUS), MADURAI - 625018

Name of the Programme: B. Sc. ZOOLOGY

Programme Outcomes (PO)

The learners will be able to

- **PO1:** Apply acquired scientific knowledge to solve complex issues.
- PO2: Attain Analytical skills to solve complex cultural, societal and environmental issues.
- **PO3:** Employ latest and updated tools and technologies to analyse complex issues.
- **PO4:** Demonstrate Professional Ethics that foster Community, Nation and Environment Building Initiatives.

PROGRAMME SPECIFIC OUTCOMES (PSO)

On completion of B.Sc. Zoology programme, the graduates would be able to

- PSO1: Gain comprehensive knowledge in different branches of Zoology Invertebrata, Chordata, Cell biology, Physiology, Environmental Biology, Biochemistry, Microbiology, Immunology, Embryology, Entomology, Genetics, Molecular Biology, Biotechnology, Biostatistics, Bioinformatics and Evolution.
- **PSO2:** Acquire technical skills in performing experiments in the field of Microbiology, Cell Biology, Biochemistry, Plant Physiology, Human Physiology, Molecular Biology, Environmental Biology,

PROGRAMME CODE: UAZO



 Criterion : I - Curricular Aspects
 Metric : 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) - B.Sc. ZOOLOGY
 Year : 2015 - 2020



Developmental Biology, Biostatistics, Immunology, Evolution, Genetics, Clinical Laboratory Techniques, Biotechnology and Bioinformatics.

- **PSO 3:** Develop empathy and instill love towards conserving plants and animals.
- **PSO 4:** Express ideas and concept through seminar and assignments.
- **PSO 5:** Solve the environmental problems by applying the biological principles for minimizing pollutants in air, water and land.
- **PSO 6:** Develop environmental concern towards value of economically important plants, Biodiversity promote Bioremediation, Bio fertilizer and vegetative propagation.
- **PSO 7:** Adopt Good Laboratory Practice, bioethics and bio safety guidelines to ensure minimal use of animals during experiments.
- **PSO 8:** Exhibit the holistic growth by developing subject proficiency, interpersonal skills, and show vertical mobility in taking up PG courses and horizontal mobility by enrolling in B.Ed institution, clinical laboratory course and seek employment in schools, Medical coding and IT companies.
- **PSO 9:** Make them self employed/ Entrepreneur in the field of Sericulture, Vermitechnology, Ornamental fish culture, Dairy farming, Apiculture, Mushroom cultivation and Horticulture.





- **PSO 10:** Use of computers for Power point presentation, Virtual Dissection, analysis of bio- molecules using bioinformatics tools and computing biological data.
- **PSO 11:** Healthy diet pattern for combat life style disorder.

2019 - 2020

Course Code	Course Title	NATURE OF THE COURSE (LOCAL/NATIONAL/ REGIONAL/ GLOBAL)	COURSE DESCRIPTION	Course Outcomes
19Z1CC1	Invertebrata	All the Three	This is an introductory taxonomy course to the Zoology Program which organizes the distribution of animals according	 CO 1: Describe the fundamental organization of animals CO 2: Explain the levels of organization of animal kingdom and origin of metazoan CO 3: List the general characters of animals from Phylum Protozoa to

A CHARACTER OF CONTRACT	Criterion Metric Year	n : I – Curricu : 1.1.1 – Prog Course Outco : 2015 - 202	lar Aspects gramme Outcomes (POs) omes (COs) – B.Sc. ZOOI O), Programme Specific O .OGY	utcome	es (PSOs) and
				to common characteristic features charted out by Linnaeus, all animals are classified into seven categories: kingdom, phylum, class, order, family, genus and species along with the type study.	CO 4: CO 5: CO6 CO7 CO8	 Phylum Echinodermata Summarize the parasitic protozoans and types of nutrition in Protozoa Classify Coelenterata based on Zooids Narrate the parasitic adaptations of helminth parasites Discriminate insects based on the modification of Mouth parts Discuss the modifications of foot in Mollusca and water vascular system in star fish Organize the diversity of animals from simple to complex through a chart/ model
19Z1	CC2 C	Cell Biology	Global &National	This course deals with the study of	СО	1: Explain the different types of microscopes.

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	Criteri Metric	on : I – Curricu : : 1.1.1 – Prog	lar Aspects gramme Outcomes (POs), Programme Specific O	Outcomes (PSOs) and
		Course Outc	omes (COs) – B.Sc. ZOO	LOGY	
MADURA!	Year	: 2015 - 202	0		
				structure and functions of the cell.	 CO 2: Distinguish between Eukaryotic and Prokaryotic cells. CO 3: Describe the structure and functions of cell organelles. CO 4: Outline the steps involved in cellular respiration. CO 5: Discuss the structure and functions of Nucleic acids. CO 6 Explain the processes of cell division by mitotic &meiotic phase. CO 7 Outline the characteristics of Cancer
10	9Z1CC3	Lab in	All the Three	This Course aims	CO 1: Recognizes the levels of organization
		Invertebrata &		to develop Identify	among Invertebrates
		Cell Biology	NA.	the salient features of Invertebrates and Preparation and	CO 2: Illustrate the Skill of Dissection of Organisms CO 3: Recalls the Structure and Functions



19Z1NME	Maternity &	National	This course	CO 1: List male and female reproductive
	Child Health		intends to create	organs
			awareness on	CO 2: Discuss the various women health
			women health	related issues
	e e e e e e e e e e e e e e e e e e e	8	problems and solutions and	CO 3: Associate the hormonal secretions with the different phases of
		A	and antenatal care	menstruation cycle.
		V) KIND	during pregnancy.	CO 4: Recall the warning signals of
			It aims to educate	pregnancy
			on public health,	CO 5: Discuss the major and minor
			personal hygiene,	problems during pregnancy
			and nutrition for	CO 6 Classify the family planning methods



Year

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			children and	with examples
			pregnant mother.	CO 7 Outline the immunization schedule
19Z2CC4	Chordata	All the Three	This course imparts knowledge on the salient features, classification and uniqueness of the Classes of Phylum Chordata.	 CO 1: Recall the levels of organization among Chordates. CO 2: Bring out the general characters of Chordates. CO 3: Classify the Phyla of Chordates up to order level. CO 4: Distinguish between the Classes of Chordates. CO 5l:Evaluate the unique features of each Class of Chordates. CO 6 Identify the Systematic Position of Animals.
19Z2CC5	Genetics	Global &National	This course concerned with the study of genes,	CO 1: Define the different laws of Mendel. CO 2: Solve the problems related to

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	Criterion Metric	: I – Curricu : 1.1.1 – Prog Course Outco	lar Aspects gramme Outcomes (POs omes (COs) – B.Sc. ZOO o	s), Programme Specific C LOGY	Dutcomes (PSOs) and
				genetic variation, and heredity in organisms	 monohybrid and dihybrid cross. CO 3: Explain the mechanism of Linkage and crossing over. CO 4: Outline the concept of sex-linked inheritance. CO 5: Discuss the types of mutation. CO 6 Explain different types of syndromes caused by chromosome abnormalities. CO 7 Identify the effective ways of diminishing the chronic genetic disorders.
19Z2CC	C6 Lab Ger &C1	o in netics hordata	All the Three	Focuses on understanding the uniqueness of Chordates and genetic inheritance of characters in	 CO 1: Recognizes the levels of organization among Chordates. CO 2: Bring out the general characters of Chordates. CO 3: Classify Chordates up to class level.

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			man	ee in summarilie and anique features of
				each Class of Chordates.
		S A		CO 5: Distinguish the Mendelian Traits as
			EAD	Dominant and Recessive.
			LEMP	CO 6 Develops the skill of dissecting
				organisms and displaying.
				CO 7 Interprets the Pedigrees.
19Z2NME	Maternity &	National	This course	CO 1: List male and female reproductive
	Child Health		intends to create	organs
			awareness on	CO 2: Discuss the various women health
		8	women health	related issues
			problems and	CO 3: Associate the hormonal secretions
			solutions and	with the different phases of
		AND	common problems	menstruation cycle
			and antenatal care	CO 4: Recall the warning signals of
			during pregnancy.	pregnancy
			It aims to educate	CO 5: Discuss the major and minor
			on public health,	problems during pregnancy
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Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
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			personal hygiene,	CO 6: Classify the family planning methods
			and nutrition for	with examples
		R A	children and	CO 7: Outline the immunization schedule
			pregnant mother.	
Course Code	Course Title	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
Z3CC6	Human	Global &National	Understanding the	• Summarize the basic components and
	Physiology		complex	functions of the digestive system
	<u>_</u>		organization of	• Organise major organs of the
		8	different organ	respiratory functions and their
			systems and their	diseases
		\Im	functions-syllabus	• Describe circulatory system and their
		AND	framed to help the	functions
			students	
			understand the	
			human	
			organization.	



