



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

SCHEME OF TEACHING AND EXAMINATION

B.Tech (Third Semester – Data Sciences)

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	Basic Science	Mathematics - III	B109311(014)	3	1	-	100	20	30	150	4
2	Computer Science Engg.	Data Structure & Algorithms	B109312(022)	3	1	-	100	20	30	150	4
3	Computer Science Engg.	Operating Systems	B109313(022)	2	1	-	100	20	30	150	3
4	Computer Science Engg.	Introduction to Python	B109314(022)	2	1	-	100	20	30	150	3
5	Computer Science Engg.	Digital Electronics & Logic Design	B109315(022)	2	1	-	100	20	30	150	3
6	Computer Science Engg.	Data Structure & Algorithms Laboratory	B109321(022)	-	-	2	40	-	20	60	1
7	Computer Science Engg.	Operating Systems Laboratory	B109322(022)	-	-	2	40	-	20	20	1
8	Computer Science Engg.	Digital Electronics & Logic Design Laboratory	B109323(022)	-	-	2	40	-	20	20	1
9	Computer Science Engg.	Python Laboratory	B109324(022)	-	-	2	40	-	20	20	1
10	Humanities	Personality Development	B000306(046)	-	-	2	-	-	10	10	-
Total Marks				12	05	10	660	100	240	1000	21

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



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

SCHEME OF TEACHING AND EXAMINATION

B.Tech (Fourth Semester – Data Sciences)

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	Computer Science Engg.	Design & Analysis of Algorithms	B109411(022)	3	1	-	100	20	30	150	4
2	Computer Science Engg.	Database Management Systems	B109412(022)	3	1	-	100	20	30	150	4
3	Computer Science Engg.	Object-Oriented Programming (with Java)	B109413(022)	3	1	-	100	20	30	150	4
4	Computer Science Engg.	Computer System Architecture	B109414(022)	2	1	-	100	20	30	150	3
5	Computer Science Engg.	Discrete Structure	B109415(022)	2	0	-	100	20	30	150	2
6	Computer Science Engg.	Design & Analysis of Algorithms Using Python Laboratory	B109421(022)	-	-	2	40	-	20	60	1
7	Computer Science Engg.	Database Management Systems Laboratory	B109422(022)	-	-	2	40	-	20	20	1
8	Computer Science Engg.	Object-Oriented Programming Laboratory (with Java)	B109423(022)	-	-	2	40	-	20	20	1
9	Computer Science Engg.	Virtual Lab- PHP/MySQL	B109424(022)	-	-	2	40	-	20	20	1
10	Humanities	Indian Culture and Constitution of India	B000406(046)	-	-	2	-	-	10	10	-
Total Marks				13	04	10	660	100	240	1000	21

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



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

SCHEME OF TEACHING AND EXAMINATION

B.Tech (Fifth Semester – Data Sciences)

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.	Computer Science Engg.	Artificial Intelligence	C109511(022)	3	1	-	100	20	30	150	4
2.	Computer Science Engg.	Statistical Analysis for Data Science	C110512(022)	3	1	-	100	20	30	150	4
3.	Computer Science Engg.	Theory of Computation	C109513(022)	3	1	-	100	20	30	150	4
4.	Computer Science Engg.	Introduction to Data Analytics and Visualization	C110514(022)	2	1	-	100	20	30	150	3
5.	Professional Elective–I (<i>Refer to Table–I</i>)			2	0	-	100	20	30	150	2
6.	Computer Science Engg.	Artificial Intelligence (Lab)	C110521(022)	-	-	2	40	-	20	60	1
7.	Computer Science Engg.	Data Analytics and Visualization (Lab)	C110522(022)	-	-	2	40	-	20	60	1
8.	Computer Science Engg.	R-Programming (Lab)	C110523(022)	-	-	2	40	-	20	60	1
9.	Computer Science Engg.	Minor Project Phase–I	C110524(022)	-	-	2	40	-	20	60	1
10	Computer Science Engg.	Environmental Science	C110525(022)	-	-	2	-	-	10	10	-
Total Marks				13	04	10	660	100	240	1000	21

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

Table-I (Professional Elective-I)

S.N.	Board of Studies	Course Code	Subject
1.	Computer Science Engg.	C109531(022)	Internet of Things (IoT)
2.	Computer Science Engg.	C109532(022)	Introduction to Toolkits for Machine Learning
3.	Computer Science Engg.	C110533(022)	Neural Networks Architectures for Data Analysis
4.	Computer Science Engg.	C110534(022)	Techniques of Data Mining

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 (CSVTVU, NEWAI (C.G.))

SCHEME OF TEACHING AND EXAMINATION

B.Tech (Fifth Semester – Data Sciences)

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.	Computer Science Engg.	Artificial Intelligence	C109511(022)	3	1	-	100	20	30	150	4
2.	Computer Science Engg.	Introduction to Machine Learning	C109512(022)	3	1	-	100	20	30	150	4
3.	Computer Science Engg.	Theory of Computation	C109513(022)	3	1	-	100	20	30	150	4
4.	Computer Science Engg.	Probability and Statistics for Machine Learning	C109514(022)	2	1	-	100	20	30	150	3
5.	Professional Elective–I (<i>Refer to Table–I</i>)			2	0	-	100	20	30	150	2
6.	Computer Science Engg.	Artificial Intelligence (Lab)	C109521(022)	-	-	2	40	-	20	60	1
7.	Computer Science Engg.	Machine Learning (Lab)	C109522(022)	-	-	2	40	-	20	60	1
8.	Computer Science Engg.	R-Programming (Lab)	C109523(022)	-	-	2	40	-	20	60	1
9.	Computer Science Engg.	Minor Project Phase–I	C109524(022)	-	-	2	40	-	20	60	1
10	Computer Science Engg.	Environmental Science	C109525(022)	-	-	2	-	-	10	10	-
Total Marks				13	4	10	660	100	240	1000	21

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Table-I (Professional Elective-I)

S.N.	Board of Studies	Course Code	Subject
1.	Computer Science Engg.	C109531(022)	Internet of Things (IoT)
2.	Computer Science Engg.	C109534(022)	Image Processing & Computer Vision
3.	Computer Science Engg.	C109532(022)	Introduction to Toolkits for Machine Learning
4.	Computer Science Engg.	C109533(022)	Data Visualization

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 (CSVTV, NEWAI (C.G.))

