CRED HE.

SACRED HEART COLLEGE, CHALAKUDY

Railway Station Road, Thrissur Dt., Kerala - 680 307, India (Affiliated to University of Calicut & Re-acredited with A+ Grade by NAAC, CGPA 3.55

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Principal (Per.) : 0480 2708877

Sub- Clarification regarding the Add-on/Certificate courses of the year 2018-19 Metric - (1.2.2)

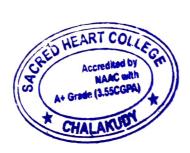
I certify that the twelve Add-on/Certificate courses offered during the academic year 2018-19 listed below are not part of the curricula offered by the University. The Course Codes and syllabi of these Add-on/Certificate courses are also not the same with the Course codes, titles and syllabi of Courses as part of the curriculum. We have attached the list of the Course Codes and syllabi of the normal curricula for clarification. The syllabi, attendance, certificates of the Add-on/Certificate courses are also provided in the other link so that NAAC can verify that the courses are not part of the normal curricula.

In the DVV, you have accepted only eight Add-on/Certificate courses indicating whether others are part of normal curricula. Thank you for giving us an opportunity to clarify this. I hope you will accept all the twelve Add-on/Certificate courses offered during the year 2018-19 and the corresponding number of students who pursued this course into consideration.

Name of Add on /Certificate programs offered	Course Code (if any)	Year of offering	No. of times offered during the same year	Duration of course	Number of students enrolled in the year	g the
Add on course on Quail		2018-19	1	100 hrs	30	30
Farming		2010-15		100 1113	50	50
Certificate course on Ayurvedic Plant breeding		2018-19	1	30 hrs	30	30
Certificate course on Dairy Training		2018-19	1	50 hrs	30	30
Certificate course on Animal Husbandry and						
cotty farming		2018-19	1	30 hrs	30	30
Add on Gurse Computer Int Okyees Experiments	terfaced	2018-19		30Hrs	21	21
*//						RINCIPA

SACRED HEART COLLEGE CHALAKUDY

Add on course on						
Communication Skills	ADENG01	2018-19	1	140 hrs	40	26
	SHCHADD					
Add on course onToiletries	2	2018-19	1	4 Months	37	37
Add on course on Soaps	SHCHADD					
and Detergents	1	2018-19	1	4 Months	32	32
Certificate course on	SHCHADD					
Water analysis	3	2018-19	1	4 Months	24	24
Add on course Industrial						
Mathematics		2018-19	1	30 hours	45	45
Add on course on						
Mathematics for						
competitive examination		2018-19	1	30 hours	90	90
Add on course						
Mathematics for social						
science		2018-19	1	30 hours	40	40



PRINCIPAL SACRED HEART COLLEGE CHALAKUDY U.O



UNIVERSITY OF CALICUT

Abstract

BSc in Zoology-CUCBCSS UG 2014-Scheme and Syllabus- w.e.f 2014 admission -Approved-

Syllabus of Complementary Course incorporated in the syllabus -approved - corregendum issued

	G & A - IV - J	
D.No. 615/2015/Admn		Dated, Calicut University.P.O, 20.01.2015

Read:-1. U.O. No. 3797/2013/CU, dated 07.09.2013 (CBCSS UG Modified Regulations) (File.ref.no. 13752/GA IV J SO/2013/CU).
2. U.O. No. 5180/2014/Admn, dated 29.05.2014 (CBCSS UG Revised Regulations) (File.ref.no. 13752/GA IV J SO/2013/CU).
3. Item no. 8 of the minutes of the meeting of the Board of Studies in Zoology UG held on 04.03.2014.
4. Item no. 2 of the minutes of the meeting of the Faculty of Science held on 27.06.2014.
5.U.O.No: U.O.No. 6928/2014/Admn Dt 17.07.14
6. U.O.Note from Pareekshabhavan No: 15714/Ex-1-Asst-3/2014 3/8/14
7. item No: 1&2 of the Minutes of the meeting BOS in Zoology UG held on 18.11.14
8. item No:12 of the meeting of the Minutes of the Faculty of Science held on 22.12.14

<u>ORDER</u>

The Modified Regulations of Choice Based Credit Semester System for UG Curriculum w.e.f 2014 was implemented under the University of Calicut vide paper read as (1). The Revised CUCBCSS UG Regulations has been implemented w.e.f 2014 admission, for all UG programme under CUCBCSS in the University, vide paper read as (2).