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
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Z3CC8	Microbiology	Global &National	To understand the	•	List out the importance and scope of
			fundamentals of		Microbiology.
			the world of		Describe the ultra structure of
			Microbes,		bacteria.
			distribution and		Discuss the gene transfer methods of
			their application		bacteria.
			for human welfare.		
Z3SB1	Vermiculture	All the Three	To impart the	•	Identify the different species of
			knowledge on		earthworm
			Vermiculture	•	Describe the properties of
	د ع		through teaching		Vermicompost
		ల	and fieldtrip and	•	Summarize the methods of
		<u>a</u>	motivate them to	1	Vermicomposting
		KIND	become self-		
			employed in		
			vermin technology.		
Z3ACQ1	Allied Botany-I	All the Three	To understand the		Identify the plant diseases with the
			structure & life		help of symptoms and choose the



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Inheritance & Allelism



Z4CC8	Environmental	All the Three	Review	of	• Explain the structure and function of
	Biology		ecological conce	epts	the Ecosystems
		R P	to	the	• Compare and contrast different types of
			understanding	of	Ecosystem
			environmental		• Infer the importance of Biodiversity and
			biology.		its conservation
			Appreciation	of	
			relationships		
			between		
			environmental		
			biology and or	ther	
		<u>इ</u> र	discipline's with	thin	
			environmental		
			biology.	S	
74000	Evolution	Global	To understand	the	• Popull the basic concents of origin of life
24009	Evolution	Gibbai	fundamental	the	• Recall the basic concepts of origin of me
			origin evolu	tion	Delete the evidences of evolution by
					• Relate the evidences of evolution by
			and diversifica	tion	observing the morphology of organisms.
			of fauna of	the	

Summarize the theories of evolution



Criterion : I – Curricular Aspects

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Year : 2015 - 2020 biosphere the origin of life --___ . . -

Z45B2	Herbal	National &	To understand the	•	Infer the role of advance technologies
	Technology	Regional	importance of the	5	in the conservation and the production
			Medicinal plant		of medicinal plants
			wealth in India	•	Unravel of the phytochemistry of the
			and the role of		active principle of the medicinal plants.
			Medicinal plants		
			in human health		
			care.		
	5				
Z4CC10	Major	All the Three	To gain skills in	•	Estimate the dissolved O2 and CO2 in
	Practical-II		analyzing the		given water samples
			clinical and	•	Infer the qualitative estimation of
		AIND	environmental		protein, urea, ammonia and creatinine
			samples and to	•	Demonstration on staining techniques
			learn basic	•	Demonstration on Serial dilution
			techniques in		
			microbiology and		

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			molecular biology		
Z4ACQ2	Allied Botany-	All the Three	To study Plan	nt •	Compare and contrast the anatomical
	II		Anatomy,		differences between the anatomical
			Physiology,		structures of Dicot and Monocot plants
			Embryology an	ıd	
			Plant breeding	•	Summarize the mechanism of
					photosynthesis and respiration in
				4	plants
				•	Explain the development of male and
					female reproductive organs in plants
	3				and infer flower and fruit setting in
		3			plants
				2)•	Explain the various techniques in the
		Y) RIND	LY LIGH	T	crop improvement programmes
Z4ACQ3	Allied Botany	All the Three	To study bas	ic •	Construct suitable micro preparations
	Practical		functioning	of •	Make use of dissection microscope to
			plant life.	52	display the floral parts of Angiosperms
				•	Illustrate the anatomy of Monocot and



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
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			CO	•	dicot stem , root and leaf Interpret experimental set ups in plant physiology
C4ACZ2	Allied Zoology-	National	Provides	•	Outline the general structure and
	II		foundation studies		function of a prokaryotic and eukaryotic
			for Biotechnology		cell.
				•	Explain the various proposed models
					regarding the structure of Plasma
					membrane
				•	Explains the structure and function of
	E E				Nucleus, Mitochondria and
	C C	٤			Endoplasmic reticulum
C4ACZ3	Allied Zoology	All the Three	To study the		Outline the Laboratory bio safety
	Practical	AIND	applications of life		guidelines and good laboratory
			sciences in		practices.
			molecular field	•	Recall the Principle of Compound
			DTK		microscope
				•	Examine the Haemin Crystal under the



he	•	Discuss	the	metabolic	pathways	of
		carbohyd	irates	s, proteins a	nd lipids.	

	E C	3	processes of the living beings	• [r.	Describe the factors affecting the normal functions of the enzymes.
Z5CC12	Molecular	Global &National	To understand the	• II	llustrate the Watson and Crick model
	Biology	AND	molecular	0	of DNA double helix
			processes of cells	• [Describe the mechanism of DNA
			and the flow of	r	replication and the role of enzymes
			genetic	• [Describe the transcription and
			information and to	t	ranslation in prokaryotes and

physiochemical



rion : I – Curricular Aspects ic : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



			appreciate the	eukaryotes
			regulatory	
			mechanisms of	
			gene expression by	
			the complex	
			interactions of	
			biomolecules.	
Z5CC13	Biophysics&	Global &National	To study the basic	• Describe the principles of physics
	Instrumentatio		principles of	involved in the structure of
	n		Biophysics that is	biomolecules, energy transformation in
	٤		relevant and	living systems
		81	applied to the life	• Relate the use of modern physical
			principle and the	instruments for the exploration of
		V) SINT	usage of	knowledge in Biology.
			instruments in	
			biological studies	
Z5ME1	Embryology	Global &National	To acquaint the	• Recall the basic concepts of
			students with	developmental biology.



		ME	loetus stage.		Relate the development of egg into a foetus, then into adult, among
			LEAD		Vertebrates.
Z5ME2	Entomology	All the Three	To learn about the	•	Compare the morphological features of
			classification,		different orders.
			biology and control	•	Summarize the beneficial aspects of
			of insects and to		insects.
			appreciate the	•	Identify the agricultural pests and the
	3		importance of		economic damage caused.
		8	insects		
Z5SB3	Ornamental	All the Three	To enable the	•	List the types of aquarium.
	Fish Culture	MIND	students to be	•	Plan the use of common aquarium
			familiarized with		ornamental fish and aquatic plants to
			ornamental fishes		decorate it.
			and to motivate	•	Explain the techniques followed in
			them to become		ornamental fish breeding.



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			entrepreneur	• Compare the symptoms of various
			CON	diseases prevalent in ornamental fish.
Z5SB4	Sericulture	All the Three	To motivate young	• List the importance of sericulture as
			minds to become	cottage industry and the support
			an entrepreneur	provided by Central Silk Board.
			for practicing	• Explain the different methods of
			sericulture as	vegetative propagation followed in
			cottage industry.	mulberry cultivation.
				• Outline the life cycle of mulberry
				silkworm and the methods of rearing.
	٤			• Find various diseases that affect
	C	গ্র		silkworm and cocoon formation
Z6CC14	Immunology	Global &National	To understand the	• Outline the types of immunity,
		AND	immune system	immunization and origin of immune
			and immune	cells
			response involved	• Explain the structure and properties of
			in human body. To	antigen and antibody Identify the
			help students	immunological technique

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	Criterion Metric	: I - Curricul : 1.1.1 - Prog Course Outco	lar Aspects gramme Outcomes (PO omes (COs) – B.Sc. ZOC o	s), Programme Specific O DLOGY	Outcomes (PSOs) and
				develop the skills necessary for the critical analysis of contemporary on topics related to health and disease.	Describe the types and mechanism of immune response
Z6CC	15 Bio	otechnology	Global &National	To familiarize the use of the techniques of engineering and technology in Biology for the study of living organisms, to modify products or processes for specific use. Also, to find solution of	 Identify the principles and applications of Biotechnology for the benefit of mankind Outline the development of transgenic plants, animals, and microbes or products for specific use Discuss the solutions to problems concerning human activities in the field of Agriculture, Medicine. Industry and Environment

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Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
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		s A	COT	• Find the way to process clinical specimens safely according to established procedures.
Z6ME5	Bioinformatics	Global &National	To enable the students to appreciate the significance of computational programs in the development and analysis of biological database	 Enumerate the applications of bioinformatics List web browsers and search engines Classify biological databases
Z6ME6	Human Genetics	Global &National	To study the modes of inheritance of congenital disorders and their preventive	 Classify the types of genetic disorders Explain the mode of inheritance of congenital disorders



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measures Z6SB5 Apiculture All the Three To enable the • Explain the scope of apiculture in India students to be the equipments used in bee List • familiarized with keeping Bee keeping Outline the types of bee disease. techniques and to motivate them to become entrepreneur All the Three Recall the scope of Dairy Farming and Z6SB6 Dairy Farming To enable the students to be Dairy Technology. familiarized with Identify the features of various management of indigenous and exotic breeds of dairy high yielding cow cattle. species, • Develop an idea regarding the preparation of formulation of value added dairy value added products. products using • CO4 Describe the clinical findings,



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
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			milk and to	treatment and control measures of
			motivate them to	livestock diseases.
			become an	
			entrepreneur	
Z6CC16	Major Practical	All the Three	Students gain	• Develop skills in handling basic
	III		hands-on	equipments
			experience and	• Relate the chemical properties
			learn the	biomolecules with the qualitative
			theoretical basis of	analytical tests of Bio molecules
			lab techniques	• Demonstrate the genomic DNA
	5		common to a	isolation, DNA estimation and
		3	variety of	chromatography
			biological	Identify the spotters
		V) KIND	disciplines	





Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
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2018 - 2019

