

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai) UG - CSE, EEE & MECH Programs Accredited by NBA, New Delhi Accredited with 'A+' grade by NAAC
An ISO 9001:2015 Certified Institution
Recognized by UGC under section 2(f) & 12(B) of UGC Act, 1956
Trichy – Pudukkottai Road, Tiruchirappalli – 620 007. Phone:0431-2660 303
Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu





### 1.2.2 Number of Add on/certificate programs offered during 2023-2024

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Date: 24.07.2023

To

The Principal

M.I.E.T. Engineering College,

Trichy – 620007

Respected Sir,

Sub: Permission to conduct the Value-Added Course - Reg.

We have planned to conduct the Value-Added Course for our final year students of Civil Engineering Department from 25.07.2023 to 17.10.2023.

Title of the Value-Added Course	Resource person
Structural Engineering with STAAD Pro: Designing Beams, Frames, and Buildings	Dr.P.V.Premalatha Professor and Head, Civil Engineering Department M.I.E.T. Engineering College

So kindly give us permission to conduct the course.

Thanking you

Course coordinator

HoD/Civil

PRINCIPAL



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### CIRCULAR

Date: 25.07.2023

Sub: Certificate Program

It is planned to conduct the certificate program for final year Civil Engineering students.

The certificate programs are short term certificate courses which are designed and offered by our department for the benefit of our students. Course will be conducted at free of cost and based on the performance of the participated students; the merit certificate will be issued after the successful completion of the course.

Students those who are willing to attend the below mentioned course can enroll their name to the course coordinator.

Name of the certificate program	Course Coordinators
Structural Engineering with STAAD Pro: Designing Beams, Frames, and Buildings	Dr.P.V.Premalatha Professor and Head, Civil Engineering Department M.I.E.T. Engineering College

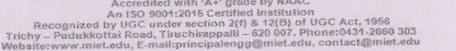
Commencement of course from 25.07.2023 to 17.10.2023 ,Time: 09.15 a.m to 12.55 p.m

Course Coordinator

HoD/Civil



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### DEPARTMENT OF CIVIL ENGINEERING

### SHORT TERM COURSE ON STAAD Pro.

### SYLLABUS

Name of the Course: STAAD PRO SOFTWARE

Course Code: CE23241

Course Coordinator: Mrs S.Nathina Thamrarai Selvi M.E, AP/CIVIL

Total hours: 30 Academic Year: 2023-2024

Preamble: To make the students to design various components of reinforced concrete structure

using STAAD pro

Pre-requisites: Design of RC Structure

Course Outcomes:

At the end of the Course, the Student will be able to:

CO 1 Understand the structural geometry and coordinate system.

CO 2 Analyse beams and frames using STAAD Pro.

CO 3 analysis and design a building using STAAD Pro.

CO 4 Develop a design report.

### MODULE 1: INTRODUCTION TO STAAD PRO:

(6)

General Types of Structure Unit System - Structure Geometry and Coordinate systems Relationship between Global & Local Coordinates.

### MODULE 2: ANALYSIS OF BEAMS:

(6)

Geometry Construction of beams, Assigning properties, constants- Loadings - post processing.

### MODULE 3: ANALYSIS OF FRAMES

(6)

Geometry Construction of frames, frames with sway and without sway, - post processing - design of beams and columns.

### MODULE 4: MODELLING OF A BUILDING

(6)

Concepts of load transfer – applying slab load – modelling of a building using advanced commands – applying Loads and load combinations- Analysing the model- Concrete Design – post processing.



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### MODULE 5: POST PROCESSING:

(6)

Checking Results- Report Generation Printing Reports- methods to check Results- Shear Force Bending Moment Check

### TEXT BOOK:

- 1.Staad Pro V8i for Beginners Paperback August 22, 2014 by TS Sarma.
- 2. Structural Analysis and Design using STAAD.Pro V8i by Sivakumar Naganathan

Course Coordinator

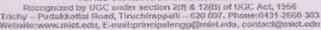
Hod/Civil

**IQAC** Coordinator

Principal



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### DEPARTMENT OF CIVIL ENGINEERING

Value Added course Student Willing list

Name of the Course: STAAD PRO SOFTWARE

Course Code: CE23241

Course Coordinator: Mrs S.Nathina Thamrarai Selvi ,M.E, AP/CIVIL

Academic Year: 2023 - 2024

S.No.	Roll No.	Name of the Candidate	Signature
1	E1201001	ARAVIND S	4 Rendra
2	E1211002	АТСНАУА Т	Atchan
3	E1211003	FAISAL AHAMED A	* de
4	E1211004	GUNABALAN S	Gum
5	E1211006	JATHAULLAH A	Bre-
6	E1211007	MOHAMED IBRAHIM M	and
7	E1211008	MOHAMED MUKFIL SHINAN	Mysten
8	E1211009	MOHAMED RAAFI R	100
9	E1211011	MOHAMMAD ASLAM A	Her
10	E1211012	NISHANTHINI N	May
11	E1211013	NITHISH M	Water
12	E1211014	RISHIKESH T	- das
13	E1211015	SABARINATHAN L	Kash 9
14	E1211016	SHEIK MOHAMED A	800
15	E1211017	SURESH KUMAR P	83
16	E1211018	THAMARAI SELVAN S	Thansayan
17	E1211019	VIJAYAKUMAR P	9
18	E 2211020	ABDU AZIZ M	Abdula
19	E 2211021	ABDUL LATHEEF S	AR
20	E 2211022	ABDUL RAHMAN	By
21	E 2211024	AKILAN A	None
22	E 2211025	ARUNKUMAR S	Solm
23	E 2211026	ASIF K	Asm
24	E 2211027	AZHAGAR S	1 trach
25	E 2211028	BEER MOHAMED J	Sect 1



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26	E 2211029	CHIBUANTONY A	11
27	E 2211030	FAIZUL AHAMED A	
28	E 2211031	GANESAN P	- que
29	E 2211032	GURUPRASATH V	90
30	E 2211033	HARISIDDHARTH K	(h)
31	E 2211034	HARSATH AHAMED R	IR.
32	E 2211035	JAYABHARATHI V	1ayur
33	E 2211037	KEVIN JACK J	learn
34	E 2211038	KUTHRATH NIYAS M	Kine
35	E 2211039	LEO BENJAMINE JK	100-
36	E 2211040	MANIMARAN R	M
37	E 2211041	MOHAMED FAHAD S	talked
38	E 2211042	MOHAMED FAIZAL S	maken
39	E 2211043	MOHAMED JAFAR ALI A	tilan
40	E 2211044	MOHAMED KHALID RAJA H	O Kal 4
41	E 2211045	MOHAMED RAHIMUDEEN K	Page
42	E 2211046	MOHAMED THAJMIL M	THOUSE
43	E 2211047	MOSHIGAN V	Mooran
44	E 2211048	NAINA MOHAMED A	Buy
45	E 2211049	NANTHAKUMAR S	Markey
46	E 2211050	RAJAGURU R	Papiro
47	E 2211051	SAIFULLAH N	B. Dado
48	E 2211052	SETHU VINAYAGAM S	Sother
49	E 2211053	SHERLIN SWETHA X	glebr
50	E 2211055	VELUMANI O	treluna

Course Coordinator

Hod/Civil



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### DEPARTMENT OF CIVIL ENGINEERING

