Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

THEORY COURSE FILE CONTENTS

Check list Course Outcomes Attainment

S. No.	Contents	Available (Y/N/NA)	Date of Submission	Signature of HOD
1.	Authenticated Syllabus Copy	Y	05.04.2021	
2.	Individual Time Table	Y		
3.	Students' Name List (Approved Copy)	Y		
4.	Course Plan, PO, PSO, COs, CO-PO Mapping, COA Plan, Session Plan and Periodic Monitoring	Y		
5.	Previous Year End Semester Question Papers	Y		
6.	Question Bank (All Units - Part A, Part B & C)	N		
7.	Dissemination of Syllabus and Course Plan to Students	Y		
8.	Lecture Notes - **Unit I**, II & III	Y		
9.	**Sample Documents and Evaluation Sheet for Internal Assessment** – Tutorials / Assignments / Class Test / Open Book Test / Quiz / Project / Seminar / Role Play if any (Before Mid Term)	Y	24.08.21	
10.	**Mid Term Examination** A. Question Paper / Any Other Assessment Tools Used B. Sample Answer Scripts (Best, Average, Poor) if required C. Evaluation Sheet D. Slow Learners List and Remedial Measures	Y		
11.	Lecture Notes – Unit IV & V	Y	24.08.21	
12.	**Sample Documents and Evaluation Sheet for Internal Assessment** – Tutorials / Assignments / Class Test /Open Book Test / Quiz / Project / Seminar / Role Play if any (After Mid Term)	Y		
13.	Course End Survey (Indirect Assessment) & Consolidation	Y		
14.	**End Term Examination** A. Question Paper & Answer Key B. Sample Answer Scripts (Best, Average, Poor) if required C. Evaluation Sheet	Y		

Year: I
Semester: II

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	D. Slow Learners List and Remedial Measures.			
15.	Content Beyond the Syllabus (Proof)			
16.	Innovative Teaching Tools Used for TLP	Y		
17.	Details of Visiting Faculty Session / Industry Expert / Guest Lecture / Seminar / Field Visit / Webinars / Flipped Class Room / Blended Learning / Online Resources etc.	Y		
18.	Consolidated Mark Statement	Y		
19.	CO Attainment (Mid Term + Internal Assessment + End Term)	Y	24.08.21	
20.	Gap Analysis & Remedial Measures	Y		
21.	CO - PO Attainment	Y		
22.	Class Record (Faculty Logbook)	Y		

Signature of HOD/ Dean **Signature of Faculty**

Date: **Date:**

Year: I
Semester: II

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Syllabus Copy

Course Code	Course Name	L	T	P	C
Version 1.0		3	0	0	3
Pre-requisites/Exposure	Construction Project Management				
Co-requisites	Management Principles and Risk Analysis				

Course Objectives

1. To study different safety concepts and requirements applicable to construction work or projects.

2. To study various construction accidents, safety programmes, contractual obligations and design safety.

Course Content

UNIT –I: **9 Lecture Hours**

Construction Accidents: Introduction to Safety Management - Accidents and their Causes - Human Factors in Construction- Safety - Costs of Construction Injuries - Occupational and Safety Hazard Assessment - Legal Implications.

Unit II: **9 Lecture Hours**

Safety Programs: Problem areas in Construction Safety - Elements of an Effective Safety Programme -Job-Site Safety Assessment - Safety Meetings - Safety Incentives - Safety in Construction Contracts - Substance Abuse - Safety Record Keeping.

.

Unit III: **9 Lecture Hours**

Designing for Safety: Safety Culture, Safe Workers, Safety and First Line Supervisors, Safety and Middle Managers - Top Management Practices, Company Activities and Safety.

.

Unit IV: **9 Lecture Hours**

Contractual Obligation Safety Personnel - Sub Contractual Obligation, Project Coordination and Safety Procedures, Workers Compensation, Safety concerns in construction, organizing for safety.

Unit V: **9 Lecture Hours**

Safety During Construction: Safety concern construction Role of owners in safety and health management - Proactive Position as an owner -Allocation of responsibility for safety - Fostering total safety culture -Promote job site safety - Additional concerns of owners.

Year: I
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C: 3

Reference Books:

1. Hinze, Jimmy W. "Construction Safety", Prentice Hall Inc. New Jersey, 1997
2. Coble, Richard J. Hinze, Jimmie and Haupt, Theo C. "Construction Safety and Health Management", Prentice Hall Inc. New Jersey, 2001
3. Raymond E. Levitt, and Nancy Morse Samelson., "Construction Safety Management", Second Edition, 1993.

Web Resources:

Journals:

Faculty Individual Time Table

ADAMAS UNIVERSITY, KOLKATA								
SCHOOL OF Engineering and Technology								
DEPARTMENT OF Civil Engineering								
Programme: M.Tech								
Course Code & Course: ECE61138 and Project Safety Management Faculty Coordinator: Subhankar Santra								
Day & Time	**9:30-10:25**	**10:30-11:25**	**11:30-12:25**	**12:25-13:30**	**13:30-14:25**	**14:30-15:25**	**15:30-16:25**	**16:30-17:25**
Monday			Project Safety Management	LUNCH				
Tuesday								
Wednesday								
Thursday					Project Safety Management			
Friday		Project Safety Management						

Signature of HOD **Signature of Class Coordinator**

Date: **Date:**

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
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C: 3

Students Name List

ROLL NUMBER	REGISTRATION NUMBER	NAME OF THE STUDENT
PG/02/MTCOEM/2020/001	AU/2020/0004499	ANINDYA GHOSH

Signature of HOD/Dean

Date:

Signature of Class Coordinator

Date:

Year: I
Semester: II

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COURSE PLAN

Target	60% (marks)
Level-1	50% (population)
Level-2	60% (population)
Level-3	70% (population)

1. Method of Evaluation

UG	PG
Internal Assessment (30%) (Quizzes/Tests, Assignments & Seminars etc.)	Internal Assessment (30%) (Quizzes/Tests, Assignments & Seminars etc.)
Mid Semester Examination (20%)	Mid Semester Examination (20%)
End Semester Examination (50%)	End Semester Examination (50%)

*Keep as per Program (UG/PG)

2. Passing Criteria

Scale	PG	UG
Out of 10 Point Scale	CGPA – "5.00" Min. Individual Course Grade – "C" Passing Minimum – 40	CGPA – "5.00" Min. Individual Course Grade – "C" Passing Minimum – 35

*Keep as per Program (UG/PG)

