

FATIMA COLLEGE (AUTONOMOUS)



Re-Accredited with A⁺⁺(NAAC IV Cycle)
Maryland, Madurai- 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT: ZOOLOGY

NAME OF THE PROGRAMME : B.Sc

PROGRAMME CODE : UAZO

ACADEMIC YEAR : 2022-2023

FATIMA COLLEGE (Autonomous), MADURAI-625018
MINUTES OF THE BOARD OF STUDIES

NAME OF THE DEPARTMENT: B.Sc Zoology




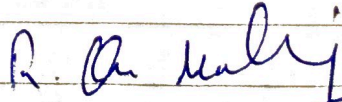
TO BE IMPLEMENTED FROM: 2022-2023 ONWARDS

VENUE: Department of Zoology

CONVENED ON: 15.03.2022

CONVENED AT: 02.00 pm

MEMBERS PRESENT:

1. Dr. A. Tamil Selvi	Head of the Department  15/03/2022
2. Dr. Capt. N. Arun Nagendran Associate Professor PG & Research Department of Zoology Thiagarajar College Madurai - 625009	University Nominee  15/3/22
3. Dr. F. Brisca Renuga Associate Professor Department of Zoology Holy Cross College (Autonomous) Nagercoil - 04	Subject Expert (Zoology)  15/3/2022
4. Dr. R. Uma Maheswari Assistant Professor PG Department of Zoology Arulmigu Palaniandavar Arts college for women Palani - 624 615	Subject Expert (Zoology)  15/3/22

5.	Dr. A. Vanniarajan Scientist Aravind Medical Research Foundation Madurai - 625 020	Industrialist / Scientist A. Vanniarajan 15/03/2022
6.	Miss. S. Susaritha Research Scholar PG & Research Department of Zoology The American College Madurai - 625 020	Alumna S. Susaritha 15/03/22
7.	Dr. N. Malathi	Dean of Academic Affairs N. Malathi 15/3/22
8.	Dr. Antony Amala Jayaseeli	Staff member
9.	Dr. N. Malathi	Staff member N. Malathi 15/3/22
10.	Dr. Sr. Biji cyriac	Staff member (absent)
11.	Dr. V. Bharathy	Staff member V. Bharathy 15.3.22
12.	Dr. N. Nagarani	Staff member N. Nagarani 15/3/2022
13.	Dr. S. Barathy	Staff member S. Barathy 15/3/22
14.	Mrs. J. Thelma	Staff member Thelma 15/3/22
15.	Dr. K. Manimegalai	Staff member K. Manimegalai 15/3/22

MINUTES OF THE BOARD OF STUDIES:

1. ACTION TAKEN REPORT FOR 2021-2022 B.Sc Zoology

S. NO	COMMON SUGGESTIONS OFFERED IN THE PREVIOUS BOARD	ACTION TAKEN FOR THE ACADEMIC YEAR 2021-22
1.	Group projects/Field Projects may be given to UG students to document local Biodiversity.	Group Projects/Field projects are given to UG students to document local Biodiversity.
2.	The DOER may have a minimum of 5 links for each paper.	5 links have been included in the DOER of each course to maintain uniformity.

CHANGE OF COURSE TITLE					
S. NO	OLD COURSE CODE	NEW COURSE CODE	OLD COURSE TITLE	NEW COURSE TITLE	NEED FOR CHANGE
1.	Z5CC11	19Z5CC13	Biochemistry	Fundamentals of Biochemistry	As per the guidelines of Academic Deans to avoid repetition of course title
2.	Z6CC14	19Z6CC17	Immunology	Basic Immunology	As per the guidelines of Academic Deans to avoid repetition of course title.
3.	Z6CC15	19Z6CC18	Biotechnology	Principles of Biotechnology	As per the guidelines of Academic Deans to avoid repetition of course title

NEW COURSES INTRODUCED										
S. NO	COURSE CODE	COURSE TITLE	RELEVANCE TO				SCOPE FOR			NEED FOR INTRODUCTION
			L	R	N	G	EMP	ENT	SD	
1.	19Z5ME2	Animal Behaviour	L	R	N	G	-	-	SD	To introduce the classical aspects of Zoology
2.	19Z5CC15	Lab - Biochemical Analysis	-	-	N	G	EMP	-	SD	Implementation of Semesterwise Practical

