

## B.Sc. BIOTECHNOLOGY

Course structure of three- year B.Sc. Degree Course in Biotechnology

Under Choice Based Credit System

### SEMESTER I

Course No. & Description	Title	Credits	IA	Univ. Exam	Total Credits
<b>BBT 101</b> Core Course-Theory	Animal Science	3	40	60	28
<b>BBT 102</b> Core Course –Theory	Plant Science	3	40	60	
<b>BBT 103</b> Core Course –Theory	Foundations of Chemistry & Biochemistry	3	40	60	
<b>BBT 104</b> Core Course –Theory	Basics of Computer	3	40	60	
<b>BBT 105</b> Core Course –Practical	Animal Science Lab	3	40	60	
<b>BBT 106</b> Core Course –Practical	Plant Science Lab	3	40	60	
<b>BBT 107</b> Core Course –Practical	Foundations of Chemistry & Biochemistry Lab	3	40	60	
<b>BBT 108</b> Core Course –Practical	Computer Fundamentals & C-Programming Lab	3	40	60	
<b>BBT 109</b> Open Course I	Elective	2	Continuous Assessment Continuous Assessment		
<b>BBT 110</b> General Course I	Elective	2			

**Elective Courses in Sem I: 1) BBT 109: Elective Open Course I; Option I:** General English.

**Option II:** Basic Programming for Bioinformatics. **Option III.** Open course offered in other constituent units of BVDU.

**2) BBT 110: Elective General Course; Option I.** Yoga, Meditation, **Option II.** An appropriate General course offered in other constituent units of BVDU.

## SEMESTER II

Course No. & Description	Title	Credits	IA	Univ. Exam	Total Credits
<b>BBT 201</b> Core Course –Theory	Introduction to Microbiology	3	40	60	28
<b>BBT 202</b> Core Course –Theory	Biochemistry I	3	40	60	
<b>BBT 203</b> Core Course –Theory	Cell Biology	3	40	60	
<b>BBT 204</b> Core Course –Theory	Genetics	3	40	60	
<b>BBT 205</b> Core Course -Practical	Introduction to Practical Microbiology	3	40	60	
<b>BBT 206</b> Core Course-Practical	Biochemistry I Lab	3	40	60	
<b>BBT 207</b> Core Course –Practical	Cell Biology Lab	3	40	60	
<b>BBT 208</b> Core Course –Practical	Genetics Lab	3	40	60	
<b>BBT 209</b> Open Course II	Elective	2	Continuous Assessment		
<b>BBT 210</b> General Course II	Elective	2	Continuous Assessment		

**Elective Courses in Sem II: 1) BBT 209: Elective Open Course II; Option I:** Ecology, **Option II:** Gardening & Landscaping, **Option III:** An appropriate Open course offered in other constituent units of BVDU.

**BBT 210: Elective General Course II; Option I:** Human Values, **Option II:** An appropriate General course offered in other BVDU constituent units

**SEMESTER III**

<b>Course No. &amp; Description</b>	<b>Title</b>	<b>Credits</b>	<b>IA</b>	<b>Univ. Exam</b>	<b>Total Credits</b>
<b>BBT 301</b> Core Course –Theory	Concepts in Microbiology	3	40	60	25
<b>BBT 302</b> Core Course –Theory	Biochemistry II	3	40	60	
<b>BBT 303</b> Core Course –Theory	Principles & Techniques in Molecular Biology	3	40	60	
<b>BBT 304</b> Core Course –Theory	Immunology	3	40	60	
<b>BBT 305</b> Core Course-Practical	Practicals in Microbiology	3	40	60	
<b>BBT 306</b> Core Course-Practical	Biochemistry II Laboratory	3	40	60	
<b>BBT 307</b> Core Course-Practical	Practicals in Molecular Biology & Immunology	3	40	60	
<b>BBT 308</b> Open Course III	Elective	2	Continuous Assessment		
<b>BBT 309</b> General Course III	Elective	2	Continuous Assessment		

**Elective Courses in Sem III:** 1) **BBT 308: Elective Open Course III; Option I:** Patent & IPR, **Option II:** Nutrition, **Option III:** An appropriate Open course offered in other disciplines of BVDU.