3. Pedagogy

- **Direct Instruction**
- Kinesthetic Learning
- **Flipped Classroom**
- Differentiated Instruction
- Expeditionary Learning
- Inquiry Based Learning
- Game Based Learning
- Personalized Learning

4. Topics introduced for the first time in the program through this course

- (New Topics Related to this Course – Syllabus Revision if any/Content Beyond Syllabus)

5. References:

Text Books	Web Resources	Journals	Reference Books
			3

Signature of HOD/Dean **Signature of Faculty**

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
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Date: **Date:**

Year: I
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C: 3

GUIDELINES TO STUDY THE SUBJECT

Instructions to Students:

1. Go through the 'Syllabus' in the LMS in order to find out the Reading List.
2. Get your schedule and try to pace your studies as close to the timeline as possible.
3. Get your on-line lecture notes (Content, videos) at Lecture Notes section. These are our lecture notes. Make sure you use them during this course.
4. check your LMS regularly
5. go through study material
6. check mails and announcements on blackboard
7. keep updated with the posts, assignments and examinations which shall be conducted on the blackboard
8. Be regular, so that you do not suffer in any way
9. C**ell Phones and other Electronic Communication Devices:** Cell phones and other electronic communication devices (such as Blackberries/Laptops) are not permitted in classes during Tests or the Mid/Final Examination. Such devices MUST be turned off in the class room.
10. **E-Mail and online learning tool:** Each student in the class should have an e-mail id and a pass word to access the LMS system regularly. Regularly, important information – Date of conducting class tests, guest lectures, via online learning tool. The best way to arrange meetings with us or ask specific questions is by email and prior appointment. All the assignments preferably should be uploaded on online learning tool. Various research papers/reference material will be mailed/uploaded on online learning platform time to time.
11. **Attendance:** Students are required to have minimum attendance of 75% in each subject. Students with less than said percentage shall NOT be allowed to appear in the end semester examination.

This much should be enough to get you organized and on your way to having a great semester! If you need us for anything, send your feedback through e-mail XXX@adamasuniversity.ac.in Please use an appropriate subject line to indicate your message details.

There will no doubt be many more activities in the coming weeks. So, to keep up to date with all the latest developments, please keep visiting this website regularly.

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
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C: 3

RELATED OUTCOMES

1. The expected outcomes of the Program are:

PO1	**Domain Knowledge**: Apply comprehensive knowledge of theories, concepts and principles for effective control and management of construction industry projects.
PO2	**Problem Analysis**: Identify and analyze the strategic importance of construction projects and its problems in the perspectives of client, context and constraints and obtain solution using mathematics, engineering and management principles.
PO3	**Design/Development of Solutions:** Planning, scheduling, and control of construction projects by managing resources and constraints with appropriate consideration for the public health and safety, and the cultural, societal, and economical considerations.
PO4	**Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern IT prediction and simulation tools for construction projects.
PO6	**Project Management, Governance and Finance:** Create comprehensive understanding of the techniques associated with the management of resources and finance, assessment and management of risk and subsequent corporate governance as appropriate to a project manager operating in the construction industry.
PO7	**Ethics and Environment:** Understand the impact of residential, commercial, industrial and infrastructural projects in societal, ethical and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO9	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO10	**Life-long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

2. The expected outcomes of the Specific Program are: (up to 3)

PSO1	PG itself a Specific Programme. Henceforth no PSO is Required
PSO2	
PSO3	

Year: I
Semester: II

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C: 3

3. **The expected outcomes of the Course are: (minimum 4 and maximum 6)**

CO1	**Explain** construction accidents and safety as well as legal implications.
CO2	**Assemble** and improve knowledge about various safety programs related to job site, contracts, records.
CO3	**Develop** concepts about safety design in various aspects as well as important management practices.
CO4	**Define** various important contractual obligation and safety personnel.
CO5	**Examine** different safety issues during construction and role of owners in safety, health, protective measures.

4. **Co-Relationship Matrix**
Indicate the relationships by 1- Slight (Low) 2- Moderate (Medium) 3-Substantial (High)

Program Outcomes / Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	1	-	1	-	2		-	-	3
CO2	3	-	-	1	-	2	3	-	-	3
CO3	3	-	3	1	-	2	3	-	-	3
CO4	3	-	3	-	1	-	3	-	-	3
CO5	3	-	3	-	1	-	3	-	-	3
Average	**3**	**1**	**3**	**1**	**1**	**2**	**3**	-	-	**3**

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
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C: 3

5. **Course Outcomes Assessment Plan (COA):**

Course Outcomes	Internal Assessment* (30 Marks)		Mid Term Exam (20 Marks)	End Term Exam (50 Marks)	Total (100 Marks)
	Before Mid Term	After Mid Term			
CO1	5	NA	13	2	20
CO2	6	NA	7	7	20
CO3	NA	5	NA	15	20
CO4	NA	7	NA	13	20
CO5	NA	7	NA	13	20
Total	11	19	20	50	100

* Internal Assessment – Tools Used: Tutorial, Assignment, Seminar, Class Test etc.

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

OVERVIEW OF COURSE PLAN OF COURSE COVERAGE

Course Activities:

S. No.	Description	Planned			Actual			Remarks
		From	To	No. of Session	From	TO	No. of Session	
1.	Construction Accidents	05.04.21	27.04.21	9	05.04.21	29.04.21	9	Student was on 16.04.21 absent due to placement offered from his B.Tech college
2.	Safety Programs	29.04.21	24.05.21	9	30.04.21	27.05.21	9	Completed
3.	Designing for Safety	27.05.21	14.06.21	9	28.05.21	17.06.21	9	Completed
4.	Contractual Obligation Safety Personnel	17.06.21	05.07.21	9	18.06.21	08.07.21	9	Completed
5.	Contractual Obligation Safety Personnel	08.07.21	26.07.21	9	09.07.21	29.07.21	9	Completed

Total No. of Instructional periods available for the course: 45 Sessions

Signature of HOD/Dean — **Signature of Faculty**

Date: — **Date:**

Year: I
Semester: II

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C: 3

SESSION PLAN

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	05.04.21	Introduction to Safety Management	CO1	1	05.04.21	Introduction to Safety Management	CO1
2	08.04.21	Accidents and their Causes	CO1	2	08.04.21	Accidents and their Causes	CO1
3	09.04.21	Accidents and their Causes	CO1	3	09.04.21	Accidents and their Causes	CO1
4	12.04.21	Human Factors in Construction- Safety	CO1	4	12.04.21	Human Factors in Construction- Safety	CO1
5	16.04.21	Human Factors in Construction- Safety	CO1	5	19.04.21	Human Factors in Construction- Safety	Student absent on 16th
6	19.04.21	Costs of Construction Injuries	CO1	6	22.04.21	Costs of Construction Injuries	CO1
7	22.04.21	Occupational and Safety Hazard Assessment	CO1	7	23.04.21	Occupational and Safety Hazard Assessment	CO1
8	23.04.21	Occupational and Safety Hazard Assessment	CO1	8	26.04.21	Occupational and Safety Hazard Assessment	CO1
9	26.04.21	Legal Implications.	CO1	9	29.04.21	Legal Implications and revision	CO1

