



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

## SCHEME OF TEACHING AND EXAMINATION

### B Tech (Third Semester – Mining 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.	Basic Science	Mathematics - III	B000311(014)	3	1	-	100	20	30	150	4
2.	Mining Engg.	Mine Development	B039312(039)	3	1	-	100	20	30	150	4
3.	Mining Engg.	Mine Ventilation-I	B039313(039)	3	1	-	100	20	30	150	4
4.	Mining Engg.	Mine Geology	B039314(039)	2	1	-	100	20	30	150	3
5.	Mechanical Engg.	Mechanics of Solids & Fluid Mechanics	B039315(037)	2	-	-	100	20	30	150	2
6.	Mining Engg.	Mine Development Lab	B039321(039)	-	-	2	40	-	20	60	1
7.	Mining Engg.	Mine ventilation-I Lab	B039322(039)	-	-	2	40	-	20	60	1
8.	Mining Engg.	Mine Geology Lab	B039323(039)	-	-	2	40	-	20	60	1
9.	Mining Engg.	Software Lab	B039324(039)	-	-	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 (CSV TU, NEWAI (C.G.))

## SCHEME OF TEACHING AND EXAMINATION

### B Tech (Fourth Semester - Mining Engineering)

Sl. No.	Board of Studies (BOS)	Courses (Subject)	Course Code	Period per Week			Scheme of Examination			Total Marks	Credits
				L	T	P	Theory/Lab				
							ESE	CT	TA		
1.	Mining Engg	Mine Surveying -I	B039411(039)	3	1	-	100	20	30	150	4
2.	Mining Engg	Underground Coal Mining	B039412(039)	3	1	-	100	20	30	150	4
3.	Mining Engg	Mine Machinery-I	B039413(039)	3	1	-	100	20	30	150	4
4.	Mining Engg	Surface Mining	B039414(039)	2	1	-	100	20	30	150	3
5.	ET&T	Basic Electronics & Instrumentation	B039415(028)	2	0	-	100	20	30	150	2
6.	Mining Engg	Mine Surveying -I Lab	B039421(039)	-	-	2	40	-	20	60	1
7.	Mining Engg	Underground Coal Mining Lab	B039422(039)	-	-	2	40	-	20	60	1
8.	Mining Engg	Mine Machinery-I Lab	B039423(039)	-	-	2	40	-	20	60	1
9.	Mining Engg	Virtual Lab	B039424(039)	-	-	2	40	-	20	60	1
10.	Non-Credit	Indian Culture and Constitution of India	B000406(046)	-	-	2	-	-	10	10	-
Total				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:**

- Duration of End Semester Exam of all theory papers will be of Three Hours.
- 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 – MINING 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.	Computer Sc. & Engg.	Numerical Analysis & Computer Programming	C039511(022)	3	1	-	100	20	30	150	4
2.	Mining Engg.	Mine Survey - II	C039512(039)	3	1	-	100	20	30	150	4
3.	Mining Engg.	Mine Legislation – I	C039513(039)	3	1	-	100	20	30	150	4
4.	Computer Sc. & Engg	Programming with C	C039514(022)	2	1	-	100	20	30	150	3
5.	<b>Professional Elective –I(Refer Table I)</b>			2	0	-	100	20	30	150	2
6.	Computer Sc. & Engg	Numerical Analysis & Computer Programming Laboratory	C039521(022)	-	-	2	40	-	20	60	1
7.	Mining Engg.	Mine Survey - II Laboratory	C039522(039)	-	-	2	40	-	20	60	1
8.	Computer Sc. & Engg	Programming with C Lab	C039523(022)	-	-	2	40	-	20	60	1
9.	Mining Engg.	Project-I based on Summer Internship/ Industrial Training	C039524(039)	-	-	2	40	-	20	60	1
10.	Non-Credit	Environmental Studies	C000506(020)	-	-	2	-	-	10	10	-
<b>Total</b>				<b>13</b>	<b>4</b>	<b>10</b>	<b>660</b>	<b>100</b>	<b>240</b>	<b>1000</b>	<b>21</b>

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

**Table I (Professional Elective I)**

S.N.	Board of Studies	Course Code	Subject
1	Mining Engg.	C039531(039)	Under ground Metal Mining
2	Mining Engg.	C039532(039)	Small Scale & Dimensional Stone Mining