3.	19Z5CC16	Lab-molecular Biology	-	-	N	G	EMP	-	SD	Implementation of semester wise Practical
4.	19Z6CC19	Lab-Immunology	-	-	N	G	EMP	-	SD	Implementation of semester wise Practical
5.	19Z6CC20	Lab-Biotechnology	-	-	N	G	EMP	-	SD	Implementation of semester wise Practical
6.	21Z2SL1	Single cell Protein Culture	L	R	N	G	EMP	ENT	SD	Offered to the Advanced Learners

REVISED COURSES

S. NO	COURSE CODE & TITLE	UNIT NO & REVISED CONTENT	Y. of Revision	NEED FOR REVISION	RELEVANCE TO				SCOPE FOR		
					L	R	N	G	EMP	ENT	SD
1.	19Z5ME1 Biostatistics	Unit-IV - Correlation & Regression - Goodness of fitness (problem) and in Unit-V - Test of Variance Student's t test can be specified.	2%	As per the recommendation of Subject Expert	L	R	N	G	EMP	-	SD
2.	19Z5SB3 Ornamental Fish Culture	Entrepreneurial aspects can be included in unit I - Introduction to Aquarium	2%	As per the recommendation of Subject Expert	L	R	N	G	EMP	ENT	SD
3.	19Z5SB4 Sericulture	The topic - National Sericulture Project (NSP) can be included in unit-I, Introduction to Sericulture	5%	As per the recommendation of Subject Expert	L	R	N	G	EMP	ENT	SD
4.	19Z6ME6 Entomology	The topic Lac insect-culture & harvesting can be included in unit-III Beneficial insects	5%	As per the recommendation of Subject Expert	L	R	N	G	-	-	SD
5.	19Z6CC20 Lab-Biotechnology	one example can be specified for Holometabolous (Butterfly), Hemimetabolous (Cockroach) insects	5%	As per the recommendation of Subject Expert	L	R	N	G	EMP	-	SD

[illegible]

5. Introduction of Purely Skill-Embedded certificate / Diploma / Advanced Diploma NIL

S.NO	COURSE CODE	COURSE TITLE	SKILLS SHARPENED	COURSE OUTCOME
-	-	NIL	-	-

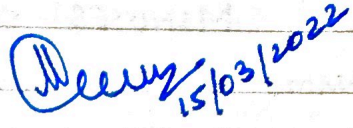
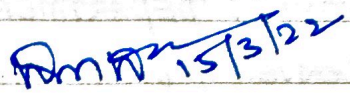
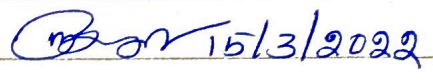
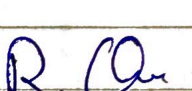
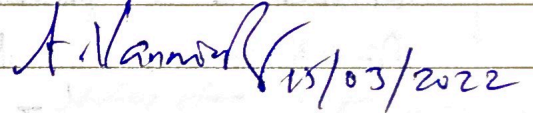
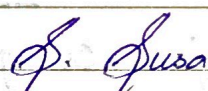

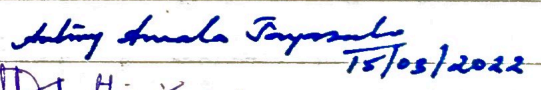
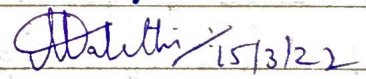

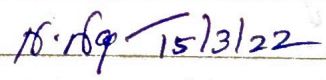
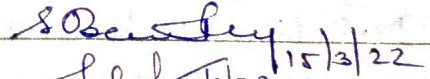
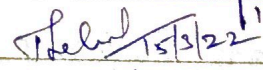

6. Approval of Ph.D Course Work Syllabus: NIL

7. Rubrics for Project: NA

S.NO	C1 20 MKS	C2 20 MKS	CIA TOTAL 40 MKS	EXTERNAL 60 MKS
-	-	-	-	-

DETAILS OF SIGNED MOU: NIL

OTHER SUGGESTIONS	COMMENDATIONS
<ol style="list-style-type: none"> Hands-on Training may be provided to the students whenever possible. Biostatistics problems can be given using real-time data collected from the field. Internship may be included for all UG programmes. 	<ol style="list-style-type: none"> Changes made in the course contents of revised courses are useful and relevant to the current need. Introduction of the new skill based course on Poultry Farming improves employability of students.