COURSE CODE	Course Title	NATURE OF THE COURSE (LOCAL/NATIONAL /REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
Z1CC1	Cell Biology	Global &National	To know the fundamental functioning of various organelles and to provide foundation for advanced courses like Biotechnology.	 Distinguish between Eukaryotic and Prokaryotic cells. Describe the structure and functions of cell organelles. Explain the processes of cell division by mitotic & meiotic phase.
Z1CC2	Animal Diversity I	All the Three	To understand fundamental organization of animals at three levels – unicellular	 Describe the fundamental organization of animals Explain the levels of organization of animal kingdom and origin of metazoan

	Criterion: I – CurriculMetric: 1.1.1 – ProgCourse OutcoYear: 2015 - 2020	ar Aspects ramme Outcomes (omes (COs) – B.Sc. 2 D	POs), Programme Specific O 200LOGY	utcomes (PSOs) and
			diploblastic and triploblastic and the principles of classification with examples from invertebrates	 List the general characters of animals from Phylum Protozoa to Phylum Echinodermata
Z1NME	Maternity and Child Health	National	To understand the Physiology of human reproductive system and to create awareness on personal health, hygiene and Family Planning methods	 Discuss the various women health related issues Discuss the major and minor problems during pregnancy Classify the family planning methods with examples
Z2CC3	Animal Diversity II	All the Three	To understand the fundamental organization of	 Bring out the general characters of Chordates. Classify the Phyla of Chordates upto

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ion : I – Curricular Aspects : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



			Chordates and	order level.
			their diversity.	• Distinguish between the Classes of
		N.A.	COL	Chordates.
Z2CC4	Genetics	Global &National	To enable students to understand the organization, function of genes and genetic components which are the basis of life continuum	 Define the different laws of Mendel. Explain the mechanism of Linkage and crossing over. Explain different types of syndromes caused by chromosome abnormalities.
Z2CC5	Major Practical I	All the Three	To study the diversity of animals and to understand the fundamental organization of cells	 Recognizes the levels of organization among Invertebrates. Develops the skill of dissecting organisms and displaying Demonstrate skill of handling Microscopes

Citterion 1.1 - Programme Outcomes (P0s), Programme Specific Outcomes (P50s) and Course Outcomes (C0s) - B.5. ZOOLOGY Year 2015 - 2020 Z2NME Maternity and Child Health National Child Health National Discuss the various women health related issues Discuss the major and minor problems during pregnancy System and to create awareness on personal health, hygiene and Family Planning methods Z3CC6 Human Physiology Global &National Understanding the complex organization of different organ systems and their functions syllabus framed to help the students understand the human Summarize the basic components and functions and their diseases Organise major organs of the respiratory functions and their diseases Describe circulatory system and their functions						NAAC – 4 th CYCLE – Self Study Report (SS
Z2NMEMaternity and Child HealthNationalTo understand the Physiology of human reproductive system and to create awareness on personal health hygiene and Family Planning methodsDiscuss the various women health related issuesZ3CC6Human PhysiologyGlobal &National Maternity and the create awareness on personal health hygiene and Family Planning methods• Discuss the various women health related issuesZ3CC6Human PhysiologyGlobal &National Global &NationalUnderstand infer complex organization of different organ systems and their functions-syllabus framed to help the students understand the human• Discuss the various women health related issuesMaternity and problems during pregnancy• Oiscuss the major and minor problems during pregnancyZ3CC6Human PhysiologyGlobal &National framed to help the students understand the human• Summarize the basic components and functions of the digestive system and their disordersZ3CC6Human PhysiologyFramed to help the students understand the human• Summarize the basic components and functions and their diseases functions syllabus framed to help the students understand the human• Discuss the various women health related issues	ARTINA COLLER ARTINA ARTINA COLLER ARTINA ARTINA COLLER ARTINA ARTINA ARTINA COLLER ARTINA ARTINA AR	Criterio Metric Year	n : I - Curricul : 1.1.1 - Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO)	s), Programme Specific O DLOGY	outcomes (PSOs) and
	Z2NME		Maternity and Child Health Human Physiology	National Global &National	To understand the Physiology of human reproductive system and to create awareness on personal health, hygiene and Family Planning methods Understanding the complex organization of different organ systems and their functions-syllabus framed to help the students understand the human	 Discuss the various women health related issues Discuss the major and minor problems during pregnancy Classify the family planning methods with examples Summarize the basic components and functions of the digestive system and their disorders Organise major organs of the respiratory functions and their diseases Describe circulatory system and their functions



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			organization.	
Z3CC8	Microbiology	Global &National	To understand the fundamentals of the world of Microbes, distribution and their application for human welfare.	 List out the importance and scope of Microbiology. Describe the ultra structure of bacteria. Discuss the gene transfer methods of bacteria
Z3SB1	Vermiculture	All the Three	To impart the knowledge on Vermiculture through teaching and fieldtrip and motivate them to become self employed in vermin technology.	 Identify the different species of earthworm Describe the properties of Vermicompost Summarize the methods of Vermicomposting
Z3ACQ1	Allied Botany-	All the Three	To understand the	• Identify the plant diseases with the help

				NAAC - 4 CICLE - Selj Study Report
ALCEN ST	Criterion Metric	: I - Curricul : 1.1.1 - Prog Course Outco	lar Aspects gramme Outcomes omes (COs) – B.Sc.	(POs), Programme Specific Outcomes (PSOs) and ZOOLOGY
	Year	: 2015 - 202	0	
	I			structure & life cycle of Plantof symptoms and choose the control measuresgroups To gain knowledge on PlantI dentify the binomial name with the help of vernacular or common namediseases To study and to understand the usage of economically important locally available plantsMake use of economically important locally available plants
C3ACZ	Z1 A Z	Allied Zoology-I	National	 To know the fundamental functioning of various organs – To inculcate the aspect of how generations vary and inherit. Outline the general characters of different phyla up to class Summarize the structure and function of circulatory system, excretory organs. Explain the Mendelian Laws Of Inheritance &Allelism

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					NAAC – 4 CYCLE – Self Study Report
RAL R	Criterio Metric Year	n : I – Curricul : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO)	s), Programme Specific O DLOGY	Outcomes (PSOs) and
Z4CC8		Environmenta 1 Biology	All the Three	Review of ecological concepts to the understanding of environmental biology. Appreciation of relationships between environmental biology and other discipline's within environmental biology.	 Explain the structure and function of the Ecosystems Compare and contrast different types of Ecosystem Infer the importance of Biodiversity and its conservation
Z4CC9		Evolution	Global	To understand the fundamental origin, evolution and diversification of fauna of the	 Recall the basic concepts of origin of life on earth. Relate the evidences of evolution by observing the morphology of organisms.



Criterion : I – Curricular Aspects

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



Year : 2015 - 2020

			biosphere since the	• Summarize the theories of evolution
			origin of life	
Z4SB2	Herbal	National &	To understand the	• Infer the role of advance technologies in
	Technology	Regional	importance of the	the conservation and the production of
			Medicinal plant	medicinal plants
			wealth in India and	• Unravel of the phytochemistry of the
			the role of	active principle of the medicinal plants.
			Medicinal plants in	
			human health	
			care.	
Z4CC10	Major	All the Three	To gain skills in	• Estimate the dissolved O2 and CO2 in
	Practical-II	57	analyzing the	given water samples
	<		clinical and	• Infer the qualitative estimation of
		TIND	environmental	protein, urea, ammonia and creatinine
			samples and to	Demonstration on staining techniques
			learn basic	Demonstration on Serial dilution
			techniques in	
			microbiology and	



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



			molecular biology	
Z4ACQ2	Allied Botany- II	All the Three	To study Plant Anatomy, Physiology, Embryology and Plant breeding	 Compare and contrast the anatomical differences between the anatomical structures of Dicot and Monocot plants Summarize the mechanism of photosynthesis and respiration in plants Explain the development of male and female reproductive organs in plants and infer flower and fruit setting in plants Explain the various techniques in the crop improvement programmes
Z4ACQ3	Allied Botany	All the Three	To study basic	Construct suitable micro preparations
	Practical		functioning of	• Make use of dissection microscope to
			plant life.	display the floral parts of Angiosperms
			DIKE	• Illustrate the anatomy of Monocot and
				dicot stem , root and leaf



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. ZOOLOGYYear: 2015 - 2020



				• Interpret experimental set ups in plant physiology
C4ACZ2	Allied Zoology-II	National	Provides foundation studies for Biotechnology	 Outline the general structure and function of a prokaryotic and eukaryotic cell. Explain the various proposed models regarding the structure of Plasma membrane Explains the structure and function of Nucleus, Mitochondria and Endoplasmic reticulum
C4ACZ3	Allied Zoology Practical	All the Three	To study the life science application in molecular field	 Outline the Laboratory bio safety guidelines and good laboratory practices. Recall the Principle of Compound microscope Examine the Haemin Crystal under the microscope



 Criterion
 : I - Curricular Aspects

 Metric
 : 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and

 Course Outcomes (COs) - B.Sc. ZOOLOGY

 Year
 : 2015 - 2020



		RA	CO 7	• Recall the structure of human physiological model such as Ear, Eye and heart.
Z5CC11	Biochemistry	Global &National	To familiarize the students with the structure and role of bimolecular and the physiochemical processes of the living beings	 Describe the properties and biological significance of Bio molecules Classify amino acids based on the nature of their functional group. Discuss the metabolic pathways of carbohydrates, proteins and lipids. Describe the factors affecting the normal functions of the enzymes.
Z5CC12	Molecular Biology	Global &National	To understand the molecular processes of cells and the flow of genetic information and to appreciate the regulatory	 Illustrate the Watson and Crick model of DNA double helix Describe the mechanism of DNA replication and the role of enzymes Describe the transcription and translation in prokaryotes and eukaryotes




			mechanisms of	
			gene expression by	
		S A	the complex	
			interactions of	
			bimolecular.	
Z5CC13	Biophysics&	Global &National	To study the basic	• Describe the principles of physics
	Instrumentati		principles of	involved in the structure of bio
	on		Biophysics that is	molecules, energy transformation in
			relevant and	living systems
			applied to the life	• - Relate the use of modern physical
	د ا		principle and the	instruments for the exploration of
	C	34	usage of	knowledge in Biology.
			instruments in	
		V KIND	biological studies	
Z5ME1	Embryology	Global &National	To acquaint the	• Recall the basic concepts of
			students with	developmental biology.
			development of cell	• Tell how fertilization, cleavage and
			from egg to the	gastrulating occur.





