Center for Animal Sciences

School of Basic and Applied Sciences Central University of Punjab, Bathinda



Program: M.Sc. Life Sciences (specialization in Animal Sciences)
Academic Session: 2017 - 18

Program: M.Sc. in Life Sciences (Specialization: Animal Sciences) (Academic Session 2017 - 18)

Semester – I

Course Code	Course Title	L (hr)	T (hr)	P (hr)	Cr
	Foundation Course*				
LAS.501	Introduction to Animal Sciences	2		-	2
	Core Courses*				
LAS.503	Biochemistry	2	1	-	3
LAS.504	Ecology, Evolution and Diversity	2	1	-	3
LAS.505	Cell Biology	2	1	-	3
LAS.506	Essentials of Genetics	2	1	-	3
LAS.525	Lab Course (Practicals) - I	-	-	12	6
	Elective Courses (Opt any one)				
LAS.551	Techniques in Life Sciences	2	-	-	2
LAS.552	Animal Cell Culture and Applications	2	-	-	2
	Inter-Disciplinary (ID) Course				
LAS.401	Fundamentals of Cell Biology	2	-	-	2
	Seminar				
LAS.595	Seminar - I	1			1
	Total Credits / Marks				25

L: Lectures; T: Tutorials; P: Practicals; Cr: Credits; * Compulsory Courses

- A: Continuous Assessment: [25 Marks]
 - i. Surprise Test (minimum three) Based on Objective Type Tests (10 Marks)
 - ii. Term paper (10 Marks)
 - iii. Assignment(s) (5 Marks)
- B: <u>Pre-Scheduled Mid Semester Test-1:</u> Based on Subjective Type Test [25 Marks]
- C: <u>Pre-Scheduled Mid Semester Test-2:</u> Based on Subjective Type Test [25Marks]
- D: End-Term Exam (Final): Based on Objective Type Tests [25 Marks]
- E: Seminar-I (Annexure A)
- F: Practicals: (Annexure B)

Semester – II

Course Code	Course Title	L (hr)	T (hr)	P (hr)	Cr
	Core Courses*				
LAS.511	Animal Physiology	3	1	-	4
LAS.512	Immunology	2	1	-	3
LAS.513	Molecular Biology	2	1	-	3
LAS.514	Nutrition and Metabolism	2	1	-	3
LAS.526	Lab Course (Practicals) - II			12	6
	Elective Courses (Opt any one)				
LAS.561	Nanobiology	2	-	-	2
LAS.562	Behavioural Neurogenetics	2	-	-	2
	Inter-Disciplinary (ID) Course				
LAS.411	Basics in Neuroscience	2	-	-	2
	Seminar		•		
LAS.596	Seminar - II	1	-	-	1
	Total Credits		L		24

L: Lectures; T: Tutorials; P: Practicals; Cr: Credits; * Compulsory Courses

- A: <u>Continuous Assessment:</u> [25 Marks]
 - i. Surprise Test (minimum three) Based on Objective Type Tests (10 Marks)
 - ii. Term paper (10 Marks)
 - iii. Assignment(s) (5 Marks)
- B: <u>Pre-Scheduled Mid Semester Test-1:</u> Based on Subjective Type Test [25 Marks]
- C: <u>Pre-Scheduled Mid Semester Test-2:</u> Based on Subjective Type Test [25Marks]
- D: <u>End-Term Exam (Final)</u>: Based on Objective Type Tests [25 Marks]
- E: Seminar (Annexure A)
- F: Practicals: (Annexure B)

Semester - III

Course Code	Course Title	L (hr)	T (hr)	P (hr)	Cr
	Core Courses*				
LAS.521					
	Biostatistics and Research Applications	2	1	-	3
LAS.522	Developmental Biology	2	1	-	3
LAS.523	Cancer Biology	2	1	-	3
LAS.527	Lab Course (Practicals) - III	-	-	12	6
	Elective Courses (Opt any one)				
LAS.571	Vascular Biology	2	-	-	
LAS.572	Neurobiology and Degeneration	2	-	-	2
	Research*				
LAS.599	Research Project (Part – I)	-	-	8	4
	Total Credits		1		21

L: Lectures; T: Tutorials; P: Practicals; Cr: Credits; * Compulsory Courses

- A: Continuous Assessment: [25 Marks]
 - i. Surprise Test (minimum three) Based on Objective Type Tests (10 Marks)
 - ii. Term paper (10 Marks)
 - iii. Assignment(s) (5 Marks)
- B: <u>Pre-Scheduled Mid Semester Test-1:</u> Based on Subjective Type Test [25 Marks]
- C: <u>Pre-Scheduled Mid Semester Test-2:</u> Based on Subjective Type Test [25Marks]
- D: <u>End-Term Exam (Final)</u>: Based on Objective Type Tests [25 Marks]
- E: Seminar (Annexure A)
- F: Practicals: (Annexure B)

Semester – IV

Course Code	Course Title	L (hr)	T (hr)	P (hr)	Cr
	Elective Course (opt any one)		ı	<u> </u>	
LAS.581	Genetic Engineering	2	-	-	2
LAS.582	Endocrinology	2	-	-	
	Research*				
LAS.599	Research Project (Part – II)	-	-	36	18
	Total Credits				20

L: Lectures; T: Tutorial; P: Practical; Cr: Credits; * Compulsory courses

- A: <u>Continuous Assessment:</u> [25 Marks]
 - i. Surprise Test (minimum three) Based on Objective Type Tests (10 Marks)
 - ii. Term paper (10 Marks)
 - iii. Assignment(s) (5 Marks)
- B: <u>Pre-Scheduled Mid Semester Test-1:</u> Based on Subjective Type Test [25 Marks]
- C: Pre-Scheduled Mid Semester Test-2: Based on Subjective Type Test [25Marks]
- D: <u>End-Term Exam (Final)</u>: Based on Objective Type Tests [25 Marks]
- E: **Research Project:** Satisfactory (S) / Unsatisfactory (US) as per the current practice by CUPB

Total No. of Credits:

Semester	No. of Credits
Semester I	25
Semester II	24
Semester III	21
Semester IV	20
Total no.	90

Annexure – A

Examination Pattern

Credit Seminars: I & II

Semi	nar:	[50 Marks]	
a.	Report submission -	10 Marks	
b.	Contents -	10 Marks	
с.	Presentation skills -	10 Marks	
d.	Innovation -	10 Marks	
e.	Question & Answers -	10 Marks	
	(Interaction session)		

Annexure – B

Examination Pattern

Practicals: Lab course – I, II & III [100 Marks]

i.	Day to day performace –		60 Marks	
	a.	Attendance –	10 Marks	
	b.	Continuous assesment -	30 Marks	
	<i>c</i> .	Lab Record -	10 Marks	
	d.	Over all performance -	10 Marks	
ii.	End-seme	ester exam –	40 Marks	
	a.	Major Question -	20 Marks	
	b.	Minor Question -	10 Marks	
	С.	Viva-voce -	10 Marks	

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