**Note: (1)** 1/4<sup>th</sup> 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 – Mining 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.	Mining Engg.	Mine Ventilation -II	C039611(039)	3	1	-	100	20	30	150	4
2.	Mining Engg.	Mine Machinery -II	C039612(039)	3	1	-	100	20	30	150	4
3.	Mining Engg.	Mineral Dressing	C039613(039)	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.	Mining Engg.	Mine Ventilation -II Lab	C039621(039)	-	-	2	40	-	20	60	1
7.	Mining Engg.	Mineral Dressing Lab	C039622(039)	-	-	2	40	-	20	60	1
8.	Professional Elective –II( Lab) (Refer Table II)			-	-	2	40	-	20	60	1
9.	Mining Engg.	Mine Machinery –II Lab	C039625(039)	-	-	2	40	-	20	60	1
10.	Humanities	Technical Communication and Soft Skill	C000601(046)	-	-	2	-	-	10	10	-
<b>Total</b>				<b>13</b>	<b>4</b>	<b>10</b>	<b>660</b>	<b>100</b>	<b>240</b>	<b>1000</b>	<b>21</b>

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.	Mining Engg.	Pollution control in Mining	C039631(039)
2.	Mining Engg.	Blasting Engineering	C039632(039)

**Table II (Professional Elective II Lab)**

S.N.	Board of Studies	Subject	Course Code
1.	Mining Engg.	Pollution control in Mining Lab	C039623(039)
2.	Mining Engg.	Blasting Engineering Lab	C039624(039)

**Note:** (1) 1/4<sup>th</sup> 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.))

## B Tech (Sixth Semester)

### List of Open Elective – I (Table III ) (For 6<sup>th</sup> 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 ((Except CSE & IT Branch)	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	Parallel Processing & Computing	C000618(022)
19	Computer Science Engg	Cryptography & Network Security	C000619(022)
20	Computer Science Engg	Cloud Computing	C000620(022)
21	Computer Science Engg	Computer Networks	C000621(022)
22	Computer Science Engg	Internet of Things	C000622(022)
23	Computer Science Engg	Data Structures and Algorithms	C000623(022)
24	Computer Science Engg	Big Data Analytics	C000624(022)
25	Electrical and Electronics Engg	Electrical Estimation and Costing	C000625(025)
26	Electrical and Electronics Engg	Energy Auditing and Management	C000626(025)
27	Management	Finance Management	C000627(076)
28	Mechanical Engineering	Safety Engineering	C000628(037)
29	Electronics & Telecom.	AI and Machine learning	C000629(028)
30	Electronics & Telecom.	Operating Systems	C000630(028)
31	Electronics & Telecom.	Internet & Web Technology	C000631(028)
32	Electronics & Telecom.	Database Management Systems (DBMS)	C000632(028)
33	Electronics & Telecom.	Device Modelling	C000633(028)
34	Electronics & Telecom.	Introduction to MEMS	C000634(028)
35	Mechanical Engineering	Principles of Management	C000635(037)
36	Mechanical Engineering	Advanced I.C. Engines	C000636(037)

37	Mechanical Engineering	Mechanical Vibrations & Condition Monitoring	<b>C000637(037)</b>
38	Mechatronics	Entrepreneurship Developments	<b>C000638(067)</b>
39	Plastic Engineering	Heat Transfer Operation	<b>C000639(095)</b>
40	Plastic Engineering	Process Economics and Management	<b>C000640(095)</b>
41	Plastic Engineering	Adhesive and Surface Coating	<b>C000641(095)</b>
42	Information Technology	E-Commerce	<b>C000642(033)</b>
43	Information Technology	Industrial Economics and Management	<b>C000643(033)</b>
44	Information Technology	Project Planning & Management	<b>C000644(033)</b>
45	Information Technology	Bio-Informatics	<b>C000645(033)</b>
46	Information Technology	Management Information System	<b>C000646(033)</b>
47	<b>Chemical Engineering</b>	<b>Plant Utility &amp; Safety Engineering</b>	<b>C000647(019)</b>
48	<b>Chemical Engineering</b>	<b>Environment Pollution &amp; Control</b>	<b>C000648(019)</b>