		RA	foetus stage.	 Relate the development of egg into a foetus, then into adult, among Vertebrates.
Z5ME2	Entomology	All the Three	To learn about the classification, biology and control of insects and to appreciate the importance of insects	 Compare the morphological features of different orders. Summarize the beneficial aspects or insects. Identify the agricultural pests and the economic damage caused.
Z5SB3	Ornamental Fish Culture	All the Three	To enable the students to be familiarized with ornamental fishes and to motivate them to become entrepreneur	 List the types of aquarium. Plan the use of common aquarium ornamental fish and aquatic plants to decorate it. Explain the techniques followed in ornamental fish breeding. Compare the symptoms of various diseases prevalent in ornamental fish





Z5SB4	Sericulture	All the Three	To motivate young	• List the importance of sericulture as
			minds to become	cottage industry and the support
			an entrepreneur	provided by Central Silk Board.
			for practicing	• Explain the different methods of
			sericulture as	vegetative propagation followed in
			cottage industry.	mulberry cultivation.
				• Outline the life cycle of mulberry
				silkworm and the methods of rearing.
				• Find various diseases that affect
				silkworm and cocoon formation
Z6CC14	Immunology	Global &National	To understand the	• Outline the types of immunity,
	R	2	immune system	immunization and origin of immune
			and immune	cells
		KIND	response involved	• Explain the structure and properties of
			in human body. To	antigen and antibody Identify the
			help students	immunological technique
			develop the skills	• Describe the types and mechanism of
			necessary for the	immune response
			critical analysis of	





Z6CC15	Biotechnology	Global &National	contemporary on topics related to health and disease. To familiarize the use of the	
			techniques of engineering and technology in Biology for the study of living organisms, to modify products or processes for specific use. Also, to find solution of problems concerning human activities including agriculture,	 Identify the principles and applications of Biotechnology for the benefit of mankind Outline the development of transgenic plants, animals, and microbes or products for specific use Discuss the solutions to problems concerning human activities in the field of Agriculture, Medicine. Industry and Environment





Z6ME3	Biostatistics	Global &National	medical treatment, industry and environment To study the statistical significance data and analysis of the Biological aspects	 Outline the importance of data collection and its types. Estimate and interpret the data, by various measures including mean, median and standard deviation
			in life	median, and standard deviation.
Z6ME4	Clinical Laboratory	All the Three	Job oriented course on the	• Identify the different sterilization methods followed in clinical laboratory.
	Technique		methods of testing the clinical samples	 Explain the collection method and techniques used in laboratory for urine analysis. Find the way to process clinical
			DOR	specimens safely according to established procedures.





Z6ME5	Bioinformatic	Global &National	To enable the	• Enumerate the applications of
	s		students to	bioinformatics
			appreciate the	• List web browsers and search engines
			significance of	Classify biological databases
			computational	
			programs in the	
			devel <mark>o</mark> pment and	
			analy <mark>s</mark> is of	
			biolog <mark>ic</mark> al database	
Z6ME6	Human	Global &National	To study the	Classify the types of genetic disorders
	Genetics		modes of	• Explain the mode of inheritance of
		ಶ	inheritance of	congenital disorders
			congenital	7/8
		KINT	disorders and their	
			preventive	
			measures	
Z6SB5	Apiculture	All the Three	To enable the	• Explain the scope of apiculture in India
			students to be	• List the equipments used in bee

							self study hepoirt (ssi	•••
AT THE COLUMN	Criterion Metric Year	: I – Curricula : 1.1.1 – Progr Course Outcon : 2015 - 2020	ar Aspects amme Outcomes (POs mes (COs) – B.Sc. ZOO	s), Programme Specific O DLOGY	Dutcon	nes (PSOs) and	Fatina College	
				familiarized with Bee keeping techniques and to motivate them to become entrepreneur		keeping Outline the types of bee di	iseases	
Z6SB6	Da Fa	airy arming	All the Three	To enable the students to be familiarized with management of high yielding cow species, preparation of value added products using milk and to motivate them to become an entrepreneur		Recall the scope of Dairy Dairy Technology. Identify the features indigenous and exotic be cattle. Develop an idea re formulation of value products. Describe the clinical finding and control measures diseases.	r Farming and of various reeds of dairy egarding the added dairy ngs, treatment of livestock	





Z6CC16	Major	All the Three	Students gain	• Develop skills in handling basic
	Practical III		hands-on	equipments
			experience and	• Relate the chemical properties
			learn the	biomolecules with the qualitative
			theoretical basis of	analytical tests of Biomolecules
			lab techniques	• Demonstrate the genomic DNA
			common to a	isolation, DNA estimation and
			variety of biological	chromatography
			disciplines	• Identify the spotters





Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. ZOOLOGYYear: 2015 - 2020



2017 - 2018

COURSE CODE	COURSE TITLE	NATURE OF THE COURSE (LOCAL/NATIONAL /REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
Z1CC1	Cell Biology	National	To know the fundamental functioning of various organelles and to provide foundation for advanced courses like Biotechnology.	 Distinguish between Eukaryotic and Prokaryotic cells. Describe the structure and functions of cell organelles. Explain the processes of cell division by mitotic & meiotic phase.
Z1CC2	Animal Diversity I	All the Three	To understand fundamental organization of animals at three levels – uni cellular	 Describe the fundamental organization of animals Explain the levels of organization of animal kingdom and origin of metazoan

					NAAC – 4 th CYCLE – Self Study Report (SS	R)
AT THE COLLEGE	Criterio Metric Year	n : I – Curricula : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs mes (COs) – B.Sc. ZOO)), Programme Specific O LOGY	Putcomes (PSOs) and	
			NA	diploblastic and triploblastic and the principles of classification with examples from	 List the general characters of animals from Phylum Protozoa to Phylum Echinodermata 	
				invertebrates.		
Z	ZINME	Maternity and Child Health	National	To understand the Physiology of human reproductive system and to create awareness on personal health, hygiene and Family Planning methods	 Discuss the various women health related issues Discuss the major and minor problems during pregnancy Classify the family planning methods with examples 	
Z	Z2CC3	Animal Diversity II	All the Three	To understand the fundamental organization of	 Bring out the general characters of Chordates. Classify the Phyla of Chordates upto 	



U	· I – curricular Aspects
C	: 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
	Course Outcomes (COs) – B.Sc. ZOOLOGY



			Chordates and	order level.
			their diversity	• Distinguish between the Classes of
		N.A	COL	Chordates.
Z2CC4	Genetics	Global &National	To enable students	• Define the different laws of Mendel.
			to understand the	• Explain the mechanism of Linkage and
			organization,	crossing over.
			function of genes	• Explain different types of syndromes
			and g <mark>en</mark> etic	caused by chromosome abnormalities.
			comp <mark>on</mark> ents which	
			are the basis of life	
	E E	37	continuum	
Z2CC5	Major	All the Three	To study the	• Recognizes the levels of organization
	Practical I		diversity of animals	among Invertebrates.
		AL AND	and to understand	• Develops the skill of dissecting
			the fundamental	organisms and displaying
			organization of	Demonstrate skill of handling
			cells.	Microscopes

ATTINA COLLEGE	Criterio Metric Year	n : I – Curriculo : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO)	;), Programme Specific O LOGY	Outcomes (PSOs) and
22	NME	Maternity and Child Health	National	To understand the Physiology of human reproductive system and to create awareness on personal health, hygiene and Family Planning methods	 Discuss the various women health related issues Discuss the major and minor problems during pregnancy Classify the family planning methods with examples
Z3	CC6	Human Physiology	Global &National	Understanding the complex organization of different organ systems and their functions-syllabus framed to help the students understand the human	 Summarize the basic components and functions of the digestive system Organise major organs of the respiratory functions and their diseases Describe circulatory system and their functions

• Identify the plant diseases with the help



Year

Z3ACQ1

Criterion : I – Curricular Aspects

: 2015 - 2020

Allied Botany-

All the Three

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



organization Z3CC7 To understand the Microbiology Global &National • List out the importance and scope of fundamentals of Microbiology. the world of Describe the ultra structure of bacteria. Microbes, distribution and Discuss the gene transfer methods of their application bacteria for human welfare. Z3SB1 Vermiculture All the Three To impart the Identify the different species of knowledge on earthworm Vermiculture Describe the properties of through teaching Vermicompost and fieldtrip and Summarize the methods of motivate them to Vermicomposting become selfemployed in

To understand the

Vermitechnology.