The Board of Studies in Zoology UG finalized the revised syllabus of BSc Zoology for implementation w.e.f the Academic Year 2014-2015. vide paper read as (3). The Faculty of Science has also approved the minutes of the Board vide paper read as (4).

The Hon'ble Vice Chancellor, considering the exigency, exercising the powers of the

concerned Boards of Studies mentioned in the minutes of the Faculty of Science, subject to ratification by the Academic Council, and orders have been issued vide paper read as (5).

The Pareekshabhavan as per paper read as (6) has reported the following omission in the approved syllabus of BSc Zoology UG 2014.

The syllabus of complementaty course was not included in the syllabus.

The BOS in Zoology as per paper read as (7) has corrected the syllabus of BSc Zoology and it has been got approved by the Faculty of Science as per paper read as (8). The chairman has forwarded the Corrected Syllabus and reported that the syllabus of complementary courses will be the same as that of 2013 syllabus.

Therefore the Scheme and Syllabus implemented vide paper read as (5) stands corrected to this effect.

Corrigendum is issued accordingly. (The corrected syllabus is attached herewith and is available in the website: universityofcalicut.info)

Muhammed S Deputy Registrar

То

- 1. All Affiliated Colleges/SDE/Dept.s/Institutions under University of Calicut.
- 2. The Controller of Examinations, University of Calicut.
- 3. The Director SDE, University of Calicut.

Forwarded / By Order

Section Officer

BSc Zoology main syllabus 2014 onwards

- Pattern of the model question paper, scheme of evaluation for internal examination and credit distribution have been included.
- The syllabus of Complementary course 2013 will continue without any change. The pattern of the model question paper, scheme of evaluation for internal examination and credit distribution for the complementary course have also been given.

UNIVERSITY OF CALICUT

B.Sc. ZOOLOGY PROGRAMME

SYLLABUS

CORE COURSES COMPLEMENTARY COURSES

&

OPEN AND ELECTIVE COURSES *With effect from 2014-15 admission onwards*

Core Course-XVIII: Project Work	2	50
Field Study/Study tour	1	
Viva-voce		
Total	30	850

Core Course Structure

Total Credits: 56 (Internal: 20%; External: 80%)

Se mes ter	Code No	Course Title	Hrs/ Week	Total Hrs/ Sem	Credits	Marks
I	ZO1B01T	Core Course I: Animal Diversity Nonchordata-I	2	36	2	100
	-	Core Course V : Practical related to ZO1B01T Practical-I*A	2	36	*	-
П	ZO2B02T	Core Course II: Animal Diversity Nonchordata-II	2	36	2	100
	-	Core Course V : Practical related to ZO2BOT-Practical-I*B	2	36	*	-
ш	ZO3B03T	Core Course III – Animal diversity- Chordata -I	3	54	3	100
	-	Core Course V : Practical related to ZO3B03T-Practical-I*C	2	36	*	-

	ZO4B04T	Core Course IV: Animal diversity Chordata-II	3	54	3	100
IV	-	Core Course V: Practical related to ZO4B04T- Practical-I*D	2	36	*	-
	ZO4B05P	Practical-I*A, I*B, I*C & I*D	8	144	4	100
	ZO5B06T	Core Course VI: Environmental Biology, Wild life Conservation & Toxicology	3	54	3	100
	ZO5B07T	Core Course VII: Ethology Evolution & Zoogeography	3	54	3	100
	-	Practical Theory Course related to ZO5B06T & ZO5B07T-Practical II*A	3	54	*	-
V	ZO5B08T	Core Course VIII: Cell Biology & Genetics	3	54	3	100
	-	Practical related to Theory Core Course : ZO5B08T-Practical II*B	3	54	*	-
	ZO5B09T	Core Course IX: General Methodology in Science, Bio Statistics & Informatics	3	54	3	100
	-	Practical Related to Theory Core Course ZO5B09T-Practical II*C	2	36	*	-
	-	Project Work	2	36	**	-
	-	Field Study	1	18	***	-
	ZO6B10T	Core Course X: Bio Chemistry	2	36	2	100
VI	ZO6B11T	Core Course XI: Physiology & Endocrinology	3	54	3	100

