

**INDIRA GANDHI UNIVERSITY, MEERPUR, REWARI**  
(A State University Established under Haryana Act No. 29 of 2013) Recognized u/s  
12 (b) & 2(f) of UGC Act, 1956



**Scheme and Syllabus of Examination (As per NEP 2020)**  
**For**  
**M.Sc. Biotechnology**

**Curriculum and Credit Framework for Postgraduate Programme with  
Multiple Entry-Exit, Internship and CBCS-LOCF with effect from the session 2026-27  
(in phased manner)**

**DEPARTMENT OF BIOTECHNOLOGY**  
**(FACULTY OF LIFE SCIENCES)**

<b>Approved by:</b>	<b>Discussed in DC Meeting</b>	<b>BOS</b>	<b>Academic Council</b>
Approval Status:	√	√	√
Approval Date:	23.06.2022	24.09.2022	09.12.2022
Modified Date:	02.01.2026	15.01.2026	

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## Indira Gandhi University, Meerpur, Rewari

### Department of Biotechnology

Scheme of the Examination for Post-Graduate Programme As per NEP-2020 w.e.f. 2026-2027 Batch (in phased manner) \\  
Framework-2 (Scheme P)

### Semester I

**Total Credit-26**

**Total Marks - 650**

Course Type	Course Code	Nomenclature of Course	Theory (T) / Practical (P)	Credits		Contact hours per week				Marks			Examination hours
				Course	Total	L	T	P	Total	Internal Assessment	End Term Examination	Total	
CC-1	24L6.0-BTY-101	Cell and Molecular Biology	T	4	26	4	0	0	4	30	70	100	3
CC-2	24L6.0-BTY-102	Biomolecules and Metabolism	T	4		4	0	0	4	30	70	100	3
CC-3	24L6.0-BTY-103	Tools and Techniques in Biotechnology	T	4		4	0	0	4	30	70	100	3
CC-4	24L6.0-BTY-104	Microbiology	T	4		4	0	0	4	30	70	100	3
PC-1	24L6.0-BTY-105	Lab Course-I (Based on CC1 & CC2)	P	4		0	0	8	8	30	70	100	4
PC-2	24L6.0-BTY-106	Lab Course-II (Based on CC3 & CC4)	P	4		0	0	8	8	30	70	100	4
SEMINAR	24L6.0-BTY-107	Seminar	S	2		0	0	0	2	0	50	50	1

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15/01/2026

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# Indira Gandhi University, Meerpur, Rewari

## Department of Biotechnology

Scheme of the Examination for Post-Graduate Programme As per NEP-2020 w.e.f. 2026-2027 Batch (in phased manner)

### Framework-2 (Scheme P)

#### Semester II

**Total Credit-26**

**Total Marks - 650**

Course Type	Course Code	Nomenclature of Course	Theory (T) / Practical (P)	Credits		Contact hours per week				Marks			Examination hours
				Course	Total	L	T	P	Total	Internal Assessment	End Term Examination	Total	
CC-5	24L6.0-BTY-201	Immunology	T	4	26	4	0	0	4	30	70	100	3
CC-6	24L6.0-BTY-202	Fundamental of Data Analysis	T	4		4	0	0	4	30	70	100	3
CC-7	24L6.0-BTY-203	Genetic Engineering	T	4		4	0	0	4	30	70	100	3
CC-8	24L6.0-BTY-204	Virology	T	4		4	0	0	4	30	70	100	3
PC-3	24L6.0-BTY-205	Lab Course-III (Based on CC5 & CC8)	P	4		0	0	8	8	30	70	100	4
PC-4	24L6.0-BTY-206	Lab Course-IV (Based on CC6 & CC7)	P	4		0	0	8	8	30	70	100	4
*CHM	24L6.0-BTY-207	Constitutional, Human and Moral values, and IPR	T	2		2	0	0	2	15	35	50	2
Internship	M24-INT-200	An internship course of 4 Credits of 4-6 weeks duration during summer vacation after II <sup>nd</sup> semester is to be completed by every student. Internship can be either for enhancing the employability or for developing the research aptitude.							50	50	100		

**Note:** 1. If a student takes exit after the successful completion of first two semesters after earning 56 Credits, then a **Post Graduate Diploma in Subject** will be awarded to that candidate.

2. \*One course of 2 Credits on Constitutional, Human and Moral values and IPR (CHM) will be compulsory for all the PG programmes.

Approved  
15/07/2026

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# Indira Gandhi University, Meerpur, Rewari

## Department of Biotechnology

### Scheme of the Examination for Post-Graduate Programme

As per NEP-2020 w.e.f. 2026-2027 Batch (in phased manner)

#### Framework-2 (Scheme P)

### Semester III

**Total Credit-26**

**Total Marks - 650**

Course Type	Course Code	Nomenclature of Course	Theory (T) / Practical (P)	Credits		Contact hours per week				Marks			Examination hours
				Course	Total	L	T	P	Total	Internal Assessment	End Term Examination	Total	
CC-9	24L6.5-BTY-301	Animal Biotechnology	T	4	26	4	0	0	4	30	70	100	3
CC-10	24L6.5-BTY-302	Molecular Diagnostics	T	4		4	0	0	4	30	70	100	3
DEC-1 Any one	24L6.5-BTY-303	Plant Cell and Tissue Culture	T	4		4	0	0	4	30	70	100	3
	24L6.5-BTY-304	Bioinformatics	T	4		4	0	0	4	30	70	100	3
DEC-2 Any one	24L6.5-BTY-305	Bioprocess Technology	T	4		4	0	0	4	30	70	100	3
	24L6.5-BTY-306	Food Biotechnology	T	4		4	0	0	4	30	70	100	3
PC-5	24L6.5-BTY-307	Lab Course-V (Based on CC-9 & CC-10)	P	4		0	0	8	8	30	70	100	4
PC-6	24L6.5-BTY-308	Lab Course-VI (Based on DEC-1 & DEC-2)	P	4		0	0	8	8	30	70	100	4
OEC*	24L6.5-BTY-309	Biology of Infectious Disease	T	2		2	0	0	2	15	35	50	2

OEC\* offered by Dept. of Biotechnology, and to be chosen by students of other departments only.