					NAAC - 4 CTCLE - Self Sludy Report
A SECTION OF A SEC	Criterion Metric Year	: I – Curricul : 1.1.1 – Prog Course Outco : 2015 - 202	lar Aspects gramme Outcomes (P omes (COs) – B.Sc. ZC 0	'Os), Programme Specific O DOLOGY	outcomes (PSOs) and
	I			 structure &life cycle of Plant groups To gain knowledge on Plant diseases To study and to understand the usage of economically important locally available plants 	of symptoms and choose the control measures Identify the binomial name with the help of vernacular or common name Make use of economically important locally available plants
C3ACZ	1 <i>F</i>	Allied Zoology-I	National	To know the fundamental functioning of various organs – To inculcate the aspect of how generations vary and inherit.	 Outline the general characters of different phyla upto class Summarize the structure and function of circulatory system, excretory organs. Explain the Mendelian Laws Of Inheritance & Allelism

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					NAAC – 4"CYCLE – Self Study Report (S
URAL	Criterio Metric Year	n : I – Curricul : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO)	s), Programme Specific O DLOGY	Dutcomes (PSOs) and
Z4CC8		Environmenta l Biology	All the Three	Review of ecological concepts to the understanding of environmental biology. Appreciation of relationships between environmental biology and other discipline's within environmental biology.	 Explain the structure and function of the Ecosystems Compare and contrast different types of Ecosystem Infer the importance of Biodiversity and its conservation
Z4CC9		Evolution	Global	To understand the fundamental origin, evolution and diversification of fauna of the	 Recall the basic concepts of origin of life on earth. Relate the evidences of evolution by observing the morphology of organisms.



Criterion : I – Curricular Aspects

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



Year : 2015 - 2020

			biosphere since the	• Summarize the theories of evolution
			origin of life	
Z4SB2	Herbal	National &	To understand the	• Infer the role of advance technologies in
	Technology	Regional	importance of the	the conservation and the production of
			Medicinal plant	medicinal plants
			wealth in India and	• Unravel of the phytochemistry of the
			the r <mark>ol</mark> e of	active principle of the medicinal plants.
			Medicinal plants in	
			human health	
			care.	
Z4CC10	Major	All the Three	To gain skills in	• Estimate the dissolved O2 and CO2 in
	Practical-II		analyzing the	given water samples
	<		clinical and	• Infer the qualitative estimation of
		AIND	environmental	protein, urea, ammonia and creatinine
			samples and to	• Demonstration on staining techniques
			learn basic	Demonstration on Serial dilution
			techniques in	
			microbiology and	



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. ZOOLOGY



			molecular biology		
Z4ACQ2	Allied Botany- II	All the Three	To study Plant Anatomy, Physiology, Embryology and Plant breeding		Compare and contrast the anatomical differences between the anatomical structures of Dicot and Monocot plants Summarize the mechanism of photosynthesis and respiration in plants Explain the development of male and female reproductive organs in plants and infer flower and fruit setting in plants Explain the various techniques in the crop improvement programmes
Z4ACQ3	Allied Botany Practical	All the Three	To study basic functioning of plant life.	•	Construct suitable micro preparations Make use of dissection microscope to display the floral parts of Angiosperms Illustrate the anatomy of Monocot and





			CO	•	dicot stem , root and leaf Interpret experimental set ups in plant physiology
C4ACZ2	Allied Zoology-II	National	Provides foundation studies for Biotechnology		Outline the general structure and function of a prokaryotic and eukaryotic cell. Explain the various proposed models regarding the structure of Plasma membrane Explains the structure and function of Nucleus, Mitochondria and Endoplasmic reticulum
C4ACZ3	Allied Zoology Practical	All the Three	To study the life science application in molecular field	•	Outline the Laboratory bio safety guidelines and good laboratory practices. Recall the Principle of Compound microscope Examine the Haemin Crystal under the

					NAAC - 4 CTCLE - Self Sludy Report (55
	Criterio Metric Year	n : I - Curricul : 1.1.1 - Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (PO: omes (COs) — B.Sc. ZOO D	s), Programme Specific O DLOGY	Dutcomes (PSOs) and
Z5CC11		Biochemistry	Global &National	To familiarize the students with the structure and role of bio molecules and the	 microscope Recall the structure of human physiological model such as Ear, Eye and heart Describe the properties and biological significance of Bio molecules Classify amino acids based on the nature of their functional group. Discuss the metabolic pathways of
Z5CC12		Molecular	Global &National	physiochemical processes of the living beings. To appreciate the	 carbohydrates, proteins and lipids. Describe the factors affecting the normal functions of the enzymes. Illustrate the Watson and Crick model
		Biology & Biotechnology	RA.	molecular mechanism of cells To gain new insights on the	 of DNA double helix Describe the mechanism of DNA replication and the role of enzymes Describe the transcription and

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						NAAC – 4 th CYCLE – Self Study Re	port (SSR)
ATTIMA COLLAR ATTIMA ATTIMA AT	Criteria Metric Year	m : I – Curricul : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO)	s), Programme Specific O DLOGY	utco	omes (PSOs) and	Farma College
			NA	applications of biotechnology		translation in prokaryotes and eukaryotes Identify the principles and applications of Biotechnology for the benefit of	
Z5CC	13	Biophysics& Instrumentati on	Global &National	To study the basic principles of biophysics that is relevant and applied to the life principle and the usage of instruments in biological studies		mankind Describe the principles of physics involved in the structure of biomolecules, energy transformation in living systems - Relate the use of modern physical instruments for the exploration of knowledge in Biology.	
Z5ME	1	Embryology	Global &National	To acquaint the students with	•	Recall the basic concepts of developmental biology.	

development of cell • Tell how fertilization, cleavage and

ANA COLLE	GE -	Criterion Metric Year	I - Curriculo I 1.1.1 - Progr Course Outco I 2015 - 2020	ar Aspects ramme Outcomes (POs mes (COs) – B.Sc. ZOO)), Programme Specific O LOGY	utco	omes (PSOs) and	
					from egg to The		gastrulating occur.	
					Foetus Stage.	•	Relate the development of egg into a	
							foetus, then into adult, among	
					TEAD		Vertebrates.	
	Z5ME2		Entomology	All the Three	To learn about the classification, biology and control of insects and to appreciate the importance of insects	• •	Compare the morphological features of different orders. Summarize the beneficial aspects of insects. Identify the agricultural pests and the economic damage caused.	
	Z5SB3		Ornamental Fish Culture	All the Three	To enable the students to be familiarized with ornamental fishes and to motivate them to become entrepreneur		List the types of aquarium. Plan the use of common aquarium ornamental fish and aquatic plants to decorate it. Explain the techniques followed in ornamental fish breeding. Compare the symptoms of various	



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



				diseases prevalent in ornamental fish
Z5SB4	Sericulture	All the Three	To motivate young minds to become an entrepreneur for practicing sericulture as cottage industry	 List the importance of sericulture as cottage industry and the support provided by Central Silk Board. Explain the different methods of vegetative propagation followed in mulberry cultivation. Outline the life cycle of mulberry silkworm and the methods of rearing. Find various diseases that affect silkworm and cocoon formation
Z6CC14	Immunology	Global &National	To Study About The Immune System And Immune Response Involved In Human Body	 Outline the types of immunity, immunization and origin of immune cells Explain the structure and properties of antigen and antibody Identify the immunological technique Describe the types and mechanism of



Year

: 2015 - 2020



				immune response
Z6CC15	Genetic Engineering	Global &National	To understand the principle and methodology of gene cloning experiments for the benefit of producing genetically modified organisms	 Identify the principles and applications of Recombinant DNA technology for the benefit of mankind Outline the development of transgenic plants, animals, and microbes or products for specific use
Z6ME3	Biostatistics	Global &National	To study the statistical significance data and analysis of the Biological aspects in life.	 Outline the importance of data collection and its types. Estimate and interpret the data, by various measures including mean, median, and standard deviation.
Z6ME4	Clinical	All the Three	Job oriented	• Identify the different sterilization

					NAAC - 4 th CYCLE - Self Study Report (SSR)
DURAL	Criterior Metric Year	1 : I – Curricul : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (PO: omes (COs) – B.Sc. ZOO D	s), Programme Specific O DLOGY	Putcomes (PSOs) and
		Laboratory		course on the	methods followed in clinical laboratory.
		Technique		methods of testing the clinical samples	 Explain the collection method and techniques used in laboratory for urine analysis. Find the way to process clinical specimens safely according to established procedures.
Z6ME	25	Bioinformatic s	Global &National	To enable the students to appreciate the significance of computational programs in the development and analysis of biological database	 Enumerate the applications of bioinformatics List web browsers and search engines Classify biological databases
Z6ME	26	Human Genetics	Global &National	To study the congenital	Classify the types of genetic disordersExplain the mode of inheritance of