Name of the Course: STAAD PRO SOFTWARE

Course Code: CE23241

Course Coordinator: Mrs S.Nathina Thamrarai Selvi M.E, AP/CIVIL

Total hours: 44 hrs Academic Year: 2023-2024

### COURSE PLAN

1.       INTRODUCTION TO STAAD PRO       2.5/07/2023         2.       General Types of Structure Unit System       8       25/07/2023         3.       Structure Geometry       01/08/2023         4.       Relationship between Global & Local Coordinates.       01/08/2023         5.       ANALYSIS OF BEAMS       22/08/2023         6.       Geometry Construction       22/08/2023         7.       Assigning various properties       9         9.       Grouping       29/08/2023         10.       ANALYSIS OF FRAMES       05/09/2023         11.       Geometry Construction of frames       05/09/2023         12.       frames with sway       9       05/09/2023         13.       frames without sway       12/09/2023         15.       MODELLING OF A BUILDING       12/09/2023         16.       Concepts of load transfer       26/09/2023         17.       Applying slab load       26/09/2023         18.       Modelling of a building using advanced commands       03/10/2023         20.       Analysing the model       03/10/2023         21.       Concrete Design       03/10/2023         22.       post processing       03/10/2023         23.       POST PROC	S.No	Topics to be Covered	Planned Hours	Planned Date
3.   Structure Geometry   8   01/08/2023	1.	INTRODUCTION TO STAAD PRO		25/07/2023
4. Relationship between Global & Local Coordinates.  5. ANALYSIS OF BEAMS 6. Geometry Construction 7. Assigning various properties 9. Grouping 10. ANALYSIS OF FRAMES 11. Geometry Construction of frames 12. frames with sway 12. frames without sway 13. frames without sway 14. post processing 15. MODELLING OF A BUILDING 16. Concepts of load transfer 17. Applying slab load 18. Modelling of a building using advanced commands 19. Applying Loads and load combinations 20. Analysing the model 21. Concrete Design 22. post processing 23. POST PROCESSING 24. Checking Results 25. Report Generation Printing Reports- methods to check Results 26. Sher Force Bending Moment Check 22/08/2023 22/08/2023 22/08/2023 22/08/2023 22/08/2023 29/09/2023 29/09/2023 29/09/2023	2.	General Types of Structure Unit System		25/07/2023
5.       ANALYSIS OF BEAMS       22/08/2023         6.       Geometry Construction       22/08/2023         7.       Assigning various properties       9 29/08/2023         8.       Constants       29/08/2023         9.       Grouping       05/09/2023         10.       ANALYSIS OF FRAMES       05/09/2023         11.       Geometry Construction of frames       05/09/2023         12.       frames with sway       9 05/09/2023         13.       frames without sway       12/09/2023         14.       post processing       12/09/2023         15.       MODELLING OF A BUILDING       12/09/2023         16.       Concepts of load transfer       26/09/2023         17.       Applying slab load       26/09/2023         18.       Modelling of a building using advanced commands       03/10/2023         19.       Applying Loads and load combinations       9 03/10/2023         20.       Analysing the model       03/10/2023         21.       Concrete Design       03/10/2023         22.       post processing       10/10/2023         23.       POST PROCESSING       10/10/2023         24.       Checking Results       17/10/2023         26.	3.	Structure Geometry	8	01/08/2023
6. Geometry Construction 7. Assigning various properties 9. Grouping 10. ANALYSIS OF FRAMES 11. Geometry Construction of frames 12. frames with sway 12. frames without sway 13. frames without sway 14. post processing 15. MODELLING OF A BUILDING 16. Concepts of load transfer 17. Applying slab load 18. Modelling of a building using advanced commands 19. Applying Loads and load combinations 20. Analysing the model 21. Concrete Design 22. post processing 22. post processing 22. POST PROCESSING 24. Checking Results 25. Report Generation Printing Reports- methods to check Results 17. In Indiana Papel 22. 12. 12. 12. 12. 12. 12. 12. 12. 12.	4.	Relationship between Global & Local Coordinates.		01/08/2023
7. Assigning various properties       9       29/08/2023         8. Constants       29/08/2023         9. Grouping       29/08/2023         10. ANALYSIS OF FRAMES       05/09/2023         11. Geometry Construction of frames       05/09/2023         12. frames with sway       9       05/09/2023         13. frames without sway       12/09/2023         15. MODELLING OF A BUILDING       12/09/2023         16. Concepts of load transfer       26/09/2023         17. Applying slab load       26/09/2023         18. Modelling of a building using advanced commands       03/10/2023         19. Applying Loads and load combinations       9       03/10/2023         20. Analysing the model       03/10/2023         21. Concrete Design       03/10/2023         22. post processing       03/10/2023         23. POST PROCESSING       10/10/2023         24. Checking Results       17/10/2023         25. Report Generation Printing Reports- methods to check Results       17/10/2023         26. Sher Force Bending Moment Check       17/10/2023	.5.	ANALYSIS OF BEAMS		22/08/2023
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9. Grouping 29/08/2023 10. ANALYSIS OF FRAMES 05/09/2023 11. Geometry Construction of frames 05/09/2023 12. frames with sway 05/09/2023 13. frames without sway 12/09/2023 14. post processing 12/09/2023 15. MODELLING OF A BUILDING 12/09/2023 16. Concepts of load transfer 26/09/2023 17. Applying slab load 26/09/2023 18. Modelling of a building using advanced commands 03/10/2023 19. Applying Loads and load combinations 90/3/10/2023 20. Analysing the model 03/10/2023 21. Concrete Design 03/10/2023 22. post processing 03/10/2023 23. POST PROCESSING 10/10/2023 24. Checking Results 17/10/2023 25. Report Generation Printing Reports- methods to check Results 17/10/2023 26. Sher Force Bending Moment Check 17/10/2023	7.	Assigning various properties	9	29/08/2023
10.       ANALYSIS OF FRAMES       05/09/2023         11.       Geometry Construction of frames       05/09/2023         12.       frames with sway       05/09/2023         13.       frames without sway       12/09/2023         14.       post processing       12/09/2023         15.       MODELLING OF A BUILDING       12/09/2023         16.       Concepts of load transfer       26/09/2023         17.       Applying slab load       26/09/2023         18.       Modelling of a building using advanced commands       03/10/2023         19.       Applying Loads and load combinations       03/10/2023         20.       Analysing the model       03/10/2023         21.       Concrete Design       03/10/2023         22.       post processing       03/10/2023         23.       POST PROCESSING       10/10/2023         24.       Checking Results       9         25.       Report Generation Printing Reports- methods to check Results       17/10/2023         26.       Sher Force Bending Moment Check       17/10/2023	8.			29/08/2023
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16. Concepts of load transfer       26/09/2023         17. Applying slab load       26/09/2023         18. Modelling of a building using advanced commands       03/10/2023         19. Applying Loads and load combinations       03/10/2023         20. Analysing the model       03/10/2023         21. Concrete Design       03/10/2023         22. post processing       03/10/2023         23. POST PROCESSING       10/10/2023         24. Checking Results       17/10/2023         25. Report Generation Printing Reports- methods to check Results       17/10/2023         26. Sher Force Bending Moment Check       17/10/2023	14.	post processing		12/09/2023
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21.       Concrete Design       03/10/2023         22.       post processing       03/10/2023         23.       POST PROCESSING       10/10/2023         24.       Checking Results       17/10/2023         25.       Report Generation Printing Reports- methods to check Results       17/10/2023         26.       Sher Force Bending Moment Check       17/10/2023	19.	Applying Loads and load combinations	9	03/10/2023
22.       post processing       03/10/2023         23.       POST PROCESSING       10/10/2023         24.       Checking Results       17/10/2023         25.       Report Generation Printing Reports- methods to check Results       17/10/2023         26.       Sher Force Bending Moment Check       17/10/2023	20.	Analysing the model		03/10/2023
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	25.	Report Generation Printing Reports- methods to check Results	7	17/10/2023
	26.			17/10/2023

Course Coordinator



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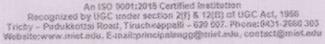


### **Resource Person Details**

	Short Term Course on STAAD-Pro V8i
Title of the program	Short Term Course on STAAD-110 voi
Course Code	CE23241
Duration and timing of the program	30 Hours
Name of the resource person	Dr. P.V. PREMALATHA
Photo of the resource person	
Email address	pvpremalatha@miet.edu
Contact number	9944579386
Designation	Professor and Head
Educational qualification	B.E., M.Sc(Engg.),Ph.D.
Experience	Total Experience – 18 Years.



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### DEPARTMENT OF CIVIL ENGINEERING

Value Added course Student Name list

Name of the Course: STAAD PRO SOFTWARE

Course Code: CE23241

Course Coordinator: Mrs S.Nathina Thamrarai Selvi ,M.E, AP/CIVIL

Academic Year: 2023 - 2024

S.No.	Roll No.	Name of the Candidate
1	E1201001	ARAVIND S
2	E1211002	ATCHAYA T
3	E1211003	FAISAL AHAMED A
4	E1211004	GUNABALAN S
5	E1211006	JATHAULLAH A
6	E1211007	MOHAMED IBRAHIM M
7	E1211008	MOHAMED MUKFIL SHINAN
8	E1211009	MOHAMED RAAFI R
9	E1211011	MOHAMMAD ASLAM A
10	E1211012	NISHANTHINI N
11	E1211013	NITHISH M
12	E1211014	RISHIKESH T
13	E1211015	SABARINATHAN L
14	E1211016	SHEIK MOHAMED A
15	E1211017	SURESH KUMAR P
16	E1211018	THAMARAI SELVAN S
17	E1211019	VIJAYAKUMAR P

S.No.	Roll No.	Name of the Candidate
18	E 2211020	ABDU AZIZ M
19	E 2211021	ABDUL LATHEEF S
20	E 2211022	ABDUL RAHMAN
21	E 2211024	AKILAN A
22	E 2211025	ARUNKUMAR S
23	E 2211026	ASIF K
24	E 2211027	AZHAGAR S
25	E 2211028	BEER MOHAMED J
26	E 2211029	CHIBUANTONY A
27	E 2211030	FAIZUL AHAMED A
28	E 2211031	GANESAN P
29	E 2211032	GURUPRASATH V
30	E 2211033	HARISIDDHARTH K
31	E 2211034	HARSATH AHAMED R
32	E 2211035	JAYABHARATHI V
33	E 2211037	KEVIN JACK J
34	E 2211038	KUTHRATH NIYAS M
35	E 2211039	LEO BENJAMINE JK
36	E 2211040	MANIMARAN R
37	E 2211041	MOHAMED FAHAD S
38	E 2211042	MOHAMED FAIZAL S
39	E 2211043	MOHAMED JAFAR ALI A
40	E 2211044	MOHAMED KHALID RAJA H
41	E 2211045	MOHAMED RAHIMUDEEN K
42	E 2211046	MOHAMED THAJMIL M
43	E 2211047	MOSHIGAN V
44	E 2211048	NAINA MOHAMED A .