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

## **SCHEME OF TEACHING AND EXAMINATION**

### **B Tech (Seventh Semester – Mining Engg.)**

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.	Mining Engg.	Mine Surveying -III	D039711(039)	3	1	-	100	20	30	150	4
2.	Mining Engg.	Rock Mechanics	D039712(039)	2	1	-	100	20	30	150	3
3.	Mining Engg.	Mine Ventilation-III	D039713(039)	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.	Mining Engg.	Mine Surveying -III Lab	D039721(039)	-	-	2	40	-	20	60	1
7.	Mining Engg.	Rock Mechanics Lab	D039722(039)	-	-	2	40	-	20	60	1
8.	Mining Engg.	Project (Phase I)	D039723(039)	-	-	6	60	-	40	100	3
9.	Mining Engg.	Industrial Training	D039724(039)			2			20	20	1
10.	Humanities	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.	Mining Engg.	D039731(039)	Mine Planning
2.	Mining Engg.	D039732(039)	Remote sensing &GIS

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.))

## B Tech (Seventh Semester)

### List of Open Elective – II (Table III ) (For 7<sup>th</sup> Semester)

S.N.	Board of Studies	Course Code	Subject
1	Agriculture Engg	D000701(094)	Biomass Management For Fodder And Energy.
2	Agriculture Engg	D000702(094)	Gully And Ravine Control Structures
3	Civil Engg	D000703(020)	Design Of Structures.
4	Agriculture Engg	D000704(094)	Reservoir And Farm Pond Design.
5	Mechanical	D000705(037)	3 D Printing & design
6	Management	D000706(076)	TechnologyManagement
7	Information Technology	D000707(033)	Decision Support & ExecutiveInformationsystem
8	CSE	D000708(022)	Software Technology
9	Management	D000709(076)	Knowledge Entrepreneurship
10	Management	D000710(076)	Intellectual Property Rights
11	Biotechnology	D000711(018)	Phytochemistry
12	Biotechnology	D000712(018)	Clinical Research and Trial Management
13	Biotechnology	D000713(018)	Cellular and Molecular Diagnostics
14	Chemical Engineering	D000714(019)	Environmental Legislation & Impact Assessment
15	Civil Engineering	D000715(020)	Environmental management and Legislations
16	Civil Engineering	D000716(020)	Hydraulics of water and waste water
17	Civil Engineering	D000717(020)	Disaster Management
18	CSE	D000718(022)	Neural Network and Deep Learning
19	CSE	D000719(022)	Big data and Hadoop
20	CSE	D000720(022)	BioInformatics
21	CSE	D000721(022)	SoftwareTesting
22	EEE	D000722(025)	Switched Mode Power Converter
23	EEE	D000723(025)	Internet of Things
24	EEE	D000724(025)	Non Conventional Energy Sources
25	EEE	D000725(025)	Sensors and Transducers
26	Information Technology	D000726(033)	E-Commerce & strategic IT
27	Computer Science & Engg.	D000727(022)	Software Technology
28	Electrical Engineering	D000728(024)	Solar PV Energy System
29	Mechanical Engineering	D000729(037)	Energy Conservation & Management
30	Information Technology	D000730(033)	Information Theory & Coding
31	Management	D000731(076)	Project Planning, Management & Evaluation
32	Electronics & Telecom	D000732(028)	Java Programming
33	Electronics & Telecom	D000733(028)	Cloud computing

34	Electronics & Telecom	<b>D000734(028)</b>	Big data Mining
35	Electronics & Telecom	<b>D000735(028)</b>	Cryptography & Network security
36	Electronics & Telecom	<b>D000736(028)</b>	Neural Network & Fuzzy Logic
37	Electronics & Telecom	<b>D000737(028)</b>	RF IC Design
38	Information Technology	<b>D000738(033)</b>	Graph Theory And Applications
39	Information Technology	<b>D000739(033)</b>	Biometrics
40	Information Technology	<b>D000740(033)</b>	Quantum Computing
41	Information Technology	<b>D000741(033)</b>	Entrepreneurship essentials
42	Information Technology	<b>D000742(033)</b>	Managerial Skills
43	Mechanical Engineering	<b>D000743(037)</b>	Mechatronics
44	Mechanical Engineering	<b>D000744(037)</b>	Engineering Economics
45	Mechanical Engineering	<b>D000745(037)</b>	Computer Graphics
46	Mechanical Engineering	<b>D000746(037)</b>	Control Engineering
47	Management	<b>D000747(076)</b>	Finance Management
48	Mechanical Engg.	<b>D000748(037)</b>	Energy Conservation & Management
49	Plastics Engineering	<b>D000749(095)</b>	Renewable Energy
50	Plastics Engineering	<b>D000750(095)</b>	Plastics Waste Management and Recycling