-	Practical related to ZO6B10T & ZO6B		2	36	*	-
ZO0612T	Core Course XII: M & Bioinformatics	lolecular Biology	3	54	3	100
ZO0613T	Core Course XIII: F Biology, Developm Teratology		3	54	3	100
-	Practical related to Course ZO0613T-P	-	2	36	*	-
ZO0614T	Core Course XIV : Micro biology & im		3	54	3	100
-	Practical Related to Course ZO0614T-P	-	2	36	*	-
ZO0615T (E1) (E2) (E3)	Core Course XV: Elective	 Human Genetics Aquaculture, Animal husbandry & Poultry Applied Entomology(An y One) 	3	54	3	100
-	Practical Related to Course ZO0615T(E	-	2	36	*	-
ZO0616P	Practical II-II*A, II	*B & II*C	8	144	4*	100
ZO0617P	Practical III-III*A, III*D	III*B, III*C &	8	144	4*	100

Project Work	-	-	2**	50
Field Study		18	1***	_
Viva voce	-	-	2****	-
		Total	56	1750
	Field Study	Field Study	Field Study 18 Viva voce -	Field Study181***Viva voce2****

Exam will be held at the end of 4th semester.

^{**} Exam will be held at the end of 6^{th} semester.

- ^{ZO 06 15T} An institution can choose any one Elective course among the three courses.
- Includes Field Study also. Marks: 90 (ZO0616P) + 10 (Hand written Field Study Report).
- Includes Viva Voce also. Marks: 85(ZO06 17P) + 15(General Viva Voce).
- Practical Examinations are of 4 hrs Duration.



UNIVERSITY OF CALICUT

Abstract

General and Academic - Faculty of Science - Syllabus of BSc Zoology Programme under CBCSS UG Regulations 2019 with effect from 2019 Admission onwards - Implemented- Orders Issued

	G & A - IV - J	
U.O.No. 9202/2019/Admn		Dated, Calicut University.P.O, 12.07.2019

Read:-1) U.O No. 4368/2019/Admn dated 23.03.2019

2) Item No.1 in the minutes of the meeting of the Board of Studies in Zoology UG held on 25.06.2019

3) Item No. I.12 in the minutes of the meeting of Faculty of Science held on 27.06.2019

<u>ORDER</u>

The Regulations for Choice Based Credit and Semester System for Under Graduate (UG) Curriculum-2019 (CBCSS UG Regulations 2019) for all UG Programmes under CBCSS-Regular and SDE/Private Registration w.e.f. 2019 admission has been implemented vide paper read first above.

The meeting of Board of Studies in Zoology UG held on 25.06.2019 has approved the Scheeme and Syllabus of BSc Zoology Programme in tune with the new CBCSS UG Regulations with effect from 2019 Admission onwards, vide paper read second above.

The Faculty of Science at its meeting held on 27.06.2019 has approved the minutes of the meeting of the Board of Studies Zoology UG held on 25.06.2019, vide paper read third above.

Under these circumstances, considering the urgency, the Vice Chancellor has accorded sanction to implement the Scheme and Syllabus of BSc Zoology Programme in accordance with the new CBCSS UG Regulations 2019, in the University with effect from 2019 Admission onwards, subject to ratification by the Academic Council.

The Scheme and Syllabus of BSc Zoology Programme in accordance with CBCSS UG Regulations 2019 is therefore implemented in the University with effect from 2019 Admission onwards.