S.No.	Roll No.	Name of the Candidate
45	E 2211049	NANTHAKUMAR S
46	E 2211050	RAJAGURU R
47	E 2211051	SAIFULLAH N
48	E 2211052	SETHU VINAYAGAM S
49	E 2211053	SHERLIN SWETHA X
50	E 2211055	VELUMANI O

Course Coordinator

Hod/Civil



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Website: www.mist.edu, E-mail:principalenga@mist.edu, contact@mist.edu



### DEPARTMENT OF CIVIL ENGINEERING

Course Code: CE232 Course Coordinator: Mrs S.Nathina Thamrarai Selvi M.E, AP/CIVIL Name of the Course: STAAD PRO SOFTWARE

Total hours: 44 hrs- Academic Year: 2023-2024

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V. JAYABHARATHI

of Final year has

completed the short term course on STAAD Pro V8i during Odd semester of Academic year 2023-2024 in

the Department of Civil Engineering at M.I.E.T. Engineering College, Trichy - 7.

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M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPALLI - 620 007.

COURSE COORDINATOR / HOD

PRINCIPAL.



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### Course Completion Certificate

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. CHIBU ANTONY

of Final year has

completed the short term course on STAAD Pro V8i during Odd semester of Academic year 2023-2024 in

the Department of Civil Engineering at M.I.E.T. Engineering College, Trichy - 7.

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PRINCIPAL

COURSE COORDINATOR / HOD



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### DEPARTMENT OF CIVIL ENGINEERING

Report on Short term course

Name of the Course: STAAD PRO SOFTWARE

Course Code: CE23241

Course Coordinator: Mrs S.Nathina Thamrarai Selvi M.E, AP/CIVIL

Academic Year: 2023-2024 Total hours: 44 hrs

Department of Civil Engineering, M.I.E.T. Engineering College conducted short term course on STAAD-Pro V8i on odd semester at A-block CAD Lab. The course aimed to emphasize the importance of STAAD and its applications in various streams of Civil Engineering. The short term course are designed and offered by our department for the benefit of our students. Course conducted at free of cost. The certificate issued after the successful completion of the course. Course starts with Inaugural Function, Dr.A.Naveen Sait, Principal and Dr.P.Shahul Hameed, Research Advisor offered felicitation in the inauguration function. Dr.P.V.Premalatha, Professor and Head of the Department, Civil Engineering briefed about the course plan.

Followed by the inaugural ceremony, the following topics are covered in short term course by Dr.P.V.Premalatha:

- Introduction to Staad-Pro,
- Analysis of Beams,
- Analysis of Frames
- Modelling of a Building.
- > Post Processing

The course was very interesting and it received an overwhelming response from the participants. On 31.10.2023 Valedictory function held at A-Block seminar hall. Valedictory Address given by Dr.A.Naveen Sait, Principal of M.I.E.T. Engineering College and Dr.P.V.Premalatha, Professor and Head of the Department, Civil Engineering read the report on the program.



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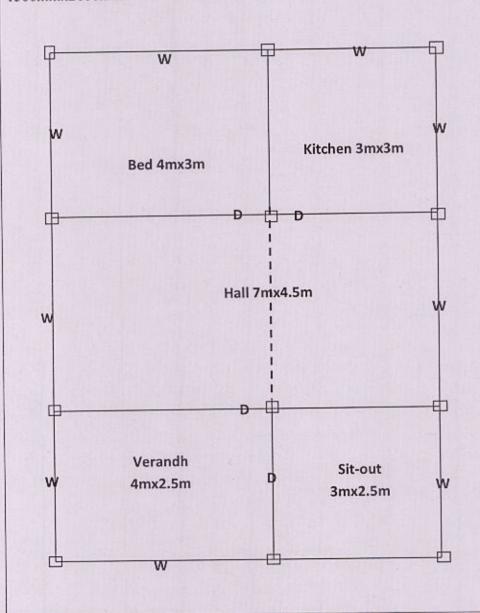




Assessment Test for VAC on STAAD Pro	Date:31.10.2023	
Duration:3 hours	Venue: CAD lab	

### Analyze the building using Space Frame Structure

Column size 300mmx300mm; Height of column below GL 1.5m; Beam size 300mmx450mm; Roof slab thickness 120mm; Floor slab thickness 150mm; Height of floor 3m, imposed load for Roof and Floor slab are 1.2kN/m2 and 1.5KN/m2; Unit weight of concrete and bricks are 25kN/m3 and 20KN/m3; Wall thickness 200mm; Sizes of Door & Windows are W-1500mmx1500mm; D-1500mmx2100mm.





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Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu



Date: 26.07.2023

To

The Principal
M.I.E.T Engineering College,
Trichy – 620007

Respected Sir,

Sub: Permission to conduct the Value-Added Course – Reg.

We have planned to conduct the value-added course for our final year students of Civil Engineering from 27.07.2023 to 02.11.2023.

Name of the certificate program	<b>Course Coordinators</b>
Autocad for Civil Engineers –	Ms.K.Kalpana/AP/Civil
Planning and Structural Detailing	Mrs.L.Kiruthika/AP/Civil

So kindly give us permission to conduct the course.

Thanking you

Course Coordinator

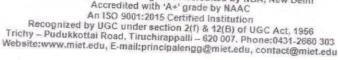
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### **CIRCULAR**

Date: 26.07.2023

Sub: Value Added course.

It is planned to conduct a Value-Added course for our Final year Civil Engineering students.

The Value-Added course is short term certificate courses which are designed and offered by our department for the benefit of our students. Course will be conducted at free of cost and based on the performance of the participated students; the merit certificate will be issued after the successful completion of the course.

Students those who are willing to attend the below mentioned course can enroll their name to the course coordinator.

Course Coordinators
Ms.K.Kalpana/ AP / Civil & Mrs.L.Kiruthika / AP/ Civil

Commencement of course from 27/07/2023 to 02/11/2023 Time: 9.15 AM - 12.55 PM

2 Vitil.

Course coordinators

Hod/Civil

Principal



(Approved by AlC Le, New Berli, Amissied to Anna Oneversity, Celeman)

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### DEPARTMENT OF CIVIL ENGINEERING

Date:26.07.2023

To

The Website Incharge,
M.I.E.T. Engineering College,
Trichy.

Through: The Principal

Sir.

Sub: Update the Value Added Course details in News and Events tab of website-Reg.

Department of Civil Engineering organizing, Value Added Course on "Autocad For Civil Engineers - Planning And Structural Detailing" for the students of Civil Engineering Department from 27.07.2023 to 02.11.2023.

Venue: -CAD Lab - A Block. I request you to update these details in News and Events tab of website.

enalad 26/7/23.

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### DEPARTMENT OF CIVIL ENGINEERING VALUE ADDED COURSE (IV Year)

**Syllabus** 

Name of the Course: AutoCAD for Civil Engineers - Planning and Structural Detailing

Course Code: CE23242

Course Coordinator: Ms.K.Kalpana/AP/Civil, Ms.L.Kiruthika/AP/Civil

Total hours: 44 Academic Year: 2023-24

### **Objectives**

At the end of the course, student is expected to

- Impart knowledge and skill relevant to Building drawing and Detailing using AutoCAD Software
- Draft Building plan and its Elements using AutoCAD Software

### Unit I - Introduction of AutoCAD Commands

Introduction to AutoCAD for Civil Engineers - Getting started with AutoCAD - Display and customizing -Setting and customizing - Units - Setting drawing limit - creating drawing using various CAD commands - Object snap - polar tracking - Object Manipulation -scaling - offsetting -Altering Objects - Fillet - chamber - Properties and Hatch - Grouping objects - Dimensions and Annotate

### Unit II - Drafting of building plan

10

2D drawings - complex tools and techniques - floor plans - elevation and sectional views - Office Building - Residential Building (R.C.C Roof) - Residential Building (Tiled Roofing) - Paneled doors and windows

### Unit III - Detailing of Flexural Members and Staircase

10

Column and Beam Layout plan in AutoCAD - Grid lines - Detailing of Beams - singly and doubly reinforced beam - continuous beam - cantilever beam - Detailing of Slab - One way slab - two way slab – continuous slab – Cantilever slab – Curtailment – Detailing of Dog-legged Staircase

### Unit IV -Detailing of Compression member and Footing

Detailing of Column – Circular column – Rectangular column – Detailing of Footing – Isolated footing - Sloped footing - Combined footing

### Unit V – Detailing of water tank, layout and plotting

Detailing of water tank – circular – Rectangular – Layout and plotting – importing and exporting of files -sharing of files.

**TOTAL PERIODS: 44** 

### Outcomes

On completion of this course the participant will be able to,

- > Draft the plan, elevation and sectional view of the load bearing and framed buildings
- > Draw the structural detailing of RCC elements
- Draw the structural detailing of RCC water tanks, footings

### References

1. National Building Code of India 2016 (NBC 2016)

2. D.N.Ghose, "Civil Engineering Drawing and Design" CBS Publishers & Pvt.Ltd., 2nd Edition, 2010. M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPALLI - 620 007.

