



Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

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DR. D. Y. PATIL BIOTECHNOLOGY & BIOINFORMATICS INSTITUTE

TATHAWADE, PUNE

SYLLABUS FOR

B. TECH. MEDICAL BIOTECHNOLOGY

2018-19

(As approved by the 44th Meeting of the BOM held on 28th March 2018)

DR. D.Y. PATIL VIDYAPEETH, PUNE
DR. D. Y. PATIL BIOTECHNOLOGY & BIOINFORMATICS INSTITUTE,
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COURSE STRUCTURE FOR B. TECH. MEDICAL BIOTECHNOLOGY

SEMESTER I						
Course Code	Course Name	L	T	P	Hr	Cr
BS 101	Physics	3	0	2	5	4
BS 102	Chemistry	3	0	4	7	5
BT 101	Electronics & Instrumentation Engineering	2	0	2	4	3
BI 101	Computers & C Programming	2	0	4	6	4
HU 101	Communication Skills	1	2	0	3	3
BS 103	Maths I – Mathematics	3	0	0	3	3
Total		14	2	12	28	22
SEMESTER II						
Course Code	Course Name	L	T	P	Hr	Cr
MB 201	Medical Biochemistry	3	0	4	7	5
BT 202	Cell Biology	3	0	2	5	4
BS 201	Maths II -Statistics	2	0	2	4	3
BT 203	Engineering Mechanics	2	0	2	4	3
BS 202	Environmental Sciences	2	0	2	4	3
BT 204	Engineering Graphics	1	0	2	3	2
HU 201	Disaster Management*	0	1	0	1	-
Total		13	1	14	28	20
<i>*Audit course, attendance is must</i>						

SEMESTER III						
BT 301	Analytical Techniques	3	0	4	7	5
BT 302	Microbiology & Virology	3	0	2	5	4
MB 301	Human Genetics	2	0	2	4	3
BI 301	Concepts in Bioinformatics	2	0	2	4	3
BT 304	Biosafety, Bioethics & IPR	2	0	0	2	2

MB 302	Human Anatomy & Physiology	3	0	2	5	4
	Total	15	0	12	27	21
SEMESTER IV						
BT 401	Molecular Biology	3	0	4	7	5
BT 406	Animal tissue culture	2	0	2	4	3
MB 401	Bioprocess Engineering	3	0	4	7	5
BT 404	Immunology	3	0	2	5	4
BT 405	Developmental Biology	3	0	2	5	4
MB 402	Pharmacology & Toxicology	2	0	0	2	2
	Total	15	0	14	31	23
SEMESTER V						
MB 501	Biopharmaceuticals	2	0	2	4	3
MB 502	Genetic engineering	3	0	4	7	5
MB 503	Tissue Engineering & Transplantation	2	0	2	4	3
BI 501	Molecular modelling & drug designing	2	0	4	6	4
MB 504	Disease Biology	2	0	2	4	3
MB 505/506	Elective 1	2	0	2	4	3
	Total	13	0	16	29	21
Elective I: (Cancer Biology / Nanomedicine)						
SEMESTER VI						
MB 601	Biomedical Devices & Instruments	2	0	2	4	3
MB 602	Artificial Organs & Biomimetics	3	0	0	3	3
HU 601	Health Care Law Management	2	0	0	2	2
BT 604	Genomics, Transcriptomics & Proteomics	3	0	4	7	5
MB 603	Molecular Diagnostics	2	0	2	4	3
MB 604/605	Elective II	3	0	0	3	3
	Total	15	0	8	23	19
Elective II: (Vaccine Technology/ Personalized Medicine)						
SEMESTER VII						
MB 701	Clinical Trials	2	0	0	2	2
MB 702	Forensic Biotechnology	2	0	2	4	3
HU 702	Entrepreneurship & Skill Development	2	0	0	2	2
MB 703	Metabolic Engineering & Systems	3	0	2	5	4

	Biology					
MB 704	Seminars in Medical Biotechnology	3	0	0	3	3
MB 705/706	Elective III	3	1	0	4	4
	Total	15	1	4	20	18
Elective III: (Biomechatronics/ Epidemiology & Public Health)						
SEMESTER VIII						
	Research Project					20
	TOTAL CREDITS: 165					