Orders are issued accordingly. (Syllabus appended).

Biju George K

Assistant Registrar

То

The Principals of all Affiliated Colleges Copy to: PS to VC/PA to PVC/ PA to Registrar/PA to CE/JCE I/JCE IV/DoA/EX and EG Sections/GA I F/CHMK Library/Information Centres/SF/DF/FC

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Section Officer

UNIVERSITY OF CALICUT B.Sc. ZOOLOGY PROGRAMME [CBCSS UG 2019] **SYLLABUS Core Courses Open Courses Complementary Courses** മ് **Model Question Papers EFFECTIVE FROM 2019 ADMISSION**

INDEX

S1.		Page
No.	Content	No.
1	B.Sc. Zoology programme: Introduction	1
2	Aims and objectives	2
3	An Overview	3
4	Credits and marks distribution of B.Sc. Zoology programme (<i>Course Structure</i>).[Table 2]	7
5	Course wise mark distribution of B.Sc. Zoology programme [Table 3]	8
6	Semester wise distribution of credits and marks [Table 4]	9
7	B.Sc. Zoology (Core) programme Structure of core, open and elective courses [Table 5]	11
8	B.Sc. Zoology Open course [for students of other streams] Structure of open course [Table 6]	13
9	Outcomes and Outcome Based Education (OBE)	14
10	Programme Outcomes (POs) for general undergraduate programme	15
11	Program Specific Outcomes (PSOs): B.Sc. Zoology program, course outcomes	15
12	Core course: Scheme of instructions	16
13	Examinations	17
14	Evaluation and Grading	18
15	Ten point indirect grading system [Table 7]	19
16	Core course: Scheme of evaluation	19
17	A. Theory [core course]: Evaluation scheme	19
18	I. Internal evaluation	19
19	II. External evaluation	21
20	Pattern of question paper (theory) type 1 & 2 [Table 9 & 10]	22
21	B. Practical [core course]: Evaluation scheme	22
22	I. Internal evaluation	22
23	II. External evaluation	23
24	Scheme of question papers for practical I, II & III [Table 12 & 13]	24
25	Project work & Field study (core course): Evaluation scheme	25
26	I. Internal evaluation	26
27	II. External evaluation	26
28	Open Course [Zoology]	27
29	Open Course : Scheme of Evaluation	27
30	I. Internal evaluation	27
31	II. External evaluation: Pattern of question paper [Table 20]	28
32	Internal Assessment : Precautions	28

Sl. No.	Content	Page No.
33	S1. Core course I [Theory]: Animal diversity: Non-chordata Part- I	31
34	S2. Core course II [Theory]: Animal diversity: Non-chordata Part- II	35
35	S3. Core course III [Theory]: Animal diversity: Chordata Part- I	39
36	S4. Core course IV [Theory]: Animal diversity: Chordata Part- II	43
37	S4. Core course Practical - I : [S1 I*A + S2 I*B + S3 I*C + S4 I*D]	47
38	S5. Core course V [Theory]: Cell Biology and Genetics	53
39	S5. Core course VI [Theory]: Biotechnology, Microbiology and Immunology	58
40	S5. Core course VII [Theory]: Biochemistry and Molecular Biology	63
41	S5. Core course VIII [Theory]: Methodology in Science, Biostatistics and Bioinformatics	68
42	S5. Core course Practical - II : [S5 II*A + S5 II*B]	72
43	S5. Open course: Zoology - 01[Theory]: Reproductive Health and Sex Education	77
44	S5. Open course: Zoology - 02[Theory]: Nutrition, Health and Hygiene	80
45	S5. Open course: Zoology - 03[Theory]: Applied Zoology	83
46	S6. Core course IX [Theory]: Physiology and Endocrinology	86
47	S6. Core course X [Theory]: Reproductive and Developmental Biology	89
48	S6. Core course XI [Theory]: Environmental and Conservation Biology	93
49	S6. Core course XII [Theory]: Ethology, Evolution and Zoogeography	97
50	S6. Core Elective course XIII [Theory]: 01: Human Genetics	101
51	S6. Core Elective course XIII [Theory]: 02: Aquaculture, Animal Husbandry and Poultry Science	104
52	S6. Core Elective course XIII [Theory]: 03: Applied Entomology	107
53	S6.Core course Practical - III : [S6 III*A + S6 III*B]	111
54	B.Sc. Zoology Complementary Programme	117
55	Complementary Course: Introduction	117
56	Complementary Course: Scheme of instruction	117
57	Complementary Course: Structure of complementary course	118
58	Complementary Course: Scheme of evaluation	119
59	A. Theory [Complementary course]: Evaluation scheme	119
60	i. Internal evaluation	119
61	ii. External evaluation	120