Course Coordinator

HoD/Civil

**IQAC** Coordinator



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### DEPARTMENT OF CIVIL ENGINEERING

Value Added course (IV Year)

Name of the course: AutoCAD for Civil Engineers - Planning and Structural Detailing

Course Code: CE23242

Course Coordinator: Ms.K.Kalpana/AP/Civil, Ms.L.Kiruthika/AP/Civil

**Total hours: 44** 

Academic Year: 2023-24

S.No	Topics To Be Covered	Planned Hours	Planned Date
1.	Introduction of AutoCAD Commands		27/7/2023
2.	Introduction to AutoCAD for Civil Engineers – Getting started with AutoCAD		27/7/2023
3.	Display and customizing –Setting and customizing - Units - Setting drawing limit		27/7/2023
4.	Creating drawing using various CAD commands Object snap – polar tracking	8	27/7/2023
5.	Object Manipulation –scaling		10/8/2023
6.	offsetting - Altering Objects		10/8/2023
7.	Fillet – chamber - Properties and Hatch		10/8/2023
8.	Grouping objects Dimensions and Annotate		10/8/2023
9.	Drafting of building plan		24/8/2023
10.	2D drawings - complex tools and techniques		24/8/2023
11.	Floor plans		24/8/2023
12.	Elevation and sectional views		24/8/2023
13.	Office Building	10	31/8/2023
14.	Residential Building (R.C.C Roof)	10	31/8/2023
15.	Residential Building (R.C.C Roof)		31/8/2023
16.	Residential Building (Tiled Roofing)		31/8/2023
17.	Residential Building (Tiled Roofing)		14/9/2023
18.	Paneled doors and windows		14/9/2023
19.	Detailing of Flexural Members and Staircase		14/9/2023
20.	Detailing of Beams – singly and doubly reinforced beam		14/9/2023
21.	Column and Beam Layout plan in AutoCAD – Grid lines	212	21/9/2023
22.	Detailing of Beams - cantilever beam	10	21/9/2023
23.	Detailing of Beams - continuous beam		21/9/2023
24.	Detailing of Slab – One way and Two way Slab	M.I.E.T. E Gundur, T	NGINEFRING COL



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### **Resource Person Details**

Title of the program	AutoCAD for Civil Engineers – Planning and Structural Detailing
Course Code	CE23242
Duration and timing of the program	40 Hrs, 9.15 AM to 12.45 PM
Name of the resource person	Ms.L.Kiruthika
Photo of the resource person	
Email address	Kiruthika.l@miet.edu
Contact number	8056841043
Designation	Assistant Professor
Educational qualification	<ul> <li>B.E -CIVIL Engineering 2013 in JJ Engineering College (Anna University), Trichy, with 8.3 CGPA</li> <li>M.E -Structural Engineering 2015 in M.A.M.College of Engineering and Technology, (Anna University) Trichy. With CGPA 7.8.</li> </ul>
Experience	Teaching Experience – 5.5 Years.



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Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu



### **Resource Person Details**

Title of the program	AutoCAD for Civil Engineers – Planning and Structural Detailing
Course Code	CE23242
Duration and timing of the program	40Hrs, 9.15 AM to 12.45 PM
Name of the resource person	Ms.K.Kalpana/AP/Civil
Photo of the resource person	
Email address	Kalpana.k@miet.edu
Contact number	8838204897
Designation	Assistant Professor
Educational qualification	<ul> <li>B.E -Civil Engineering(2016) in Anna University, Thirukuvalai Campus, Tamil Nadu.with 7.6 CGPA</li> <li>M.E -Structural Engineering (2018) in Oxford Engineering College, Trichy affiliated to Anna University Chennai with 8.99 CGPA</li> </ul>
Experience	Teaching Experience – 3.5 Years.



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### DEPARTMENT OF CIVIL ENGINEERING

Value Added course Student Willing list

Name of the Course: AutoCAD for Civil Engineers – Planning and Structural Detailing

Course Code: CE23242

Course Coordinator: Ms.K.Kalpana/AP/CIVIL & Mrs.L.Kiruthika/AP/CIVIL

Academic Year: 2023 - 2024

S.No. Roll No.		Name of the Candidate	Signature
1	E1201001	ARAVIND S	8 PHD-
2	E1211002	ATCHAYA T	T. Stely.
3	E1211003	FAISAL AHAMED A	XXXII
4	E1211004	GUNABALAN S	82
5	E1211006	JATHAULLAH A	Old
6	E1211007	MOHAMED IBRAHIM M	Q 1
7	E1211008	MOHAMED MUKFIL SHINAN	NG.
8	E1211009	MOHAMED RAAFI R	RASi
9 .	E1211011	MOHAMMAD ASLAM A	Stelam
10	E1211012	NISHANTHINI N	Now
11	E1211013	NITHISH M	in hister
12	E1211014	RISHIKESH T	Pront
13	E1211015	SABARINATHAN L	FISHER
14	E1211016	SHEIK MOHAMED A	Shiller
15	E1211017	SURESH KUMAR P	P. S. D.
16	E1211018	THAMARAI SELVAN S	O. Co
17	E1211019	VIJAYAKUMAR P	LARA
18	E 2211020	ABDU AZIZ M	NO
19	E 2211021	ABDUL LATHEEF S	John Ho
20	E 2211022	ABDUL RAHMAN	about .
21	E 2211024	AKILAN A	ae.
22	E 2211025	ARUNKUMAR S	Startes of-
23	E 2211026	ASIF K	K. Sside
24	E 2211027	AZHAGAR S	KAZIO
25	E 2211028	BEER MOHAMED J	5.B 1
26	E 2211029	CHIBUANTONY A	Hard
27	E 2211030	FAIZUL AHAMED A	Spiritani
28	E 2211031	GANESAN P	PRINCIPAL M.I.E.T. ENGINEERING COLL

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### DEPARTMENT OF CIVIL ENGINEERING

### Value Added course (IV Year)

### Student list

Name of the course: AutoCAD for Civil Engineers - Planning and Structural Detailing

Course Code: CE23242

Course Coordinator: Ms.K.Kalpana/AP/CIVIL & Ms.L.Kiruthika/AP/CIVIL

Academic Year: 2023-2024

### IV YEAR STUDENTS

		IV YEAR STUDENTS
SL.NO	ROLL NO	STUDENT NAME
1.	812420103001	ARAVIND S
2.	812420103002	АТСНАУА Т
3.	812420103003	FAISAL AHAMED A
4.	812420103004	GUNABALAN S
5.	812420103006	JATHAULLAH A
6.	812420103007	MOHAMED IBRAHIM M
7.	812420103008	MOHAMED MUKFIL SHINAN
8.	812420103009	MOHAMED RAAFI R
9.	812420103011	MOHAMMAD ASLAM A
10.	812420103012	NISHANTHINI N
11.	812420103013	NITHISH M
12.	812420103014	RISHIKESH T
13.	812420103015	SABARINATHAN L
14.	812420103016	SHEIK MOHAMED A
15.	812420103017	SURESH KUMAR P
16.	812420103018	THAMARAI SELVAN S
17.	812420103019	VIJAYAKUMAR P
18.	812420103301	ABDU AZIZ M
		M.I.E.T. ENGINEERING COIL



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SL.NO	ROLL NO	STUDENT N	AME
19.	812420103302	ABDUL LATHEEF S	
20.	812420103303	ABDUL RAHMAN	
21.	812420103305	AKILAN A	
22.	812420103306	ARUNKUMAR S	
23.	812420103307	ASIF K	
24.	812420103308	AZHAGAR S	
25.	812420103309	BEER MOHAMED J	
26.	812420103310	CHIBUANTONY A	
27.	812420103311	FAIZUL AHAMED A	
28.	812420103312	GANESAN P	
29.	812420103313	GURUPRASATH V	
30.	812420103314	HARISIDDHARTH K	
31.	812420103315	HARSATH AHAMED R	
32.	812420103316	JAYABHARATHI V	
33.	812420103318	KEVIN JACK J	
34.	812420103319	KUTHRATH NIYAS M	a
35.	812420103320	LEO BENJAMINE JK	
36.	812420103321	MANIMARAN R	
37.	812420103322	MOHAMED FAHAD S	
38.	812420103323	MOHAMED FAIZAL S	<u> </u>
39.	812420103324	MOHAMED JAFAR ALI A	
40.	812420103325	MOHAMED KHALID RAJA H	
41.	812420103326	MOHAMED RAHIMUDEEN K	•
42.	812420103327	MOHAMED THAJMIL M	7.44
43.	812420103328	MOSHIGAN V	PRINCIPAL  M.I.E.T. ENGINEERING CO GUNDUR, TIRUCHIRAPALLI -



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### DEPARTMENT OF CIVIL ENGINEERING

Certificate Program (IV Year)

**Attendance Sheet** 

Name of the course: AutoCAD for Civil Engineers - Planning and Structural Detailing

Course Coordinator: Ms.K.Kalpana/AP/CIVIL & Mrs.L.Kiruthika/AP/CIVIL

Course Code: CE23242

**Total hours: 44** 

Academic Year: 2023-2024 (Odd Sem)