UNIT-I

Remarks:

Signature of Faculty

Year: I
Semester: II

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8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

Date:

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

SESSION PLAN
UNIT-II

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	29.04.21	Problem areas in Construction Safety	CO2	1	30.04.21	Problem areas in Construction Safety	CO2
2	30.04.21	Problem areas in Construction Safety	CO2	2	03.05.21	Problem areas in Construction Safety	CO2
3	03.05.21	Elements of an Effective Safety Programme	CO2	3	06.05.21	Elements of an Effective Safety Programme	CO2
4	06.05.21	Job-Site Safety Assessment	CO2	4	07.05.21	Job-Site Safety Assessment	CO2
5	07.05.21	Safety Meetings	CO2	5	10.05.21	Safety Meetings	CO2
6	10.05.21	Safety Incentives	CO2	6	13.05.21	Safety Incentives	CO2
7	13.05.21	Safety in Construction Contracts - Substance Abuse	CO2	7	16.05.21	Safety in Construction Contracts - Substance Abuse	CO2
8	16.05.21	Safety in Construction Contracts - Substance Abuse	CO2	8	24.05.21	*Safety in Construction Contracts - Substance Abuse*	CO2
9	24.05.21	Safety Record Keeping.	CO2	9	27.05.21	Safety Record Keeping and revisions	CO2

Remarks:

Signature of Faculty

Year: I
Semester: II

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7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

Date:

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

SESSION PLAN
UNIT-III

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	27.05.21	Safety Culture, Safe Workers,	CO3	1	28.05.21	Safety Culture, Safe Workers,	CO3
2	28.05.21	Safety Culture, Safe Workers,	CO3	2	31.05.21	Safety Culture, Safe Workers,	CO3
3	31.05.21	Safety and First Line Supervisors,	CO3	3	03.06.21	Safety and First Line Supervisors,	CO3
4	03.06.21	Safety and First Line Supervisors,	CO3	4	04.06.21	Safety and First Line Supervisors,	CO3
5	04.06.21	Safety and Middle Managers -	CO3	5	07.06.21	Safety and Middle Managers -	CO3
6	07.06.21	Top Management Practices,	CO3	6	10.06.21	Top Management Practices,	CO3
7	10.06.21	Top Management Practices,	CO3	7	11.06.21	Top Management Practices,	CO3
8	11.06.21	Company Activities and Safety.	CO3	8	14.06.21	Company Activities and Safety.	CO3
9	14.06.21	Company Activities and Safety.	CO3	9	17.06.21	Company Activities and Safety and revision	CO3

Remarks:

Signature of Faculty

Date:

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

SESSION PLAN
UNIT-IV

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	17.06.21	Sub Contractual Obligation	CO4	1	18.06.21	Sub Contractual Obligation	CO4
2	18.06.21	Sub Contractual Obligation	CO4	2	21.06.21	Sub Contractual Obligation	CO4
3	21.06.21	Project Coordination and Safety Procedures	CO4	3	24.06.21	Project Coordination and Safety Procedures	CO4
4	24.06.21	Project Coordination and Safety Procedures	CO4	4	25.06.21	Project Coordination and Safety Procedures	CO4
5	25.06.21	Project Coordination and Safety Procedures	CO4	5	28.06.21	Project Coordination and Safety Procedures	CO4
6	28.06.21	Workers Compensation	CO4	6	01.07.21	Workers Compensation	CO4
7	01.07.21	Safety concerns in construction	CO4	7	02.07.21	Safety concerns in construction	CO4
8	02.07.21	Safety concerns in construction	CO4	8	05.07.21	Safety concerns in construction	CO4
9	05.07.21	organizing for safety.	CO4	9	08.07.21	organizing for safety.	CO4

Remarks:

Signature of Faculty

Date:

Year: I
Semester: II

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8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

SESSION PLAN
UNIT-V

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	08.07.21	Safety concern construction Role of owners in safety and health management	CO5	1	09.07.21	Safety concern in construction	CO5
2	09.07.21	Safety concern construction Role of owners in safety and health management	CO5	2	12.07.21	Role of owners in safety and health management	CO5
3	12.07.21	Proactive Position as an owner	CO5	3	15.07.21	Proactive Position as an owner	CO5
4	15.07.21	Allocation of responsibility for safety	CO5	4	16.07.21	Allocation of responsibility for safety	CO5
5	16.07.21	Fostering total safety culture	CO5	5	19.07.21	Fostering total safety culture	CO5
6	19.07.21	Promote job site safety	CO5	6	22.07.21	Promote job site safety	CO5
7	22.07.21	Additional concerns of owners.	CO5	7	23.07.21	Additional concerns of owners.	CO5
8	23.07.21	Additional concerns of owners.	CO5	8	26.07.21	Additional concerns of owners.	CO5
9	26.07.21	Additional concerns of owners.	CO5	9	29.07.21	Revision	CO5

Remarks:

Signature of Faculty

Date:

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

PERIODIC MONITORING

Actual date of completion and remarks, if any

Components		From	To	From	To
Duration (Mention from and to Dates)		05.04.21	21.05.21	25.05.21	27.07.21
Percentage of Syllabus covered		0%	30%	30%	100%
Lectures	Planned	1	17	18	45
	Taken	1	16		
Tutorials	Planned	NA			
	Taken				
Test/Quizzes/ Mid Semester/ End Semester	Planned	1	1 (MID)	1	1(END)
	Taken	1	1	2	1
	CO's Addressed	CO1	CO1, CO2	CO3,CO4	CO1, CO2, CO3,CO4,CO5
	CO's Achieved	CO1	CO1, CO2	CO2,(CO3,CO4)	
Assignments	Planned	1	1	1	1
	Taken	1	1	1	1
	CO's Addressed	CO1,CO2	1	CO3, CO4	CO5
	CO's Achieved	CO1,CO2	1	CO3, CO4	CO5
Signature of Faculty					
Head of the Department					
OBE Coordinator					

