



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 III)			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.	Biotechnology	Professional Elective-II Lab (Refer Table II)		-	-	2	40	-	20	60	1
10.	Humanities	Technical Communication and Soft Skill	C000601(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 I)

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)

Table II (Professional Elective Lab)

S.N.	Board of Studies	Subject	Course Code
1.	Biotechnology	Machine Learning Lab	C018624(018)
2.	Biotechnology	Waste Management & Up cycling Lab	C018625(018)
3.	Biotechnology	Stem-Cell Technology	C018626(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.



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

SCHEME OF TEACHING AND EXAMINATION

B Tech (Seventh 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	Pharmaceutical Biotechnology	D018711(018)	3	1	-	100	20	30	150	4
2.	Biotechnology	Functional Genomics and Proteomics	D018712(018)	2	1	-	100	20	30	150	3
3.	Biotechnology	Nano-Biotechnology	D018713(018)	2	1	-	100	20	30	150	3
4.	Professional Elective –III (Refer to Table I)			1	1	-	100	20	30	150	2
5.	Open Elective- II (Refer to Table II)			2	0	-	100	20	30	150	2
6.	Biotechnology	Pharmaceutical Biotechnology Lab	D018721(018)	-	-	2	40	-	20	60	1
7.	Biotechnology	Nano-Biotechnology Lab	D018722(018)	-	-	2	40	-	20	60	1
8.	Biotechnology	Project (Phase I)	D018723(018)	-	-	6	60	-	40	100	3
9.	Biotechnology	Industrial Training	D018724(018)			2			20	20	1
10.	Non-credit Course	Universal Human Values 2	D000701(046)	-	-	2	-	-	10	10	-
Total Marks				10	4	14	640	100	260	1000	20

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

➤ Note: - The students have to attend the four weeks industrial training / summer internship in B. Tech program after sixth semester, which will be evaluated in seventh semester.

Table I (Professional Elective III)

S.N.	Board of Studies	Course Code	Subject
1.	Biotechnology	D018731(018)	Gene Expression and Transgenics
2.	Biotechnology	D018732(018)	Rational Drug Discovery
3.	Biotechnology	D018733(018)	Oncology

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.



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

SCHEME OF TEACHING AND EXAMINATION

B Tech (Eight Semester - Biotechnology Engineering)

Sl. No.	Board of Studies (BOS)	Courses (Subject)	Course Code	Period per Week			Scheme of Examination			Total Mark	Credit
				L	T	P	Theory/Lab				
							ESE	CT	TA		
1.	Biotechnology	Agriculture Technology	D018811(018)	3	1	-	100	20	30	150	4
2.	Professional Elective–IV (Refer to Table-I)			2	1	-	100	20	30	150	3
3.	Open Elective–III (Refer to Table-III)			2	0	-	100	20	30	150	2
4.	Biotechnology	Agriculture Biotechnology (Lab)	D018821(018)	-	-	2	40	-	20	60	1
5.	Professional Elective Lab–IV (Refer to Table-II)			-	-	2	40	-	20	60	1
6.	Biotechnology	Project (Phase-II)	D018825(018)	-	-	14	350	-	80	430	7
Total Marks				7	2	18	730	60	210	1000	18

L – Lecturer, T – Tutorial, P – Practical, CT– Class Test, ESE – End Semester Exam, TA – Teacher’s Assessment

Table–I (Professional Elective – IV)

S.N.	Board of Studies	Course Code	Courses (Subject)
1.	Biotechnology	D018831(018)	Applied Forensics in Biotechnology
2.	Biotechnology	D018832(018)	Biofuel Technology
3.	Biotechnology	D018833(018)	Biofertilizer and Biopesticide

Table–II (Professional Elective Lab – IV)

S.N.	Board of Studies	Course Code	Courses (Subject)
1.	Biotechnology	D018822(018)	Applied Forensics in Biotechnology (Lab)
2.	Biotechnology	D018823(018)	Biofuel Technology (Lab)
3.	Biotechnology	D018824(018)	Biofertilizer and Biopesticide (Lab)

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.