### IV YEAR STUDENTS

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SL. NO	ROLL NO	STUDENT NAME	27/8	10/8	24/8	31/8	7/9	14/91	21/9	5/10	12/10	19/10	26/10	2/11
1.	E1201001	ARAVIND S	bon	Ab	de	br	do	Air	Ab	Am	A	Leye	Ab	An
2.	E1211002	АТСНАУА Т	Tolkday	Tolka	Tallen	T. Aday	T.Abely	TALL	T. stoly	Taleh	Tollede	T. Alelm	-PARM	7. Aldu
3.	E1211003	FAISAL AHAMED A	Little	gul	tall	101	10%	SOB	tiff!	follow.	4	to f	A Pla	4
4.	E1211004	GUNABALAN S	84	SP	SP	82	SP	Sp	&P	E P	SP	SP	St	SOR
5.	E1211006	JATHAULLAH A	- fu	Lu	Lu	5	A	Just	5	E.	In	Lan	Lu	Lug
6.	E1211007	MOHAMED IBRAHIM M	(A)	dy		der	MA	gM	AN	My	Bu	An	AN	an
7.	E1211008	MOHAMED MUKFIL SHINAN	N	Nr.	X	Az	N	8	1/-	Se	1	121	A	V
8.	E1211009	MOHAMED RAAFI R	R.Phi	0. 14	O. Ri	o Dly	or bi	2,24	Q.D1	e. D. X	ep	Q.Db	· N.	29
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SL.	ROLL		
NO	NO	STUDENT NAME	2/8 10/8 24/8 31/8 7/9 14/9 21/9 5/10 12/10 19/10 26/10 2/11
27.	E 2211030	FAIZUL AHAMED A	Tel : Tul By Ide to II. the Charlet of III
28.	E 2211031	GANESAN P	and and the total total total
29.	E 2211032	GURUPRASATH V	Versity last class class of Man of Company
30.	E 2211033	HARISIDDHARTH K	the the Har Har Har har he
31.	E 2211034	HARSATH AHAMED R	The contraction of the contracti
32.	E 2211035	JAYABHARATHI V	Dh Dh Th D. F.
33.	E 2211037	KEVIN JACK J	Kaula Van Van Van Van Van Van Van Van Van Va
34.	E 2211038	KUTHRATH NIYAS M	hand hand hand hand kand kand
35.	E 2211039	LEO BENJAMINE JK	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
36.	E 2211040	MANIMARAN R	ELINE WIS WYS WYS WYS WYS WYS WYS WYS WYS WYS WY
37.	E 2211041	MOHAMED FAHAD S	Trof Tare Many D. M.
38.	E 2211042	MOHAMED FAIZAL S	Db Olm ela lu ly la Do ly 00.
39.	E 2211043	MOHAMED JAFAR ALI A	Ab the the the the the the law Ab len
40.	E 2211044	MOHAMED KHALID RAJA H	Michael Mochael Mochael Mochael Marchael Marchae
41.	E 2211045	MOHAMED RAHIMUDEEN K	Mary Mary AP Mary AP Mary AP
42.	E 2211046	MOHAMED THAJMIL M	AP CHUDURATIAUCHIRAPALUS 820003 1 AX AX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
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### DEPARTMENT OF CIVIL ENGINEERING Report

Name of the course: AutoCAD for Civil Engineers - Planning and Structural Detailing

Course Code: CE23242

Course Coordinator: Ms.K.Kalpana, AP/CIVIL, Mrs.L.Kiruthika, AP/CIVIL

Total Hours: 44 Academic Year: 2023-24

I hereby affirm that the entire course contents listed in the course syllabus of the value added program "AutoCAD for Civil Engineers – Planning and Structural Detailing" have educated to the students as the part of the prescribed co – curricular activities through this Program.

They have been given hands on session on the topics mentioned and students clearly understood the software.

The certificate program titled as "AutoCAD for Civil Engineers – Planning and Structural Detailing" has been conducted in the odd semester and course delivery along with attendance of the students was recorded.

All the students were actively attended this certificate Program and performed well throughout the program and eligible students received the certificate.



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Name of the course: AutoCAD for Civil Engineers - Planning and Structural Detailing

Date: 02.11.2023

Course Code : CE23242

Academic Year: 2023-2024 **Total Marks: 25** 

Question: Draw a Plan, Section and Elevation for a Residential Building with RCC Roof for the given specification and line diagram

### **Specifications:**

- 1. Foundation: The foundation for all main walls will be in plain cement concrete 1:5:10 mix, 1000 mm wide and 200 mm thick. The concrete will be laid 800 mm below ground level. The masonry footings will be in Random Rubble Masonry in CM 1:6, first footing 800mm wide and 300mm thick. Second footing is 600mm wide and 300mm thick.
- 2. Basement: The basement will be in Random Rubble Masonry in CM 1:6, 300mm wide and 750mm high above ground level for all walls and the basement is filled with clean sand to a depth of 400 mm.
- 3. Super Structure: All walls will be in brick work in cement mortar 1:5, 230 mm thick. The height of all walls will be 3000 mm above floor level. All the walls including the basement shall be plastered with CM 1:4 externally and CM 1:6 internally for 12.5 mm thick. Parapet walls 230 mm thick and 450 mm height with brick work in CM 1:5 will be provided all round.
- 4. Roofing: The roofing will be of RCC 1:2:4 mix 100 mm thick. A weathering course of 50 mm thick shall be provided over the slab.
- 5. Lintel: All the internal openings will be provided with 150 mm thick RCC 1:2:4 mix lintels. All the external openings will be provided with 150 mm thick RCC 1:2:4 lintels cum sunshade 600 mm wide
- 6. Flooring: The flooring will be in cement concrete 1:5:10 mix 170 mm thick. The top is finished with clay tiles in CM 1:3, 30 mm thick.
- 7. Steps: Steps will be in brick work in cement mortar 1:5 mix laid on 150mm thick cement concrete 1:5:10 mix footing. Rise will be 150 mm and tread 300 mm.

### 8. Doors, Windows and Ventilators

D1 - Door

- 1100 x 2100mm

D2 - Door

- 1200 x 2100mm

D3 - Door

- 900 x 2100mm

W1- Window - 1000 x 1200mm

W2- Window - 1200 x 1200mm

V1 - Ventilator - 750 x 300mm

V2 – Ventilator - 1000 x 300mm

G1 – Grills

- 1000 x1200mm

G2 - Grills

- 1750 x1200mm

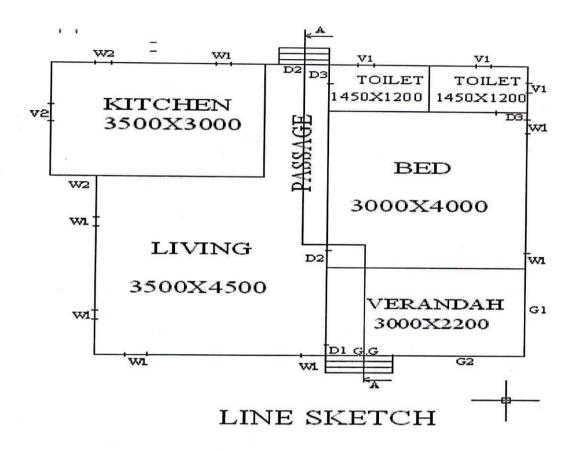
G.G - Grill Gate- 1000 x 2100mm



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Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu



### Line Sketch of Residential Building with RCC roof







### CERTIFICATE OF MERIT

This is certify that Mr / Ms. A. J. i. K.

has participated in ..... Auto.c.p...

Workshop held on .!!: 10. 2023

to 13.10.202

Vsu'

PRINCIPAL

M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007.

General Manager

Co-ordinator















### CERTIFICATE OF MERIT

This is certify that Mr/Ms. Abdul Lathert

has participated in ... A. uboc A.D.

Workshop held on 11:10:2023 10 13:10:2023.

General Manager

M.I.E.T. ENGINEERING COLLEGE CO-Ordinator



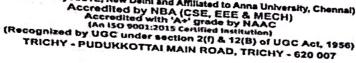














Date: 22.03.2024

To

The Principal M.I.E.T Engineering College, Trichy - 620007

Respected Sir,

Sub: Permission to conduct the Value Added Course – Reg.

We have planned to conduct the value added course for our students of Civil Engineering from 25.03.2024 to 31.03.2024.

Name of the certificate program	Course Coordinators
Short Term Course on "REVIT ARCHITECTURE FOR BUILDING INFORMATION MODELLING"	Mrs.L.Kiruthika/AP/Civil Dr.P.V.Premalatha/Professor and Head /Civil

Hence, kindly give us permission to conduct the course in our CAD Lab at A Block.

Thanking you

Course Coordinators

HoD/Civil



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### CIRCULAR

Date: 05.03.2024

It is planned to conduct a Value-Added course for our Third and Second year Civil Engineering students.

The Value-Added course are short term certificate course which are designed and offered by our department for the benefit of our students. Course will be conducted at free of cost and based on the performance of the participated students, the merit certificate will be issued after the successful completion of the course.

Students those who are willing to attend the below mentioned course can enroll their name to the course coordinator.

Name of the Value-Added course	Course Coordinators	
Bar Bending Schedule	Dr. K. Pandi, Associate Professor /Civil Mr. S. Arun Sahaya Raj, AP/Civil.	
	from 06/03/2024 to 10/03/2024 am – 05.00 pm	



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### DEPARTMENT OF CIVIL ENGINEERING VALUE ADDED COURSE (III & II Year) Syllabus

Name of the Course: Bar Bending Schedule

Course Code: CE232403

Course Coordinators: Dr.K.Pandi / Associate Professor & Mr.S.Arun sahaya raj / AP/ Civil

Total hours: 34 Academic Year: 2023-2024

### Preamble:

To make the students to understand and RCC detailing of different structural elements.

