



Chhattisgarh Swami Vivekanand Technical University (CSVTU), Bhilai (CG)

SCHEME OF TEACHING AND EXAMINATION

B Tech (Third Semester - Biotechnology Engineering)

Sl.No.	Board of Studies (BOS)	Courses (Subject)	Course Code	Period per Week			Scheme of Examination			Total Marks	Credit
				L	T	P	Theory/Lab				
							ESE	CT	TA		
1.	Biotechnology	Biochemistry	B018311(018)	3	1	-	100	20	30	150	4
2.	Biotechnology	Microbial Technology	B018312(018)	3	1	-	100	20	30	150	4
3.	Biotechnology	Genetics	B018313(018)	3	1	-	100	20	30	150	4
4.	Biotechnology	Cell and Molecular Biology	B018314(018)	2	1	-	100	20	30	150	3
5.	Biotechnology	Biophysics	B018315(018)	2	-	-	100	20	30	150	2
6.	Biotechnology	Biochemistry Lab	B018321(018)	-	-	2	40	-	20	60	1
7.	Biotechnology	Microbial Technology Lab	B018322(018)	-	-	2	40	-	20	60	1
8.	Biotechnology	Cell and Molecular Biology Lab	B018323(018)	-	-	2	40	-	20	60	1
9.	Biotechnology	Software Lab	B018324(018)	-	-	2	40	-	20	60	1
10.	Humanities	Personality Development	B000306(046)	-	-	2	-	-	10	10	-
Total Marks				13	4	10	660	100	240	1000	21

L-Lecture, T-Tutorial, P-Practical, ESE-End Semester Exam, CT- Class Test, TA-Teacher's Assessment



Chhattisgarh Swami Vivekanand Technical University (CSVTV, NEWAI (C.G.))

SCHEME OF TEACHING AND EXAMINATION

B Tech (Fourth Semester - Biotechnology Engineering)

Sl. No.	Board Of Studies (BOS)	Courses (Subject)	Course Code	Period per Week			Scheme of Examination			Total Marks	Credit
				L	T	P	Theory/Lab				
							ESE	CT	TA		
1.	Biotechnology	Bioprocess Engineering	B018411(018)	3	1	-	100	20	30	150	4
2.	Biotechnology	Immunology & Immuno technology	B018412(018)	3	1	-	100	20	30	150	4
3.	Biotechnology	Recombinant DNA Technology	B018413(018)	3	1	-	100	20	30	150	4
4.	Biotechnology	Bioinformatics & Computational Biology	B018414(018)	2	1	-	100	20	30	150	3
5.	Biotechnology	Environmental Biotechnology	B018415(018)	2	-	-	100	20	30	150	2
6.	Biotechnology	Immunology & Immunotechnology Lab	B018421(018)	-	-	2	40	-	20	60	1
7.	Biotechnology	Bioinformatics & Computational Biology Lab	B018422(018)	-	-	2	40	-	20	60	1
8.	Biotechnology	Recombinant DNA Technology Lab	B018423(018)	-	-	2	40	-	20	60	1
9.	Biotechnology	Virtual Lab	B018424(018)	-	-	2	40	-	20	60	1
10.	Non-credit Course	Indian Culture and Constitution of India	B000406(046)	-	-	2	-	-	10	10	-
Total Marks				13	4	10	660	100	240	1000	21

L-Lecture, T-Tutorial, P-Practical, ESE-End Semester Exam, CT- Class Test, TA-Teacher's Assessment

Note:

1. Duration of End Semester Exam of all theory papers will be of Three Hours.
2. Industrial Training of eight weeks is mandatory for B.Tech.. Student. It is to be completed in two parts.
 - The first part will be in summer after IV semester after which students have to submit a training report which will be evaluated by the college teachers during B.E. V semester.



Chhattisgarh Swami Vivekanand Technical University (CSVTV, NEWAI (C.G.))