Signature of HOD/ Dean — **Signature of Faculty**

Date — **Date**

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

LECTURE NOTES

LINK:

https://riceindiamy.sharepoint.com/:w:/g/personal/subhankar1_santra_adamasuniversity_ac_in/EUwJ264ZUy9FnLEez310Ha4BbL9MPByGyz7kqcsr5UXUmA?e=rbIPNR

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

PERIODIC MONITORING

Attainment of the Course (Learning) Outcomes:

Components	Attainment level	Action Plan	Remarks
Assignment	CO1:	Submission Target 10.05.2021	Submitted on 14.05.21
	CO2:		
	CO3:	Submission Target 30.06.2021	Submitted on 10.07.21
	CO4:		
	CO5:	Submission Target 30.07.2021	Submitted on 30.07.21
Quiz/Test etc.	CO1:	To be Conducted on 03.05.2021	Quiz Conducted on 06.05.2021
	CO2:	To be Conducted on 03.06.2021	Quiz Conducted on 03.06.2021
	CO3:	To be Conducted on 28.06.2021	Class Test Conducted on 28.06.2021
	CO4:		
	CO5:	-	
Mid Semester	CO1:	Scheduled between 17.05.21-21.05.21	Conducted on 19.05.2021
	CO2:		
	CO3:	-	
	CO4:	-	
	CO5:	-	
End Semester	CO1:	Scheduled between 09.08.21-15.08.21	Conducted on 12.08.21
	CO2:		
	CO3:		
	CO4:		
	CO5:		
Any Other	CO1:		
	CO2:		
	CO3:		
	CO4:		
	CO5:		

Signature of HOD/ Dean

Signature of Faculty

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

Date **Date**

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

PREVIOUS SEMESTER QUESTION PAPER

ADAMAS UNIVERSITY
END-SEMESTER EXAMINATION: JULY 2020

Name of the Program: M. Tech Semester: II
Stream: CE
PAPER TITLE: Project Safety Management PAPER CODE: ECE 61138
Maximum Marks: 40 Time duration: 3 Hours
Total No of questions: 08 Total No of Pages: 02

Instruction to the Candidate:

1. At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam.
2. All parts of a Question should be answered consecutively. Each Answer should start from a fresh page.
3. Assumptions made if any, should be stated clearly at the beginning of your answer.

Answer all the Groups

Group A

Answer all the questions of the following

1. a) What is occupational hazard? **1 X 5 = 5**
b) What is fishbone diagram?
c) What are the available methods for risk analysis?
d) What do you mean by MORT?
e) Which analysis method is the most effective in determining potential problem in a given system?

GROUP –B
(Short Answer Type Questions)
Answer *any three* of the following

2. Write a short note on safety design. **3 X 5 = 15**
3. What are the needs of training for management?
4. As a safety manager of underground work what factors will you take into account for safety program?
5. What are the roles of owner for construction safety?

GROUP –C
(Long Answer Type Questions)
Answer *any two* of the following

6. Briefly explain all the causes of construction accidents and their preventive measures. **2 X 10 = 20**
7. Write a short note on risk analysis.
8. Briefly discuss about the elements of an effective safety program.

Year: I
Semester: II

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7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
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C: 3

Question Bank

School: SOET — **Department: CE**
Course Code: ECE61138 — **Course Name: Project Safety Management**
Program: M. Tech — **Semester: II**

Sl. No.	Question	Level of Difficulty (Easy/ Medium/ Difficult)	Knowledge Level (Bloom's Taxonomy)	Course Outcome (CO)
	UNIT-I			
	Part A (Multiple Choice Questions) (1 mark each)			
1.	Who may be responsible for accident? a) Worker b) Management c) working conditions d) all	**Easy**	**R**	**CO1**
2.	_____ is an example of unsafe working conditions. a) Poor discipline at workplace b) oily surface c) lack of safety awareness d) untrained worker	**Medium**	**R**	**CO1**
3.	Which is an indirect cost of accident _____. a) Compensation paid to worker b) cost of time lost c) money paid for treatment of worker d) all the above	**Difficult**	**R**	**CO1**
	Part B (Definition/Naming Questions) (2 marks each)			
1.	Define Accident	**Easy**	**R**	**CO1**
2.	What is occupational hazard?	**Medium**	**U**	**CO1**
3.	Who is responsible for accident?	**Difficult**	U	**CO1**
	Part C (Short Questions) (3-4 marks each)			

Year: I
Semester: II

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C: 3

1.	What are the different causes of Accidents?	Easy	R	CO1
2.	State the role of first line supervisor.	Medium	R	CO1
3.	List out the elements of construction safety.	Difficult	R	CO1
Part D (Explanation Based Questions) (5 marks each)				
1.	What are the different types of construction accidents?	Easy	U	CO1
2.	Explain the human Factors in Construction Safety.	Medium	U	CO1
3.	Explain the legal implications of accidents.	Difficult	U	CO1
Part E (Questions Based on Reasoning) (5 marks each)				
1.	What is the classification of construction accidents?	Easy	R	CO1
2.	How the accident is prevented before it happens?	Medium	R	CO1
3.	How the rate of accidents is calculated?	Difficult	R	CO1
Part F (Application Based Questions) (5-10 marks each)				
1.	What are the occupational and safety hazard assessment?	Easy	Analyzing	CO1
2.	What are the Legal implications in construction accidents?	Medium	Analyzing	CO1
3.	List out the roles and responsibilities concerned in construction safety.	Difficult	Analyzing	CO1
Part G (Short Notes) (5 marks each)				
1.	Give an account on safety standards	Easy	U	CO1
2.	Write a short note on unsafe working conditions.	Medium	R	CO1
3.	Discuss the in a project.	Difficult	U	CO1

Year: I
Semester: II

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UNIT-II

Part A (Multiple Choice Questions) (1 mark each)				
1.	Safety management deals with _____. a) Loss of life b) personal injury c) damage to the equipment d) prevention of an accident	**Easy**	**R**	**CO2**
2.	_____ improves the safety in an industry a) Good housekeeping b) reduced noise level c) material handling system d) all	**Medium**	**R**	**CO2**
3.	Safety procedure includes _____ a) Safety training b) industrial safety c) safe working conditions d) all	**Difficult**	**R**	**CO2**
	Part B (Definition/Naming Questions) (2 marks each)			
1.	Define Safety Committee.	**Easy**	**R**	**CO2**
2.	Define safety management in construction.	**Medium**	**R**	**CO2**
3.	What are the electrical components involved in construction	**Difficult**	R	**CO2**
Part C (Short Questions) (3-4 marks each)				
1.	What is the first rule of safety?	**Easy**	**U**	**CO2**
2.	Give a five basic safety rules.	**Medium**	**R**	**CO2**
3.	What is safety in building and construction industry?	**Difficult**	**R**	**CO2**
Part D (Explanation Based Questions) (5 marks each)				
1.	What is safety operation?	**Easy**	**R**	**CO2**
2.	Explain the prevention measures in construction.	**Medium**	**R**	**CO2**
3.	What are safety measures in different stages of construction?	**Difficult**	**R**	**CO2**
Part E (Questions Based on Reasoning) (5 marks each)				

