

STUDY & EVALUATION SCHEME
B.SC. (H) BIOTECHNOLOGY
I YEAR: I SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	EVALUATION SCHEME		TOTAL	CREDITS	COURSE TYPE	FACULTY
						CIE	ESE				
THEORY											
1	UBS1001	Cell Biology	4	0	0	40	60	100	4	Major	Own faculty
2	UBS1002	Genetics	4	0	0	40	60	100	4	Major	Own faculty
3	UBS1003	Plant Physiology	4	0	0	40	60	100	4	Major	Own faculty
4	UBS1004	Biotechnology and Human Welfare	4	0	0	40	60	100	4	Major	Own faculty
5	UEG1502 SE	Functional English	2	0	0	40	60	100	2	Minor Skills	Other faculty
6	UPC1401	First Aid and Health	2	0	0	100	0	100	2*	Minor Co-curricular	Other faculty
PRACTICAL											
7	UBS1209	Cell Biology Lab	0	0	2	80	20	100	1	Major	Own faculty
8	UBS1202	Plant Physiology Lab	0	0	2	80	20	100	1	Major	Own faculty
9	UEG1501SE	English Language Lab	0	0	2	80	20	100	1	Minor Skill	Other faculty
TOTAL			16	0	14	580	320	900	23		

L - Lecture

T - Tutorial

P - Practical

CIE - Continuous Internal Evaluation

ESE-End Semester Exam

C - Credit

STUDY & EVALUATION SCHEME
B.SC. (H) BIOTECHNOLOGY
I YEAR: II SEMESTER

S. NO	SUBJECT CODE	SUBJECT	L	T	P	EVALUATION SCHEME		TOTAL	CREDITS	COURSE TYPE	FACULTY
						CIE	ESE				
THEORY											
1	UBS2001	Molecular Biology	4	0	0	40	60	100	4	Major	Own faculty
2	UBS2002	Genetic Engineering	4	0	0	40	60	100	4	Major	Own faculty
3	UBS2003	Mammalian Physiology	4	0	0	40	60	100	4	Major	Own faculty
4		Minor Elective-I	4	0	0	40	60	100	4	Minor/Elective	Other faculty
5	UBS2501VO	Enzyme Technology	3	0	0	40	60	100	3	Minor Vocational	Own faculty
6	UBS2402	Food, Nutrition and Hygiene	2	0	0	100	0	100	2*	Minor Co-curricular	Own faculty
PRACTICAL											
7	UBS2209	Molecular Biology Lab	0	0	4	80	20	100	2	Major	Own faculty
8	UBS2210	Genetic Engineering Lab	0	0	4	80	20	100	2	Major	Own faculty
9	UBS2202	Mammalian Physiology Lab	0	0	2	80	20	100	1	Major	Own faculty
10	UBS2203	Enzyme Technology Lab	0	0	2	80	20	100	1	Major	Own faculty
TOTAL			21	0	12	620	380	1000	27		

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ESE-End Semester Exam
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STUDY & EVALUATION SCHEME
B.SC. (H) BIOTECHNOLOGY
II YEAR: III SEMESTER

S. NO	SUBJECT CODE	SUBJECT	L	T	P	EVALUATION SCHEME		TOTAL	CREDITS	COURSE TYPE	FACULTY
						CIE	ESE				
THEORY											
1	UBS3001	Biochemistry and Metabolism	4	0	0	40	60	100	4	Major	Own faculty
2	UBS3002	Environmental Biotechnology	4	0	0	40	60	100	4	Major	Own faculty
3	UBS3003	Green Chemistry	4	0	0	40	60	100	4	Major	Own faculty
4	UBS3004	Developmental Biology	4	0	0	40	60	100	4	Major	Own faculty
5	UBS3501 VO	Molecular Diagnostics	3	0	0	40	60	100	3	Minor Vocational	Own faculty
6	UPE3401	Physical Education and Yoga	2	0	0	100	0	100	2*	Minor Co-curricular	Own faculty
PRACTICAL											
7	UBS3201	Biochemistry and Metabolism Lab	0	0	4	80	20	100	2	Major	Own faculty
8	UBS3207	Green Chemistry Lab	0	0	2	80	20	100	1	Major	Own faculty
TOTAL			21	0	6	460	340	800	24		

