



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Mechanical/Metallurgy/Mining/Chemical Engineering (Group-IB)

Semester-I

Scheme of Studies:

Session-2020

S.No	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit (C) L+T+(P)/2
1	Humanities	2000171(046)	Communication Skills-I	2	-	1	3
2	Applied Science	2000172(014)	Applied Maths-I	2	-	1	3
3	Mechanical Engineering	2000173(037)	Applied Mechanics	2	-	1	3
4	Applied Science	2000178(011)	Applied Chemistry	2	-	1	3
5	Mechanical Engineering	2000177(037)	Engineering Drawing	2	-	1	3
6	Mechanical Engineering	2000180(037)	Workshop Practice (Theory)	1	-	-	1
7	Mechanical Engineering	2000190(037)	Applied Mechanics (Lab)	-	2	-	1
8	Applied Science	2000191(011)	Applied Chemistry (Lab)	-	2	-	1
9	Mechanical Engineering	2000192(037)	Engineering Drawing (Practical)	-	2	-	1
10	Mechanical Engineering	2000193(037)	Workshop Practice (Practical)	-	4	-	2
11	Humanities	2000194(046)	Seminar & Technical Presentation (Listening, Reading & Speaking) Skills	-	2	-	1
12	-	-	Library	-	2	-	-
13	-	-	Co-curricular & Academic Activity Societies	-	2	-	-
Total				11	16	05	22

L - Lecture, T - Tutorial, P – Practical

Lecture (L)→ CI Classroom Instruction (Includes different instructional strategies i.e Lecture and others)

Practical (P)→LI Laboratory Instruction (Includes practical performances in Laboratory workshop, field or other locations using different instructional strategies).

Tutorial (T)→Includes sessional work (SW) (assignment, seminar, mini project etc) & self Learning (SL)

Note: Leftover periods/week (4 periods/week) shall be utilized for Self Learning (SL) purpose.



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Mechanical/Metallurgy/Mining/Chemical Engineering (Group-IB)

Semester-I

Scheme of Examinations:

Session-2020

S.No	Board of Study	Course Code	Course Titles	Scheme of Examination					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Humanities	2000171(046)	Communication Skills-I	70	20	30	-	-	120
2	Applied Science	2000172(014)	Applied Maths-I	70	20	30	-	-	120
3	Mechanical Engineering	2000173(037)	Applied Mechanics	70	20	30	-	-	120
4	Applied Science	2000178(011)	Applied Chemistry	70	20	30	-	-	120
5	Mechanical Engineering	2000177(037)	Engineering Drawing	70	20	30	-	-	120
6	Mechanical Engineering	2000180(037)	Workshop Practice (Theory)	-	-	30	-	-	30
7	Mechanical Engineering	2000190(037)	Applied Mechanics (Lab)	-	-	-	30	50	80
8	Applied Science	2000191(011)	Applied Chemistry (Lab)	-	-	-	30	50	80
9	Mechanical Engineering	2000192(037)	Engineering Drawing (Practical)	-	-	-	30	50	80
10	Mechanical Engineering	2000193(037)	Workshop Practice (Practical)	-	-	-	50	30	80
11	Humanities	2000194(046)	Seminar & Technical Presentation (Listening, Reading & Speaking) Skills	-	-	-	-	50	50
Total				350	100	180	140	230	1000

ESE : End Semester Examination, CT: Class Test, TA: Teachers Assessment

Note : i) TA in Theory includes Sessional work (SW) and Attendance (ATT) with weightage of 70% and 30% of total respectively.

ii) TA in Practical includes performance of PRA, PDA and Viva-Voce with weightage of 50%, 40% and 10% of total respectively.

iii) 85% attendance is essential in each theory and practical subjects to appear in examination.