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Year

: 2015 - 2020



			disorders and their	congenital disorders
			preventive	
		SK P	measures	
Z6SB5	Apiculture	All the Three	To enable the	• Explain the scope of apiculture in India
			students to be	
			familiarized with	• List the equipments used in bee
			Bee keeping	keeping
			techniques and to	• Outline the types of bee diseases
			motiv <mark>at</mark> e them to	
			become	
	ξ	7	entrepreneur	
Z6SB6	Dairy	All the Three	To enable the	• Recall the scope of Dairy Farming and
	Farming		students to be	Dairy Technology.
		KIND	familiarized with	• Identify the features of various
			management of	indigenous and exotic breeds of dairy
			high yielding cow	cattles.
			species,	• Develop an idea regarding the
			preparation of	formulation of value added dairy

» (Criterion	I – Curricul	ar Aspects		
	Metric	: 1.1.1 – Prog	ramme Outcomes (PO	s), Programme Specific O	utcomes (PSOs) and
Ş)		Course Outco	omes (COs) – B.Sc. ZOO	DLOGY	
	Year	: 2015 - 2020)		
				value added	products.
				products using	• Describe the clinical findings, treatment
				milk and to	and control measures of livestock
				motivate them to	diseases.
				become	
				entrepreneur	
Z6CC16		Major	All the Three	Students gain	• Develop skills in handling basic
		Practical III		hands-on	equipments
				experience and	Relate the chemical properties
				learn the	biomolecules with the qualitative
				theoretical basis of	analytical tests of Biomolecules
			3	lab techniques	Demonstrate the genomic DNA
				common to a	isolation, DNA estimation and
				variety of biological	chromatography
			A ANI	disciplines	• Identify the spotters



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. ZOOLOGYYear: 2015 - 2020



2016 - 2017

COURSE CODE	Course Title	NATURE OF THE COURSE (LOCAL/NATIONAL /REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
Z1CC1	Cell Biology	Global &National	To know the fundamental functioning of various organelles and to provide foundation for advanced courses like Biotechnology.	 Distinguish between Eukaryotic and Prokaryotic cells. Describe the structure and functions of cell organelles. Explain the processes of cell division by mitotic & meiotic phase.
Z1CC2	Animal Diversity I	All the Three	To understand fundamental organization of animals at three levels – unicellular-	 Describe the fundamental organization of animals Explain the levels of organization of animal kingdom and origin of metazoan

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						NAAL – 4 CYCLE – Self Study Rep
	Criterion	: I – Curriculo	ar Aspects			
L FF	Metric	: 1.1.1 - Prog	ramme Outcomes (POs), Programme Specific Ou	utco	mes (PSOs) and
		Course Outco	mes (COs) – B.Sc. ZOO	LOGY		
AI	Year	: 2015 - 2020	n de la companya de l			
				diploblastic and	٠	List the general characters of animals
				triploblastic and		from Phylum Protozoa to Phylum
				the principles of		Echinodermata
				classification with		
			RY/	examples from		
				invertebrates		
Z1NME	Ma	aternity and	National	To understand the	•	Discuss the various women health
	Cł	nild Health		Physi <mark>ol</mark> ogy of		related issues
				human	•	Discuss the major and minor problems
				reproductive		during pregnancy
		3		system and to	•	Classify the family planning methods
		C	34	create awareness		with examples
				on personal health,	7	A
			() SIAT	hygiene and Family		
			IND	Planning methods		
Z2CC3	Ar	nimal	All the Three	To understand the		Bring out the general characters of
	Di	versity II		fundamental		Chordates.
				organization of	•	Classify the Phyla of Chordates upto





			Chordates and	order level.
			their diversity.	• Distinguish between the Classes of
				Chordates.
Z2CC4	Genetics	Global &National	To enable students	• Define the different laws of Mendel.
			to understand the	• Explain the mechanism of Linkage and
			organization,	crossing over.
			function of genes	• Explain different types of syndromes
			and g <mark>en</mark> etic	caused by chromosome abnormalities.
			comp <mark>on</mark> ents which	
			are t <mark>he</mark> basis of life	
	Ę		continuum	
Z2CC5	Major	All the Three	To study the	• Recognizes the levels of organization
	Practical I		diversity of animals	among Invertebrates.
		KIND	and to understand	• Develops the skill of dissecting
			the fundamental	organisms and displaying
			organization of	• Demonstrate skill of handling
			cells	Microscopes

_					NAAC - 4 th CYCLE - Self Study Report (SSR)
A LA	Criteria Metric Year	n : I – Curricul : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO D	s), Programme Specific O DLOGY	Outcomes (PSOs) and
Z2NME		Maternity and Child Health	National	To understand the Physiology of human reproductive system and to create awareness on personal health, hygiene and Family Planning methods	 Discuss the various women health related issues Discuss the major and minor problems during pregnancy Classify the family planning methods with examples
Z3CC6		Human Physiology	Global &National	Understanding the complex organization of different organ systems and their functions-syllabus framed to help the students understand the human	 Summarize the basic components and functions of the digestive system Organise major organs of the respiratory functions and their diseases Describe circulatory system and their functions

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Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



organization. Z3CC7 To understand the Microbiology Global &National • List out the importance and scope of fundamentals of Microbiology. the world of Describe the ultra structure of bacteria. Microbes, Discuss the gene transfer methods of distribution and bacteria their application for human welfare. Z3SB1 Vermiculture All the Three This <mark>syl</mark>labus is Identify the different species of designed to impart earthworm sufficient academic Describe the properties of and practical Vermicompost experience to the Summarize the methods of learners and Vermicomposting motivate them to become self employed in vermin technology.





Z3ACQ1	Allied Botany- I	All the Three	To understand structure & life cycle of Primitive Plants. To gain knowledge on Bacteria and Fungi. To study and to understand the usage of economically	 Identify the plant diseases with the help of symptoms and choose the control measures Identify the binomial name with the help of vernacular or common name Make use of economically important locally available plants
C3ACZ1	Allied Zoology-	National	economically important locally available plants. To know the	• Outline the general characters of
	I		fundamental functioning of various organs – To inculcate the	 outline the general characters of different phyla upto class Summarize the structure and function of circulatory system, excretory organs.





			aspect of how generations vary and inherit.	• Explain the Mendelian Laws Of Inheritance & Allelism
Z4CC8	Environmenta 1 Biology	All the Three	Review of ecological concepts to the understanding of environmental biology. Appreciation of relationships between environmental biology and other discipline's within environmental biology.	 Explain the structure and function of the Ecosystems Compare and contrast different types of Ecosystem Infer the importance of Biodiversity and its conservation
Z4CC9	Evolution	Global	To understand the	• Recall the basic concepts of origin of life

						NAAC + CICLE Seij Study Report	. (331
	Criterion Metric Year	1 : I – Curricul : 1.1.1 – Prog Course Outco : 2015 - 202	ar Aspects framme Outcomes (POs omes (COs) – B.Sc. ZOO D	s), Programme Specific O DLOGY	utco	omes (PSOs) and	a College
				fundamental origin, evolution and diversification of fauna of the biosphere since the origin of life		on earth. Relate the evidences of evolution by observing the morphology of organisms. Summarize the theories of evolution	
Z4SB2		Herbal Technology	National &Regional	To understand the importance of the Medicinal plant wealth in India and the role of Medicinal plants in human health care.	•	Infer the role of advance technologies in the conservation and the production of medicinal plants Unravel of the phytochemistry of the active principle of the medicinal plants.	
Z4CC1	0	Major Practical-II	All the Three	To gain skills in analyzing the clinical and environmental	•	Estimate the dissolved O2 and CO2 in given water samples Infer the qualitative estimation of protein, urea, ammonia and creatinine	

ANIMA.



