

JAYPEE UNIVERSITY ANOOPSHAHR

Faculty of Science



Course Structure

B.Sc. (Zoology, Botany and Chemistry)

As per NEP 2020 based on CBCS

Academic Batch: 2022-2025

STRUCTURE OF SYLLABUS

Semester I										
S. No.	Subject Code	Course Name	L	T	P	Total	Credits	Category	University Category	
1	22H11ZO101	Cytology, Genetics and Immunology	4	0	0	4	4	Core	Core	
2	22H17ZO191	Cell Biology & Cytogenetics Lab	0	0	4	4	2	Core	Core	
3	21H11CH101	Fundamentals of Chemistry	4	0	0	4	4	Core	Core	
4	21H17CH191	Quantitative Analysis	0	0	4	4	2	Core	Core	
5	22H11BT101	Plant Pathology & Microbiology	4	0	0	4	4	Core	Core	
6	22H17BT191	Techniques in Plant Pathology & Microbiology	0	0	4	4	2	Core	Core	
7	21H11VO101	Introduction to word processing	1	0	4	5	3	Vocational	Core	
8	21H11CC101	Physical Education and Yoga*	2	0	0	2	2	Co-curricular	Co-curricular core*	
		Total	15	0	16	31	23			
Semester 2										
S. No.	Subject Code	Course Name	L	T	P	Total	Credits	Category	University Category	
1	22H11ZO201	Biochemistry and Physiology	4	0	0	4	4	Core	Core	
2	22H17ZO291	Physiological, Biochemical & Hematology Lab	0	0	4	4	2	Core	Core	
3	21H11CH201	Bioorganic and Medicinal Chemistry	4	0	0	4	4	Core	Core	
4	21H17CH291	Biochemical Analysis	0	0	4	4	2	Core	Core	
5	22H11BT201	Archegoniates & Plant Architecture	4	0	0	4	4	Core	Core	
6	22H17BT291	Land Plants Architecture	0	0	4	4	2	Core	Core	
7	21H11VO201	Workshop I	0	1	4	5	3	Vocational	Core	
8	21H11CC201	Analytic Ability and Digital Awareness*	2	0	0	2	2	Co-Curricular	Co-curricular core*	
		Total	14	1	16	31	23			

* As per UP Govt. order, student's grades based on their marks in the subjects will be marked on their mark sheets but these grades will not be considered for calculation of student's CGPA and for award of degree.

Semester 3									
S. No.	Subject Code	Course Name	L	T	P	Total	Credits	Category	University Category
1	22H11ZO301	Molecular Biology, Bioinstrumentation & Biotechniques	4	0	0	4	4	Core	Core
2	22H17ZO391	Bioinstrumentation & Molecular Biology Lab	0	0	4	4	2	Core	Core
3	21H11CH301	Chemical Dynamics & Coordination Chemistry	4	0	0	4	4	Core	Core
4	21H17CH391	Physical Analysis	0	0	4	4	2	Core	Core
5	22H11BT301	Identification of Flowering Plants & Aesthetic Characteristics	4	0	0	4	4	Core	Core
6	22H17BT391	Plant Identification technology	0	0	4	4	2	Core	Core
7	21H11VO301	Workshop II	0	1	4	5	3	Vocational	Core
8	21H11CC301	Human Values and Environment studies*	2	0	0	2	2	Co-Curricular	Co-curricular core*
Total			14	1	16	31	23		
Semester 4									
S. No.	Subject Code	Course Name	L	T	P	Total	Credits	Category	University Category
1	22H11ZO401	Gene Technology and Human Welfare	4	0	0	4	4	Core	Core
2	22H17ZO491	Genetic Engineering Lab	0	0	4	4	2	Core	Core
3	21H11CH401	Quantum Mechanics and Analytical Techniques	4	0	0	4	4	Core	Core
4	21H17CH491	Instrumental Analysis	0	0	4	4	2	Core	Core
5	22H11BT401	Ethnomedicine & Phytochemistry	4	0	0	4	4	Core	Core
6	22H17BT491	Phytochemical Analysis	0	0	4	4	2	Core	Core
7	21H11VO401	Workshop III	0	1	4	5	3	Vocational	Core
8	21H11CC401	Communication Skills and Personality Development*	2	0	0	2	2	Co-Curricular	Co-curricular core*
Total			14	1	16	31	23		

* As per UP Govt. order, student's grades based on their marks in the subjects will be marked on their mark sheets but these grades will not be considered for calculation of student's CGPA and for award of degree.