Legend: - PRA: Process Assessment, PDA: Product Assessment



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Mechanical/Metallurgy/Mining/Chemical Engineering (Group-IB)

Semester-II

Scheme of Studies:

Session-2020

S. No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit (C) L+T+(P/2)
1	Humanities	2000271 (046)	Communication Skills-II	2	-	1	3
2	Applied Science	2000272 (014)	Applied Maths-II	2	-	1	3
3	Civil Engineering	2000273 (020)	Environmental Engineering & Sustainable Development	2	-	1	3
4	Applied Science	2000274 (015)	Applied Physics	2	-	1	3
5	Mechanical Engineering	2000279 (037)	Basic Non-Conventional Energy Sources	1	-	1	2
6	Computer Science and Engineering	2000276 (022)	Computer Fundamentals & Applications	2	-	-	2
7	Applied Science	2000290 (015)	Applied Physics (Lab)	-	2	-	1
8	Mechanical Engineering	2000291 (037)	Basic Non-Conventional Energy Sources (Lab)	-	2	-	1
9	Computer Science and Engineering	2000292 (022)	Computer Fundamentals & Applications (Lab)	-	4	-	2
10	Humanities	2000294 (046)	Seminar & Technical Presentation (Personality Development & Leadership) Skills	-	2	-	1
11	-	-	Library	-	2	-	-
12	-	-	Co-curricular & Academic Activity Societies	-	2	-	-
Total				11	14	05	21

L - Lecture, T - Tutorial, P – Practical

Lecture (L) → CI Classroom Instruction (Includes different instructional strategies i.e Lecture and others.)

Practical (P) → LI Laboratory Instruction (Includes practical performances in Laboratory workshop, field or other locations using different instructional strategies).

Tutorial (T) → Includes sessional work (SW) (assignment, seminar, mini project etc), self Learning (SL)

Note: Leftover periods/week (6 periods/week) shall be utilized for Self Learning (SL) purpose.



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Mechanical/Metallurgy/Mining/Chemical Engineering (Group-IB)

Semester-II

Scheme of Examination:

Session-2020

S. No	Board of Study	Course Code	Course Titles	Scheme of Examination					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Humanities	2000271 (046)	Communication Skills-II	70	20	30	-	-	120
2	Applied Science	2000272 (014)	Applied Maths-II	70	20	30	-	-	120
3	Civil Engineering	2000273 (020)	Environmental Engineering & Sustainable Development	70	50	30	-	-	150
4	Applied Science	2000274 (015)	Applied Physics	70	20	30	-	-	120
5	Mechanical Engineering	2000279 (037)	Basic Non-Conventional Energy Sources	-	-	70	-	-	70
6	Computer Science and Engineering	2000276 (022)	Computer Fundamentals & Applications	70	20	30	-	-	120
7	Applied Science	2000290 (015)	Applied Physics (Lab)	-	-	-	30	50	80
8	Mechanical Engineering	2000291 (037)	Basic Non-Conventional Energy Sources (Lab)	-	-	-	30	50	80
9	Computer Science and Engineering	2000292 (022)	Computer Fundamentals & Applications (Lab)	-	-	-	30	50	80
10	Humanities	2000294 (046)	Seminar & Technical Presentation (Personality Development & Leadership) Skills	-	-	-	-	60	60
Total				350	130	220	90	210	1000

ESE: End Semester Exam, CT: Class Test, TA: Teachers Assessment

Note: i) TA in Theory includes Sessional work (SW) and Attendance (ATT) with weightage of 70% and 30% of total respectively.

ii) TA in Practical includes performance of PRA, PDA and Viva-Voce with weightage of 50%, 40% and 10% of total respectively.

iii) 85% attendance is essential in each theory and practical subjects to appear in examination.

Legend: - PRA: Process Assessment, PDA: Product Assessment.



