

ANNA UNIVERSITY :: CHENNAI – 600 025

DEGREE OF BACHELOR OF TECHNOLOGY
(8 SEMESTER PROGRAMME)

BRANCH: B.TECH. INDUSTRIAL BIO-TECHNOLOGY
CURRICULUM

Code No.	Course Title	L	T	P	M
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SEMESTER 1

(Applicable to candidates to be admitted in 2003–2004)

THEORY

CM125	Chemistry I	3	0	0	100
GE131	Engineering Mechanics	3	1	0	100
L1	Language Elective I	3	1	0	100
MA131	Mathematics I	3	1	0	100
PH125	Physics I	3	0	0	100

PRACTICAL

GE132	Computer Practice I	1	0	3	100
GE133	Workshop Practice	0	0	4	100
CM126	Chemistry Laboratory	0	0	2	100
PH126	Physics Laboratory	0	0	2	100

Code No.	Course Title	L	T	P	M
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SEMESTER 2

(Applicable to candidates to be admitted in 2003–2004)

THEORY

IB131	Cell Biology	2	1	2	100
EE151	Electrical Engineering	2	0	0	100
EC152	Electronics Engineering	2	0	2	100
L2	Language Elective II	3	1	0	100
MA132	Mathematics II	3	1	0	100
CH131	Chemistry II	2	1	2	100
PH134	Physics II	2	1	2	100

PRACTICAL

GE135	Computer Practice II	1	0	3	100
GE134	Engineering Graphics	1	0	3	100

The following curriculum is applicable to all candidates studying 2nd and 3rd year in the academic year 2003- 2004

SEMESTER 3**THEORY**

IB237	Basic Industrial Biotechnology	2	1	0	100
IB232	Bio-Organic Chemistry	2	1	0	100
IB231	Biochemistry	2	1	0	100
IB235	Chemical Thermodynamics and Biothermodynamics	2	1	0	100
IB233	Genetics	2	1	0	100
IB234	Microbiology	2	1	0	100
IB236	Principles of Chemical Engineering	2	1	0	100

PRACTICAL

IB239	Bio-Organic Chemistry Lab	0	0	4	100
IB238	Biochemistry Lab	0	0	4	100

SEMESTER 4**THEORY**

IB244	Bioprocess Principles	2	1	0	100
IB243	Enzyme Engineering and Technology	2	1	0	100
IB242	Instrumental Methods of Analysis	2	1	0	100
IB241	Molecular Biology	2	1	0	100
MA039	Probability and Statistics	3	1	0	100
IB240	Unit Operations	2	1	0	100

PRACTICAL

IB247	Chemical Engineering Lab	0	0	4	100
IB246	Instrumental Methods of Analysis Lab	0	0	4	100
IB245	Microbiology Lab	0	0	4	100

Code No.**Course Title****L****T****P****M****SEMESTER 5****THEORY**

IB332	Chemical Reaction Engineering	2	1	0	100
E1***	Elective I	3	0	0	100
E2***	Elective II	3	0	0	100
E3***	Elective III	3	0	0	100
IB331	Genetic Engineering	2	1	0	100
IB333	Mass Transfer and Separation	2	1	0	100

PRACTICAL

IB334	Bioprocess Lab I	0	0	6	100
IB336	Dissertation and Seminar	0	0	4	100
IB335	Molecular Biology Lab	0	0	4	100

Code No.	Course Title	L	T	P	M
SEMESTER 6					
THEORY					
IB344	Bioethics	2	1	0	100
IB341	Bioinformatics	2	1	0	100
IB342	Bioprocess Engineering	2	1	0	100
E4***	Elective IV	3	0	0	100
E5***	Elective V	3	0	0	100
E6***	Elective VI	3	0	0	100
IB343	Immunology	2	1	0	100
PRACTICAL					
IB346	Bioprocess Lab II	0	0	6	100
IB345	Genetic Engineering Lab	0	0	6	100
SEMESTER 7					
THEORY					
IB432	Analytical Techniques in Biotechnology	2	1	0	100
IB431	Downstream Processing	2	1	0	100
IB433	Protein Engineering	2	1	0	100
CE071	Principles of Environmental Science and Engineering	3	0	0	100
GE035	Professional Ethics	3	0	0	100
E7***	Elective VII	3	0	0	100
PRACTICAL					
IB436	Dissertation and Seminar	0	0	4	100
IB435	Downstream Processing Lab	0	0	4	100
IB434	Immunology Lab	0	0	4	100
IB337	Industrial Training	0	0	0	100
SEMESTER 8					
THEORY					
GE406	Total Quality Management	3	0	0	100
PRACTICAL					
IB444	Project Work	0	0	12	200

LIST OF ELECTIVE SUBJECTS

Code No.	Course Title	L	T	P	M
Semester I					
HS034	Technical Tamil	2	0	2	100
HS035	Technical German I	3	1	0	100
HS037	Technical Japanese I	3	1	0	100
HS039	Technical French I	3	1	0	100
HS041	English I	3	1	0	100
Semester II					
HS036	Technical German II	3	1	0	100
HS038	Technical Japanese II	3	1	0	100
HS040	Technical French II	3	1	0	100
HS042	English II	3	1	0	100
Semester V					
IB035	Plant Biotechnology	3	0	0	100
IB036	Animal Biotechnology	3	0	0	100
IB037	Biological Spectroscopy	3	0	0	100
IB038	Metabolic Engineering	3	0	0	100
IB040	Environmental Biotechnology	3	0	0	100
IB041	Food Science and Technology	3	0	0	100
Semester VI					
IB034	Technical Writing and Communication	3	0	0	100
IB039	Chromatographic Separations	3	0	0	100
IB042	Biopharmaceutical Technology	3	0	0	100
IB047	Genomics and Proteomics	3	0	0	100
IB048	Molecular Pathogenesis	3	0	0	100
Semester VIII					
IB043	Developmental Biology	3	0	0	100
IB044	Biophysics	3	0	0	100
IB045	Immunotechnology	3	0	0	100
IB046	Cancer Biology	3	0	0	100
IB049	Bioprocess Economics and Plant Design	3	0	0	100
IB050	Molecular Modeling and Drug Design	3	0	0	100
IB051	Neurobiology and Cognitive Sciences	3	0	0	100
IB052	Biodiversity, IPR and Management of Biotechnology	3	0	0	100
Others					
GE034	Creativity, Innovation and New Product Development	2	0	2	100
HS053	Communication Skills for Engineers	2	0	2	100
GE037	Intellectual Property Right (IPR)	3	0	0	100
GE038	Indian Constitution and Society	3	0	0	100