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

## **SCHEME OF TEACHING AND EXAMINATION**

### **B Tech (Eighth Semester – Mining 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.	Mining Engineering	Strata Control	D039811(039)	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.	Mining Engineering	Strata Control (Lab)	D039821(039)	-	-	2	40	-	20	60	1
5.	Mining Engineering	Mine Machinery–III (Lab)	D039822(039)	-	-	2	40	-	20	60	1
6.	Mining Engineering	Project (Phase–II)	D039823(039)	-	-	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	Subject
1.	Mining Engineering	D039831(039)	Surface Mining–II
2.	Mining Engineering	D039832(039)	Mine Legislation–II

**Note: (1) 1/4<sup>th</sup> 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.))

## B.Tech (Eight Semester)

### List of Open Elective – III (Table – III) (For 8<sup>th</sup> Semester)

S.N.	Board of Studies	Course Code	Subject
1	Agriculture Engineering	D000801(094)	Environmental Science
2	Management	D000802(076)	Industrial Engineering & Management
3	Computer Science & Engineering	D000803(022)	Soft Computing Techniques
4	Mechanical	D000804(037)	Composite Materials
5	Electrical & Electronics Engineering	D000805(025)	Industrial Automation
6	Mechanical Engineering	D000806(037)	Production & Product Management
7	Electronics & Telecommunication	D000807(028)	Virtual Instrumentation
8	Computer Science & Engineering	D000808(022)	Data Sciences
9	Mechanical Engineering	D000809(037)	Computational Fluid Dynamics
10	Biotechnology	D000810(018)	Medical Biotechnology
11	Biotechnology	D000811(018)	Bioterrorism and National Security
12	Biotechnology	D000812(018)	Precision Medicine and Wellness
13	Chemical Engineering	D000813(019)	Non Conventional Energy Sources (NCES) (Except Electrical Engg. and Agriculture Engg.)
14	Civil Engineering	D000814(020)	Air pollution and control measures
15	Civil Engineering	D000815(020)	Solid and hazardous waste management
16	Computer Science Engineering	D000816(022)	Natural language processing
17	Computer Science Engineering	D000817(022)	Cluster and Grid Computing
18	Computer Science Engineering	D000818(022)	Blockchain
19	Computer Science Engineering	D000819(022)	Data Compression
20	Electrical & Electronics Engineering	D000820(025)	Power Plant Engineering
21	Electrical & Electronics Engineering	D000821(025)	Utilization of Electrical Energy and Electric Traction
22	Electrical & Electronics Engineering	D000822(025)	Introduction to Micro-electromechanical systems (MEMS)
23	Management	D000823(076)	Management Concept Techniques
24	Electronics & Telecom.	D000824(028)	Operational Research

25	Electronics & Telecom.	D000825(028)	Android Apps Development
26	Electronics & Telecom.	D000826(028)	Digital Switching & Multiplexing
27	Electronics & Telecom.	D000827(028)	Optimization Techniques
28	Information Technology	D000828(033)	Business Intelligence
29	Information Technology	D000829(033)	Game Theory
30	Information Technology	D000830(033)	Optimization Design And Techniques
31	Information Technology	D000831(033)	Software Metrics and Quality Assurance
33	Mechanical Engineering	D000833(037)	Energy Management and Audit
34	Information Technology	D000834(033)	Cyber Security and Information Security
35	Mechatronics Engineering	D000835(067)	Nanotechnology
36	Computer Science & Engineering	D000836(022)	Supply Chain Management
37	Electrical Engineering	D000837(024)	Electrical Estimation and Costing
38	Computer Science & Engineering	D000838(022)	Data Mining & Warehousing
39	Plastics Engineering	D000839(095)	Fiber Technology
40	Electrical Engineering	D000840(024)	Wind Energy