Semester 5									
S. No.	Subject Code	Course Name	L	T	P	Total	Credits	Category	University Category
1	22H11ZO501	Diversity of Non-Chordates, Parasitology and Economic Zoology	4	0	0	4	4	DSE	Elective
2	22H11ZO502	Diversity of Chordates and Comparative Anatomy	4	0	0	4	4	DSE	Elective
3	22H17ZO591	Lab on Virtual Dissection, Anatomy, Economic Zoology and Parasitology	0	0	2	2	1	DSE	Elective
4	21H11CH501	Organic Synthesis-A	4	0	0	4	4	DSE	Elective
5	21H11CH502	Rearrangements and Chemistry of Group Elements	4	0	0	4	4	DSE	Elective
6	21H17CH591	Qualitative Analysis	0	0	2	2	1	DSE	Elective
7	22H11BT501	Plant Physiology, Metabolism & Biochemistry	4	0	0	4	4	DSE	Elective
8	22H11BT502	Molecular Biology & Bioinformatics	4	0	0	4	4	DSE	Elective
9	22H17BT591	Practicals in physiology, Biochemistry & Molecular biology	0	0	2	2	1	DSE	Elective
10	22H19CH591	Project I*	0	0	6	6	3	Core	Co-curricular core*
	22H19ZO591								
	22H19BT591								
11	21H11CC501	Intellectual Property Rights and Ethics*	2	0	0	2	2	Co-Curricular	Co-curricular core*

* As per UP Govt. order, student's grades based on their marks in the subjects will be marked on their mark sheets but these grades will not be considered for calculation of student's CGPA and for award of degree.

#Total credits assigned to semester V are 23.

#Students have to opt any two subjects from the above mentioned groups, i.e., ZO, CH & BT, of 18 credits each.

Project of 3 credit have to opt any one subjects from the above mentioned groups, i.e., ZO, CH & BT (Serial No. 10)

Project and Co-Curricular paper (Serial No. 10 and 11) are mandatory.

Semester 6										
S. No.	Subject Code	Course Name	L	T	P	Total	Credits	Category	University Category	
1	22H11ZO601	Evolutionary and Developmental Biology	4	0	0	4	4	DSE	Elective	
2	22H11ZO602	Ecology, Ethology, Environmental Science and Wildlife	4	0	0	4	4	DSE	Elective	
3	22H17ZO691	Lab on Environmental Science and Behavioural Ecology, Developmental Biology, Wildlife, Ethology	0	0	2	2	1	DSE	Elective	
4	21H11CH601	Organic Synthesis-B	4	0	0	4	4	DSE	Elective	
5	21H11CH602	Chemical Energetics and Radiochemistry	4	0	0	4	4	DSE	Elective	
6	21H17CH691	Analytical Methods	0	0	2	2	1	DSE	Elective	
7	22H11BT601	Cytogenetics, Plant Breeding & Nanotechnology	4	0	0	4	4	DSE	Elective	
8	22H11BT602	Ecology & Environment	4	0	0	4	4	DSE	Elective	
9	22H17BT691	Cytogenetics, Conservation & Environment management	0	0	2	2	1	DSE	Elective	
10	22H19CH691	Project II*	0	0	6	6	3	Core	Co-curricular core*	
	21H19ZO691									
	21H19BT691									
11	21H11CC601	Indian Constitution*	2	0	0	2	2	Co-Curricular	Co-curricular core*	

#Total credits assigned to semester VI are 23.

#Students have to opt any two subjects from the above mentioned groups, i.e., ZO, CH & BT of 18 credits each.

Project of 3 credit have to opt any one subjects from the above mentioned groups, i.e., ZO, CH & BT (Serial No. 10)

Project and Co-Curricular paper (Serial No. 10 and 11) are mandatory.

***A co-curricular core course is the courses:**

- Which is mandatory for a student to pass to be eligible for the award of the degree.
- For which grades are mentioned on the grade-sheet but those grade/credits are not considered for the calculation of the CGPA and award of the degree.

As per the instructions of UP Government, there is no limit to the credits earned by a student in co-curricular course category during the degree program.

Total Credits 138 (18 credits: Qualifying courses)

Student has to earn minimum of 120 credits for the award of degree out of 138 credits.

HOD	Faculty In-charge	Dean (Academics)	Vice-Chancellor