

Programme structure

Total Credits: 210

Structure of the curriculum

Course category	No of courses	Credits per course	Total Credits
I. Core courses	53	3	159
II. Core courses	3	2	6
III. Core courses	2	4	8
IV. Core courses	1	1	1
V. Elective courses	3	3	9
VI. Elective courses	1	4	4
VII. Project	1	8	08
VIII. Project	1	15	15
Total credits	65		210

1. SEMESTER-WISE SCHEDULE

SEMESTER I

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 101: Biology Major I (Biodiversity (Microbes, Algae, Fungi and Archegoniate)	3	0	0	3	3
	LI 103: Biology Major I Lab	0	0	3	6	3
	PI 101: Physics I	3	0	0	3	3
	CI 101: Chemistry I	3	0	0	3	3
	MI 101: Mathematics I	3	0	0	3	3
	PI 197: Physics I Lab	0	0	3	6	3
	EG 101: Communicative English	3	0	0	3	3

SEMESTER 2

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 102: Biology Major II (Animal Diversity)	3	0	0	3	3
	LI 104: Biology Major II Lab	0	0	3	6	3
	PI 102: Physics II	3	0	0	3	3
	CI 102: Chemistry II	3	0	0	3	3

	MI 102: Mathematics II	3	0	0	3	3
	CI 107: Chemistry I Lab	0	0	3	6	3
	ES 103: Environmental Studies	3	1	0	4	4

SEMESTER 3

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 201: Plant Ecology and Taxonomy	3	0	0	3	3
	LI 203: Comparative anatomy of vertebrates	3	0	0	3	3
	LI 205: Plant Anatomy and Embryology	3	0	0	3	3
	LI 207: Biology Major III Lab (Anatomy: Plant and animal)	0	0	3	6	3
	LI 209: Introduction to computing	3	0	0	3	3
	PI 201: Physics III	3	0	0	3	3
	CI 201: Chemistry III	3	0	0	3	3
	NS 201: NSS	2	0	0	2	2

SEMESTER 4

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 202: Genetics and Evolutionary Biology	3	0	0	3	3
	LI 204: Microbiology	3	0	0	3	3
	LI 206: Cell Biology-I	3	0	0	3	3
	LI 208: Biochemistry I	3	0	0	3	3
	LI 210: Biology Lab-IV (Biochemistry)	0	0	3	6	3
	LI 212: Biology lab V (Cell Biology)	0	0	3	6	3
	LI 214: Seminar	0	1	0	2	1
	DM 101: Disaster Management	3	0	0	3	3

SEMESTER 5

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 301: Plant Physiology	3	0	0	3	3

	LI 303: Animal Physiology	3	0	0	3	3
	LI 305: Basic Bioinformatics	2	0	1	4	3
	LI 307: Molecular Biology	3	0	0	3	3
	LI 309: Biology lab VI (Physiology)	0	0	3	6	3
	LI 311: Biology lab VII (Molecular Biology)	0	0	3	6	3
	LI 313: Public Health and Hygiene	0	0	3	6	3

SEMESTER 6

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 302: Immunology I	3	0	0	3	3
	LI 304: Biocomputing & Biostatistics	2	0	1	4	3
	LI 306: Developmental Biology	3	0	0	3	3
	LI 308: Analytical Techniques	3	1	0	4	4
Project	LI 310: Mini Project	0	0	8	16	8

SEMESTER 7

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 401: Biochemistry – II	3	0	0	3	3
	LI 403: Molecular Genetics	3	0	0	3	3
	LI 405: Immunology II	3	0	0	3	3
	LI 407: Biological Database Management System	3	0	0	3	3
	LI 409: Cell Biology II	3	0	0	3	3
	LI 411: Biology Lab VIII (Biochemistry)	0	0	3	6	3
	LI 413: Biology Lab –IX (Immunology)	0	0	3	6	3

SEMESTER 8

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 402: Biophysics & Structural Biology	3	0	0	3	3
	LI 404: Genetic Engineering	3	0	0	3	3

	LI 412: Biology Lab X (Genetic Engineering)	0	0	3	6	3
	LI 406: Applied Microbiology and Bioprocess engineering	3	0	0	3	3
	LI 408: Computational Biology	2	0	1	4	3
	LI 410: Cell & Tissue culture	3	0	0	3	3
	LI 414: Biology Lab XI (Applied Microbiology)	0	0	3	6	3

SEMESTER 9

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Core	LI 501: Genomics & Proteomics	3	0	0	3	3
	LI 503: Bioinformatic softwares & algorithm	3	0	0	3	3
	LI 505: Lab on advanced programming	0	0	2	4	2
	LI 507 : Biosafety and IPR	2	0	0	2	2
Elective	LI 509: Plant Biotechnology/ LI 515: Animal Biotechnology	3	0	0	3	3
	LI 511: Economic Botany/ LI 517: Economic Zoology	3	0	0	3	3
	LI 513 Biology Lab XII (Plant Sciences)/ LI 519: Biology Lab XII (Animal Science)	0	0	4	8	4

SEMESTER 10

Course type	Course title	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hour(CH)	Credits
Elective	LI 522: Evolutionary Biology	3	0	0	3	3
	LI 524: Ethnomedicine & Herbal Technology					
	LI 526: Plant metabolism & secondary metabolites					
	LI 528: System Biology					
	LI 530: Wild life & Animal Behavior					
	LI 532: Fish Biology					
	LI 534: Cancer Biology					
	LI 536: Psychoneuroimmunology					
	LI 538: Insect vector and Diseases					
	LI 540: Immunotechnology					
	LI 542: Computer aided drug designing					
Project	LI 502: Project - I	0	0	15	30	15