Year: I
Semester: II

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1.	Give an account on safety benefits and measurement.	**Easy**	**U**	**CO2**
2.	How safety measurement is calculated?	**Medium**	**R**	**CO2**
3.	What are the steps for an effective safety awareness program?	**Difficult**	**R**	**CO2**
Part F (Application Based Questions) (5-10 marks each)				
1.	What are the Safety measures to be taken While Using Electrical Appliances?	**Easy**	**Analyzing**	**CO2**
2.	Write a Case Study on Demolition and safety carried out on demolition process.	**Medium**	**Analyzing**	**CO2**
3.	Give a brief account on any safety in construction on heavy structure with neat picturized sign for safety	**Difficult**	**Analyzing**	**CO2**
Part G (Short Notes) (5 marks each)				
1.	Give a five basic safety rules	**Easy**	**U**	**CO2**
2.	Discuss the most important safety rules in construction.	**Medium**	**U**	**CO2**
3.	What are the different types of Construction project?	**Difficult**	**R**	**CO2**

UNIT-III

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Part A (Multiple Choice Questions) (1 mark each)				
1.	Safety policies are framed because of _____. a) Safety of employees b) legal obligations c) To minimize accidents d) all the above	**Easy**	**R**	**CO3**
2.	Injury without showing external signs is _____ injury. a) Internal b) external c) temporary d) permanent	**Medium**	**R**	**CO3**
3.	Which one is not applicable to good housekeeping?	**Difficult**	**R**	

Year: I
Semester: II

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9. Target : 70 % — P: 0
C: 3

	a) Minimizes discomfort to workers b) reduces chances of fire c) refers to cleanliness d) extinguishes fire			CO3
	Part B (Definition/Naming Questions) (2 marks each)			
1.	Define Safety Committee.	**Easy**	**R**	CO3
2.	List out types of safety training programs.	**Medium**	**R**	CO3
3.	Define safety management in construction.	**Difficult**	**R**	CO3
	Part C (Short Questions) (3-4 marks each)			
1.	Write about importance of Safety Training	**Easy**	**U**	CO3
2.	What are the advantages of monitoring?	**Medium**	**U**	CO3
3.	What are the responsibilities of General employees?	**Difficult**	**Analyzing**	CO3
	Part D (Explanation Based Questions) (5 marks each)			
1.	Explain basic duties and responsibilities in construction safety management.	**Easy**	**U**	CO3
2.	Explain about labour safety in construction industry.	**Medium**	**U**	CO3
3.	Explain the responsibilities of safety officers?	**Difficult**	**U**	CO3
	Part E (Questions Based on Reasoning) (5 marks each)			
1.	What are the factors governing safety in construction?	**Easy**	**R**	CO3
2.	What kind of details should be in inspection reports?	**Medium**	**R**	CO3
3.	Write the need and uses of construction safety manual?	**Difficult**	**R**	CO3
	Part F (Application Based Questions) (5-10 marks each)			
1.	Write the need and uses of construction safety manual?	**Easy**	**Analyzing**	CO3

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
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C: 3

2.	Write a Case Study on Construction Safety Management.	**Medium**	**Analyzing**	**CO3**
3.	Write a Case Study on Construction Safety Management.	**Difficult**	**Analyzing**	**CO3**
	Part G (Short Notes) (5 marks each)			
1.	What is the role of safety officers in construction?	**Easy**	**R**	**CO3**
2.	What kind of details should be in inspection reports?	**Medium**	**U**	**CO3**
3.	What are the functions of Supervisors?	**Difficult**	**U**	**CO3**
	UNIT-IV			
	Part A (Multiple Choice Questions) (1 mark each)			
1.	Fire drill shall be done _____. a) Once in week b) once in month c) once in quarter d) once in year	**Easy**	**R**	**CO4**
2.	Fire in industry is due to _____. a) Short circuit b) fuel c) ignition d) all	**Medium**	**R**	**CO4**
3.	Find the odd one out. a) Loss of time in assisting injured worker b) loss due to damage caused to machines c) compensation paid d) loss due to reduction in efficiency	**Difficult**	**R**	**CO4**
	Part B (Definition/Naming Questions) (2 marks each)			
1.		**Easy**	**R**	**CO4**
2.	What are the types of contracts?	**Medium**	**R**	**CO4**
3.	What are contractual obligations?	**Difficult**	**U**	**CO4**
	Part C (Short Questions) (3-4 marks each)			
1.	What is Workers' Compensation?	**Easy**	**U**	**CO4**

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2.	What is accident leave?	**Medium**	**R**	**CO4**
3.	What is a contractual relationship?	**Difficult**	**R**	**CO4**
Part D (Explanation Based Questions) (5 marks each)				
1.	Explain the basic safety precautions to be implemented in a construction site.	**Easy**	**R**	**CO4**
2.	What are the benefits of ISO certification?	**Medium**	**U**	**CO4**
3.	Explain is Temporary Total Benefits?	**Difficult**	Analyzing	**CO4**
Part E (Questions Based on Reasoning) (5 marks each)				
1.	What should a construction contract include?	**Easy**	**R**	**CO4**
2.	Why project coordination is so important?	**Medium**	**R**	**CO4**
3.	What are basic employment rights for a worker?	**Difficult**	**R**	**CO4**
Part F (Application Based Questions) (5-10 marks each)				
1.	Explain about protection of the public on construction management.	**Easy**	**AP**	**CO4**
2.	Simply the procedures to increase safety in construction sites.	**Medium**	**AP**	**CO4**
3.	Briefly give an overview on contractual obligation.	**Difficult**	**AP**	**CO4**
Part G (Short Notes) (5 marks each)				
1.	What are the safety practices in construction sites?	**Easy**	**U**	**CO4**
2.	List out the equipment for minimum PPE?	**Medium**	**U**	**CO4**
3.	What are additional PPE?	**Difficult**	**U**	**CO4**
UNIT-V				
Part A (Multiple Choice Questions) (1 mark each)				

