



आईएफटीएम विश्वविद्यालय, मुरादाबाद, उत्तर प्रदेश
IFTM University, Moradabad, Uttar Pradesh
NAAC ACCREDITED

Academic Ordinance
for
Bachelor of Science (B. Sc.) Programme

(Amended with Semester Based Grading System as per NEP 2020 guidelines

&

Approved by the Academic Council in the meeting held on 25/09/2021)

2021-22

IFTM UNIVERSITY

(Established under U.P. Govt. Act No.24 of 2010 and approved under section 22 of UGC Act 1956)

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REGULATIONS

1. Short Title and Commencement

These regulations shall be called as “The Regulations for the Bachelor of Science (B. Sc.) Degree Program of the IFTM University, Moradabad under Semester based grading system as per NEP 2020 guidelines”, latest revised from the Academic Year 2021-22. The regulations framed are subject to modifications from time to time by IFTM University, Moradabad.

2. Minimum Qualification for Admission

Candidate must have passed 10 + 2 exam with Science stream with 45% (40% for SC/ ST) marks or valid MAT/ CAT score. Admission in B. Sc. programme will be based on Merit/ Entrance examination. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/ mark sheet will be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/ University will not be allowed.

Foreign National candidates, who apply through Ministry of Human Resource Development (MHRD), Government of India (GoI), are eligible to apply provided that they possess the same minimum qualification.

3. Duration of the Program

The course of study for B. Sc. shall extend over a period of six semesters (three academic years). The curricula and syllabi for the program shall be prescribed from time to time by IFTM University, Moradabad.

4. Medium of Instruction and Examinations

Medium of instruction and examination shall be in English.

5. Working Days in Each Semester

Each semester shall consist of not less than 90 working days. The odd semesters shall be conducted from the month of June/ July to November/ December and the even semesters shall be conducted from December/ January to May/ June in every calendar year.

6. Attendance and Progress

A candidate is required to maintain at least 75% attendance to appear in End-Semester/ Annual examination. However, the same can be condoned to 15% on medical grounds or for other genuine reasons beyond the control of students.

7. Program/ Course Credit Structure

As per the philosophy of Semester based grading system, certain quantum of academic work viz. theory classes, practical classes, project report, internship etc. are measured in terms of credits. On satisfactory completion of the courses, a candidate earns credits. The amount of credit associated with a course is dependent upon the number of hours of instruction per week in that course. Similarly, the credit associated with any of the other academic, co/ extra-curricular activities is dependent upon the quantum of work expected to be put in for each of these activities per week.

7A. Credits and Grade System

(a) All programmes shall have credits associated with them as per their Lecture/ Tutorial/ Practical (L-T-P) structure and shall be determined as follows:

- One lecture hour per week per semester shall be assigned one credit.
- One practical hour per week shall be assigned half credit.

However, the credits associated with every programme will be a whole number, *i.e.*, wherever the sum comes out to be in half credit on calculation following the aforesaid process, the half shall be rounded to the next whole number.

(b) The letter grades based upon the overall marks obtained in a subject will be as follows:

S. No.	Marks	Letter Grade	Grade Point
1.	> = 90	A+	10
2.	80 - 89	A	9
3.	70 - 79	B+	8
4.	60 - 69	B	7
5.	50 - 59	C+	6
6.	40 - 49	C	5
7.	35 - 39	D	4
8.	30 - 34	E	2
9.	< 30	F	0

'E' & 'F' Grade will be treated as Carry Over Paper.

In addition to the above grades, there shall be two more letter grades 'I' and 'AB' which shall stand for Incomplete and Absent Grades, respectively.

(c) Semester Grade Point Average (SGPA)

The Semester Grade Point Average (SGPA) is a weighted average of the grade points earned by a student in all the papers credited and described his/ her academic performance in a semester. If the grade points associated with the letter grades awarded to a student are $g_1, g_2, g_3, \dots, g_k$, etc. and the corresponding credits are $c_1, c_2, c_3, \dots, c_k$, the SGPA is given by :

$$SGPA = \frac{c_1g_1 + c_2g_2 + c_3g_3 + \dots + c_kg_k}{c_1 + c_2 + c_3 + \dots + c_k}$$

where, k is the number of papers for which the candidate remains registered during the semester.