Name of	Signature
1. Head of the Department Dr. A. Tamil Selvi	 15/03/2022
2. University Nominee Dr. Capt. N. Anur. Nagendran	 15/3/22
3. Subject Expert Dr. F. Brisca Renuka	 15/3/2022
4. Subject Expert Dr. R. Uma Maheswari	 15/3/22
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14. Mrs. J. Thelma	 15/3/22
15. Dr. K. Mani megalai	 15/3/22

VISION OF THE DEPARTMENT

Women Empowerment through Biological Education for the Betterment of Environment and Mankind

MISSION OF THE DEPARTMENT

- To ensure quality education offering skill based program
- To render entrepreneurial training to make students employable
- To create awareness on the conservation of Biodiversity
- To give ultimate insight into the correlation of various branches of biology that has overwhelming applications
- To facilitate Higher education & research (for the advanced learners)

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

PEO 1	Our graduates will be academic, digital and information literates; creative, inquisitive, innovative and desirous for the “more” in all aspects
PEO 2	They will be efficient individual and team performers, exhibiting progress, flexibility, transparency and accountability in their professional work
PEO 3	The graduates will be effective managers of all sorts of real – life and professional circumstances, making ethical decisions, pursuing excellence within the time framework and demonstrating apt leadership skills
PEO 4	They will engage locally and globally ,evincing social and environmental stewardship demonstrating civic responsibilities and employing right skills at the right moment.

GRADUATE ATTRIBUTES (GA)

Fatima College empowers her women graduates holistically. A Fatimite achieves all-round empowerment by acquiring Social,

Professional and Ethical competencies. A graduate would sustain and nurture the following attributes:

I. SOCIAL COMPETENCE	
GA 1	Deep disciplinary expertise with a wide range of academic and digital literacy
GA 2	Hone creativity, passion for innovation and aspire excellence
GA 3	Enthusiasm towards emancipation and empowerment of humanity
GA 4	Potentials of being independent
GA 5	Intellectual competence and inquisitiveness with problem solving abilities befitting the field of research
GA 6	Effectiveness in different forms of communications to be employed in personal and professional environments through varied platforms
GA 7	Communicative competence with civic, professional and cyber dignity and decorum
GA 8	Integrity respecting the diversity and pluralism in societies, cultures and religions
GA 9	All – inclusive skill - sets to interpret, analyse and solve social and environmental issues in diverse environments
GA 10	Self-awareness that would enable them to recognise their uniqueness through continuous self-assessment in order to face and make changes building their strengths and improving on their weaknesses
GA 11	Finesse to co-operate exhibiting team-spirit while working in groups to achieve goals
GA 12	Dexterity in self-management to control their selves in attaining the kind of life that they dream for

GA 13	Resilience to rise up instantly from their intimidating setbacks
GA 14	Virtuosity to use their personal and intellectual autonomy in being life-long learners
GA 15	Digital learning and research attributes
GA 16	Cyber security competence reflecting compassion, care and concern towards the marginalised
GA 17	Rectitude to use digital technology reflecting civic and social responsibilities in local, national and global scenario
II. PROFESSIONAL COMPETENCE	
GA 18	Optimism, flexibility and diligence that would make them professionally competent
GA 19	Prowess to be successful entrepreneurs and employees of trans-national societies
GA 20	Excellence in Local and Global Job Markets
GA 21	Effectiveness in Time Management
GA 22	Efficiency in taking up Initiatives
GA 23	Eagerness to deliver excellent service
GA 24	Managerial Skills to Identify, Commend and tap Potentials
III. ETHICAL COMPETENCE	
GA 25	Integrity and discipline in bringing stability leading a systematic life promoting good human behaviour to build better society
GA 26	Honesty in words and deeds
GA 27	Transparency revealing one's own character as well as self-esteem to lead a genuine and authentic life

GA 28	Social and Environmental Stewardship
GA 29	Readiness to make ethical decisions consistently from the galore of conflicting choices paying heed to their conscience
GA 30	Right life skills at the right moment

PROGRAMME OUTCOMES (PO)

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

PO 1	Apply acquired scientific knowledge to solve complex issues.
PO 2	Attain Analytical skills to solve complex cultural, societal and environmental issues.
PO 3	Employ latest and updated tools and technologies to analyse complex issue.
PO 4	Demonstrated Professional Ethics that foster community, Nation and Environment Building Initiatives.
PO 5	Apply the knowledge and skill to take up higher education, entrepreneurship and employment in government and private sectors.