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Chemical Engineering

Semester – 3

Scheme of Studies :

Session-2020

S.No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit L+T+(P/2)
1	Chemical Engineering	2019371(019)	Fundamental of Chemical Engineering	3	-	1	4
2	Chemical Engineering	2019372(019)	Industrial Stoichiometry	2	-	1	3
3	Chemical Engineering	2019373(019)	Inorganic Process Technology	2	-	1	3
4	Chemical Engineering	2019374(019)	Material Science for Chemical Engineering	2	-	1	3
5	Chemical Engineering	2019375(019)	Applied Chemistry for Chemical Engineering	3	-	1	4
6	Chemical Engineering	2019361(019)	Fundamental of Chemical Engineering (Lab)	-	2	-	1
7	Chemical Engineering	2019362(019)	Inorganic Process Technology (Lab)	-	2	-	1
8	Chemical Engineering	2019363(019)	Material Science for Chemical Engineering (Lab)	-	2	-	1
9	Chemical Engineering	2019364(019)	Applied Chemistry for Chemical Engineering (Lab)	-	2	-	1
10	-	-	Non Credit Subject (NSS/Sports/Yoga/Library Activities)	-	11	-	-
Total				12	19	05	21

L- Lecture,

T- Tutorial,

P- Practical,

Lecture (L)→ CL Classroom Instruction (Includes different instructional Strategies i.e Lecture and others.)

Practical (P)→Laboratory Instruction (Includes practical performances inLaboratory workshop, field or other locations using different instructional strategies).

Tutorial (T)→Includes sessional work (SW) (assignment, seminar, mini project etc), Self Learning (SL)



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Chemical Engineering

Semester – 3

Scheme of Examination :

Session-2020

S. No	Board of Study	Course Code	Course Titles	Scheme of Examination					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Chemical Engineering	2019371(019)	Fundamental of Chemical Engineering	70	20	30	-	-	120
2	Chemical Engineering	2019372(019)	Industrial Stoichiometry	70	20	30	-	-	120
3	Chemical Engineering	2019373(019)	Inorganic Process Technology	70	20	30	-	-	120
4	Chemical Engineering	2019374(019)	Material Science for Chemical Engineering	70	20	30	-	-	120
5	Chemical Engineering	2019375(019)	Applied Chemistry for Chemical Engineering	70	20	30	-	-	120
6	Chemical Engineering	2019361(019)	Fundamental of Chemical Engineering (Lab)	-	-	-	60	40	100
7	Chemical Engineering	2019362(019)	Inorganic Process Technology (Lab)	-	-	-	60	40	100
8	Chemical Engineering	2019363(019)	Material Science for Chemical Engineering (Lab)	-	-	-	60	40	100
9	Chemical Engineering	2019364(019)	Applied Chemistry for Chemical Engineering (Lab)	-	-	-	60	40	100
Total				350	100	150	240	160	1000

ESE: End of semester exam

CT: Class Test

TA: Teachers Assessment



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Chemical Engineering

Semester – 4

Scheme of Studies :

Session-2020

S. No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit L+T+(P/2)
1	Chemical Engineering	2019471(019)	Mechanical Operations in Chemical Engineering	3	-	1	4
2	Chemical Engineering	2019472(019)	Fluid Flow Operation	3	-	1	4
3	Chemical Engineering	2019473(019)	Organic Process Technology	2	-	1	3
4	Mechanical Engineering	2000475(037)	Entrepreneurship Development & Management	2	-	1	3
5	Chemical Engineering	2019474(019)	Utilities and Renewable Energy	2	-	1	3
6	Chemical Engineering	2019461(019)	Mechanical Operations in Chemical Engineering (Lab)	-	2	-	1
7	Chemical Engineering	2019462(019)	Fluid Flow Operation (Lab)	-	2	-	1
8	Chemical Engineering	2019463(019)	Organic Process Technology (Lab)	-	2	-	1
9	Chemical Engineering	2019464(019)	Utilities and Renewable Energy (Lab)	-	2	-	1
10	-	-	Non Credit Subject (NSS/Sports/Yoga/Library Activities)	-	11	-	-
Total				12	19	05	21

L- Lecture,

T- Tutorial,

P- Practical,

Lecture (L)→ CL Classroom Instruction (Includes different instructional Strategies i.e Lecture and others.)