(d) Cumulative Grade Point Average (CGPA)

The Cumulative Grade Point Average (CGPA) indicates the overall academic performance of a student in all the papers registered in a particular academic year. It is computed in the same manner as the SGPA, considering all (say, n) the papers, and is given by:

$$CGPA = \frac{\sum_{i=1}^n c_i g_i}{\sum_{i=1}^n c_i}$$

(e) Final CGPA

It is the weighted average of the CGPA of all years of study.

(f) Percentage equivalence of CGPA/ Final CGPA

The conversion of CGPA/ Final CGPA to exact percentage of marks does not have perfect rationale. However, its equivalent at best can be arrived at by multiplying by 10.00.

7B. Change of Grade already awarded

Letter Grade 'E' will be changed into Letter Grade 'D' up to a maximum of 03 papers at the time of promotion to the next academic year provided he/ she can be declared to have passed the academic year without any carry over paper, by changing the Grade.

8. Academic work

A regular record of attendance both in Theory and Practical shall be maintained by the teaching staff of respective courses.

9. Course of study

The course of study for B. Sc. shall include Semester-wise Theory & Sessional courses. The number of hours to be devoted to each theory, tutorial and practical course in any semester shall not be less than 40 sessions.

B.Sc. (Physics) First Year							
Semester-I							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B010101T	Mathematical Physics & Newtonian Mechanics	4	25	75	100
		B010102P	Mechanical Properties of Matter	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z010101T	Food, Nutrition and Hygiene	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-II							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B010201T	Thermal Physics & Semiconductor Devices	4	25	75	100
		B010202P -	Thermal Properties of Matter & Electronic Circuits	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z020201T	First Aid and Health	2	25	75	100
Min.- Max. Credits of the semester				23-29			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				(50-52) {46} [4] Certificate in Basic Physics & Semiconductor Devices			

B.Sc. (Physics) Second Year							
Semester-III							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B010301T	Electromagnetic Theory & Communication Systems	4	25	75	100
		B010302P	Demonstrative Aspects of Electricity & Magnetism	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z030301T	Human values and Environmental Studies	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-IV							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B020401T	Quantum Mechanics and Analytical Techniques	4	25	75	100
		B020402P	Instrumental Analysis	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z040401T	Physical Education and Yoga	2	25	75	100
Min.- Max. Credits of the semester				23-29 (50-52)			
(Min.-Max Total Credits) After completion [Minimum Credits] [Max Duration in years]				(100-104) {92}[7] Diploma in Applied Physics with Electronics			

B.Sc. (Physics) Third Year							
Semester-V							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B010501T	Classical & Statistical Mechanics	4	25	75	100
		B010502T	Digital Electronics & Microprocessor	4	25	75	100
		B010503P	Digital Electronics Instrumentation	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory + Theory	5+5	25	75	100
		Option 2	Theory + Theory	4+4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040504R	*Project-I	3	25	75	100
4.	Co-Curricular Course	Z050501	Analytic Ability and Digital Awareness	2	25	75	100
Min.- Max. Credits of the semester				25			
Semester-VI							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B010601T	Quantum Physics & Spectroscopy	4	25	75	100
		B010602T	Solid State & Nuclear Physics	4	25	75	100
		B010603P	Exploration of Communication Systems	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory + Theory	5+5	25	75	100
		Option 2	Theory + Theory	4+4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040604R	*Project-II	3	25	75	100
4.	Co-Curricular Course	Z060601	Communication Skills and Personality Development	2	25	75	100
Min.- Max. Credits of the semester				25 (50)			
(Min.-Max Total Credits) After completion [Minimum Credits] [Max Duration in years]				((150-154){138} [10] Bachelor of Science (Physics)			

B.Sc. (Chemistry) First Year							
Semester-I							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
7.	Subject-1 (Major) From own Faculty	B020101T	Fundamentals of Chemistry	4	25	75	100
		B020102P	Quantitative Analysis	2	25	75	100
8.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
9.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
10.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
11.	Vocational (Minor)			3	25	75	100
12.	Co-Curricular Course	Z010101T	Food, Nutrition and Hygiene	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-II							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
7.	Subject-1 (Major) From own Faculty	B020201T	Bioorganic and Medicinal Chemistry	4	25	75	100
		B020202P	Biochemical Analysis	2	25	75	100
8.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
9.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
10.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
11.	Vocational (Minor)			3	25	75	100
12.	Co-Curricular Course	Z020201T	First Aid and Health	2	25	75	100
Min.- Max. Credits of the semester				23-29			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				(50-52) {46} [4] Certificate in Bioorganic and Medicinal Chemistry			