- Summarize mechanism the of photosynthesis and respiration in plants
- Explain the development of male and female reproductive organs in plants practices of plants and infer flower and fruit setting in plants
 - Explain the various techniques in the crop improvement programmes
 - Construct suitable micro preparations •

To study basic

All the Three

Allied Botany

Z4ACQ3

Angiosperms and

to provide

knowledge on

horticultural

					NAAC - 4 th CYCLE - Self Study Report (SSR)	
ANNA COL	Criterio Metric Year	n : I – Curriculo : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs mes (COs) — B.Sc. ZOO)	Os), Programme Specific Outcomes (PSOs) and OLOGY		
		Practical		functioning of plant life.	 Make use of dissection microscope to display the floral parts of Angiosperms Illustrate the anatomy of Monocot and dicot stem , root and leaf Interpret experimental set ups in plant physiology 	
	C4ACZ2	Allied Zoology- II	National	Provides foundation studies for Biotechnology	 Outline the general structure and function of a prokaryotic and eukaryotic cell. Explain the various proposed models regarding the structure of Plasma membrane Explains the structure and function of Nucleus, Mitochondria and Endoplasmic reticulum 	
	ACZ3	Allied Zoology Practical	All the Three	To study the life science application in molecular field	 Outline the Laboratory bio safety guidelines and good laboratory practices. 	
	Criterio Metric	n : I – Curricul : 1.1.1 – Prog Course Outco	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc <u>. ZOO</u>), Programme Specific O LOGY	utco	omes (PSOs) and
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A	Year	: 2015 - 2020)			
				COZ	•	Recall the Principle of Compound microscope Examine the Haemin Crystal under the microscope Recall the structure of human physiological model such as Ear, Eye and heart
Z5CC1	1	Biochemistry	Global &National	To familiarize the students with the structure and role of biomolecules and the physiochemical processes of the living beings.		Describe the properties and biological significance of Biomolecules Classify amino acids based on the nature of their functional group. Discuss the metabolic pathways of carbohydrates, proteins and lipids. Describe the factors affecting the normal functions of the enzymes.
Z5CC12	2	Molecular Biology & Biotechnology	Global &National	Gives ultimate insight into the correlation of	•	Illustrate the Watson and Crick model of DNA double helix Describe the mechanism of DNA

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					NAAC - 4 CICLE - Self Study Report
	Criterio Metric	n : I - Curricul : 1.1.1 - Prog Course Outco	ar Aspects gramme Outcomes (POs omes (COs) – B.Sc. ZOO	;), Programme Specific O LOGY	Outcomes (PSOs) and
Z5CC1	.3	Biophysics& Instrumentati on	Global &National	Genetics, Biochemistry and Molecular Biology – latest branch of biology that has overwhelming applications. To study the basic principles of Biophysics that is relevant and applied to the life principle and the usage of instruments in biological studies	 replication and the role of enzymes Describe the transcription and translation in prokaryotes and eukaryotes Describe the principles of physics involved in the structure of biomolecules, energy transformation in living systems Relate the use of modern physical instruments for the exploration of knowledge in Biology.
Z5ME1	L	Embryology	Global &National	To acquaint the students with	Recall the basic concepts of developmental biology.



			LEAD	foetus, then into adult, among Vertebrates.
Z5ME2	Entomology	All the Three	To learn about the classification, biology and control of insects and to appreciate the importance of insects	 Compare the morphological features of different orders. Summarize the beneficial aspects of insects. Identify the agricultural pests and the economic damage caused.
Z5SB3	Ornamental Fish Culture	All the Three	To enable the students to be familiarized with ornamental fishes and to motivate them to become	 List the types of aquarium. Plan the use of common aquarium ornamental fish and aquatic plants to decorate it. Explain the techniques followed in ornamental fish breeding.



Year

Criterion : I - Curricular Aspects Metric : 1.1.1 - Programme Outcomes (POs), Program

 ic : 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) - B.Sc. ZOOLOGY
 : 2015 - 2020



			entrepreneur	• Compare the symptoms of various diseases prevalent in ornamental fish
Z5SB4	Sericulture	All the Three	To motivate young minds to become an entrepreneur for practicing sericulture as cottage industry	 List the importance of sericulture as cottage industry and the support provided by Central Silk Board. Explain the different methods of vegetative propagation followed in mulberry cultivation. Outline the life cycle of mulberry silkworm and the methods of rearing. Find various diseases that affect silkworm and cocoon formation
Z6CC14	Immunology	Global &National	To study about the immune system and immune response involved in human body	 Outline the types of immunity, immunization and origin of immune cells Explain the structure and properties of antigen and antibody Identify the immunological technique





				• Describe the types and mechanism of immune response
Z6CC15	Genetic Engineering	Global &National	To understand the principle and methodology of gene cloning experiments for the benefit of producing Genetically Modified Organisms	 Identify the principles and applications of Recombinant DNA technology for the benefit of mankind Outline the development of transgenic plants, animals, and microbes or products for specific use
Z6ME3	Biostatistics	Global &National	To study the statistical significance data and analysis of the Biological aspects in life.	 Outline the importance of data collection and its types. Estimate and interpret the data, by various measures including mean, median, and standard deviation.

	Criteria Metric Year	n : I - Curricul : 1.1.1 - Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO 0), Programme Specific O LOGY	outcomes (PSOs) and
Z6ME4		Clinical Laboratory Technique	All the Three	Job oriented course on the methods of testing the clinical samples.	 Identify the different sterilization methods followed in clinical laboratory. Explain the collection method and techniques used in laboratory for urine analysis. Find the way to process clinical specimens safely according to established procedures.
Z6ME5		Bioinformatics	Global &National	To enable the students to understand the development of biological database To appreciate the significance of computational programs in	 Enumerate the applications of bioinformatics List web browsers and search engines Classify biological databases

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Criterion : I – Curricular Aspects

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



Year : 2015 - 2020

			analyzing biological	
			data	
Z6ME6	Human Genetics	Global &National	To study the congenital disorders and their	 Classify the types of genetic disorders Explain the mode of inheritance of
			preventive measures	
Z6SB5	Apiculture	All the Three	To enable the students to be familiarized with Bee keeping techniques and to motivate them to become entrepreneur	 Explain the scope of apiculture in India List the equipments used in bee keeping Outline the types of bee diseases
Z6SB6	Dairy Farming	All the Three	To enable the students to be familiarized with	 Recall the scope of Dairy Farming and Dairy Technology. Identify the features of various

					MAAC - 4 CICLE - Self Sludy Kep
ATTINA COURT	Criterion Metric Year	: I – Curriculo : 1.1.1 – Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (P mes (COs) – B.Sc. Z(POs), Programme Specific O OOLOGY	utcomes (PSOs) and
				management of high yielding cow species, preparation of value added products using milk and to motivate them to become entrepreneur	 indigenous and exotic breeds of dairy cattles. Develop an idea regarding the formulation of value added dairy products. Describe the clinical findings, treatment and control measures of livestock diseases.
Z6CC1	l 6 M Pi	lajor ractical III	All the Three	Students gain hands-on experience and learn the theoretical basis of lab techniques common to a variety of biological disciplines	 Develop skills in handling basic equipments Relate the chemical properties biomolecules with the qualitative analytical tests of Biomolecules Demonstrate the genomic DNA isolation, DNA estimation and chromatography Identify the spotters



2015 - 2016

COURSE CODE	Course Title	NATURE OF THE COURSE (LOCAL/NATIONAL /REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
Z1CC1	Cell Biology	Global &National	To know the fundamental functioning of various organelles and to provide foundation for advanced courses like Biotechnology	 Distinguish between Eukaryotic and Prokaryotic cells. Describe the structure and functions of cell organelles. Explain the processes of cell division by mitotic & meiotic phase.
Z1CC2	Animal Diversity I	All the Three	To understand fundamental organization of animals at three	 Describe the fundamental organization of animals Explain the levels of organization of animal kingdom and origin of metazoan

					MARC 4 CICLE Self Study Report (S
	Criterion : Metric : ⁻ Co Year : :	I – Curriculo 1.1.1 – Prog ourse Outco 2015 - 2 <u>020</u>	ar Aspects ramme Outcomes (POs mes (COs) — B.Sc. ZOO)	i), Programme Specific O LOGY	outcomes (PSOs) and
Z1NME	Mater Child	mity and Health	National	levels – unicellular- diploblastic and triploblastic. Foundation of the principles of classification with examples from invertebrates. Based on the Family Planning note- welcome the first, space the second and stop the third.	 List the general characters of animals from Phylum Protozoa to Phylum Echinodermata Discuss the various women health related issues Discuss the major and minor problems during pregnancy Classify the family planning methods with examples
Z2CC3	Anima Divers	al sity II	All the Three	To study and to have knowledge on the fundamental organization of	 Bring out the general characters of Chordates. Classify the Phyla of Chordates up to order level.



		n A	Chordates.	 Distinguish between the Classes of Chordates.
Z2CC4	Genetics	Global &National	To enable students to understand the organization, function of genes and genetic components which are the basis of life continuum	 Define the different laws of Mendel. Explain the mechanism of Linkage and crossing over. Explain different types of syndromes caused by chromosome abnormalities.
Z2CC5	Major Practical I	All the Three	To understand the fundamental Organization of Animals	 Recognizes the levels of organization among Invertebrates. Develops the skill of dissecting organisms and displaying Demonstrate skill of handling Microscopes

	Criteria Metric Year	n : I - Curricul : 1.1.1 - Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO D	:), Programme Specific O LOGY	Outcomes (PSOs) and
Z2NME		Maternity and Child Health	National	Based on the Family Planning note - welcome the first, space the second and stop the third.	 Discuss the various women health related issues Discuss the major and minor problems during pregnancy Classify the family planning methods with examples
Z3CC6		Human physiology	Global &National	Understanding the complex organization of different organ systems and their functions-syllabus framed to help the students understand the human organization	 Summarize the basic components and functions of the digestive system Organise major organs of the respiratory functions and their diseases Describe circulatory system and their functions
Z3CC7		Microbiology	Global &National	To understand the	• List out the importance and scope of

S

• Identify the plant diseases with the help

• Identify the binomial name with the

measures

of symptoms and choose the control



Plants.