Practical (P)→ Laboratory Instruction (Includes practical performances in Laboratory workshop, field or other locations using different instructional strategies).

Tutorial (T)→ Includes sessional work (SW) (assignment, seminar, mini project etc), Self Learning (SL)



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Chemical Engineering

Semester – 4

Session-2020

Scheme of Examination :

S. No.	Board of Study	Course Code	Course Titles	Scheme of Examination					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Chemical Engineering	2019471(019)	Mechanical Operations in Chemical Engineering	70	20	30	-	-	120
2	Chemical Engineering	2019472(019)	Fluid Flow Operation	70	20	30	-	-	120
3	Chemical Engineering	2019473(019)	Organic Process Technology	70	20	30	-	-	120
4	Mechanical Engineering	2037477(037)	Entrepreneurship Development & Management	70	20	30	-	-	120
5	Chemical Engineering	2019474(019)	Utilities and Renewable Energy	70	20	30	-	-	120
6	Chemical Engineering	2019461(019)	Mechanical Operations in Chemical Engineering (Lab)	-	-	-	60	40	100
7	Chemical Engineering	2019462(019)	Fluid Flow Operation (Lab)	-	-	-	60	40	100
8	Chemical Engineering	2019463(019)	Organic Process Technology (Lab)	-	-	-	60	40	100
9	Chemical Engineering	2019464(019)	Utilities and Renewable Energy (Lab)	-	-	-	60	40	100
Total				350	100	150	240	160	1000

ESE: End of semester exam

CT: Class Test

TA: Teachers Assessment



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Chemical Engineering Semester – 5

Scheme of Studies :

Session-2020

S.No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit L+T+(P/2)
1	Chemical Engineering	2019571 (019)	Process Heat Transfer	3	-	1	4
2	Chemical Engineering	2019572 (019)	Separation Technique-I	3	-	1	4
3	Chemical Engineering	2019573 (019)	Process Automation and Control	2	-	1	3
4	Chemical Engineering	2019574 (019)	Thermodynamics	2	-	1	3
5	Chemical Engineering	2019581 (019)	Elective – I	3	-	1	4
			Cement Technology				
		2019582 (019)	Fertilizer Technology				
6	Chemical Engineering	2019561 (019)	Process Heat Transfer (Lab)	-	2	-	1
7	Chemical Engineering	2019562 (019)	Separation Technique-I (Lab)	-	2	-	1
8	Chemical Engineering	2019563 (019)	Process Automation and Control (Lab)	-	2	-	1
9	Chemical Engineering		Elective – I (Lab)	-	2	-	1
		2019591 (019)	Cement Technology (Lab)				
		2019592 (019)	Fertilizer Technology (Lab)				
10	Chemical Engineering	2019564 (019)	Industrial Training / Internship	-	2	-	1
11	Humanities	--	Library/Sports/Seminar Presentation	-	8	-	-
Total				13	18	5	23

L- Lecture, T- Tutorial, P- Practical,

Lecture (L)→ CL Classroom Instruction (Includes different instructional Strategies i.e. Lecture and others.)

Practical (P)→ Laboratory Instruction (Includes practical performances in Laboratory workshop, field or other locations using different instructional strategies).

Tutorial (T)→ Includes sessional work (SW) (assignment, seminar, mini project etc), Self Learning (SL)

Elective-I: Cement Technology OR Fertilizer Technology



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Chemical Engineering

Semester – 5

Scheme of Examination :

