



# Chhattisgarh Swami Vivekanand Technical University, Bhilai

## Diploma in Industrial Safety & Fire Safety Engineering

### Semester-I

Session-2021

#### Scheme of Studies:

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	-	-
<b>Total</b>				<b>11</b>	<b>16</b>	<b>05</b>	<b>22</b>

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 Industrial Safety & Fire Safety Engineering

### Semester-I

Session-2021

#### Scheme of Examinations:

S.No	Board of Study	Course Code	Course Titles	Scheme of Examination					Total Marks
				Theory			Practical		
				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
<b>Total</b>				<b>350</b>	<b>100</b>	<b>180</b>	<b>140</b>	<b>230</b>	<b>1000</b>

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 Industrial Safety & Fire Safety Engineering

### Semester-II

Session-2021

#### Scheme of Studies:

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	-	-
<b>Total</b>				<b>11</b>	<b>14</b>	<b>05</b>	<b>21</b>

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 Industrial Safety & Fire Safety Engineering

### Semester-II

Scheme of Examination:

Session-2021

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
<b>Total</b>				<b>350</b>	<b>130</b>	<b>220</b>	<b>90</b>	<b>210</b>	<b>1000</b>

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 Industrial Safety and Fire Safety Engineering

### Semester – III

Session-2021-22

#### Scheme of Studies :

S. No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit L+T+(P/2)
1	Civil Engineering	2129371 (020)	Fire Safety Engineering-I	2	-	1	3
2	Civil Engineering	2129372 (020)	Fire Codes and Standard	2	-	1	3
3	Civil Engineering	2129373 (020)	Industrial Safety Management	2	-	1	3
4	Civil Engineering	2129374 (020)	Safety in Construction	2	-	1	3
5	Civil Engineering	2129375 (020)	Mines Hazard & Safety	3	-	1	4
6	Civil Engineering	2129361 (020)	Fire Safety Engineering-I (Lab)	-	2	-	1
7	Civil Engineering	2129362 (020)	Safety in Construction (Lab)	-	2	-	1
8	Civil Engineering	2129363 (020)	Industrial Safety Management (Lab)	-	2	-	1
9	Civil Engineering	2129364 (020)	Mines Hazard & Safety (Lab)	-	2	-	1
10	-	-	Library	-	2	-	0
11	Humanities	-	Health, Hygiene & Yoga	-	7	-	0
<b>Total</b>				<b>11</b>	<b>17</b>	<b>05</b>	<b>20</b>

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 Industrial Safety and Fire Safety Engineering

### Semester – III

Scheme of Examination:

Session-2021-22

S. No.	Board of Study	Course Code	Course Titles	Scheme of Examination					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Civil Engineering	2129371 (020)	Fire Safety Engineering-I	70	20	30	-	-	120
2	Civil Engineering	2129372 (020)	Fire Codes and Standard	70	20	30	-	-	120
3	Civil Engineering	2129373 (020)	Industrial Safety Management	70	20	30	-	-	120
4	Civil Engineering	2129374 (020)	Safety in Construction	70	20	30	-	-	120
5	Civil Engineering	2129375 (020)	Mines Hazard & Safety	70	20	30	-	-	120
6	Civil Engineering	2129361 (020)	Fire Safety Engineering-I (Lab)	-	-	-	40	60	100
7	Civil Engineering	2129362 (020)	Safety in Construction (Lab)	-	-	-	40	60	100
8	Civil Engineering	2129363 (020)	Industrial Safety Management (Lab)	-	-	-	40	60	100
9	Civil Engineering	2129364 (020)	Mines Hazard & Safety (Lab)	-	-	-	40	50	100
10	Humanities	-	Health, Hygiene & Yoga	-	-	-	-	-	-
<b>Total</b>				<b>350</b>	<b>100</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>1000</b>

**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% total respectively.
- ii) TA in Practical includes performance of PRA, PDA and Viva- Voice with weightage of 50%, 40% and 10% of total respectively.
- iii) 85% attendance is essential in theory & Practical classes appear in examination.