PROGRAMME SPECIFIC OUTCOMES (PSO)

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

PSO 1	Gain comprehensive knowledge in different branches of Zoology–Invertebrata, Chordata, Cell biology, Physiology, Environmental Biology, Biochemistry, Microbiology, Immunology, Embryology, Entomology,
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	Genetics, Molecular Biology, Biotechnology, Biostatistics, Bioinformatics and Evolution.
PSO 2	Acquire technical skills in performing experiments in the field of Microbiology, Cell Biology, Biochemistry, Plant Physiology, Human Physiology, Molecular Biology, Environmental Biology, Developmental Biology, Biostatistics, Immunology, Evolution, Genetics, Clinical Laboratory Techniques, Biotechnology and Bioinformatics.
PSO 3	Develop empathy and instil 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 biosafety 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.

FATIMA COLLEGE (AUTONOMOUS), MADURAI-18**DEPARTMENT OF ZOOLOGY***For those who joined in June 2019 onwards***PROGRAMME CODE: UAZO****PART – I – TAMIL / FRENCH / HINDI- 12 CREDITS****PART – I – TAMIL****Offered by The Research Centre of Tamil**

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DITS	CIA Mks	ESE Mks	TOT. MKs
1.	I	19TL1C1	General Tamil – Ikaala Ilakiyam	5	3	40	60	100
2.	II	19TL2C2	General Tamil - Bakthi Illakiyam	5	3	40	60	100
3.	III	19TL3C3	General Tamil – Kaapiya Illakiyam	5	3	40	60	100
4.	IV	19TL4C4	General Tamil - Sangam Illakiyam	5	3	40	60	100
Total				20	12			

PART – I –FRENCH**Offered by TheDepartment of French**

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DITS	CIA Mks	ESE Mks	TOT. MKs
1.	I	19RL1C 1	PART 1 LANGUAGE FRENCH - LE NIVEAU INTRODUCTIF	5	3	40	60	100
2.	II	19RL2C	PART 1 LANGUAGE	5	3	40	60	100

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DITS	CIA Mks	ESE Mks	TOT. MKs
		2	FRENCH - LE NIVEAU DÉCOUVERTE					
3.	III	19RL3C 3	PART 1 LANGUAGE FRENCH - LE NIVEAU INTERMEDIAIRE	5	3	40	60	100
4.	IV	19RL4C 4	PART 1 LANGUAGE FRENCH - LE NIVEAU DE SUIVRE	5	3	40	60	100
Total				20	12			

PART – I – HINDI

Offered by TheDepartment of Hindi

S. NO	SE M.	COURSE CODE	COURSE TITLE	HRS	CRE DITS	CIA Mks	ESE Mks	TOT. MKs
1.	I	19DL1C1	PART 1 LANGUAGE HINDI - Vyakaran aur Karyalyeen Hindi	5	3	40	60	100
2.	II	19DL2C2	PART 1 LANGUAGE HINDI –Srijanatmak Hindi aur Gadhy	5	3	40	60	100
3.	III	19DL3C3	PART 1 LANGUAGE HINDI –Hindi Sahithya Ka Aadhikaal aur Bhakthikaal	5	3	40	60	100
4.	IV	19DL4C4	PART 1 LANGUAGE	5	3	40	60	100

S. NO	SE M.	COURSE CODE	COURSE TITLE	HRS	CRE DITS	CIA Mks	ESE Mks	TOT. MKs
			HINDI –Reetikaleen Hindi Sahithya aur Aadhunikaal					
Total				20	12			

PART – II -ENGLISH – 12 CREDITS

Offered by The Research Centre of English

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DITS	CIA Mks	ESE Mks	TO T. MKs
1.	I	19EL1LB	BASIC COMMUNICATIVE ENGLISH	5	3	40	60	100
2.		19EL1LI	INTERMEDIATE COMMUNICATIVE ENGLISH					
3.		191EL1LA	ADVANCED COMMUNICATIVE ENGLISH					
4.	II	19EL2LB	ENGLISH FOR EFFECTIVE COMMUNICATION (BASIC)	5	3	40	60	100
5.		19EL2LI	ENGLISH FOR EMPOWERMENT (INTERMEDIATE)					
6.		19EL2LA	ENGLISH FOR CREATIVE WRITING (ADVANCED)					
7.	III	19EL3LN	ENGLISH FOR THE DIGITAL ERA	5	3	40	60	100

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DITS	CIA Mks	ESE Mks	TO T. MKS
8.	IV	19EL4LN	ENGLISH FOR INTEGRATED DEVELOPMENT	5	3	40	60	100
Total				20	12			