B.Sc. (Chemistry) Second Year							
Semester-III							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B020301T	Chemical Dynamics & Coordination Chemistry	4	25	75	100
		B020302P	Physical Analysis	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z030301T	Human values and Environmental Studies	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-IV							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B020401T	Quantum Mechanics and Analytical Techniques	4	25	75	100
		B020402P	Instrumental Analysis	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z040401T	Physical Education and Yoga	2	25	75	100
Min.- Max. Credits of the semester				23-29 (50-52)			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				(100-104) {92}[7] Diploma in Chemical Dynamics and Analytical Techniques			

B.Sc. (Chemistry) Third Year							
Semester-V							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B020501T	Organic Synthesis-A	4	25	75	100
		B020502T	Rearrangements and Chemistry of Group Elements	4	25	75	100
		B020503P	Qualitative Analysis	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory + Theory	5+5	25	75	100
		Option 2	Theory + Theory	4+4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040504R	*Project-I	3	25	75	100
4.	Co-Curricular Course	Z050501	Analytic Ability and Digital Awareness	2	25	75	100
Min.- Max. Credits of the semester				25			
Semester-VI							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B020601T	Organic Synthesis-B	4	25	75	100
		B020602T	Chemical Energetics and Radiochemistry	4	25	75	100
		B020603P	Analytical Methods	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory + Theory	5+5	25	75	100
		Option 2	Theory + Theory	4+4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040604R	*Project-II	3	25	75	100
4.	Co-Curricular Course	Z060601	Communication Skills and Personality Development	2	25	75	100
Min.- Max. Credits of the semester				25 (50)			
(Min.-Max Total Credits) After completion [Minimum Credits] [Max Duration in years]				((150-154){138} [10] Bachelor of Science (Chemistry)			

B.Sc. (Mathematics) First Year							
Semester-I							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
13.	Subject-1 (Major) From own Faculty	B030101T	Differential Calculus & Integral Calculus	4	25	75	100
		B030102P	Practical	2	25	75	100
14.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
15.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
16.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
17.	Vocational (Minor)			3	25	75	100
18.	Co-Curricular Course	Z010101T	Food, Nutrition and Hygiene	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-II							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
13.	Subject-1 (Major) From own Faculty	B030201T	Matrices and Differential Equations & Geometry	6	25	75	100
14.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory	4	25	75	100
	Practical		2	25	75	100	
15.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory	4	25	75	100
	Practical		2	25	75	100	
16.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
17.	Vocational (Minor)			3	25	75	100
18.	Co-Curricular Course	Z020201T	First Aid and Health	2	25	75	100
Min.- Max. Credits of the semester				23-29			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				(50-52) {46} [4] Certificate in Applied Mathematics			

B.Sc. (Mathematics) Second Year							
Semester-III							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B030301T	Algebra & Mathematical Methods	6	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory	4	25	75	100
			Practical	2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory	4	25	75	100
			Practical	2	25	75	100
4.	Subject IV (Minor/Elective)		Theory/ Practical	(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z030301	Human Values and Environment studies	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-IV							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B030401T	Differential Equations & Mechanics	6	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory	4	25	75	100
			Practical	2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory	4	25	75	100
			Practical	2	25	75	100
4.	Subject IV (Minor/Elective)		Theory/ Practical	(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z040401	Physical Education and Yoga	2	25	75	100
Min.- Max. Credits of the semester				23-29 (50-52)			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				(100-104) {92}[7] Diploma in Mathematics			

B.Sc. (Mathematics) Third Year							
Semester-V							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B030501T	Group and Ring Theory & Linear Algebra	5	25	75	100
		B030502T	Number Theory and Cryptography & Discrete Mathematics	5	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	5	25	75	100
			Theory	5	25	75	100
		Option 2	Theory	4	25	75	100
			Theory	4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040504R	*Project-I	3	25	75	100
4.	Co-Curricular Course	Z050501	Analytic Ability and Digital Awareness	2	25	75	100
Min.- Max. Credits of the semester				25			
Semester-VI							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B030601T	Metric Spaces & Complex Analysis	4	25	75	100
		B030602T	Numerical Analysis & Operation Research	4	25	75	100
		B030603P	Practical	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	5	25	75	100
			Theory	5	25	75	100
		Option 2	Theory	4	25	75	100
			Theory	4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040604R	*Project-II	3	25	75	100
4.	Co-Curricular Course	Z060601	Communication Skills and Personality Development	2	25	75	100
Min.- Max. Credits of the semester				25 (50)			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				((150-154){138} [10] Bachelor of Science (Mathematics)			