L - Lecture

T - Tutorial

P - Practical

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ESE-End Semester Exam

C - Credit

STUDY & EVALUATION SCHEME
B.SC. (H) BIOTECHNOLOGY
II YEAR: IV SEMESTER

S. NO	SUBJECT CODE	SUBJECT	L	T	P	EVALUATION SCHEME		TOTAL	CREDITS	COURSE TYPE	FACULTY
						CIE	ESE				
THEORY											
1	UBS4001	Microbiology	4	0	0	40	60	100	4	Major	Own faculty
2	UBS4002	Immunology	4	0	0	40	60	100	4	Major	Own faculty
3	UBS4011	Medicinal Chemistry	3	0	0	40	60	100	3	Major	Own faculty
4	UBS4004	Industrial Fermentation	4	0	0	40	60	100	4	Major	Own faculty
5		Minor Elective-2	4	0	0	40	60	100	4	Minor /Elective	Other faculty
6	UBS4501VO	Basic of Forensic Science	3	0	0	40	60	100	3	Minor Vocational	Own faculty
7	USO4402	Human Values and Environmental Studies	2	0	0	100	0	100	2*	Minor Co-curricular	Own faculty
PRACTICAL											
8	UBS4208	Microbiology and Immunology Lab	0	0	2	80	20	100	1	Major	Own faculty
9	UBS4202	Medicinal Chemistry Lab	0	0	2	80	20	100	1	Major	Own faculty
10	UBS4702SM	Seminar	0	0	2	100	0	100	1	Major	Own faculty
TOTAL			24	0	6	600	400	1000	27		

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T - Tutorial

P - Practical

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STUDY & EVALUATION SCHEME
B.SC. (H) BIOTECHNOLOGY
III YEAR: IV SEMESTER

S. NO	SUBJECT CODE	SUBJECT	L	T	P	EVALUATION SCHEME		TOTAL	CREDITS	COURSE TYPE	FACULTY
						CIE	ESE				
THEORY											
1	UBS5001	Biostatistics and Bioinformatics	4	0	0	40	60	100	4	Major	Own faculty
2	UBS5002	Animal and Plant Biotechnology	4	0	0	40	60	100	4	Major	Own faculty
3	UBS5003	Bioprocess Technology	4	0	0	40	60	100	4	Major	Own faculty
4		Departmental Elective -1 (DE – 1)	4	0	0	40	60	100	4	Major	Own faculty
5	USS5401	Communication Skills and Personality Development	2	0	0	100	0	100	2*	Minor Co-curricular	Other faculty
PRACTICAL											
6	UBS5201	Bioinformatics, Biostatistics and Tissue culture Lab	0	0	4	80	20	100	2	Major	Own faculty
7	UBS5202	Bioprocess Technology Lab	0	0	4	80	20	100	2	Major	Own faculty
8	UBS5601IS	Industrial Training/Internship	0	0	6	100	0	100	3	Major Industrial Training	Own faculty
TOTAL			18	0	14	520	280	800	25		

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Departmental Elective (DE)-1

Sub Code	Sub Name
USB5101	Plant Tissue Culture
USB5102	Animal Cell Culture

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III YEAR: VI SEMESTER

S. NO	SUBJECT CODE	SUBJECT	L	T	P	EVALUATION SCHEME		TOTAL	CREDITS	COURSE TYPE	FACULTY
						CIE	ESE				
THEORY											
1	UBS6001	Industrial Biotechnology	4	0	0	40	60	100	4	Major	Own faculty
2	UBS6002	Food Biotechnology	4	0	0	40	60	100	4	Major	Own faculty
3	UBS6003	Genomics and Proteomics	4	0	0	40	60	100	4	Major	Own faculty
4		Departmental Elective -2 (DE – 1)	4	0	0	40	60	100	4	Major	Own faculty
5	UAP6401	Analytic Ability and Digital Awareness	2	0	0	100	0	100	2*	Minor Co-curricular	Other faculty
PRACTICAL											
6	UBS6208	Industrial Biotechnology Lab	0	0	2	80	20	100	1	Major	Own faculty
7	UBS6209	Food Technology Lab	0	0	2	80	20	100	1	Major	Own faculty
8	UBS6210	Genomics and Proteomics Lab	0	0	2	80	20	100	1	Major	Own faculty
9	UBS6601I V	Industrial Visit	0	0	2	100	0	100	1	Minor	Own Faculty
10	UBS6701P J	Mini Project	0	0	6	100	0	100	3	Mini Project	Own Faculty
TOTAL			18	0	14	700	300	1000	25		

