

FOUR YEAR UNDER GRADUATE PROGRAM (FYUP), CHOICE BASED CRADIT SYSTEM (CBCS)

Under Faculty of Advance Studies in Life Sciences,

Institute of Biosciences and Biotechnology

Syllabus

B.Sc. (Hons) Biotechnology

PREAMBLE

In view of the increasing demand for training manpower in the area of Molecular Biology, Genetic Medicine and Biotechnology, it was consensus of the committee (Faculties & experts) that this course should be broad based and should be able to give a good insight into modern biology and important component of hands-on training to the students. Thus by nature it will be an interdisciplinary course. The course curriculum for U.G. program under choice based for B.Sc. in Biotechnology (Hons.) presented in this document follows the nationwide exercise undertaken by the UGC as part of curriculum restructuring initiative.

SEMESTER-1							
Paper code	Courses offered (Core course)	Course name	Credit		Marks		
			Theory	Practical *	Theory	Practical BBT-1005	Total
BBT-1001	CC-1	Chemistry 1	4	2	100	150	500
BBT -1002	CC-2	Cell Biology	4	2	100		
BBT-1003 /AECC - 01	Ability Enhancement Compulsory Course	English communication -1	2	-	50		
BBT-1004 / GE-01	Generic Elective (elect any one)	1004 (A): Biotechnology and Human Welfare	4	2	100		
		1004(B): I.P.R. Entrepreneurship Bioethics & Biosafety	4	2	100		
SEMESTER- II							
Paper code	Courses offered	Course name	Theory	Practical *	Theory	Practical BBT-2005	Total
BBT - 2001	CC-3	Mammalian physiology	4	2	100	150	500
BBT - 2002	CC-4	Plant anatomy and physiology	4	2	100		
BBT-2003 /AECC - 02	Ability Enhancement Compulsory Course	Environmental Sciences	2	-	50		
BBT-2004 / GE-02	Generic Elective (elect any one)	2004 (A): Gene Organization, Expression and Regulation	4	2	100		
		2004 (B): Developmental Biology	4	2	100		

23/06/21

23.06.2021

23/06/21

SEMESTER- III							
Paper code	Courses offered	Course name	Theory	Practical *	Theory	Practical BBT-3005	Total
BBT - 3001	CC-5	General Biochemistry	4	2	100	150	550
BBT - 3002	CC-6	General microbiology	4	2	100		
BBT - 3003	CC-7	Genetics	4	2	100		
BBT - 3004 /SEC-01	Skill Enhancement Course	Enzymology	4	2	100		
SEMESTER-IV							
Paper code	Courses offered	Course name	Theory	Practical *	Theory	Practical BBT-4005	Total
BBT - 4001	CC-8	Bioanalytical Tools	4	2	100	150	550
BBT - 4002	CC-9	Intermediary Metabolism	4	2	100		
BBT - 4003	CC-10	Immunology	4	2	100		
BBT-4004 /SEC-02	Skill Enhancement Course	Molecular diagnostics	4	2	100		
SEMESTER V							
Paper code	Courses offered	Course name	Theory	Practical *	Theory	Practical BBT-5006	Total
BBT -5001	CC-11	Molecular Biology	4	2	100	150	550
BBT -5002	CC-12	Biostatistics	4	2	100		
BBT - 5003	Discipline Specific Elective (elect any two)	Animal Biotechnology	4	2	100		
BBT - 5004		Environmental Biotechnology	4	2	100		
BBT - 5005		Microbial Biotechnology	4	2	100		
SEMESTER VI							
Paper code	Courses offered	Course name	Theory	Practical *	Theory	Practical BBT-6006	Total
BBT - 6001	CC-13	Recombinant DNA Technology	4	2	100	150	550
BBT - 6002	CC-14	Genomics and Proteomics	4	2	100		
BBT - 6003	Discipline Specific Elective (elect any two)	Plant Biotechnology	4	2	100		
BBT - 6004		Bioinformatics	4	2	100		
BBT - 6005		Bioprocess Technology	4	2	100		
Total credits			128				3200

SEMESTER VII							
Paper code	Courses offered	Course name	Theory	Practical	Theory	Practical BBT-7003	Total
In addition complete any one optional subject: BBT-7001 (A)/ (B)/ (C)/ (D)							
BBT- 7001 (A)	CC-15	Applied Biotechnology	4	2	100	100	300
BBT-7001(B)		Applied Biochemistry	4	2	100		
BBT -7001 (C)		Applied Microbiology	4	2	100		
BBT -7001(D)		Applied Food Technology	4	2	100		
BBT -7002	CC-16	Research methodology	4	2	100		
SEMESTER VIII							
Develop the skill required to completed a substantial original research project							
BBT- 8001	CC-17	Research project	4				100
Total credit			144				3600

C: Core Courses; **GE:** Generic Elective; **AECC:** Ability Enhancement Compulsory Course; **SEC:** Skill Enhancement Courses;
DSE: Discipline Specific Elective

N01
23/1/21

[Signature]

[Signature]