### Pre-requisites:

Design of reinforced concrete elements

### **Objectives**

This course teaches:

- To give additional input to the area of structural dimension and detailing.
- To introduce bar bending schedule.

### Unit I -Mix design

6

Cross section of structural element – Classification According to mix design and grades of steel – concrete mix design.

### Unit II - Documentation

6

.Documentation of Quality Assurance. Rusting in Steel - honey combing in concrete.

### Unit III - Shuttering

6

Design of shuttering for casting concrete elements – Shuttering and de-shuttering techniques. Case studies.

### Unit IV -Structural Drawings

6

Cross Section & longitudinal sections of beams, slab, column and footing-Detailing diagrams.

### Unit V - Bar bending Schedule

10

Reinforcement Drawings for structural elements- Measurement of each structural steel reinforcement in a structural element- Cutting length of steel – calculation- bar bending schedule.

QA in usage of steel. Site visit at RBS Readymade steel.

### Outcomes

On completion of this course the student will able to

- 1. Apply the concept in design and construction site work.
- 2. Prepare reinforcement detailing of various structural p elements.

### References

- 1. IS 456:2000 Plain and Reinforced Concrete Code of Practice
- 2. SP 16 Design Aids for Reinforced Concrete to IS 456:1978

### Web references:

- 1. https:// theconstructor.org/practical-guide/preparation-of-bar-bending-schedule/
- 2. https://www.ultratechcement.com/home-building-explained-single/what-is-shuttering-andright-way-to-do-shuttering-in-construction

### Course activity:

Exercise 1: Detailing diagram of beams and slabs.

Exercise 2: Bar bending schedule for Beams and column.



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### DEPARTMENT OF CIVIL ENGINEERING

Value Added course Willing Student list

Course Coordinators: Dr. K. Pandi, AP/Civil, Mr. S. Arun Sahaya Raj, AP/Civil.

Academic Year: 2023-2024

SL. NO	STUDENT NAME	SIGNATURE
1.	Mohammed Rifayudeen.S	S. M. Rajan
2.	Prasanth S	Book &
3.	Ramkumar R	
4.	Sharul Anoor A	Shame Line
5.	Sudharsan.V	Such V
6.	Insteen Williams.A	A. Jawa William
7.	Jayasurya E	F. Jay Ja.
8.	Jegan E	Oba-S
9.	Krishnamoorthy.K	K. Linhardy.
10.	Manoj V	V. Manj.
11.	Mohammed Ashiq.S	S'Isals
12.	Mohamed Umar S	Oldanes.
13.	Prakash muthu A	A mely that
14.	Rahmathullahabdulbasith M	M.R. Am Lairth
15.	Sukish.M	M- Sulsil
16.	Ruthran S	Oleman.
17.	Vishnu kumar.C	C. St.

SL. NO STUDENT NAME SIGNATURE  18. Irfan Ahamed. T  19. Vasanthagurubalan T  20. Vetrivel A  21. Dhamotharan P  22. Manikandan M  23. Manikandan R  24. Mohamed Ismail S  25. Mohammed Shaheel S  26. Pandiselvam S  27. Pradeep Harish V  28. Rasiq Ferose M  29. Sahul Hameed M  30. Sheik Mohamed F  31. Vivin Joes D  32. Abdul Latheef R  33. Mohammed Anis K  34. Mohammed Anis K  35. Sakariya Vairamuthu S  36. Vigneswaran V	1			
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32. Abdul Latheef R  R. Ah Later  33. Mohamed Yasir A  34. Mohammed Anis K  35. Sakariya Vairamuthu S  S. Sakariya Vairamuthu S  S. Sakariya Vairamuthu S		30.	Sheik Mohamed F	and fam.
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35. Sakariya Vairamuthu S  S. Sahariya  Via		33.	Mohamed Yasir A	R. Ah lafter
S. Sat Vagi		34.	Mohammed Anis K	A-Argaritz
Vi		35.	Sakariya Vairamuthu S	K. Muhim duri.
		36.	Vigneswaran V	3.50

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**Course Coordinators** 

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### DEPARTMENT OF CIVIL ENGINEERING

Value Added course (III Year & II Year / VI & IV Sem)

Name of the course: Bar Bending Schedule

Course Code: CE232403

Course Coordinators: Dr. K. Pandi, AP/Civil, Mr. S. Arun Sahaya Raj, AP/Civil.

Total hours: 34

Academic Year:2023-2024

### **COURSE PLAN**

S.No	Topics To Be Covered	Planned Hours	Planne Date
	Designation of footings, beams, Piers and Abutments &		
1.	slab panels to identify a particular structural element as an		6/3/202
	integral part of whole structure		
2.	Units of measurement. Cross section of structural element		6/3/2024
_	Classification According to mix design and grades of steel		6/3/202
3.	- concrete mix design.	6	
	Assurance of quality of concrete – testing methods of		6/3/2024
4.	green and hardened concrete.		
5.	Documentation of Quality Assurance.		6/3/2024
6.	Rusting in Steel – honey combing in concrete.		6/3/2024
_	Design of shuttering for casting concrete elements –		= /2 /2.22
7.	Shuttering and de-shuttering techniques.		7/3/2024
8.	Sequence of de-shuttering for foundation and plinth beams		7/3/2024
9.	Sequence of de-shuttering for beams piers and abutments		7/3/2024
10.	Safety precaution 6		7/3/2024
4.2	Cross Section & longitudinal sections of beams and		
11.	detailing for footings		7/3/2024
10	Plinth beam, damp proof course, Expansion joints of		= 10 10 00 0
12.	buildings		7/3/2024
13.	Treatment of joints at Roof. Prevention of leaks.	8/3/202	
14.	Reinforcement Drawings for structural elements		8/3/2024
1.5	Measurement of each structural steel reinforcement in a	6 .	0/2/2024
15.	structural element.		8/3/2024
16.	Cutting length of steel calculation and bar bending		8/3/2024

	schedule.		
17.	QA in usage of steel.		8/3/2024
18.	SP 16 - Code book Practice		8/3/2024
19.	SP 34 - Code book Practice		9/3/2024
20.	SP 34 - Code book Practice		9/3/2024
21.	IS 456 -2000 Code book Practice		9/3/2024
22.	Code book Practice	6	9/3/2024
23.	Model practices	U	9/3/2024
24.	Model practices		9/3/2024
25.	Site Visit at BBS Deadymade steel		10/3/202
26.	Site Visit at RBS Readymade steel		10/3/202
27.			10/3/202
28.	Bar bending Demo of beams, slabs, columns and footing by the		10/3/202
29.			10/3/202
30.	help of Barbenders	10	10/3/202
31.			10/3/202
32.	Class revision session and student interaction		10/3/202
33.	Conduct an exam		10/3/202
34.	Student feedback and course outcome session		10/3/2024

& Aufs 13/24

Course Coordinators

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Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu



### **Resource Person Details**

Title of the program	Bar Bending Schedule
Course Code	CE232403
Duration and timing of the program	30 Hrs, 9:30 PM to 5:00 PM
Name of the resource person	Mr. S. Arun Sahaya Raj
Photo of the resource person	
Email address	arunsahayaraj09@gmail.com
Contact number	8754152298
Designation	Assistant Professor
Educational qualification	B.E -CIVIL Engineering 2013 in M.I.E.T Engineering College (Anna University), Trichy, Tamil Nadu, with 78%.  M.E -Structural Engineering 2015 in PSNA College of engineering and Technology ,( Anna University) Dindigul with CGPA 8.2.
Experience	Teaching Experience – 8 Years.



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### **Resource Person Details**

Title of the program	Bar Bending Schedule	
Course Code	CE232403	
Duration and timing of the program	30 Hrs, 10:00 AM to 5:00 PM	
Name of the resource person	Dr. K. Pandi	
Photo of the resource person		
Email address	envepandi@yahoo.co.in	
Contact number	9345674534	
Designation	Assistant Professor	
Educational qualification	<ul> <li>B.E -Civil Engineering (2000) in Alagappa Chettiar College of Engineering &amp; Technology Karaikudi.(Madurai Kamaraj University), Madurai, Tamil Nadu.</li> <li>M.E -Environmental Engineering (2005) in Alagappa Chettiar College of Engineering &amp; Technology Karaikudi affiliated to Anna University Chennai.</li> <li>Ph.D in Civil Engineering (2021) in Anna University Chennai.</li> </ul>	
Experience	Teaching Experience – 16 Years.	



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### DEPARTMENT OF CIVIL ENGINEERING Value Added course ( Academic Year: 2023 – 2024)

**Student list** 

Name of the course: Bar Bending Schedule

Course Code: CE232403

Course Coordinators: Dr. K. Pandi, AP/Civil, Mr. S. Arun Sahaya Raj, AP/Civil.