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Departmental Elective- 2

Sub Code	Sub Name
USB6101	Application of Biotechnology in agriculture
USB6102	Medical Biotechnology
UBS6103	MOOCs from SWAYAM Biotech2

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IV YEAR: VII SEMESTER

S. NO	SUBJECT CODE	SUBJECT	L	T	P	EVALUATION SCHEME		TOTAL	CREDITS	COURSE TYPE	FACULTY
						CIE	ESE				
THEORY											
1	UBS7009	Research Methodology	4	0	0	40	60	100	4	Major	Own faculty
2	UBS7010	Research Publication Ethics	2	0	0	40	60	100	2	Major	Own faculty
3	UBS7002	Intellectual Property Right	4	0	0	40	60	100	4	Major	Own faculty
4	UBS7001	Bio-analytical Tools	4	0	0	40	60	100	4	Major	Own faculty
5		Departmental Elective-3 (DE-3)	4	0	0	40	60	100	4	Major	Own faculty
PRACTICAL											
6	UBS7201	Bio-analytical Tools Lab	0	0	4	80	20	100	2	Major	Own faculty
7	UBS7703PJ	Research Project:1	0	0	12	80	20	100	6	Major Project	Own faculty
TOTAL			18	0	16	360	340	700	26		

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Departmental Elective- 3

Sub Code	Subject Name
USB7101	Nano- Biotechnology
USB7102	Drug Design

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IV YEAR: VIII SEMESTER**

S. NO	SUBJECT CODE	SUBJECT	L	T	P	EVALUATION SCHEME		TOTAL	CREDITS	COURSE TYPE	FACULTY
						CIE	ESE				
THEORY											
1	UBS8010	Food Processing and Preservation	4	0	0	40	60	100	4	Major	Own faculty
2	UMA8003	Biostatistics	4	0	0	40	60	100	4	Major	Other faculty
3	UBS8003	Computational and Structural Biology	4	0	0	40	60	100	4	Major	Own faculty
4		Departmental Elective-4 (DE-4)	4	0	0	40	60	100	4	Major	Own faculty
5		Minor Elective-3	4	0	0	40	60	100	4	Minor/Elective	Other faculty
PRACTICAL											
6	UBS8201	Computational and Structural Biology Lab	0	0	4	80	20	100	2	Major	Own faculty
7	UMA8201	Biostatistics Lab	0	0	4	80	20	100	2	Major	Other faculty
8	UBS8702 PJ	Research Project: II	0	0	12	80	20	100	6	Major Project	Own faculty
TOTAL			18	0	16	360	340	700	26		

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Departmental Elective- 4

Sub Code	Sub Name
USB8101	Industrial Microbiology
UBS8102	MOOCs from SWAYAM Biotech1/2

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LIST OF ELECTIVE

MINOR ELECTIVE COURSES (OPEN FOR THE STUDENTS OF OTHER PROGRAMS OF THE UNIVERSITY)				
S. NO.	SUBJECT CODE	SUBJECT	CREDIT	SEMESTER
1	UBS2304	Bioethics and Bio-safety	4	II
2	UBS2305	Food Plant Sanitation	4	II
3	UBS2305	Food Quality Management	4	II
4	UBS4301	Ecology and Environmental Management	4	IV
5	UBS4302	Food Quality and Standard	4	IV
6	UBS4303	MOOCS from SWAYAM Biotech 1	4	IV
7	UBS8301	Medical Microbiology	4	VIII
8	UBS8302	Food Microbiology	4	VIII