Year: I
Semester: II

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7. Course : Project Safety Management — L: 3
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9. Target : 70 % — P: 0
C: 3

1.	One ambulance room should be provided in a factory employ more than ____ workers. a) 200 b) 300 c) 400 d) 500	**Easy**	**R**	**CO5**
2.	A worker has used cutter instead of plier for doing some job, and he gets a cut on his right hand. What is the cause of this accident classified as _____ factor. a) Mechanical b) environmental c) human d) technical	**Medium**	**R**	**CO5**
3.	As per safety procedures, compressed gas cylinders may be moved _____. a) By rolling b) by dragging c) by throwing d) all	**Difficult**	**R**	**CO5**
	Part B (Definition/Naming Questions) (2 marks each)			
1.	Name the different safety measures considered.	**Easy**	**R**	**CO5**
2.	What is CFR in safety?	**Medium**	**R**	**CO5**
3.	Define the role of owner.	**Difficult**	**U**	**CO5**
	Part C (Short Questions) (3-4 marks each)			
1.	Why health and safety is important in construction?	**Easy**	**R**	**CO5**
2.	State the three general sections in a safety policy.	**Medium**	**R**	**CO5**
3.	State emergency action plan.	**Difficult**	**R**	**CO5**
	Part D (Explanation Based Questions) (5 marks each)			
1.	Explain communication for employers on worksites	**Easy**	**R**	**CO5**
2.	Briefly explain hazard identification and assessment.	**Medium**	**R**	**CO5**
3.	What is meant by ISO construction?	**Difficult**	**R**	**CO5**
	Part E (Questions Based on Reasoning) (5 marks each)			
1.	What is the consideration in deep excavation?	**Easy**	**R**	**CO5**
2.	Why is office safety important?	**Medium**	**R**	**CO5**

Year: I
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C: 3

3.	How ISO certification can help your construction company?	**Difficult**	**R**	**CO5**
Part F (Application Based Questions) (5-10 marks each)				
1.	What are the elements of an effective safety culture?	**Easy**	**Analyzing**	**CO5**
2.	What is the high rise construction risk assessment?	**Medium**	**Analyzing**	**CO5**
3.	Give an account on safety and rescue equipment.	**Difficult**	**Analyzing**	**CO5**
Part G (Short Notes) (5 marks each)				
1.	What does safety policy mean?	**Easy**	**U**	**CO5**
2.	How to develop a safety and health policy?	**Medium**	**U**	**CO5**
3.	How ISO certification can help your construction company?	**Difficult**	**U**	**CO5**

Year: I
Semester: II

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8. **Program : M. Tech** — **T: 0**
9. **Target : 70 %** — **P: 0**
C: 3

END SEMESTER QUESTION PAPER – SET – I

ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **END SEMESTER EXAMINATION** (Academic Session: 2020 – 21)		
Name of the Program:	**M.Tech (Construction Engineering and Management)**	**Semester:**	**II**
Paper Title:	**Project Safety Management**	**Paper Code:**	**CEM21012**
Maximum Marks:	**50**	**Time Duration:**	**3 Hrs**
Total No. of Questions:	**17**	**Total No of Pages:**	**2**
(Any other information for the student may be mentioned here)	**1.** At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. **2.** All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. **3.** Assumptions made if any, should be stated clearly at the beginning of your answer.		

Group A **Answer All the Questions (5 x 1 = 5)**			
1	Who may be responsible for accident? a) Worker b) Management c) working conditions d) all	**Remembering**	**CO1**
2	Safety procedure includes _____ a) Safety training b) industrial safety c) safe working conditions d) all	**Remembering**	**CO2**
3	Injury without showing external signs is _____ injury. a) Internal b) external c) temporary d) permanent	**Remembering**	**CO3**
4	Fire drill shall be done _____. a) Once in week b) once in month c) once in quarter d) once in year	**Remembering**	**CO4**

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

5	One ambulance room should be provided in a factory employ more than ____ workers. a) 200 b) 300 c) 400 d) 500	Remembering	CO5
	Group B **Answer All the Questions (5 x 2 = 10)**		
6 a)	What is occupational hazard?	Understanding	CO1
	(OR)		
6 b)	Define Accident	Remembering	CO1
7 a)	Define Safety Committee.	Remembering	CO2
	(OR)		
7 b)	What is the first rule of safety?	Remembering	CO2
8 a)	Write about the importance of Safety Training	Understanding	CO3
	(OR)		
8 b)	Define safety management in construction.	Remembering	CO3
9 a)	What are contractual obligations?	Understanding	CO4
	(OR)		
9 b)	What are the types of contracts?	Understanding	CO4
10 a)	List out the equipment for minimum PPE?	Remembering	CO4
	(OR)		
10 b)	Define the role of owner.	Remembering	CO5
	Group C **Answer All the Questions (7 x 5 = 35)**		
11 a)	Discuss the most important safety rules in construction.	Understanding	CO2
	(OR)		
11 b)	What are the steps for an effective safety awareness program?	Understanding	CO2
12 a)	Write a short note on Job-Safety analysis.	Analysing	CO2
	(OR)		
12 b)	Write the need and uses of construction safety manual?	Remembering	CO3
13 a)	What kind of details should be in inspection reports?	Remembering	CO3
	(OR)		
13 b)	What is the role of safety officers in construction?	Understanding	CO3
14 a)	What is Workers' Compensation?	Remembering	CO4
	(OR)		
14 b)	What is accident leave?	Remembering	CO4
15 a)	What are the benefits of ISO certification?	Understanding	CO4
	(OR)		
15 b)	How ISO certification can help your construction company	Analysing	CO4
16 a)	Briefly explain hazard identification and assessment.	Analysing	CO5
	(OR)		
16 b)	What does safety policy mean?	Understanding	CO5

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
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C: 3

17 a)	State emergency action plan.	Understanding	CO5
	(OR)		
17 b)	How to develop a safety and health policy?	Understanding	CO5

END SEMESTER QUESTION PAPER – SET – II

ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **END SEMESTER EXAMINATION** (Academic Session: 2020 – 21)		
Name of the Program:	**M.Tech (Construction Engineering and Management)**	**Semester:**	**II**
Paper Title:	**Project Safety Management**	**Paper Code:**	**CEM21012**
Maximum Marks:	**50**	**Time Duration:**	**3 Hrs**
Total No. of Questions:	**17**	**Total No of Pages:**	**2**
(Any other information for the student may be mentioned here)	**4.** At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. **5.** All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. **6.** Assumptions made if any, should be stated clearly at the beginning of your answer.		