PART – III -MAJOR, ALLIED & ELECTIVES – 95 CREDITS

MAJOR CORE COURSES INCLUDING PRACTICALS : 60 CREDITS

S.N O	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DITS	CIA Mks	ES E Mks	TOT . Mks
1.	I	19Z1CC1	INVERTEBRATA	5	4	40	60	100
2.		19Z1CC2	CELL BIOLOGY	4	3	40	60	100
3.		19Z1CC3	LAB - INVERTEBRATA & CELL BIOLOGY	3	2	40	60	100
4.	II	19Z2CC4	CHORDATA	5	4	40	60	100
5.		19Z2CC5	GENETICS	4	3	40	60	100
6.		19Z2CC6	LAB - CHORDATA & GENETICS	3	2	40	60	100
7.	III	19Z3CC7	HUMAN PHYSIOLOGY	5	4	40	60	100
8.		19Z3CC8	ENVIRONMENTAL BIOLOGY	4	3	40	60	100
9.		19Z3CC9	LAB - HUMAN PHYSIOLOGY & ENVIRONMENTAL BIOLOGY	3	2	40	60	100
10.	IV	19Z4CC10	MICROBIOLOGY	5	4	40	60	100
11.		19Z4CC11	EVOLUTION	4	3	40	60	100

S.NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ES E Mks	TOT . Mks
12.		19Z4CC12	LAB - MICROBIOLOGY& EVOLUTION	3	2	40	60	100
13.	V	19Z5CC13	FUNDAMENTALS OF BIOCHEMISTRY	6	4	40	60	100
14.		19Z5CC14	MOLECULAR BIOLOGY	6	4	40	60	100
15.		19Z5CC15	LAB - BIOCHEMICAL ANALYSIS	4	2	40	60	100
16.		19Z5CC16	LAB - MOLECULAR BIOLOGY	4	2	40	60	100
17.		VI	19Z6CC17	BASIC IMMUNOLOGY	5	4	40	60
18.	19Z6CC18		PRINCIPLES OF BIOTECHNOLOGY	5	4	40	60	100
19.	19Z6CC19		LAB - IMMUNOLOGY	3	2	40	60	100
20.	19Z6CC20		LAB - BIOTECHNOLOGY	3	2	40	60	100
Total				84	60			

ALLIED COURSES- 20 CREDITS

S.NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ES E Mks	TOT . MKS
1.	I	19C1ACZ1	ALLIED CHEMISTRY - I	3	3	40	60	100
2.		19C1ACZ2	LAB IN VOLUMETRIC ANALYSIS	2	2	40	60	100

S.N O	SE M.	COURSE CODE	COURSE TITLE	HR S	CREDI T	CIA Mk s	ES E Mk s	TOT · MK s
3.	II	19C2ACZ3	ALLIED CHEMISTRY - II	3	3	40	60	100
4.		19C2ACZ4	LAB IN QUALITATIVE ORGANIC ANALYSIS	2	2	40	60	100
5.	III	21Q3ACZ1	PLANT DIVERSITY & PATHOLOGY	3	3	40	60	100
6.		21Q3ACZ2	LAB - PLANT DIVERSITY & PATHOLOGY	2	2	40	60	100
7.	IV	21Q4ACZ3	DEVELOPMENTAL BOTANY & PLANT BREEDING	3	3	40	60	100
8.		21Q4ACZ4	LAB -DEVELOPMENTAL BOTANY & PLANT BREEDING	2	2	40	60	100
Total				20	20			

ELECTIVES-15 CREDITS

S.N o	SEM .	COURSECODE	COURSE TITLE	HR S	CREDI T	CIA Mk s	ES E Mk s	TOT . Mks
1.	V	19Z5ME1 / 19Z5ME2	BIOSTATISTICS / ANIMAL BEHAVIOUR	5	5	40	60	100
2.	VI	19Z6ME3 / 19Z6ME4	EMBRYOLOGY / CLINICAL LABORATORY TECHNIQUES	5	5	40	60	100

S.No	SEM	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. Mks
3.		19Z6ME5 / 19Z6ME6	BIOINFORMATICS / ENTOMOLOGY	5	5	40	60	100
Total				15	15			

PART – IV – 20 CREDITS

- **VALUE EDUCATION**
- **ENVIRONMENTAL AWARENESS**
- **NON MAJOR ELECTIVE**
- **SKILL BASED COURSES**

S. No	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDITS	CIA Mks	ESE Mks	TOT. Mks
1.	I	21G1VE1	Personal Values	1	1	40	60	100
2.		19Z1NME	Non-Major Elective – Maternity and Child Health (Offered to other major Students)	2	2	40	60	100
3.	II	21G2VE2	Values for Life	1	1	40	60	100
4.		19Z2NME	Non-Major Elective – Maternity and Child Health (Offered to other major Students)	2	2	40	60	100
5.	III	19G3EE1	Environmental Education	1	1	40	60	100
6.		19Z3SB1	Vermitechnology	2	2	40	60	100
7.	IV	19G4EE2	Gender Studies	1	1	40	60	100
8.		19Z4SB2	Mushroom Cultivation	2	2	40	60	100
9.	V	19Z5SB3	Ornamental Fish Culture	2	2	40	60	100