# Chhattisgarh Swami Vivekanand Technical University, Bhilai

## Diploma in Industrial Safety and Fire Safety Engineering

### Semester – IV

Scheme of Studies :

Session-2021-22

S. No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit L+T+(P/2)
1	Civil Engineering	2129471 (020)	Fire Safety Engineering–II	2	-	1	3
2	Civil Engineering	2129472 (020)	Legal Provision on Safety Health and Environment	3	-	1	4
3	Civil Engineering	2129473 (020)	Occupational Health and Hygiene	2	-	1	3
4	Civil Engineering	2129474 (020)	Safety in Engineering Industry	2	-	1	3
5	Civil Engineering	2129475 (020)	Safety in Chemical Industry	2	-	1	3
6	Civil Engineering	2129461 (020)	Fire Safety Engineering–II (Lab)	-	2	-	1
7	Civil Engineering	2129462 (020)	Occupational Health and Hygiene (Lab)	-	2	-	1
8	Civil Engineering	2129463 (020)	Safety in Engineering Industry (Lab)	-	2	-	1
9	Civil Engineering	2129464 (020)	Minor Project	-	2	-	1
10	-	-	Library	-	2	-	0
11	-	-	Sports	-	5	-	0
<b>Total</b>				<b>11</b>	<b>15</b>	<b>05</b>	<b>20</b>

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 Industrial Safety and Fire Safety Engineering

### Semester – IV

Scheme of Examination:

Session-2021-22

S. No.	Board of Study	Course Code	Course Titles	Scheme of Examination					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Civil Engineering	2129471 (020)	Fire Safety Engineering–II	70	20	30	-	-	120
2	Civil Engineering	2129472 (020)	Legal Provision on Safety Health and Environment	70	20	30	-	-	120
3	Civil Engineering	2129473 (020)	Occupational Health and Hygiene	70	20	30	-	-	120
4	Civil Engineering	2129474 (020)	Safety in Engineering Industry	70	20	30	-	-	120
5	Civil Engineering	2129475 (020)	Safety in Chemical Industry	70	20	30	-	-	120
6	Civil Engineering	2129461 (020)	Fire Safety Engineering–II (Lab)	-	-	-	40	60	100
7	Civil Engineering	2129462 (020)	Occupational Health and Hygiene (Lab)	-	-	-	40	60	100
8	Civil Engineering	2129463 (020)	Safety in Engineering Industry (Lab)	-	-	-	40	60	100
9	Civil Engineering	2129464 (020)	Minor Project	-	-	-	40	60	100
10	-	-	Library	-	-	-	-	-	-
11	-	-	Sports	-	-	-	-	-	-
<b>Total</b>				<b>350</b>	<b>100</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>1000</b>

**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% total respectively.
- ii) TA in Practical includes performance of PRA, PDA and Viva- Voice with weightage of 50%, 40% and 10% of total respectively.
- iii) 85% attendance is essential in theory & Practical classes appear in examination.





# Chhattisgarh Swami Vivekanand Technical University, Bhilai

## Diploma in Industrial Safety and Fire Safety Engineering

### Semester – V

#### Scheme of Studies:

Session-2021-22

S. No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit L+T+(P/2)
1	Civil Engineering	2129571 (020)	Fire Safety Engineering-III	2	-	1	3
2	Civil Engineering	2129572 (020)	Hazard Identification and Risk Assessment	3	-	1	4
3	Electrical Engineering	2129573 (020)	Electrical System Safety	2	-	1	3
4	Civil Engineering	2129574 (020)	Industrial Environmental and Pollution Control	2	-	1	3
5	Civil Engineering	2129575 (020)	Disaster Management and Emergency Planning	2	-	1	3
6	Civil Engineering	2129561 (020)	Fire Safety Engineering-III (Lab)	-	2	-	1
7	Electrical Engineering	2129562 (020)	Electrical System Safety (Lab)	-	2	-	1
8	Civil Engineering	2129563 (020)	Industrial Environmental and Pollution Control (Lab)	-	2	-	1
9	Civil Engineering	2129564 (020)	Industrial Training-I (Lab)	-	2	-	1
10	Mandatory Course	-	Fire Ground Operation	2	-	-	-
<b>Total</b>				<b>13</b>	<b>08</b>	<b>05</b>	<b>20</b>

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 Industrial Safety and Fire Safety Engineering

### Semester – V

Scheme of Examination:

Session-2021-22

S. No.	Board of Study	Course Code	Course Titles	Scheme of Examination					
				Theory			Practical		Total Marks
				ESE	CT	TA	ESE	TA	
1	Civil Engineering	2129571 (020)	Fire Safety Engineering-III	70	20	30	-	-	120
2	Civil Engineering	2129572 (020)	Hazard Identification and Risk Assessment	70	20	30	-	-	120
3	Civil Engineering	2129573 (020)	Electrical System Safety	70	20	30	-	-	120
4	Civil Engineering	2129574 (020)	Industrial Environmental and Pollution Control	70	20	30	-	-	120
5	Civil Engineering	2129575 (020)	Disaster Management and Emergency Planning	70	20	30	-	-	120
6	Civil Engineering	2129561 (020)	Fire Safety Engineering-III (Lab)	-	-	-	40	60	100
7	Civil Engineering	2129562 (020)	Electrical System Safety (Lab)	-	-	-	40	60	100
8	Civil Engineering	2129563 (020)	Industrial Environmental and Pollution Control (Lab)	-	-	-	40	60	100
9	Civil Engineering	2129564 (020)	Industrial Training (Lab)	-	-	-	40	60	100
10	Mandatory Course	-	Fire Ground Operation	-	-	-	-	-	-
<b>Total</b>				<b>350</b>	<b>100</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>1000</b>

**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% total respectively.
- ii) TA in Practical includes performance of PRA, PDA and Viva- Voice with weightage of 50%, 40% and 10% of total respectively.
- iii) 85% attendance is essential in theory & Practical classes appear in examination.



# Chhattisgarh Swami Vivekanand Technical University, Bhilai

## Diploma in Industrial Safety and Fire Safety Engineering

### Semester – VI

#### Scheme of Studies:

S. No.	Board of Study	Course Code	Course Titles	Scheme of Studies (Hours/Week)			
				L	P	T	Credit L+T+(P/2)
1	Civil Engineering	2129671 (020)	Safety in Petrochemical Industry	3	-	1	4
2	Civil Engineering	2129672 (020)	Nuclear Safety and Radioactive Materials	2	-	1	3
3	Civil Engineering	2129673 (020)	Special Fire Hazards (Aviation, Marine & High-Rise Building)	2	-	1	3
4	Civil Engineering	2129674 (020)	Paramedics	2	-	1	3
5	Mechanical Engineering	2129675 (037)	Entrepreneurship Development and Management	2	-	1	3
6	Civil Engineering	2129661 (020)	Paramedics (Lab)	-	2	-	1
7	Civil Engineering	2129662 (020)	Fixed Fire Protection System (Lab)	-	2	-	1
8	Civil Engineering	2129663 (020)	Major Project	-	4	-	2
9	Mandatory	-	Personality Development and Communication Skill	2	-	-	0
<b>Total</b>				<b>13</b>	<b>08</b>	<b>05</b>	<b>20</b>

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 Industrial Safety and Fire Safety Engineering

### Semester – VI

#### 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	Civil Engineering	2129671 (020)	Safety in Petrochemical Industry	70	20	30	-	-	120
2	Civil Engineering	2129672 (020)	Nuclear Safety and Radioactive Materials	70	20	30	-	-	120
3	Civil Engineering	2129673 (020)	Special Fire Hazards (Aviation, Marine & High-Rise Building)	70	20	30	-	-	120
4	Civil Engineering	2129674 (020)	Paramedics	70	20	30	-	-	120
5	Mechanical Engineering	2129675 (037)	Entrepreneurship Development and Management	70	20	30	-	-	120
6	Civil Engineering	2129661 (020)	Paramedics (Lab)	-	-	-	40	60	100
7	Civil Engineering	2129662 (020)	Fixed Fire Protection System (Lab)	-	-	-	40	60	100
8	Civil Engineering	2129663 (020)	Major Project	-	-	-	80	120	200
9	Mandatory	-	Personality Development and Communication Skill	-	-	-	-	-	-
<b>Total</b>				<b>350</b>	<b>100</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>1000</b>

**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% total respectively.
- ii) TA in Practical includes performance of PRA, PDA and Viva- Voice with weightage of 50%, 40% and 10% of total respectively.
- iii) 85% attendance is essential in theory & Practical classes appear in examination.