S1. No.	Content	Page No.
62	B. Practical [Complementary course]: Evaluation scheme	121
63	i. Internal Evaluation	121
64	ii. External Evaluation	122
65	Scheme of question paper for Complementary Practical	122
66	S1. Compl. course I [Theory]: Animal Diversity and Wildlife Conservation	123
67	S2. Compl. course II [Theory]: Economic Zoology	126
68	S3. Compl. course III [Theory]: Physiology and Ethology	128
69	S4. Compl. course IV [Theory]: Genetics and Immunology	131
70	S4. Complementary course Practical-I:[S1 I*A+S2 I*B+S3 I*C+S4 I*D]	134
71	Model question papers [Core courses] (S1-S5)	139
72	Model question papers [Open courses]	147
73	Model question papers [Core courses] (S6)	150
74	Model question papers [Core Elective courses]	154
75	Model question papers [Complementary courses]	157
76	Model question paper [Core Practical I]	161
77	Model question paper [Core Practical II & III]	162
78	Model question paper [Complementary Practical]	166

INTRODUCTION,

GUIDELINES

AND

GENERAL INFORMATION

Table 5B.Sc. ZOOLOGY (CORE) PROGRAMMESTRUCTURE OF CORE, OPEN AND ELECTIVE COURSES

Course code, Title, Instructional hours, Credits, Marks and Examination duration in various semesters

Total Credits: 58 (w.e.f. 2019 Admission)

Semester	Core/Open/ Elective courses	Code	Course Title	Instructional hours/week	Instructional hrs in a semester	Credits	External Marks	Internal marks	Total marks	Duration of Exam (hrs)
	Theory I	ZOL1B01T	Animal Diversity : Nonchordata Part-I	2	36	2	60	15	75	2
	Practical I*A		Practical related to ZOL1B01T	2	36	*				
	Theory II	ZOL2B02T	Animal Diversity : Nonchordata Part-II	2	36	2	60	15	75	2
	Practical I*B		Practical related to ZOL2B02T	2	36	*				
	Theory III	ZOL3B03T	Animal Diversity: Chordata Part-I	3	54	3	60	15	75	2
	Practical I*C		Practical related to ZOL3B03T	2	36	*				
IV	Theory IV	ZOL4B04T	Animal Diversity: Chordata Part-II	3	54	3	60	15	75	2
	Practical I*D		Practical related to ZOL4B04T	2	36	*				
	Practical-I {I*A +I*B+ I*C+ I*D}	ZOL4B05P	Zoology Core Practical I (Practical related to ZOL1B01T,02T,03T and 04T)	8	144	4	80	20	100	4
	Theory V	ZOL5B06T	Cell Biology and Genetics	3	54	4	80	20	100	2.5
	Theory VI	ZOL5B07T	Biotechnology, Microbiology and Immunology	4	72	4	80	20	100	2.5
	Practical II*A		Practical related to ZOL5B06T & 07T	4	72	**				
	Theory VII	ZOL5B08T	Biochemistry and Molecular Biology	4	72	4	80	20	100	2.5
V	Theory VIII	ZOL5B09T	Methodology in Science, Biostatistics and Bioinformatics	3	54	4	80	20	100	2.5
	Practical II*B		Practical related to ZOL5B08T, & 09T	4	72	**				
	#Open Course +++ (for other streams)	ZOL5D01T ZOL5D02T ZOL5D03T	 Reproductive Health and Sex Education Nutrition, Health & Hygiene Applied Zoology (Any one) # 	3	54	3	60	15	75	2
	Theory IX	ZOL6B10T	Physiology and Endocrinology	3	54	3	60	15	75	2
VI	Theory X	ZOL6B11T	Reproductive and Developmental Biology	3	54	3	60	15	75	2
	Practical III*A		Practical related to ZOL6B10T & 11T	4	72	**				
	Theory XI	ZOL6B12T	Environmental and Conservation Biology	3	54	3	60	15	75	2
	Theory XII	ZOL6B13T	Ethology, Evolution and Zoogeography	3	54	3	60	15	75	2