S. No	SEM.	COURSE CODE	COURSE TITLE	H RS	CRE DITS	CIA Mks	ESE Mks	TOT. Mks
10.		19Z5SB4	Sericulture	2	2	40	60	100
11.	VI	19Z6SB5	Apiculture	2	2	40	60	100
12.		19Z6SB6	Dairy Farming	2	2	40	60	100
TOTAL				20	20			

PART – V – 1 CREDIT

OFF-CLASS PROGRAMMES - ALL PART-V

SHIFT - I

S. No	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DIT	TOT. Mks
1.	I - IV	21A4PED	Physical Education	30/ SEM	1	100
2.		21A4NSS	NSS			
3.		21A4NCC	NCC			
4.		21A4WEC	Women Empowerment Cell			
5.		21A4ACUF	AICUF			

OFF-CLASS PROGRAMMES

ADD-ON COURSES

COURSE CODE	COURSE TITLE	HR S.	CRE DITS	SEMES TER IN WHICH THE COURSE IS OFFER ED	CIA Mks	ESE Mks	TOT AL Mks
21UAD1CA	COMPUTER APPLICATIONS (offered by the department of PGDCA for Shift I)	40	2	I&II	40	60	100
21UADFCS	ONLINE SELF LEARNING COURSE -Foundation Course for Science	40	2	II	40	60	100
21UAD3ES	Professional Ethics	15	1	III	40	60	100
21UAD4ES	Personality Development	15	1	IV	40	60	100
21UAD5ES	Family Life Education	15	1	V	40	60	100
21UAD6ES	Life Skills	15	1	VI	40	60	100
19UAD5HR	HUMAN RIGHTS	15	2	V	100	-	100
21UAD6RS	OUTREACH PROGRAMME - Reach Out to Society through Action ROSA	100	3	V & VI	100	-	100
21UAD6PR	PROJECT	30	4	VI	40	60	100
21UAD6RC	READING CULTURE	10/ Sem este r	1	II-VI	-	-	-
TOTAL			20				

EXTRA CREDIT COURSES

COURSE CODE	COURSE	HR S.	CREDIT S	SEMESTER IN WHICH THE COURSE IS OFFERED	CIA MK S	ESE MK S	TOTAL MARK S
21Z2SL1	SELF LEARNING COURSES for ADVANCED LEARNERS SingleCell Protein Culture	-	2	II	40	60	100
	MOOC COURSES / International Certified online Courses (Department Specific Courses/any other courses) * Students can opt other than the listed course from UGC-SWAYAM UGC / CEC	-	Minimum 2 Credits	I – VI	-	-	

OFF CLASS PROGRAMMES

19UGVACZ1 - Value Added Certificate Course (Herbalism in Health Care)

21UGVACZ1 – Skill – Embedded Value Added Certificate Course (Livestock Farming)

III B.Sc. Zoology

SEMESTER – VI

For those who joined in 2022 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAZO	22Z6SB6	Poultry Farming	Skill Based	2	2

COURSE DESCRIPTION

This course provides comprehensive knowledge on the management of various breeds of poultry fowls. The course also highlights the formulations of poultry feed, poultry products and the economics of poultry.

COURSE OBJECTIVES

- To foster self-employment opportunities after their graduation.
- To understand the nutritive value of poultry products.
- To manage fowl diseases in poultry farms.

UNITS

UNIT I INTRODUCTION AND POULTRY BREEDS

Introduction and scope of poultry keeping –Poultry industry in India – Indian breeds- Aseel, Chittagong - Exotic breeds –Plymouth Rock, Brahma, Leghorn- selection of commercial laying stock, sexing in day-old chicks.

UNIT II HOUSING AND MANAGEMENT

Poultry housing – General principles of building poultry house - Deep litter system- Management of fowls – Growers, Layers, and Broilers – Lighting for chicks – Debeaking. Growth management – summer and winter management.

UNIT III POULTRY FEED

Energy- proteins and amino acids, vitamins, essential inorganic elements. Non-nutritive feed additives- feedstuffs and formulations for poultry, Nutrient requirements for different stages of Layers and Broilers.