SL.NO	ROLL NO	STUDENT	NAME
1.	E1181001	Abdul Rahuman B	
2.	E1181002	Abuthalip A	
3.	E1181003	Jiyavudeen S	
4.	E1181005	Mohamed Aslam S	
5.	E1181006	Mohamed Halidh M.A	
6.	E1181007	Mohamed Hisham K.H	
7.	E1181008	Mohamed Ibrahim. A	
8.	E1181009	Mohamed Ishak M	
9.	E1181010	Mohamed Malik J	
10.	E1181011	Mohamed Natheem M	
11.	E1181012	Mohamed Rizwan A	
12.	E1181013	Pugalenthi. M	
13.	E1181014	Riyas Ahmed. M	
14.	E1181015	Siva A	
15.	E1181016	Subash. S	n.l.f.
16.	E1181017	Ubayathulla. A	PRINCIPAL  M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPALLI - 620 007.

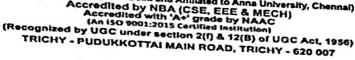
SL.NO	ROLL NO	STUDENT N	NAME	
17.	E1181019	Venkateshwaran.G		
18.	E1181020	Vignesh M		
19.	E2191023	Aathif Navidh. A		
20.	E2191024	Abdul Haris I		
21.	E2191025	Abdullah A		
22.	E2191026	Abdul Rahman.S		
23.	E2191027	Ajmeerkhan		
24.	E2191028	Angelin sineha. J		
25.	E2191030	Asifa Begam.B		
26.	E2191032	Elango S		
27.	E2191033	Irshadh Ahamed.S	Irshadh Ahamed.S	
28.	E2191034	Logeshwari. U		
29.	E2191035	Maheshwaran M		
30.	E2191036	Maheshwaran.M		
31.	E2191037	Mogamed Shafir. S		
32.	E2191038	Mohamed Arifkhan J	Mohamed Arifkhan J	
33.	E2191039	Mohamed Askar Abbas T.S		
34.	E2191040	Mohamed Aslam M		
35.	E2191041	Mohamed Usman Ali M		
36.	E2191042	Mohammed Fazil N		
37.	E2191043	Mohammed Jabar.A		
38.	E2191044	Monicka P M		
39.	E2191046	Nowfil Riswan S	PRINCIPAL	
40.	E2191048	Ramkumar B	M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPALLI - 620 007.	

SL.NO	ROLL NO	STUDENT NAME
41.	E2191050	Vasim Khan M
42.	M3181065	Vignesh S
43.	E2191052	Yasar Kamaldeeen M
44.	M3181053	Yasar Arafath M
45.	E2191054	Yogeshwaran.D
46.	E2191048	Mohamed Sheik Rasith M.A
47.	M3181055	Ajith kumar S
48.	M3181056	Arockia Jerin A
49.	M3181057	Bheer Mohamed S
50.	M3181058	Guna T
51.	M3181059	Pandi R
52.	M3181060	Ragul L
53.	M3181061	Sangavi S
54.	M3181062	Sindhanai Selvi S
55.	M3181063	Suresh. M
56.	M3181064	Syed Mohamed K
57.	M3181065	Thoubig Mohammed A
58.	M3181066	Mohamed Ansari A
59.	M3181067	Sakthivel M
60.	E3161068	Hariharan .J



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Date: 22.03.2024

To

The Principal
M.I.E.T Engineering College,
Trichy – 620007

Respected Sir,

Sub: Permission to conduct the Value Added Course - Reg.

We have planned to conduct the value added course for our students of Civil Engineering from 25.03.2024 to 31.03.2024.

Name of the certificate program	Course Coordinators
Short Term Course on "REVIT ARCHITECTURE FOR BUILDING INFORMATION MODELLING"	Mrs.L.Kiruthika/AP/Civil Dr.P.V.Premalatha/Professor and Head /Civil

Hence, kindly give us permission to conduct the course in our CAD Lab at A Block.

Thanking you

Course Coordinators

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### **CIRCULAR**

Date: 22.03.2024

It is planned to conduct a Value Added course for our Civil Engineering students.

The Value Added course are short term certificate course which are designed and offered by our department for the benefit of our students. Course will be conducted at free of cost and based on the performance of the participated students, the merit certificate will be issued after the successful completion of the course.

Students those who are willing to attend the below mentioned course can enroll their name to the course coordinator.

Name of the Value-Added course	Course Coordinators	
Short Term Course on "REVIT  ARCHITECTURE FOR BUILDING  INFORMATION MODELLING"	Mrs.L.Kiruthika, AP/Civil.  Dr.P.V.Premalatha/Professor and Head /Civil.	
Commencement of course from 25/03/2024 to 31/03/2024		
Time: 10.00 am – 05.00 pm		

Course Coordinators

HoD/Civil



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Accredited by NBA (CSE, EEE & MECH)
Accredited with 'A+' grade by NAAC
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### DEPARTMENT OF CIVIL ENGINEERING

**VALUE ADDED COURSE - Syllabus** 

Name of the Course: Revit Structure and Revit Architecture in Building Information Modelling

**Course Code: CE23244** 

Course Coordinator: Mrs.L.Kiruthika/AP/Civil

Total hours: 56 Academic Year: 2024-25

Unit 1: Introduction & Basic Tools
Building Information Modeling (BIM) and the Revit platform, user interface, toolbars, and workspace
navigation. Students learn to start projects, save with templates, and set up project units for consistency. Set
up reference levels and grids to organize the model and practice drawing walls with different types.
Customizing and managing project templates. Key skills include organizing and structuring the model for
efficient workflow.

Unit 2: Basic Modeling & Editing
Basic modeling techniques, including creating and modifying walls, doors, windows, floors, and ceilings.
Editing tools such as move, copy, rotate, and trim/extend to refine models. Add dimensions and annotations.
Creating sweeps and reveals to enhance design details. Finally, students will set up and manage floor plans, elevations, and 3D views for better visualization of the design

Unit 3: Advanced Modeling & Analysis
This unit covers advanced modeling techniques for structural elements, including complex roof types,
curtain walls, stairs, and ramps. Students will explore massing models and custom family creation for
structural components. Emphasis is placed on adding reinforcement and preparing models for structural
analysis. Students will learn to create and modify 3D views for improved visualization of the structural
model.

Unit 4: Team Collaboration & Documenting Models
Team collaboration and documenting structural models for project delivery. Students will learn to manage
views, including floor plans, sections, and 3D views, and organize them into schedules and sheets. Title
blocks and view templates for professional documentation. Manage worksets for team collaboration and
incorporate project phasing to handle design stages.

Unit 5: Advanced Family Creation & Customization This unit focuses on advanced family creation, including custom families for doors, windows, trusses, and structural components. Students will use adaptive components for flexible family designs and manage materials and decals for rendering. The unit also covers creating realistic renderings and walkthroughs, along with custom structural families like metal decks and concrete columns. Additionally, students will learn project phasing and model export for different construction stages.

### **Outcomes**

On completion of this course the participant will be able to,

- > Use Revit to create and modify architectural and structural elements, and set up project templates.
- Model complex building components, perform analysis, and create schedules and documentation.
- ➤ Collaborate in a BIM environment, manage workflows, and customize families

### .References

- 1. Revit Architecture 2021 for Designers by Douglas R. Seidler
- 2. Revit Structure 2021 for Architects, Structural Engineers, and Contractors by Eric Wing

Course Coordinator

HoD/Civil

**IQAC** Coordinator

Principal



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### DEPARTMENT OF CIVIL ENGINEERING

### **VALUE ADDED COURSE - Syllabus**

Name of the Course: Revit Structure and Revit Architecture in Building Information Modelling

**Course Code: CE23244** 

Course Coordinator: Mrs.L.Kiruthika/AP/Civil

Academic Year: 2023 - 2024

SL.NO	ROLL NO	STUDENT N	NAME
1.	E1211001	Mohammed Rifayudeen.S	
2.	E1211002	Prasanth S	
3.	E1211003	Ramkumar R	
4.	E1211004	Sharul Anoor A	
5.	E1211005	Sudharsan.V	
6.	E2221008	Insteen Williams.A	
7.	E2221009	Jayasurya E	
8.	E2221010	Jegan E	
9.	E2221011	Krishnamoorthy.K	
10.	E2221012	Manoj V	
11.	E2221013	Mohammed Ashiq.S	
12.	E2221014	Mohamed Umar S	
13.	E2221015	Prakash muthu A	
14.	E2221016	Rahmathullahabdulbasith M	
15.	E2221017	Sukish.M	
16.	E2221018	Ruthran S	n.ld-
17.	E2221019	Vishnu kumar.C	PRINCIPAL M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPALLI - 620 007.

SL.NO	ROLL NO	STUDENT NAME
18.	E2221020	Irfan Ahamed. T
19.	E2221021	Vasanthagurubalan T
20.	E3211007	Vetrivel A
21.	E1221001	Dhamotharan P
22.	E1221002	Manikandan M
23.	E1221003	Manikandan R
24.	E1221004	Mohamed Ismail S
25.	E1221005	Mohammed Shaheel S
26.	E1221006	Pandiselvam S
27.	E1221007	Pradeep Harish V
28.	E1221008	Rasiq Ferose M
29.	E1221009	Sahul Hameed M
30.	E1221010	Sheik Mohamed F
31.	E1221011	Vivin Joes D
32.	E2231014	Abdul Latheef R
33.	E2231016	Mohamed Yasir A
34.	E2231017	Mohammed Anis K
35.	E2231018	Sakariya Vairamuthu S
36.	E2231020	Vigneswaran V
37.	E1201014	Muhammad Aslam A
38.	E1201020	Thamarai Selvan S
39.	E221019	Kevin Jack J
40.	E1201004	Atchaya T

Course Coordinators

HoD/Civil



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### DEPARTMENT OF CIVIL ENGINEERING

### Value Added course

Name of the course: Revit Architecture and Revit Structure for Building Information Modelling

Course Code: CE23244

Course Coordinators: Mrs.L.Kiruthika, AP/Civil.