SCHEME OF TEACHING AND EXAMINATION

B Tech (Fifth Semester - Biotechnology Engineering)

Sl. No.	Board of Studies	Courses (Subject)	Course Code	L	T	P	Theory/Lab			Total Marks	Credits
							ESE	CT	TA		
1.	Biotechnology	Entrepreneurship and Startups	C018511(018)	3	1	-	100	20	30	150	4
2.	Biotechnology	Metabolic Engineering	C018512(018)	3	1	-	100	20	30	150	4
3.	Biotechnology	Analytical Techniques	C018513(018)	3	1	-	100	20	30	150	4
4.	Biotechnology	Biosafety and Bioethics	C018514(018)	2	1	-	100	20	30	150	3
5.	Professional Elective-I (Refer Table I)			2	0	-	100	20	30	150	2
6.	Biotechnology	Entrepreneurship and Startups Lab	C018521(018)	-	-	2	40	-	20	60	1
7.	Biotechnology	Metabolic Engineering Lab	C018522(018)	-	-	2	40	-	20	60	1
8.	Biotechnology	Analytical Techniques Lab	C018523(018)	-	-	2	40	-	20	60	1
9.	Biotechnology	Project –I based on summer internship/ Industrial Training	C018524(018)	-	-	2	40	-	20	60	1
10.	Civil Engg.	Environmental Studies	C000506(020)	-	-	2	-	-	10	10	-
Total				13	4	10	660	100	240	1000	21

L – Lecturer
P – Practical,
TA – Teacher's Assessment

T – Tutorial,
ESE – End Semester Exam,

CT –ClassTest

Table I (Professional Elective I)

S.N.	Board of Studies	Course Code	Subject
1.	Biotechnology	C018531(018)	Marine Biotechnology
2.	Biotechnology	C018532(018)	Genome Editing
3.	Biotechnology	C018533(018)	Biosimilars Technology

Note: (1) 1/4th of total strength of students subject to minimum of 20 students is required to offer and elective in the college in a particular academic session.

(2) Choice of elective course once made for an examination cannot be changed in future examinations.



SCHEME OF TEACHING AND EXAMINATION

B Tech (Sixth Semester – Biotechnology Engineering)

Sl. No.	Board of Studies	Courses (Subject)	Course Code	Period per Week			Theory/Lab			Total Marks	Credits
				L	T	P	ESE	CT	TA		
1.	Biotechnology	Plant and Animal Biotechnology	C018611(018)	3	1	-	100	20	30	150	4
2.	Biotechnology	Enzyme Technology	C018612(018)	3	1	-	100	20	30	150	4
3.	Biotechnology	Food Processing Technology	C018613(018)	3	1	-	100	20	30	150	4
4.	Professional Elective-II(Refer Table I)			2	1	-	100	20	30	150	3
5.	Open Elective – I (Refer Table II)			2	0	-	100	20	30	150	2
6.	Biotechnology	Plant and Animal Biotechnology Lab	C018621(018)	-	-	2	40	-	20	60	1
7.	Biotechnology	Enzyme Technology Lab	C018622(018)	-	-	2	40	-	20	60	1
8.	Biotechnology	Food Processing Technology Lab	C018623(018)	-	-	2	40	-	20	60	1
9.	Open Elective – I Lab (Refer Table III)			-	-	2	40	-	20	60	1
10.	Humanities	Technical Communication and Soft Skill	C000625(046)	-	-	2	-	-	10	10	-
Total				13	4	10	660	100	240	1000	21

L – Lecturer
P – Practical,

T – Tutorial, TA – Teacher's Assessment
ESE – End Semester Exam, CT –ClassTest

Table I (Professional Elective II)

S.N.	Board of Studies	Subject	Course Code
1.	Biotechnology	Machine Learning	C018631(018)
2.	Biotechnology	Waste Management & Up cycling	C018632(018)
3.	Biotechnology	Stem-Cell Technology	C018633(018)

Note: (1) 1/4th of total strength of students subject to minimum of 20 students is required to offer and elective in the college in a particular academic session.