B.Sc. (Botany) First Year							
Semester-I							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
19.	Subject-1 (Major) From own Faculty	B040101T	Microbiology & Plant Pathology	4	25	75	100
		B040102P	Techniques in Microbiology & Plant Pathology	2	25	75	100
20.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
21.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
22.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
23.	Vocational (Minor)			3	25	75	100
24.	Co-Curricular Course	Z010101T	Food, Nutrition and Hygiene	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-II							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
19.	Subject-1 (Major) From own Faculty	B040201T	Archegoniatas & Plant Architecture	4	25	75	100
		B040202P	Land Plants Architecture	2	25	75	100
20.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
21.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
22.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
23.	Vocational (Minor)			3	25	75	100
24.	Co-Curricular Course	Z020201T	First Aid and Health	2	25	75	100
Min.- Max. Credits of the semester				23-29			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				(50-52) {46} [4] Certificate in Microbial Technology & Applied Botany			

B.Sc. (Botany) Second Year							
Semester-III							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B040301T	Flowering Plants Identification & Aesthetic Characteristics	4	25	75	100
		B040302P	Plant Identification technology	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z030301T	Human values and Environmental Studies	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-IV							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B040401T	Economic Botany, Ethnomedicine&Phytoc hemistry	4	25	75	100
		B040402P	Commercial Botany &Phytochemical Analysis	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z040401T	Physical Education and Yoga	2	25	75	100
Min.- Max. Credits of the semester				23-29 (50-52)			
(Min.-Max Total Credits) After completion [Min. Duration in years]				(100-104) {92}[7] Diploma in Plant Identification, Utilization &Ethnomedicine			

B.Sc. (Botany) Third Year							
Semester-V							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B040501T	Plant Physiology, Metabolism & Biochemistry	4	25	75	100
		B040502T	Molecular Biology & Bioinformatics	4	25	75	100
		B040503P	Experiments in physiology, Biochemistry & molecular biology	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory + Theory	5+5	25	75	100
		Option 2	Theory + Theory	4+4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040504R	*Project-I	3	25	75	100
4.	Co-Curricular Course	Z050501	Analytic Ability and Digital Awareness	2	25	75	100
Min.- Max. Credits of the semester				25			
Semester-VI							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B040601T	Cytogenetics, Plant Breeding & Nanotechnology	4	25	75	100
		B040602T	Ecology & Environment	4	25	75	100
		B040603P	Cytogenetics, Conservation & Environment Management	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory + Theory	5+5	25	75	100
		Option 2	Theory + Theory	4+4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040604R	*Project-II	3	25	75	100
4.	Co-Curricular Course	Z060601	Communication Skills and Personality Development	2	25	75	100
Min.- Max. Credits of the semester				25 (50)			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				((150-154){138} [10] Bachelor of Science (Botany)			

B.Sc. (Zoology) First Year							
Semester-I							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
25.	Subject-1 (Major) From own Faculty	B050101T	Cytology, Genetics and Immunology	4	25	75	100
		B050102P	Cell Biology and Cytogenetics Lab	2	25	75	100
26.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
27.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
28.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
29.	Vocational (Minor)			3	25	75	100
30.	Co-Curricular Course	Z010101T	Food, Nutrition and Hygiene	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-II							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
25.	Subject-1 (Major) From own Faculty	B050201T	Biochemistry and Physiology	4	25	75	100
		B050202P	Physiological, Biochemical & Hematology Lab	2	25	75	100
26.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
27.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
28.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
29.	Vocational (Minor)			3	25	75	100
30.	Co-Curricular Course	Z020201T	First Aid and Health	2	25	75	100
Min.- Max. Credits of the semester				23-29			
(Min.-Max Total Credits) After completion [Minimum Credits] [Max Duration in years]				{50-52} {46} [4] Certificate in Medical Diagnostics & Public Health			