Session-2020

S.No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Chemical Engineering	2019571 (019)	Process Heat Transfer	70	20	30	-	-	120
2	Chemical Engineering	2019572 (019)	Separation Technique-I	70	20	30	-	-	120
3	Chemical Engineering	2019573 (019)	Process Automation and Control	70	20	30	-	-	120
4	Chemical Engineering	2019574 (019)	Thermodynamics	70	20	30	-	-	120
5	Chemical Engineering		Elective – I	70	20	30	-	-	120
		2019581 (019)	Cement Technology						
		2019582 (019)	Fertilizer Technology						
6	Chemical Engineering	2019561 (019)	Process Heat Transfer	-	-	-	50	30	80
7	Chemical Engineering	2019562 (019)	Separation Technique-I	-	-	-	50	30	80
8	Chemical Engineering	2019563 (019)	Process Automation and Control	-	-	-	50	30	80
9	Chemical Engineering		Elective – I (Lab)	-	-	-	50	30	80
		2019591 (019)	Cement Technology (Lab)						
		2019592 (019)	Fertilizer Technology (Lab)						
10	Chemical Engineering	2019564 (019)	Industrial Training/Internship	-	-	-	50	30	80
Total				350	100	150	250	150	1000

ESE: End of semester exam

CT: Class Test

TA: Teachers Assessment



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Chemical Engineering

Semester – 6

Scheme of Studies :

Session-2020

S.No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit L+T+(P/2)
1	Chemical Engineering	2019671 (019)	Plant Maintenance & Safety	3	-	1	4
2	Chemical Engineering	2019672 (019)	Separation Technique-II	3	-	1	4
3	Chemical Engineering	2019673 (019)	Chemical Engineering Kinetics	3	-	1	4
4	Chemical Engineering		Elective – II	3	-	1	4
		2019681 (019)	Refinery and Petrochemical Technology				
		2019682 (019)	Food and Beverages Technology				
5	Chemical Engineering	2019661 (019)	Separation Technique-II (Lab)	-	2	-	1
6	Chemical Engineering	2019662 (019)	Chemical Engineering Kinetics (Lab)	-	2	-	1
7	Chemical Engineering		Elective – II (Lab)	-	2	-	1
		2019691 (019)	Refinery and Petrochemical Technology (Lab)				
		2019692 (019)	Food and Beverages Technology (Lab)				
8	Chemical Engineering	2019663 (019)	Major Project	-	4	-	2
9	Chemical Engineering	--	Library/Sorts/Seminar Presentation	-	8	-	0
10	Humanities	--	Indian Constitution	2	-	-	0
Total				14	18	04	21

L- Lecture, T- Tutorial, P- Practical,

Lecture (L)→CL Classroom Instruction (Includes different instructional Strategies i.e. Lecture and others.)

Practical (P)→Laboratory Instruction (Includes practical performances in Laboratory workshop, field or other locations using different instructional strategies).

Tutorial (T)→Includes sessional work (SW) (assignment, seminar, mini project etc), Self Learning (SL)

Elective-II: Refinery and Petrochemical Technology OR Food and Beverages Technology



Chhattisgarh Swami Vivekanand Technical University, Bhilai

Diploma in Chemical Engineering

Semester – 6

Scheme of Examination :

Session-2020

S.No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Chemical Engineering	2019671 (019)	Plant Maintenance & Safety	70	20	30	-	-	120
2	Chemical Engineering	2019672 (019)	Separation Technique-II	70	20	30	-	-	120
3	Chemical Engineering	2019673 (019)	Chemical Engineering Kinetics	70	20	30	-	-	120
4	Chemical Engineering		Elective – II	70	20	30	-	-	120
		2019681 (019)	Refinery and Petrochemical Technology						
		2019682 (019)	Food and Beverages Technology						
5	Chemical Engineering	2019661 (019)	Separation Technique-II (Lab)	-	-	-	60	40	100
6	Chemical Engineering	2019662 (019)	Chemical Engineering Kinetics (Lab)	-	-	-	60	40	100
7	Chemical Engineering		Elective – II (Lab)	-	-	-	60	40	100
		2019691 (019)	Refinery and Petrochemical Technology (Lab)						
		2019692 (019)	Food and Beverages Technology (Lab)						
8	Chemical Engineering	2019663 (019)	Major Project	-	-	-	120	100	220
Total				280	80	120	300	220	1000

ESE: End of semester exam

CT: Class Test

TA: Teachers Assessment