2) **BBT 309: Elective General Course III; Option I:** Communication skills& Personality Development, **Option II:** An appropriate General course offered in other constituent units of BVDU

**SEMESTER IV**

<b>Course No. &amp; Description</b>	<b>Title</b>	<b>Credits</b>	<b>IA</b>	<b>Univ. Exam</b>	<b>Total Credits</b>
<b>BBT 401</b> Core Course –Theory	Environmental Biotechnology	3	40	60	
<b>BBT 402</b> Core Course –Theory	Fundamentals in Molecular Biology	3	40	60	
<b>BBT 403</b> Core Course –Theory	Developmental Biology	3	40	60	
<b>BBT 404</b> Core Course –Theory	Analytical Techniques	3	40	60	
<b>BBT 405</b> Core Course-Practical	Environmental Biotechnology Laboratory	3	40	60	
<b>BBT 406</b> Core Course-Practical	Practicals in Molecular & Developmental Biology	3	40	60	
<b>BBT 407</b> Core Course-Practical	Analytical Techniques Lab	3	40	60	
<b>BBT 408</b> Open Course IV	Elective	2	Continuous Assessment		
<b>BBT 409</b> General Course IV	Elective	2	Continuous Assessment		

**Elective Courses in Sem IV: 1) BBT 408: Elective Course IV Option I:** Nanotechnology, **Option II:** Bio fertilizer Technology, **Option III:** An appropriate Open course offered in other disciplines of BVDU.

2) **BBT 409: General Course IV; Option I:** Seminar & Journal Club, **Option II.** An appropriate General course offered in other BVDU constituent units.

**SEMESTER V**

Course No. & Description	Title	Credits	IA	Univ. Exam	Total Credits
<b>BBT 501</b> Core Course –Theory	Biostatistics	3	40	60	
<b>BBT 502</b> Core Course –Theory	Clinical Biotechnology	3	40	60	
<b>BBT 503</b> Core Course –Theory	Recombinant DNA Technology	3	40	60	
<b>BBT 504</b> Core Course –Theory	Food Biotechnology	3	40	60	
<b>BBT 505</b> Core Course-Practical	Practicals in Clinical Biotechnology	3	40	60	
<b>BBT 506</b> Core Course-Practical	Practicals in Recombinant DNA Technology	3	40	60	
<b>BBT 507</b> Core Course-Practical	Practicals in Food Biotechnology	3	40	60	
<b>BBT 508</b> Open Course V	Elective	2	Continuous Assessment		
<b>BBT 509</b> General Course V	Elective	2	Continuous Assessment		25

**Elective Courses in Sem V: 1) BBT 508: Elective Course V; Option i.** Biotechnology for forensics, **Option II:** Biodiversity, **Option III:** Information security

2) **BBT 509: Elective General Course V; Option I:** Innovative ideas in Biotechnology, **Option II:** An appropriate General course offered in other BVDU constituent Unit

## SEMESTER VI

Course No. & Description	Title	Credits	IA	Univ. Exam	Total Credits
<b>BBT 601</b> Core Course –Theory	Animal Biotechnology	3	40	60	25
<b>BBT 602</b> Core Course –Theory	Bioprocess Technology	3	40	60	
<b>BBT 603</b> Core Course –Theory	Plant Biotechnology	3	40	60	
<b>BBT 604</b> Core Course –Theory	Basics of Bioinformatics	3	40	60	
<b>BBT 605</b> Core Course-Practical	Animal Tissue Culture Lab	3	40	60	
<b>BBT 606</b> Core Course-Practical	Plant Tissue Culture Lab	3	40	60	
<b>BBT 607</b> Core Course-Practical	Computer Applications & Bioinformatics Lab	3	40	60	
<b>BBT 608</b> Open Course VI	Elective	2	Continuous Assessment		
<b>BBT 609</b> General Course VI	Elective	2	Continuous Assessment		

**Elective Courses in Sem VI: 1) BBT 608: Elective Open Course VI; Option i.**

Entrepreneurship in Biotechnology, **Option II:** Business management in Biotechnology, **Option III:** Cyber Law

**2) BBT 609: Elective General Course VI; Option i:** Scientific Writing, **Option ii:** An appropriate General course offered in other BVDU constituent unit

**Total Credits: 28+28+25+25+25+25 = 156**