B.Sc. (Zoology) Second Year							
Semester-III							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B050301T	Molecular Biology, Bioinstrumentation & Biotechniques	4	25	75	100
		B050302P	Bioinstrumentation & Molecular Biology Lab	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z030301T	Human values and Environmental Studies	2	25	75	100
Min.- Max. Credits of the semester				23-29			
Semester-IV							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject Description Subject-1 (Major) From own Faculty	B050401T	Gene Technology and Human Welfare	4	25	75	100
		B050402P	Genetic Engineering Lab, Genetic Counselling & Telemedicine	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
3.	Subject-3 (Major) From own Faculty or any other Department/Faculty	Option 1	Theory	6	25	75	100
		Option 2	Theory + Practical	4+2	25	75	100
4.	Subject IV (Minor/Elective)			(4/5/6)	25	75	100
5.	Vocational (Minor)			3	25	75	100
6.	Co-Curricular Course	Z040401T	Physical Education and Yoga	2	25	75	100
Min.- Max. Credits of the semester				23-29 (50-52)			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				(100-104) {92}[7] Diploma in Molecular Diagnostics and Genetic Counselling			

B.Sc. (Zoology) Third Year							
Semester-V							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B050501T	Diversity of Non-Chordates, Parasitology and Economic Zoology	4	25	75	100
		B050502T	Diversity of Chordates and Comparative Anatomy	4	25	75	100
		B050503P	Lab on Virtual Dissection, Anatomy, Economic Zoology and Parasitology	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory + Theory	5+5	25	75	100
		Option 2	Theory + Theory	4+4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040504R	*Project-I	3	25	75	100
4.	Co-Curricular Course	Z050501	Analytic Ability and Digital Awareness	2	25	75	100
Min.- Max. Credits of the semester				25			
Semester-VI							
S. No.	Subject Description	Subject Code	Subject Title (Theory/ Practical)	Credit	Continuous Internal Evaluation (CIE)	University Exam. (UE)	Max. Marks
1.	Subject-1 (Major) From own Faculty	B050601T	Evolutionary and Developmental Biology	4	25	75	100
		B050602T	Ecology, Ethology, Environmental Science and Wildlife	4	25	75	100
		B050603P	Lab on Environmental Science, Behavioral Ecology, Developmental Biology, Wildlife, Ethology	2	25	75	100
2.	Subject-2 (Major) From own Faculty	Option 1	Theory + Theory	5+5	25	75	100
		Option 2	Theory + Theory	4+4	25	75	100
			Practical	2	25	75	100
3.	Inter/Intra Faculty related to main subject (inside campus)	B040604R	*Project-II	3	25	75	100
4.	Co-Curricular Course	Z060601	Communication Skills and Personality Development	2	25	75	100
Min.- Max. Credits of the semester				25 (50)			
(Min.-Max Total Credits) After completion {Minimum Credits} [Max Duration in years]				((150-154){138} [10] Bachelor of Science (Zoology)			

10. Examinations/ Assessments

10A. Internal/ Sessional Examination

- (a) The minimum Grade required to pass in each Theory & Practical paper is 'GRADE D'.
- (b) A candidate, in order to pass must satisfy the requirement of Minimum CGPA of 4.50 in a particular academic year inclusive of both semesters of that academic year subject to conditions of clause 10D.
- (c) In case of audit/ qualifying paper the minimum Grade required to pass is Grade D. However, the Grade obtained in audit paper shall not be included in SGPA.

10B. End-Semester Examination

There will be two End Semester Examinations in all theory and project subjects viz. Odd (I, III, V) Semester Examination and Even (II, IV, VI) Semester Examination in an academic year.

10C. Carry Forward of Marks

In case, if a student gets the back in a course/ paper, the sessional marks of the subject concerned will be carried forward in the total of marks when he re-appears for the examination of the course in which he/ she has got the back.

10D. Heads of Passing

- (a) The minimum passing marks in each theory subject (including Internal/ Sessional marks) will be 35%.
- (b) The minimum passing marks in each comprehensive viva/ project/ practical will be 50%.
- (c) A student, in order to pass must satisfy the following:
Minimum 45% marks in aggregate of a particular academic year inclusive of both semesters of that academic year subject to the conditions of the clause 7B.

10E. Carry Over System

Maximum number of carry over papers (Theory/ viva/ project) permissible for promotion to next year will be 05.

10F. Promotion

- (a) A candidate satisfying all the requirements under clause 10A shall be promoted to the next academic year of study.
- (b) A candidate shall be eligible for provisional promotion with carryover (PCP status) to the next academic year of study provided he/ she fails to satisfy the requirements of clause 10A (a) in not more than permissible carry over paper as mentioned in clause 10D.