Semester	Core/Open/ Elective courses	Code	Course Title	Instructional hours/week	Instructional hrs in a semester	Credits	External Marks	Internal marks	Total marks	Duration of Exam (hrs)
	Theory XIII Elective Course##	ZOL6B14(E)01T ZOL6B14(E)02T ZOL6B14(E)03T	Aquaculture, Animal Husbandry & Poultry science	3	54	2	60	15	75	2
	Practical III*B		Practical related to theory core course ZOL6B12T, 13T & ZOL6B14 (E)01T/ (E)02T/ (E)03T	4	72	**				
			Project work / Field study	2	32	***				
	Practical II (II*A +II*B)	ZOL6B15P	Zoology Core Practical II (Practical related to ZOL5B06T, 07T, 08T, 09T)	8	144	4**	80	20	100	4
	Practical III (III*A +III*B)	ZOL6B16P	Zoology Core Practical III (Practical related to ZOL6B10T, 11T, 12T, 13T & 14T (E)01/(E)02/(E)03)	8	144	4**	80	20	100	4
		ZOL6B17PF	Project work & Field study			2+1 ***	60	15	75	
			Total			58	1220	305	1525	

Core courses 1450 + Open course 75 = 1525 Marks

Scheme of evaluation: External 80 % +Internal 20 %

- * Practical examination for1st, 2 nd , 3rd and 4th semesters will be held at the end of IV semester.
- ** Practical examination for 5th and 6th semesters will be held at the end of VI semester.

*** **Project work – 2 credits; Field study – 1 credit.** External evaluation of Project work and Field study report will be conducted at the end semester VI after Practical III (External: 80% Marks + Internal: 20 % marks; **Total: 75 Marks**). (It includes a Viva-voce based on report of Project work and field study).

Project: External 48 marks + Internal 12 marks = **60** marks

Field study report: External 12 marks +Internal 3 marks = **15** marks

Open course of any one course (ZOL5D01T/ ZOL5D02T/ ZOL5D03T) opted by the dept. is for other streams.

Open course Theory: 80% marks for external and 20% marks for internal evaluation.

- +++ See Appendix of Open course
- ## Elective course of any one course (ZOL6B14(E)01/ ZOL6B14(E)02/ ZOL6B14(E)03) opted by the dept. is for Core course.

Table 6

+++Appendix

B.Sc. ZOOLOGY OPEN COURSE

[For students of other streams]

<u>STRUCTURE OF OPEN COURSE</u> Course code, Title, Instructional hours, Credits, Marks and Duration of Examination Total Credits: 3 (External 80% and Internal 20%) (w.e.f. 2019Admission)

Semester	Open Course	Code	Course content	Instructional hrs/ week	Instructional hrs in a semester	Credits	External Marks	Internal marks	Total marks	Duration of Exam (hrs)
		ZOL5D01T	<i>Open Course 01 :</i> Reproductive Health and Sex Education							
	Theory [Any one] ZOL5D02	ZOL5D02T	<i>Open Course 02 :</i> Nutrition, Health and Hygiene	3	54	3	60	15	75	2
V		ZOL5D03T	<i>Open Course 03 :</i> Applied Zoology							
	TOTAL		3	54	3	60	15	75	2	

Open course of any one course (ZOL5D01T/ ZOL5D02T/ ZOL5D03T) opted by the dept. is for students of other streams.