Group A **Answer All the Questions (5 x 1 = 5)**			
1	Which is an indirect cost of accident _____. a) Compensation paid to worker b) cost of time lost c) money paid for treatment of worker d) all the above	**Remembering**	**CO1**
2	Safety procedure includes _____ a) Safety training b) industrial safety c) safe working conditions d) all	**Remembering**	**CO2**
3	Safety policies are framed because of _____. a) Safety of employees b) legal obligations c) To minimize accidents d) all the above	**Remembering**	**CO3**

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
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C: 3

4	As per safety procedures, compressed gas cylinders may be moved _____ a) By rolling b) by dragging c) by throwing d) all	**Remembering**	**CO4**
5	A worker has used cutter instead of plier for doing some job, and he gets a cut on his right hand. The cause of this accident classified as _____factor a) Mechanical b) environmental c) human d) technical	**Understanding**	**CO5**
	Group B **Answer All the Questions (5 x 2 = 10)**		
6 a)	Who is responsible for accident?	**Understanding**	**CO1**
	(OR)		
6 b)	List out different types of accident in construction industry.	**Remembering**	**CO1**
7 a)	Define safety management in construction.	**Remembering**	**CO2**
	(OR)		
7 b)	What is safety in building and construction industry?	**Remembering**	**CO2**
8 a)	What are the advantages of safety monitoring?	**Understanding**	**CO3**
	(OR)		
8 b)	Write a short a note on record keeping.	**Understanding**	**CO3**
9 a)	List out types of safety training programs.	**Remembering**	**CO3**
	(OR)		
9 b)	What are additional PPE?	**Remembering**	**CO4**
10 a)	Explain is Temporary Total Benefits?	**Remembering**	**CO5**
	(OR)		
10 b)	What is CFR in safety?	**Remembering**	**CO5**
	Group C **Answer All the Questions (7 x 5 = 35)**		
11 a)	What are the different types of Construction project?	**Understanding**	**CO2**
	(OR)		
11 b)	Give an account on safety benefits and measurement.	**Understanding**	**CO2**
12 a)	What are safety measures in different stages of construction?	**Analysing**	**CO2**
	(OR)		
12 b)	What are the responsibilities of General employees?	**Remembering**	**CO3**
13 a)	Explain the responsibilities of safety officers?	**Remembering**	**CO3**
	(OR)		
13 b)	Explain basic duties and responsibilities in construction safety management.	**Understanding**	**CO3**

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
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C: 3

14 a)	Explain the basic safety precautions to be implemented in a construction site.	**Remembering**	**CO4**
(OR)			
14 b)	List out the parameters and explain why contractual obligations takes place.	**Understanding**	**CO4**
15 a)	What are basic employment rights for a worker?	**Understanding**	**CO4**
(OR)			
15 b)	Why project coordination is so important?	**Analysing**	**CO4**
16 a)	Explain about protection of the public on construction management.	**Analysing**	**CO5**
(OR)			
16 b)	State the role of owner in developing organizational safety culture.	**Understanding**	**CO5**
17 a)	Why is office safety important?	**Understanding**	**CO5**
(OR)			
17 b)	Give an account on safety and rescue equipment	**Understanding**	**CO5**

Sample Answer Sheet

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Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

Evaluation Sheet – Internal Assessment

Roll Number	Registration Number	Name of the Student	Internal Assessment (30)								
			Assignment 5+5+5 = 15			Class Test 5+5+5 =15			Case Study	etc.	Total
PG/02/MTCOEM/ 2020/001	AU/2020/0004499	ANINDYA GHOSH	5	5	5	5	3	5	-		28

Signature of HOD/Dean — **Signature of Faculty**

Date: — **Date:**

Evaluation Sheet – Mid Semester

Roll Number	Registration Number	Name of the Student	Marks (20)
PG/02/MTCOEM/2020/001	AU/2020/0004499	ANINDYA GHOSH	17

Signature of HOD/Dean — **Signature of Faculty**

Date: — **Date:**

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

COURSE END SURVEY

INDIRECT ASSESSMENT

Sample format for Indirect Assessment of Course outcomes:

NAME: Anindya Ghosh
ROLL NO.: PG/02/MTCOEM/2020/001
REG. NO..: AU/2020/0004499
COURSE: Program Safety Management
PROGRAM: M.Tech CEM

Please rate the following aspects of course outcomes of

Use the scale 1-5 (Poor – Excellent)

Course Outcomes	Statement	1	2	3	4	5
CO1	**Can you Explain** construction accidents and safety as well as legal implications.					5
CO2	**Will you be able to Assemble** and improve knowledge about various safety programs related to job site, contracts, records.					5
CO3	**Can you Develop** concepts about safety design in various aspects as well as important management practices.					5
CO4	**Can you Define** various important contractual obligation and safety personnel.					5
CO5	**Can you Examine** different safety issues during construction and role of owners in safety, health, protective measures.					5

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

INDIRECT ASSESSMENT CONSOLIDATION

ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING
CO Indirect Assessment

Programme: M.Tech in CEM **Academic Year:2020-21**
Batch: 2020-22

Course code & Name : CEM21012 & Project Safety and Management

Course Outcome	Students Feed Back (5)	Attainment (100)
CO1	5	100
CO2	5	100
CO3	5	100
CO4	5	100
CO5	5	100
etc.		

Signature of HOD/Dean
Date:

Signature of Faculty
Date:

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

Evaluation Sheet (End Semester)

Roll Number	Registration Number	Name of the Student	Marks (50)
PG/02/MTCOEM/2020/001	AU/2020/0004499	ANINDYA GHOSH	48

Signature of HOD/Dean **Signature of Faculty**

Date: **Date:**

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

Consolidated Mark Statement

Roll Number	Registration Number	Name of the Student	Total Marks			
			Mid Semester (20)	Internal Assessment (30)	End Semester (50)	Total (100)
PG/02/MTCOEM/2020/001	AU/2020/0004499	ANINDYA GHOSH	17	28	48	93

Signature of Dean/HOD

Date:

Signature of Faculty

Date:

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

CO ATTAINMENT – GAP ANALYSIS & REMEDIAL MEASURES

ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING
CO ATTAINMENT - GAP ANALYSIS & REMEDIAL MEASURES

Batch :	2020-22		Academic Year: 2020-21
Course Code & Name		Name of the Coordinator	Year & Semester
CEM21012 & Project Safety and Management		Subhankar Santra	I & II