2. Mapping: Program Educational Objectives (PEOs) and Program Outcomes (POs)

Course title	PO1	PO2	PO3	PO4	PO5
LI 101: Biology Major I (Biodiversity (Microbes, Algae, Fungi and Archegoniate)	X	X	X	-	-
LI 103: Biology Major I Lab	X	X	X	X	-
PI 101: Physics I	X	X	X	-	-
CI 101: Chemistry I	X	X	X	-	-
MI 101: Mathematics I	X	X	X	X	-
PI 197: Physics I Lab	X	X	X	X	-
EG 101: Communicative English	-	-	-	X	X
LI 102: Biology Major II (Animal Diversity)	X	X	X	-	-
LI 104: Biology Major II Lab	X	X	X	X	-
PI 102: Physics II	X	X	X	-	-
CI 102: Chemistry II	X	X	X	-	-
MI 102: Mathematics II	X	X	X	-	-
CI 106: Chemistry I Lab	X	X	X	-	-
ES 103: Environmental Studies	X	X	X	-	-
LI 201: Plant Ecology and Taxonomy	X	X	X	-	-
LI 203: Comparative anatomy of vertebrates	X	X	X	-	-
LI 205: Plant Anatomy and Embryology	X	X	X	-	-
LI 207: Biology Major III Lab (Anatomy: Plant and animal)	X	X	X	X	-
LI 209: Introduction to computing	X	X	X	-	-
PI 201: Physics III	X	X	X	-	-
CI 201: Chemistry III	X	X	X	-	-
NS 201: NSS	-	-	-	X	X
LI 202: Genetics and Evolutionary Biology	X	X	X	-	-
LI 204: Microbiology	X	X	X	-	-
LI 206: Cell Biology-I	X	X	X	-	-
LI 208: Biochemistry I	X	X	X	-	-
LI 210: Biology Lab-IV (Biochemistry)	X	X	X	X	-
LI 212: Biology lab V (Cell Biology)	X	X	X	X	-
LI 214: Seminar	-	X	X	X	-
DM 101: Disaster Management	-	-	-	-	X
LI 301: Plant Physiology	X	X	X	-	-
LI 303: Animal Physiology	X	X	X	-	-
LI 305: Basic Bioinformatics	X	X	X	-	-
LI 307: Molecular Biology	X	X	X	-	-
LI 309: Biology lab VI (Physiology)	X	X	X	X	-
LI 311: Biology lab VII (Molecular Biology)	X	X	X	X	-
LI 313: Public Health and Hygiene	X	X	X	-	X

LI 302: Immunology I	X	X	X	-	-
LI 304: Biocomputing & Biostatistics	X	X	X	-	-
LI 306: Developmental Biology	X	X	X	-	-
LI 308: Analytical Techniques	X	X	X	-	-
LI 310: Mini Project	X	X	X	X	X
LI 401: Biochemistry – II	X	X	X	-	-
LI 403: Molecular Genetics	X	X	X	-	-
LI 405: Immunology II	X	X	X	-	-
LI 407: Biological Database Management System	X	X	X	-	-
LI 409: Cell Biology II	X	X	X	-	-
LI 411: Biology Lab VIII (Biochemistry)	X	X	X	X	-
LI 413: Biology Lab –IX (Immunology)	X	X	X	X	-
LI 402: Biophysics & Structural Biology	X	X	X	-	-
LI 404: Genetic Engineering	X	X	X	-	-
LI 412: Biology Lab X (Genetic Engineering)	X	X	X	X	-
LI 406: Applied Microbiology and Bioprocess engineering	X	X	X	-	-
LI 408: Computational Biology	X	X	X	-	-
LI 410: Cell & Tissue culture	X	X	X	-	-
LI 414: Biology Lab XI (Applied Microbiology)	X	X	X	X	-
LI 501: Genomics & Proteomics	X	X	X	-	-
LI 503: Bioinformatic softwares & algorithm	X	X	X	-	-
LI 505: Lab on advanced programming	X	X	X	X	-
LI 507: Biosafety and IPR	X	X	X	X	X
LI 509: Plant Biotechnology/ LI 515: Animal Biotechnology	X	X	X	-	-
LI 511: Economic Botany/ LI 517: Economic Zoology	X	X	X	-	-
LI 513 Biology Lab XII (Plant Sciences)/	X	X	X	X	-
LI 519: Biology Lab XII (Animal Science)	X	X	X	X	-
LI 522: Evolutionary Biology LI 524: Ethnomedicine & Herbal Technology LI 526: Plant metabolism & secondary metabolites LI 528: System Biology LI 530: Wild life & Animal Behavior LI 532: Fish Biology LI 534: Cancer Biology	X	X	X	-	-

LI 536: Pyschoneuroimmunology					
LI 538: Insect vector and Diseases					
LI 540: Immunotechnology					
LI 542: Computer aided drug designing					
LI 502: Project - I	X	X	X	X	X

3. Evaluation plan:

- Understanding of subject is constantly evaluated through discussion and cross questioning.
- Examinations of specific duration (1 Hr/2 Hr)
- Assignment on critical problems related to specific subject.
- Constant assessment during laboratory courses and practical records.
- Viva voce
- Individual and group oral presentations.
- Research paper presentation in seminar.
- Project work and report writing.
- Presentation (oral/poster) of project work.
- Research ability and research findings.