There shall be one open course in core subjects in the fifth semester. The open course shall be open to all the students in the institution except the students in the parent department. The students can opt that course from any other department in the institution. Each department can decide the open course from a pool of three courses offered by the University. For open courses there shall be a minimum of 10 and maximum of 75 students per batch. Total credits allotted for open course is 3 and the hours allotted is 3. If there is only one programme in a college, they can choose either language courses or physical education as open course.



UNIVERSITY OF CALICUT

Abstract

General and Academic - Faculty of Science - Syllabus of MSc Applied Zoology Programme under CCSS PG Regulations 2019 (University Teaching Departments) with effect from 2019 Admission onwards-Implemented- Orders-Issued.

G & A - IV - J

U.O.No. 11743/2019/Admn

Dated, Calicut University.P.O, 30.08.2019

Read:-1. U.O No.4487/2019/Admn dated 26.03.2019

2. Item No. 1 of the minutes of the meeting of the Board of Studies in Zoology PG held on 28.06.2019

3. Remark from the Dean, Faculty of Science dated 30.07.2019.

<u>ORDER</u>

The Regulations under Choice-based Credit Semester System for Post Graduate Programmes (CCSS-PG-2019) of all Teaching Departments / Schools of the University of Calicut w.e.f. 2019 admissions has been implemented in the University of Calicut vide paper read first above.

The meeting of Board of Studies in Zoology PG held on 28.06.2019 has approved the Syllabus of M.Sc Applied Zoology Programme in tune with the new CCSS PG Regulations with effect from 2019 Admission onwards, vide paper read second above.

The Dean, Faculty of Science has approved the minutes of the meeting of the Board of Studies in Zoology PG held on 28.06.2019 vide paper read third above.

Under these circumstances, considering the urgency, the Vice Chancellor has accorded sanction to implement the Scheme and Syllabus of M.Sc Applied Zoology Programme in accordance with the new CCSS PG Regulations 2019, in the University with effect from 2019 Admission onwards, subject to ratification by the Academic Council.

The Scheme and Syllabus of M.Sc Applied Zoology Programme for Teaching Departments /Schools of the University of Calicut in accordance with CCSS PG Regulations 2019, is therefore implemented with effect from 2019 Admission onwards.

Orders are issued accordingly. (Syllabus appended).

Biju George K

Assistant Registrar

То

The HoD, Department of Zoology Copy to: PS to VC/PA to PVC/ PA to Registrar/PA to CE/JCE I/JCE V/DoA/EX and EG Sections/GA I F/CHMK Library/Information Centres/SF/DF/FC

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Section Officer

DEPARTMENT OF ZOOLOGY UNIVERSITY OF CALICUT CALICUT UNIVERSITY P.O.

KERALA, 673 635



RESTRUCTURED CURRICULUM AND SYLLABI FOR M. Sc. APPLIED ZOOLOGY

(Choice based Credit Semester System – CCSS)

(w.e.f. 2019 admission)

$\mathbf{C} \ \mathbf{O} \ \mathbf{N} \ \mathbf{T} \ \mathbf{E} \ \mathbf{N} \ \mathbf{T} \ \mathbf{S}$

		Pages
1.	Regulations and Scheme of Examination	3-9
2.	M. Sc. Applied Zoology Syllabus (CCSS)	
	2.1. Semester I	10 – 29
	2.2. Semester II	30 – 48
	2.3. Semester III	49 – 65
	2.4. Semester IV	66 – 80
3.	Model Questions	81 – 97