motivate them to

Vermitechnology

To understand

structure & life

cycle of Primitive

become self-

employed in

All the Three

Allied Botany

I

Z3ACQ1

					MAAC - + CICLL - Self Study Report (SSI
DURAL	Criterio Metric Year	n : I - Curricul : 1.1.1 - Prog Course Outco : 2015 - 2020	ar Aspects ramme Outcomes (POs omes (COs) – B.Sc. ZOO 0	s), Programme Specific O LOGY	Outcomes (PSOs) and
C3ACZ	21	Allied Zoology I	National	To gain knowledge on Bacteria and Fungi. To study and to understand the usage of economically important locally available plants. To know the fundamental functioning of various organs – To inculcate the aspect of how generations vary and inherit.	 help of vernacular or common name Make use of economically important locally available plants Outline the general characters of different phyla upto class Summarize the structure and function of circulatory system, excretory organs. Explain the Mendelian Laws Of Inheritance & Allelism
Z4CC8	3	Environmenta	All the Three	Review of	• Explain the structure and function of

A COLLEGE	Criterion : I – Curricu Metric : 1.1.1 – Pro Course Outo Year : 2015 - 202	lar Aspects gramme Outcomes (POs omes (COs) – B.Sc. ZOO 0	s), Programme Specific O DLOGY	Outcomes (PSOs) and
	1 Biology		ecological concepts to the understanding of environmental biology. Appreciation of relationships between environmental biology and other discipline's within environmental biology	 the Ecosystems Compare and contrast different types of Ecosystem Infer the importance of Biodiversity and its conservation
Z4CC9	Molecular Biology & Biotechnology	Global &National	Gives ultimate insight into the correlation of Genetics, Biochemistry and Molecular Biology –	 Illustrate the Watson and Crick model of DNA double helix Describe the mechanism of DNA replication and the role of enzymes Describe the transcription and translation in prokaryotes and





		N.A	latest branch of biology that has overwhelming applications.	eukaryotes
Z4CC10	Major Practical II	All the Three	To understand application with human activities and environment	 Estimate the dissolved O2 and CO2 in given water samples Infer the qualitative estimation of protein, urea, ammonia and creatinine Demonstration on staining techniques Demonstration on Serial dilution
Z4SB2	Herbal Technology	National & Regional	To understand the importance of the Medicinal plant wealth in India and the role of Medicinal plants in human health care.	 Infer the role of advance technologies in the conservation and the production of medicinal plants Unravel of the phytochemistry of the active principle of the medicinal plants.





Z4ACQ2	Allied II	Botany	All the Three	To study the function of the plants. To impart knowledge about the various components and characters of wood. To study the basic principles of embryo to provide knowledge on vegetative propagation of plants. Create awareness on	Compare and contrast the anatomical differences between the anatomical structures of Dicot and Monocot plants Summarize the mechanism of photosynthesis and respiration in plants Explain the development of male and female reproductive organs in plants and infer flower and fruit setting in plants Explain the various techniques in the crop improvement programmes
				plants. Create awareness on Aesthetic value of ornamental plant	



C4ACZ3

Allied Zoology

Practical

• Explains the structure and function of Nucleus, Mitochondria and Endoplasmic reticulum

SSR)

						NAAC – 4 th CYCLE – Self Study Rep	ort (SSP
AT THA COLLER AND DUBAL	Criterio Metric Year	n : I - Curricul : 1.1.1 - Prog Course Outco : 2015 - <u>202</u> 0	ar Aspects Jramme Outcomes (POs omes (COs) – B.Sc. ZOO 0	s), Programme Specific O DLOGY)utco	omes (PSOs) and	Fatma Colege
				in molecular field		practices. Recall the Principle of Compound microscope Examine the Haemin Crystal under the microscope Recall the structure of human physiological model such as Ear, Eye and heart	
Z5CC1	1	Biochemistry	Global &National	To familiarize the students with the structure and role of biomolecules and the physiochemical processes of the living beings.	•	Describe the properties and biological significance of Biomolecules Classify amino acids based on the nature of their functional group. Discuss the metabolic pathways of carbohydrates, proteins and lipids. Describe the factors affecting the normal functions of the enzymes.	
Z5CC1	2	Evolution	Global	Fundamental understanding of	•	Recall the basic concepts of origin of life on earth.	

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	Vetric : 1.1.1 - Course Year : 2015 -	- Programme Outcomes (PO Outcomes (COs) – B.Sc. ZO(- 2020	s), Programme Specific O DLOGY	Outcomes (PSOs) and
			the overall origin, evolution and diversification of fauna of the biosphere since the origin of life.	 Relate the evidences of evolution by observing the morphology of organisms Summarize the theories of evolution
Z5CC13	Biophysics Instrumen on	s & Global &National tati	To study the basic principles of Biophysics that is more practically applied in life and usage of instruments in biological studies.	 Describe the principles of physic involved in the structure biomolecules, energy transformation is living systems Relate the use of modern physic instruments for the exploration knowledge in Biology.
Z5ME1	Embryolog	y Global &National	To acquaint the students with development of cell, i.e., from egg	 Recall the basic concepts developmental biology. Tell how fertilization, cleavage ar gastrulating occur.

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Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. ZOOLOGYYear: 2015 - 2020



to the fetus stage. • Relate the development of egg into a then foetus, into adult, among Vertebrates. All the Three Learn about the Z5ME2 Entomology • Compare the morphological features of classification, different orders. biology and control • Summarize the beneficial aspects of of insects insects. Identify the agricultural pests and the Identify major economic damage caused. orders and families of insects Understand the need for good management practices Appreciate the value and importance of insects





Z5SB3	Ornamental	All the Three	To enable the	• List the types of aquarium.
	Fish Culture		students to be	• Plan the use of common aquarium
		R P	familiarized with	ornamental fish and aquatic plants to
			ornamental fishes	decorate it.
			To motivate the	• Explain the techniques followed in
			students to become	ornamental fish breeding.
			entrepreneur	• Compare the symptoms of various
				diseases prevalent in ornamental fish
Z5SB4	Sericulture	All the Three	Motiv <mark>ati</mark> ng young	• List the importance of sericulture as
			minds so as to	cottage industry and the support
		7	become an	provided by Central Silk Board.
	R	2	entrepreneur for	• Explain the different methods of
			practicing	vegetative propagation followed in
		MIND	sericulture as	mulberry cultivation.
			cottage industry.	• Outline the life cycle of mulberry
				silkworm and the methods of rearing
			NTIRP	• Find various diseases that affect
				silkworm and cocoon formation





Z6CC14	Immunology	Global &National	To study about the	• Outline the types of immunity,
			immune system	immunization and origin of immune
		R P	and immune	cells
			response involved	• Explain the structure and properties of
			in human body	antigen and antibody Identify the
				immunological technique
				• Describe the types and mechanism of
				immune response
Z6CC15	Genetic	Global &National	To understand the	• Identify the principles and applications
	engineering		principle and	of Recombinant DNA technology for the
	Ċ,	7	methodology of	benefit of mankind
		2	gene cloning	• Outline the development of transgenic
			experiments for the	plants, animals, and microbes or
		Y KIND	benefit of	products for specific use
			producing	
			Genetically	
			Modified	
			Organisms	





Z6ME3	Biostatistics	Global	To study the	Outline the importance of data
			statistical	collection and its types.
			significance data	• Estimate and interpret the data, by
			and analysis of the	various measures including mean,
			biological aspects	median, and standard deviation.
			in life.	
Z6ME4	Clinical	All the Three	Job oriented	• Identify the different sterilization
	Laboratory		cours <mark>e</mark> on the	methods followed in clinical laboratory.
	Technique		meth <mark>ods</mark> of testing	• Explain the collection method and
			the clinical	techniques used in laboratory for urine
	د د		samples	analysis.
		2		• Find the way to process clinical
				specimens safely according to
		KIND	LY LIGHT	established procedures.
Z6ME5	Bioinformatics	Global &National	To enable the	• Enumerate the applications of
			students to	bioinformatics
			understand the	List web browsers and search engines
			development of	Classify biological databases
				1

					NAAC – 4" CYCLE – Self Study Report (
THE REPORT OF TH	Criterion Metric	on : I – Curricular Aspects : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY				
ADURAL	Year	2015 - 2020		biological database To appreciate the		
				significance of computational programs in		
				data		
26ME6	G H	renetics	Global &National	To study the congenital disorders and their preventive measures.	 Classify the types of genetic disorders Explain the mode of inheritance of congenital disorders 	
Z6SB5	A	piculture	All the Three	To enable the students to be familiarized with Bee keeping techniques and to motivate them to	 Explain the scope of apiculture in India List the equipments used in bee keeping Outline the types of bee diseases 	



Criterion : I – Curricular Aspects

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. ZOOLOGY



Al Year	: 2015 - 2020	0		le la
			become entrepreneur	
Z6SB6	Dairy Farming	All the Three	To enable the students to be familiarized with management of high yielding cow species, preparation of value added products using milk and to motivate them to become entrepreneur	 Recall the scope of Dairy Farming and Dairy Technology. Identify the features of various indigenous and exotic breeds of dairy cattles. Develop an idea regarding the formulation of value added dairy products. Describe the clinical findings, treatment and control measures of livestock diseases.
Z6CC16	Major Practical III	All the Three	Students gain hands-on experience and	 Develop skills in handling basic equipments Relate the chemical properties