UNIT IV POULTRY DISEASES

Viral diseases- Ranikhet, Fowlpox. Bacterial disease - Salmonellosis, Fowl Cholera. Fungal Diseases – Aspergillosis, Aflatoxicosis. Parasitic- Coccidiosis, Ticks, and Mites. Vaccination program.

UNIT V POULTRY PRODUCTS & MARKETING STRATEGIES

Poultry **egg production** – composition and nutritive value of egg. Use of feathers and poultry manure - Recycling of poultry waste. **Economics of poultry**- Role of NABARD in poultry farming.

REFERENCES:

TEXTBOOK:

1. Gnanamani MR (1998), *Modern aspects of Commercial Poultry Keeping*, Giri Publications, Madurai, 1998.

REFERENCE BOOKS:

1. Shukla G S, Upadhyay V B (2011). *Economic Zoology*. Rastogi Publications, India.
2. Jawaid, A. and Sinha, S. P. (2008) *A Handbook of Economic Zoology*. S. Chand & Company, New Delhi.

DIGITAL OPEN EDUCATIONAL RESOURCES

1. <http://www.asciindia.com/BooksPDF/Small%20Poultry%20Farmer.pdf>
2. https://nsdcindia.org/sites/default/files/MC_AGR-Q4306_Small-poultry-farmer-.pdf
3. <http://ecoursesonline.iasri.res.in/course/view.php?id=335>
4. https://swayam.gov.in/nd2_nou19_ag09/preview

Levels	C1	C2	C3	C4	Total Scholastic Marks	Non-Scholastic Marks C5	CIA Total	% of Assessment
	Session-wise Average	Better of W1, W2	M1+M2	MID-SEM TEST				
	5 Mks.	5 Mks	5+5=10 Mks.	15 Mks	35 Mks.	5 Mks.	40Mks.	
K1	5	-	-	2 ½	7.5	-	7.5	18.75 %
K2	-	5	4	2 ½	11.5	-	11.5	28.75 %
K3	-	-	3	5	8	-	8	20 %
K4	-	-	3	5	8	-	8	20 %
Non-Scholastic	-	-	-	-		5	5	12.5 %
Total	5	5	10	15	35	5	40	100 %

CIA	
Scholastic	35
Non-Scholastic	5
	40

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

UG CIA Components

				Nos				
C1	-	Test (CIA 1)		1	-	10 Mks		
C2	-	Test (CIA 2)		1	-	10 Mks		
C3	-	Assignment		1	-	5 Mks		
C4	-	Open Book Test/PPT		2 *	-	5 Mks		
C5	-	Quiz		2 *	-	5 Mks		
C6	-	Attendance			-	5 Mks		

** The best out of two will be taken into account*

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Inspect the features of various indigenous and exotic breeds of poultry breeds.	K4	PSO1, PSO4, PSO6 & PSO9
CO 2	Summarize the management of growers, layers, and broilers	K2	PSO1, PSO4, PSO6, &

			PSO9
CO 3	Examine the significance of feed additives and nutritional requirements for different stages of layers and broilers	K1	PSO2, PSO4 PSO8, PSO9 & PSO11
CO 4	Relate the causative organism, mode of infection, symptoms, treatment, and control measures of poultry diseases.	K2	PSO2, PSO4, PSO9 & PSO11
CO 5	Develop an idea regarding the poultry products and strategies of marketing.	K3	PSO4, PSO6, PSO8, & PSO9

Mapping of COs with PSOs

CO/ PSO	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6	PS O7	PS O8	PS O9	PSO1 0	PSO1 1	PSO1 2
CO1	3	2	2	3	2	3	2	2	3	2	2	2
CO2	3	2	2	3	2	3	2	2	3	2	2	2
CO3	2	3	2	3	2	2	2	3	3	2	3	2
CO4	2	3	2	3	2	2	2	2	3	2	3	2
CO5	2	2	2	3	2	3	2	3	3	2	2	2

Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	3

C02	3	3	3	2	3
C03	3	3	3	2	3
C04	3	3	3	2	3
C05	3	3	3	2	3

Note: ♦ Strongly Correlated – **3**

♦ Moderately Correlated – **2**


♦ Weakly Correlated -**1**

COURSE DESIGNER:

1. Dr.S. Barathy

2. Mrs.J.Thelma

Forwarded By


Dr. A. TAMIL SELVI
 Head, Dept. of Zoology
 FATIMA COLLEGE (AUTONOMOUS)
 MADURAI-625 018

HOD'S Signature

& Name

III B.Sc.
SEMESTER – III

For those who joined in 2021 onwards
(Offered as Interdisciplinary Course with Home Science)

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UAZO	21Z4SLN1	PUBLIC HEALT H & HYGIE NE	Self Learning	-	2

COURSE DESCRIPTION

The course is designed to introduce life threatening medical scenarios and to instruct the student how to recognize and respond appropriately to each given situation.