CO	Direct Assessment	Indirect Assessment	CO Attainment	Target	CO Attainment Gaps	Action for Bridge the Gap	Target Modification
CO1	100	100	100	70	-30		80
CO2	100	100	100	70	-30		80
CO3	100	100	100	70	-30		80
CO4	100	100	100	70	-30		80
CO5	100	100	100	70	-30		80

Signature of HOD/Dean

Date:

Signature of Faculty

Date:

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

CO-PO ATTAINMENT

ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING
CO-PO ATTAINMENT

Programme: M.Tech CEM	Year & Sem: I & II	Academic Year: 2020-21	Batch:2020-22

Course Code	Course Name	CO-PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CEM21012	Project Safety and Management	Relationship	CO1, CO2, CO3, CO4, CO5	CO1	CO3, CO4, CO5	CO1, CO2, CO3	CO4, CO5	CO1, CO2	CO2,CO3, CO4,CO5	NA	NA	CO1, CO2, CO3, CO4, CO5					
		Mapping Value	3	1	3	1	1	2	3	NA	NA	3	NA	NA	NA	NA	3
		Attainment	3	1	3	1	1	2	3	*	*	3	*	*	*	*	3

Signature of HOD/Dean

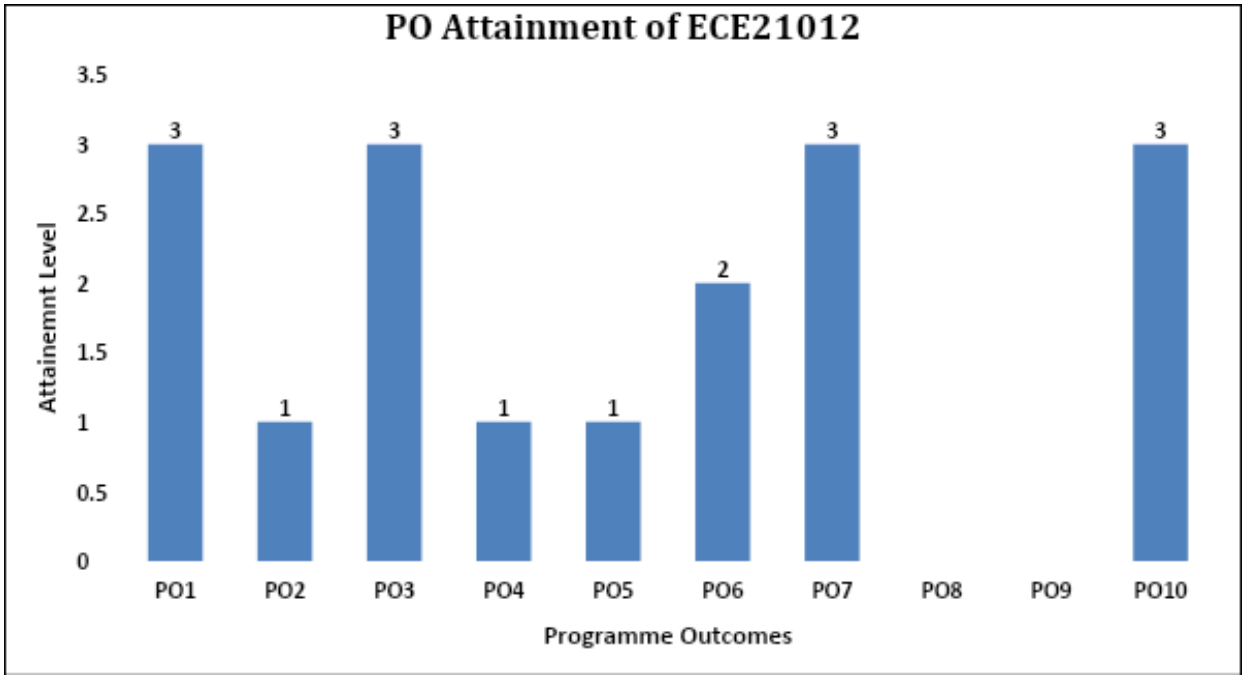
Signature of Faculty

Year: I
Semester: II

6. Name of the Faculty: Subhankar Santra — Course Code: CEM21012
7. Course : Project Safety Management — L: 3
8. Program : M. Tech — T: 0
9. Target : 70 % — P: 0
C: 3

Date: Date:

PO ATTAINMENT OF THE COURSE



Signature of HOD/Dean Signature of Faculty

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

Date: **Date:**

Year: I
Semester: II

6. **Name of the Faculty: Subhankar Santra** **Course Code: CEM21012**
7. **Course : Project Safety Management** **L: 3**
8. **Program : M. Tech** **T: 0**
9. **Target : 70 %** **P: 0**
C: 3

INSTRUCTIONS FOR FACULTY

Instructions for Faculty

- Faculty should keep track of the students with low attendance and counsel them regularly.
- Course coordinator will arrange to communicate the short attendance (as per University policy) cases to the students and their parents monthly.
- Topics covered in each class should be recorded in the table of RECORD OF CLASS TEACHING (Suggested Format).
- Internal assessment marks should be communicated to the students twice in a semester.
- The file will be audited by respective Academic Monitoring and Review Committee (AMRC) members for theory as well as for lab as per AMRC schedule.
- The faculty is required to maintain these files for a period of at least three years.
- This register should be handed over to the head of department, whenever the faculty member goes on long leave or leaves the Colleges/University.
- For labs, continuous evaluation format (break-up given in the guidelines for result preparation in the same file) should be followed.
- Department should monitor the actual execution of the components of continuous lab evaluation regularly.
- Instructor should maintain record of experiments conducted by the students in the lab weekly.
- Instructor should promote students for self-study and to make concept diary, due weightage in the internal should be given under faculty assessment for the same.
- Course outcome assessment: To assess the fulfilment of course outcomes two different approaches have been decided. Degree of fulfillment of course outcomes will be assessed in different ways through direct assessment and indirect assessment. In Direct Assessment, it is measured through quizzes, tests, assignment, Mid-term and/or End-term examinations. It is suggested that each examination is designed in such a way that it can address one or two outcomes (depending upon the course completion). Indirect assessment is done through the student survey which needs to be designed by the faculty (sample format is given below) and it shall be conducted towards the end of course completion. The evaluation of the achievement of the Course Outcomes shall be done by analyzing the inputs received through Direct and Indirect Assessments and then corrective actions suggested for further improvement.
- **Submission Targets of Course Contents:**
  - **S. No. 1 to 8 : Before Starting the Course**
  - **S. No. 9 & 10 : After Mid Semester Examination**
  - **S. No. 11 to 18 : Immediately After End Semester Examination**
  - **S. No. 19 to 22 : After Declaration of Result of the Course**