SEMESTER-WISE DETAILS

FIRST SEMESTER

Code No. & Course	Teaching Hours	Credits	Ext. Marks	Int. Marks	Total Marks
ZOO 1C 01- BIOCHEMISTRY	80 hrs	4	80	20	100
ZOO 1C 02 – BIOPHYSICS & BIOSTATISTICS	80 hrs	4	80	20	100
ZOO 1C 03 – BIOSPHERE ECOLOGY	80 hrs	4	80	20	100
ZOO 1C 04- SYSTEMATICS & ANIMAL BEHAVIOUR	80 hrs	4	80	20	100
ZOO 1C 05 – BIOCHEMISTRY, BIOPHYSICS & BIOSTATISTICS PRACTICAL	60 hrs	2	80	20	100
ZOO 1C 06 – SYSTEMATICS, BEHAVIOUR & BIOSPHERE ECOLOGY PRACTICAL	60 hrs	2	80	20	100
Total for First Semester			480	120	600

SECOND SEMESTER

Code No. & Course	Teaching Hours	Credits	Ext. Marks	Int. Marks	Total Marks
ZOO 2C 07- CYTOGENETICS & EVOLUTION	80 hrs	4	80	20	100
ZOO 2C 08 – MOLECULAR BIOLOGY	80 hrs	4	80	20	100
ZOO 2C 09 – BIOTECHNOLOGY	80 hrs	4	80	20	100
ZOO 2C 10- ANIMAL PHYSIOLOGY & ENDOCRINOLOGY	80 hrs	4	80	20	100
ZOO 2C 11 - CYTOGENETICS & ANIMAL PHYSIOLOGY PRACTICAL	60 hrs	2	80	20	100
ZOO 2C 12 - MOLECULAR BIOLOGY & BIOTECHNOLOGY PRACTICAL	60 hrs	2	80	20	100
Total for Second Semester			480	120	600

THIRD SEMESTER

Code No. & Course	Teaching Hours	Credits	Ext. Marks	Int. Marks	Total Marks
ZOO 3C 13- DEVELOPMENTAL BIOLOGY & ANIMAL ETHICS	80 hrs	4	80	20	100
ZOO 3C 14 – MICROBIOLOGY & IMMUNOLOGY	80 hrs	4	80	20	100
ZOO 3E 15 – GENERAL ENTOMOLOGY	80 hrs	4	80	20	100
ZOO 3E 16- INSECT PHYSIOLOGY & BIOCHEMISTRY	80 hrs	4	80	20	100
ZOO 3C 17 - DEVELOPMENTAL BIOLOGY, MICROBIOLOGY & IMMUNOLOGY PRACTICAL	60 hrs	2	80	20	100
ZOO 3E 18 - GENERAL ENTOMOLOGY & INSECT PHYSIOLOGY BIOCHEMISTRY PRACTICAL	60 hrs	2	80	20	100
Total for Third Semester		20	480	120	600

FOURTH SEMESTER

Code No. & Course	Allotted Hours	Credits	Ext. Marks	Int. Marks	Total Marks
ZOO 4C 19- PROJECT	160 hrs	8	160	40	200
ZOO 4E 20 – AGRICULTURAL ENTOMOLOGY & ACAROLOGY*	80 hrs	4	80	20	100
ZOO 4E 21 – INSECT PESTS – CONTROL AND MANAGEMENT*	80 hrs	4	80	20	100
ZOO 4E 22 – ECOLOGY & ETHOLOGY OF INSECTS*	80 hrs	4	80	20	100
ZOO 4E 23 – MEDICAL, VETERINARY & FORENSIC ENTOMOLOGY*	80 hrs	4	80	20	100
ZOO 4E 24 – PRACTICAL ON 4E 20*	30 hrs	2	80	20	100
ZOO 4E 25 – PRACTICAL ON 4E 21*	30 hrs	2	80	20	100
ZOO 4E 26 – PRACTICAL ON 4E 22*	30 hrs	2	80	20	100
ZOO 4E 27 – PRACTICAL ON 4E 23*	30 hrs	2	80	20	100
Total for Fourth Semester	20	480	120	600	

C - Core course; E - Elective course * Elective Courses (Any Two Theory course and its Practical is to be opted by the student)