COURSE OBJECTIVES

- To recognize and avoid hazards within her or environment.
- To develop skills necessary for immediate and temporary care of victims of various cases.

UNITS

UNIT I - NUTRITION AND HEALTH

Role of international health organization: WHO – UNICEF. Concept of health, Indicators of health. Importance of Nutrition. Nutritional requirements for the special groups (pregnant mother, lactating mother and children).Protein calorie Malnutrition (PCM), National nutrition programme.

UNIT II: ENVIRONMENT AND HEALTH

Water borne diseases – types, symptoms and treatment. Purification of water - large scale for drinking purpose (slow sand and rapid sand filtration methods).Chlorination of well water. Sanitation. Excreta - Methods of disposal - -types of latrines. National health programmes in India.

UNIT III: COMMUNICABLE AND NON COMMUNICABLE DISEASE

Epidemiology of Communicable disease- prevention and control -Diarrhoeal diseases- Zoonoses -Viral hemorrhagic fevers - Primary infections of the brain- Mycobacterial infections- Emerging disease threats- Severe Acute Respiratory Syndrome (SARS) and Avian flu- Dengue, Swine, Flu, Chikungunya. **Epidemiology, prevention and control of noncommunicable diseases-** Rheumatic heart disease- Infective endocarditis- Ischaemic heart disease- Respiratory diseases - Program related to Communicable and Non Communicable diseases

UNIT IV: FAMILY PLANNING, MATERNAL AND CHILD HEALTH

Family Planning - Objectives and methods - temporary and permanent methods. Maternal Mortality Rate (MMR) - Causes and prevention. Infant Mortality Rate (IMR) - Causes and prevention. Problems of the aged Geriatrics.Immunization schedule for children.

UNIT V: FIRST AID

Heart attack - Fire accident –Accident – Injuries- Fractures – Stroke- Poison- Electric Shock - Gas leakage - Snake bite and Dog bite

REFERENCE BOOKS

1. Park J.E., (2017). *Textbook Of Preventive Social Medicine* 24 Th Edition. BanarsidasBhanot Publishers.
2. Vidhya R., (2002). *Hand Book of Preventive and SocialMedicine*.
Publisher: JPB; Nineth edition
3. Sudhar R., Wagh P.,_Vinod B., Kakade, Jiwan P.S., (2015). *Public Health And Hygiene* Paperback – 2015. Success Publications; First Edition edition (2015).
4. Kumaresan, V., Sorna Raj R., Public Health and Hygiene. Saras Publication
5. Paho, Padro N.A., (2003). *Zoonoses and Communicable DiseasesCommon to Man and Animals* (PAHO Scientific Publications S.) 2003. World Health Organization; 3rd Revised edition edition.

Digital Open Educational Resources

1. <https://www.healthline.com/health/food-nutrition>
2. <https://www.who.int/health-topics/nutrition>
3. <https://www.healthline.com/health/first-aid>

EVALUATION

Internal	External
Assignment – 20 Marks	Objective – 20 Marks
Test – 20Marks	Essay Type Qns. – 40 Marks
Total – 40Marks	Total – 60Marks

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Discuss the importance, requirement of nutrition for Mother and children	K2	PSO1, PSO4 & PSO11
CO 2	Summarizes about types water borne disease and its remedies	K2	PSO1, PSO4
CO 3	Explain the temporary and permanent methods of family planning	K2	PSO1, PSO4 & PSO8
CO 4	Outlines the types of maternity problems and child health	K2	PSO1 & PSO8
CO 5	Explain the first aid for major health problems	K2	PSO1, PSO3 & PSO4

Mapping COs Consistency with PSOs

CO/ PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9	PSO10	PSO11	PSO12
CO1	3			3							1	
CO2	3			3								

CBCS Curriculum for B.Sc ZOOLOGY3

CO3	3			3				1				
CO4	1							1				
CO5	2		2	3								


Note: ♦ Strongly Correlated – 3
 ♦ WeaklyCorrelated -1

♦ ModeratelyCorrelated – 2

1. Dr. N.Nagarani (Zoology)

2. Mrs. C. Helen (Home Science)

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**HOD'S Signature
 & Name**