SCHEME OF TEACHING AND EXAMINATION

B.Tech (Sixth Semester - Data Sciences)

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.	Computer Science Engg.	Compiler Design	C109611(022)	3	1	-	100	20	30	150	4
2.	Computer Science Engg.	Computer Network	C109612(022)	3	1	-	100	20	30	150	4
3.	Computer Science Engg.	Software Engineering and Project Management	C109613(022)	2	1	-	100	20	30	150	4
4.	Professional Elective–II (Refer to Table–I)			2	1	-	100	20	30	150	3
5.	Open Elective–I (Refer to Table–III)			3	0	-	100	20	30	150	2
6.	Computer Science Engg.	Android (Lab)	C109621(022)	-	-	2	40	-	20	60	1
7.	Computer Science Engg.	Computer Network (Lab)	C109622(022)	-	-	2	40	-	20	60	1
8.	Computer Science Engg.	Minor Project Phase-II	C109623(022)	-	-	2	40	-	20	60	1
9.	Professional Elective–II (Lab) (Refer to Table–III)			-	-	2	40	-	20	60	1
10	Humanities	Technical Communication and Soft Skills	C000601(046)	-	-	2	-	-	10	10	-
Total Marks				13	04	10	660	100	240	1000	21

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

Table-I (Professional Elective-II)

S.N.	Board of Studies	Course Code	Subject
1.	Computer Science Engg.	C109631(022)	Cloud Computing
2.	Computer Science Engg.	C109632(022)	Big Data Analytics using Hadoop
3.	Computer Science Engg.	C109633(022)	Soft Computing
4.	Computer Science Engg.	C109634(022)	Data Security and Privacy

Table-II (Professional Elective-II Lab)

S.N.	Board of Studies	Course Code	Subject
1.	Computer Science Engg.	C109624(022)	Cloud Computing (Lab)
2.	Computer Science Engg.	C109625(022)	Big Data Analytics using Hadoop (Lab)
3.	Computer Science Engg.	C109626(022)	Soft Computing (Lab)
4.	Computer Science Engg.	C109627(022)	Data Security and Privacy (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.



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

SCHEME OF TEACHING AND EXAMINATION

B.Tech (Seventh Semester - Data Sciences)

Sl. No.	Board of Studies (BOS)	Courses (Subject)	Subject Code	Period per Week			Scheme of Examination			Total Marks	Credit
				L	T	P	Theory/Lab				
							ESE	CT	TA		
1.	Computer Science Engg.	Deep Learning and Applications	D109711(022)	2	1	-	100	20	30	150	3
2.	Computer Science Engg.	Data and Visual Analytics in AI	D109712(022)	2	1	-	100	20	30	150	3
3.	Computer Science Engg.	Natural Language Processing	D109713(022)	3	1	-	100	20	30	150	4
4.	Professional Elective – III (Refer to Table-I)			1	1	-	100	20	30	150	2
5.	Open Elective – II (Refer to Table-III)			2	-	-	100	20	30	150	2
6.	Computer Science Engg.	Deep Learning (Lab)	D109721(022)	-	-	2	40	-	20	60	1
7.	Computer Science Engg.	DevOps (Lab)	D109722(022)	-	-	2	40	-	20	60	1
8.	Computer Science Engg.	Project Phase-I	D109723(022)	-	-	6	40	-	20	60	3
9.	Computer Science Engg.	Industrial Training	D109724(022)	-	-	2	40	-	20	60	1
10	Humanities	Universal Human Values 2	D109725(046)	-	-	2	-	-	10	10	-
Total Marks				10	04	14	660	100	240	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	Subject Code	Subject
1.	Computer Science Engg.	D109731(022)	Generative AI
2.	Computer Science Engg.	D109732(022)	Cognitive Computing
3.	Computer Science Engg.	D109733(022)	Enterprise Resource Planning
4.	Computer Science Engg.	D109734(022)	NN and Fuzzy Application

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 (CSVTU, NEWAI (C.G.))

SCHEME OF TEACHING AND EXAMINATION

B.Tech (Eighth Semester - Data Sciences)

Sl. No.	Board of Studies (BOS)	Courses (Subject)	Subject Code	Period per Week			Scheme of Examination			Total Mark	Credit
				L	T	P	Theory/Lab				
							ESE	CT	TA		
1.	Computer Science Engg.	Advance Data Science	D109811(022)	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	-	-	100	20	30	150	2
4.	Computer Science Engg.	Web Development Using Full Stack (Lab)	D109821(022)	-	-	2	40	-	20	60	1
5.	Computer Science Engg.	Advanced AI (Lab) / Linux (Lab)	D109822(022)	-	-	2	40	-	20	60	1
6.	Computer Science Engg.	Project Phase-II	D109823(022)	-	-	14	350	-	80	430	7
Total Marks				07	02	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	Subject Code	Subject
1.	Computer Science Engg.	D109831(022)	Introduction to Game Theory
2.	Computer Science Engg.	D109832(022)	Multimedia and Computer Vision
3.	Computer Science Engg.	D109833(022)	Digital Image Processing
4.	Computer Science Engg.	D109834(022)	Augmented and Virtual Reality

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.