Note: OEC course by Biotechnology students will be opted from the pool of OEC courses offered by other departments.

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## Indira Gandhi University, Meerpur, Rewari

### Department of Biotechnology

Scheme of the Examination for Post-Graduate Programme As per NEP-2020 w.e.f. 2026-2027 Batch (in phased manner)

#### Framework-2 (Scheme P)

### Semester IV (With Dissertation)

**Total Credit-26**

**Total Marks - 650**

Course Type	Course Code	Nomenclature of Course	Theory (T) / Practical (P)	Credits		Contact hours per week				Marks			Examination hours
				Course	Total	L	T	P	Total	Internal Assessment	End Term Examination	Total	
DEC-3* Anyone	24L6.5-BTY-401	Molecular Genetics	T	4	26	4	0	0	4	30	70	100	3
	24L6.5-BTY-402	Biosafety, Bioethics and IPR in Biotechnology	T	4		4	0	0	4	30	70	100	3
DEC-4* Anyone	24L6.5-BTY-403	Drug Designing and Pharmacogenomics	T	4		4	0	0	4	30	70	100	3
	24L6.5-BTY-404	Regenerative Medicine and Stem Cells	T	4		4	0	0	4	30	70	100	3
DEC-5* Anyone	24L6.5-BTY-405	Enzyme Technology	T	4		4	0	0	4	30	70	100	3
	24L6.5-BTY-406	Plant Biotechnology	T	4		4	0	0	4	30	70	100	3
EEC	24L6.5-BTY-407	Research Ethics	T	2		2	0	0	2	15	35	50	2
Dissertation	24L6.5-BTY-408	Dissertation	D	12		0	0	0	-	100	200	300	-

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18/07/2026

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### Semester IV (Without Dissertation)

CC 11	24L6.5-BTY-409	Plant Biotechnology	T	4	4	0	0	4	30	70	100	3
CC12	24L6.5-BTY-410	Nano & Environmental Biotechnology	T	4	4	0	0	4	30	70	100	3
DEC-3*	24L6.5-BTY-401	Molecular Genetics	T	4	4	0	0	4	30	70	100	3
Anyone	24L6.5-BTY-402	Biosafety, Bioethics and IPR in Biotechnology	T	4	4	0	0	4	30	70	100	3
DEC-4*	24L6.5-BTY-403	Drug Designing and Pharmacogenomics	T	4	4	0	0	4	30	70	100	3
Anyone	24L6.5-BTY-404	Regenerative Medicine and Stem Cells	T	4	4	0	0	4	30	70	100	3
PC-7	24L6.5-BTY-411	Lab Course-VII (Based on CC-11 & CC-12)	P	4	0	0	8	8	30	70	100	4
PC-8	24L6.5-BTY-412	Lab Course-VIII (Based on DEC-3 & DEC-4)	P	4	0	0	8	8	30	70	100	4
EEC	24L6.5-BTY-407	Research Ethics	T	2	2	0	0	2	15	35	50	2
<b>Grand Total</b>				<b>Credits-108</b>				<b>Marks-2700</b>				

**Note:**

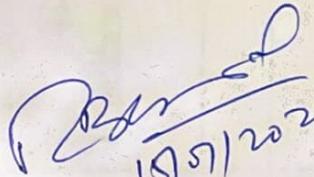
- \*Students can opt up to 40% of total elective courses (**up to 3 any courses available at that time**) mentioned in the Scheme (relevant to Biotechnology with four credit) available on SWAYAM/NPTEL/MOOCs Portal, or other online portal recognized by the UGC and the University.
- A student will be awarded with **Master Degree in the Subject** after successful completion of 2 year PG Programme by earning 108 Credits.  
OR
- A student will be awarded with **Master Degree in the Subject** after successful completion of 1 year PG Programme by earning 52 Credits, in the case of lateral entry after 4 year UG Programme with Honours/ Honours with Research/ one year PG Diploma in the Subject

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## Abbreviations: -

L	:	Lecture
P	:	Practical
T	:	Tutorial
CC	:	Core Course
PC	:	Practicum Courses
DEC	:	Discipline Centric Elective Course
EEC	:	Employability & Entrepreneurship Skills Course
CHM	:	Constitutional, Human and Moral values, and IPR
OEC	:	Open Elective Course

  
19/01/2026



## REFERENCES

- National Education Policy-2020.  
[https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf)
- The draft subject specific LOCF templates available on UGC website.  
[https://www.ugc.ac.in/ugc\\_notices.aspx?id=MjY5OQ==](https://www.ugc.ac.in/ugc_notices.aspx?id=MjY5OQ==)

## APPENDICES

- Curricular Reforms — Extracts from National Education Policy-2020 The draft subject specific LOCF templates available on UGC website.  
[https://www.ugc.ac.in/ugc\\_notices.aspx?id=MjY5OQ==](https://www.ugc.ac.in/ugc_notices.aspx?id=MjY5OQ==)

  
19/07/2026