(2) Choice of elective course once made for an examination cannot be changed in future examinations.

Table II (Open Elective – I)

S. N.	Board of Studies	Subject	Course Code
1	Computer Science	Artificial Intelligence	
2	Computer Science	Quantum Computing	
3	Computer Science	Cyber Security	



Chhattisgarh Swami Vivekanand Technical University (CSV TU, NEWAI (C.G.))

B Tech (Sixth Semester)

List of Open Elective – I (Table III) (For 6th Semester)

S.N.	Board of Studies	Subject	Course Code
1	Agriculture Engg.	Food Packaging Technology	C000601(094)
2	Agriculture Engg	Energy Management & Audit	C000602(094)
3	Agriculture Engg	Energy Conservation & Management	C000603(094)
4	Agriculture Engg	Disaster Management	C000604(094)
5	Agriculture Engg	Ecology and Sustainable Development	C000605(094)
6	Agriculture Engg	Non Conventional Energy Sources	C000606(094)
7	Mechanical Engineering	Safety Engineering	C000607(037)
8	Mechanical Engineering	Value Engineering	C000608(037)
9	Mechanical Engineering	Managing Innovation & Entrepreneurship	C000609(037)
10	Mechanical Engineering	Environment Pollution & Control	C000610(037)
11	Management	Enterprise Resource Planning	C000611(076)
12	Computer Science Engg.	Artificial Intelligence	C000612(022)
13	Computer Science Engg	Quantum Computing	C000613(022)
14	Computer Science Engg	Cyber Security	C000614(022)
15	Civil Engg	Construction engineering and management	C000615(020)
16	Civil Engg	Metro system and engineering	C000616(020)
17	Civil Engg	Infrastructure Planning and Management	C000617(020)
18	Computer Science Engg	Cyber Security	C000618(022)
19	Computer Science Engg	Parallel Processing & Computing	C000619(022)
20	Computer Science Engg	Cryptography & Network Security	C000620(022)
21	Computer Science Engg	Cloud Computing	C000621(022)
22	Electrical Engineering	Fibre Optics	C000622(024)
23	Electrical Engineering	Microcontroller and Embedded System	C000623(024)
24	Electrical Engineering	Hybrid Electric vehicle	C000624(024)
25	Electrical Engineering	Digital Control System	C000625(024)
26	Electrical and Electronics Engg	Electrical Estimation and Costing	C000626(025)
27	Electrical and Electronics Engg	Energy Auditing and Management	C000627(025)
28	Management	Finance Management	C000628(076)
29	Mechanical Engineering	Safety Engineering	C000629(037)
30	Electronics & Telecom.	AI and Machine learning	C000630(028)
31	Electronics & Telecom.	Operating Systems	C000631(028)
32	Electronics & Telecom.	Internet & Web Technology	C000632(028)
33	Electronics & Telecom.	Database Management Systems (DBMS)	C000633(028)
34	Electronics & Telecom.	Device Modelling	C000634(028)
35	Electronics & Telecom.	Introduction to MEMS	C000635(028)
36	Mechanical Engineering	Principles of Management	C000636(037)
37	Mechanical Engineering	Advanced I.C. Engines	C000637(037)

38	Mechanical Engineering	Mechanical Vibrations & Condition Monitoring	C000638(037)
39	Mechatronics	Entrepreneurship Developments	C000639(067)
40	Mechatronics	Enterprise Resource Planning (Except CSE & IT Branch)	C000640(067)
41	Plastic Engineering	Heat Transfer Operation	C000641(095)
42	Plastic Engineering	Process Economics and Management	C000642(095)
43	Plastic Engineering	Adhesive and Surface Coating	C000643(095)
44	Information Technology	E-Commerce	C000644(033)
45	Information Technology	Industrial Economics and Management	C000645(033)
46	Information Technology	Project Planning & Management	C000646(033)
47	Information Technology	Bio-Informatics	C000647(033)
48	Information Technology	Management Information System	C000648(033)