- (c) If a candidate satisfies the requirement of clause 10A (a) but fails to satisfy the requirement of 10A (b) he/ she shall be eligible for provisional promotion with carryover [PCP-A (aggregate) status]. He/ she may choose up to a maximum of any 04 theory papers of that particular academic year as per his/her choice to pass the examination of that.

10G. Ex-studentship

A candidate opting for ex-studentship shall be required to appear in all the theory/ practical/ viva papers in the end semester examinations of both semesters/ annual examination of the same academic year. However, the sessional marks of theory & practical both shall remain the same as those secured earlier. The maximum duration of course completion is six years.

11. Evaluation of Performance

(a) **Programmes:** Evaluation of performance of the students in a programme shall be a continuous process based on their performance in the class test, quizzes, assignments and the end semester examinations.

Continuous Internal Evaluation (CIE)

- Continuous Internal Evaluation will be performed by the teacher concerned.
- It is proposed that CIE be kept at present, at 25% of total assessment in a theory paper.
- It can be increased in steps upto 50% over a period of time.
- The practical papers in all semesters will have 25% CIE and 75% UE, conducted at the end of the semester by one internal examiner and one external examiner appointed by the University.

Marking System

- All papers will be of total maximum marks 100 including both CIE and University Examination (UE).
- Maximum marks 25 will be allotted to CIE and 75 to UE in a theory paper and Research project.
- The practical papers in all semesters will have maximum marks 25 in CIE and maximum marks 75 in UE, conducted at the end of the Semester by one internal examiner and one external examiner appointed by the University, including viva-vice of 25 marks.

(b) Summer Training, Project Report, Seminar etc.

Summer Training, Project Report, Seminar, and other learning oriented activities shall have associated maximum marks and credits, as stated in the syllabus.

<i>Evaluation Scheme</i>			
	<i>Internal</i>	<i>External</i>	<i>Total</i>
<i>Theory</i>	25	75	100
<i>Practical Evaluation and Viva-Voce</i>	25	75	100
<i>Project Report Evaluation and Viva-Voce</i>	25	75	100

Question paper pattern for End-semester Examinations

- I. Multiple Choice Questions (MCQs) = 25 x 1 = 25
 II. Long Answers (Answer 5 out of 10) = 5 x 10 = 50
 (Internal Choice questions)

Total Marks = 75

Question paper pattern for Internal/ Sessional Examinations

- I. Class Test (Best of 2) = 10
 II. Quizzes/ Multiple Choice Questions = 05
 III. Attendance/ Presentation = 05
 IV. Assignment = 05

Total Marks = 25

12. Award of Division

- (a) The division shall be awarded on the basis of final year result.
 (b) If a student passes all examinations and secure minimum Final CGPA 4.50 to 5.99, he/ she shall be eligible for the award of SECOND DIVISION.
 (c) If a student passes all examinations and secure minimum Final CGPA 6.00 to 7.49, he/ she shall be eligible for the award of FIRST DIVISION.
 (d) If a student passes all examinations in first attempt without change of Grade and secure minimum Final CGPA 7.50 & above, he/ she shall be eligible for the award of FIRST DIVISION WITH HONOURS.

13. Scrutiny and Re-evaluation

- (a) Scrutiny shall be allowed in only theory papers, in which Re-totaling of the marks awarded will be done and only unchecked answers (if any) will be evaluated.
 (b) Re-evaluation of theory/ practical papers is not permitted.

14. Unfair Means

Cases of unfair means shall be dealt as per the rules of the University.

15. Result

- (a) The result of a candidate shall be declared on the basis of the performance of both semesters of the same academic year.
- (b) Result of the final year shall be declared on the basis of working out Final CGPA which is the weighted average of CGPA of all years of the study.

16. Improvement

There shall be no provision of Improvement examination in all the courses running in the University.

17. Grade Card

- (a) A copy of the Grade Card shall be issued to each student at the end of each academic year. The duplicate copy, if required can be obtained on payment of prescribed fee.
- (b) The Grade Report Card of a student may be withheld if he/ she has not paid his/ her dues or if there is a case of indiscipline pending against him/ her or for any other such reasons.

18. Re-Admission

A candidate may be allowed for re-admission provided he/ she satisfies one of the following conditions:

- (a) A candidate is declared fail.
- (b) A candidate promoted with carry over papers and opts for re-admission.