**Total hours: 56** Academic Year:2023-24

### **COURSE PLAN**

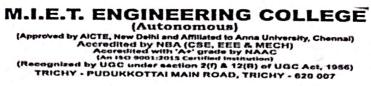
S.No	Topics To Be Covered	Planned Hours
1.	Introduction to Building Information Modeling (BIM) and the Revit Platfor	
2.	User Interface and Workspace Navigation	
3.	Exploring Revit's Toolbars and Menus	
4.	Starting a New Project in Revit	
5.	Saving Projects with Templates	
6.	Setting Up Project Units for Consistency	11
7.	Creating and Modifying Reference Levels	
8.	Setting Up and Using Grids	
9.	Drawing Basic Walls and Wall Types	
10.	Customizing Project Templates	
11.	Organizing and Structuring the Model for Efficient Workflow	
12.	Creating and Modifying Walls	
13.	Adding Doors and Windows	
14.	Modeling Floors and Floor Types	
15.	Modeling Ceilings and Ceiling Types	
16.	Using Move, Copy, and Rotate Tools	
17.	Using Trim and Extend Tools	11
18.	Placing and Modifying Dimensions	
19.	Adding Annotations for Documentation	
20.	Creating Sweeps for Design Detail	
21.	Adding Reveals for Aesthetic Features	
22.	Creating Complex Roof Types (Pitched, Curved, etc.)	NCIPAL
23.	Modeling and Modifying Curtain Walls  M.I.E.T. ENG GUNDUR, TIRI	INEERING COLLEGE

24.	Designing Stairs and Landings	
25.	Modeling and Customizing Ramps for Accessibility	
26.	Introduction to Massing Models for Conceptual Design	1
27.	Modeling Structural Framing (Beams, Columns)	
28.	Adding and Editing Structural Reinforcement (Rebar)	
29.	Creating Structural Slabs and Floors	
30.	Enhancing 3D Views for Better Visualization	
31.	Preparing Models for Structural Analysis	
32.	Using Analytical Tools for Structural Simulation	
33.	Creating Complex Roof Types (Pitched, Curved, etc.)	
34.	Managing Views (Floor Plans, Sections, Elevations)	
35.	Creating and Managing Schedules	
36.	Customizing and Adding Title Blocks	
37.	Using View Templates for Consistent Documentation	
38.	Organizing Views into Sheets for Documentation	
39.	Setting Up and Managing Worksets for Collaboration	11
40.	Collaborating on Models with Multiple Users	
41.	Using Design Options to Explore Multiple Designs	
42.	Managing Project Phases and Stages	
43.	Reviewing and Coordinating Models in a Team	
44.	Handling Project Documentation for Delivery	
45.	Introduction to Custom Family Creation in Revit	
46.	Creating Custom Door Families	
47.	Creating Custom Window Families	
48.	Designing and Modeling Structural Trusses	
49.	Creating and Modifying Parameterized Families	
50.	Using Adaptive Components for Flexible Designs	11
51.	Assigning Materials and Managing Material Properties	
52.	Using Decals for Enhanced Visualization	
53.	Generating Realistic Renderings in Revit	
54.	Creating and Navigating Walkthrough Animations	
55.	Exporting Families for Reuse and Collaboration in Other Projects	

Course Coordinators

HoD/Civil





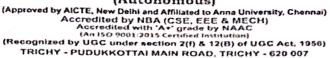


### Resource Person Details

Title of the program	Revit Structure for Building Information Modeling	
Course Code	CE23244	
Duration and timing of the program	22.04.2024 to 24.04.2024 (24 hours)	
Name of the resource person	Er.M.Balachandran	GA.
Photo of the resource person		
Email address	bachand06@gmail.com	No. of the least
Contact number	9443672159	
Designation	Structural Engineer	94 13
Educational qualification	<ul> <li>B.E (Civil Engineering) – Regional Engineering College (NIT), Trichy, 2003</li> <li>M.E (Structural Engineering) – Anna University, Madurai, 2014</li> <li>M.B.A (Project Management) – Alagappa University Karaikudi, 2010</li> <li>PG Diploma (Quantity Surveying and Valuation), Annamalai Ll.</li> </ul>	
Experience	Annamalai University, Chidamabaram, 20006  Experience (Teaching and Industrial) – 20 Years	(173) 23-42 -184

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### DEPARTMENT OF CIVIL ENGINEERING

Revit Architecture and Revit Structure for Building Information Modelling Value Added course Willing Student list

Course Coordinator: Mrs. L.Kiruthika, AP/Civil.

Academic Year: 2023-2024 (Even sem)

SL. NO	STUDENT NAME	SIGNATURE
1.	Mohammed Rifayudeen.S	Dig .
2.	Prasanth S	Panon
3.	Ramkumar R	Peny
4.	Sharul Anoor A	Luce .
5.	Sudharsan.V	Sudheisen.
6.	Insteen Williams.A	A. Fuhlan
7.	Jayasurya E	E. Fayer.
8.	Jegan E	Jegn
9.	Krishnamoorthy.K	tenty
10.	Manoj V	Manay - Q.
11.	Mohammed Ashiq.S	S. Mohnashing
12.	Mohamed Umar S	Marley . 1
13.	Prakash muthu A	Prakenh Kuth.
14.	Rahmathullahabdulbasith M	M. Roy
15.	Sukish.M	Quoling.
16.	Ruthran S	Quithuan . S.
17.	Vishnu kumar.C	Sohulumen.

SL. NO	STUDENT NAME	SIGNATURE	
18.	Irfan Ahamed. T	Strfam Ahmand T.	
19.	Vasanthagurubalan T	Varanthe grusbelm	٦,
20.	Vetrivel A	Duranel -	
21.	Dhamotharan P	Hamotharan. P.	
22.	Manikandan M	Mainken	
23.	Manikandan R	D. Mantlem	
24.	Mohamed Ismail S	Euro.	
25.	Mohammed Shaheel S	Mohamed Shaked S.	
26.	Pandiselvam S	Randireh.	
27.	Pradeep Harish V	Dardutaih	
28.	Rasiq Ferose M	Pdys/Ferrar M.	
29.	Sahul Hameed M	Salu-Hameed.	
30.	Sheik Mohamed F	Sheik . Mohamed . E	
31.	Vivin Joes D	Distre.	
32.	Abdul Latheef R	R. Abolul Catherf.	
33.	Mohamed Yasir A	Mohamuel Lamin	
34.	Mohammed Anis K	Ann.	
35.	Sakariya Vairamuthu S	Sakariya Vairamben.	S
36.	Vigneswaran V	Vigniham V.	
37.	Muhammad Aslam A	Muhanmal Aslam.	A
38.	Thamarai Selvan S	Thursal.	, 0
39.	Kevin Jack J	Beinfruk . T	
40.	Atchaya T	Atchaya	

Course Coordinators

HoD/Civil



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### DEPARTMENT OF CIVIL ENGINEERING Report

Name of the course: Revit Structure and Revit Architecture in Building Information Modelling

Course Code: CE23244

Course Coordinator: Mrs.L.Kiruthika, AP/CIVIL

Total Hours: 56 Academic Year: 2023-24

The BIM and Revit course equips students with essential skills in design, modeling, and collaboration using Revit. The program begins with an introduction to BIM and the Revit platform, focusing on the user interface, project setup, and organizing models with reference levels and grids. Students learn basic modeling techniques, such as creating and editing walls, doors, windows, and floors, along with essential editing tools for refining models and managing dimensions and annotations.

The course progresses to advanced modeling, covering complex structural elements like roofs, curtain walls, stairs, and custom families for structural components. Students explore massing models, reinforcement techniques, and 3D view modification for structural analysis. Team collaboration and documentation are emphasized, teaching students how to manage views, schedules, sheets, and worksets for multi-user environments. Advanced family creation and rendering techniques are also covered.

I affirm that the course content of the "Revit Structure and Revit Architecture in Building Information Modelling" program was fully delivered through hands-on sessions. All students participated actively, and those who performed well received certificates at the end of the even semester, with attendance recorded throughout the program.



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### VALUE ADDED COURSE ASSESSMENT TEST

### Revit Architecture and Revit Structure for Building Information Modelling **Total Marks: 30**

### **PART-A**

### [Answer the following Questions ( $10 \times 2 = 20$ ) Marks ]

- 1. What is the purpose of reference levels in a Revit project?
- 2. Explain the steps to set project units in Revit.
- 3. How do you create grids in a Revit model?
- 4. Name two tools used to edit walls in Revit and explain their functions.
- 5. What is the difference between a sweep and a reveal in Revit?
- 6. How do you create and customize a basic floor plan view in Revit?
- 7. What is the purpose of a view template in Revit?
- 8. Explain the process of creating a curtain wall.
- 9. What are adaptive components in Revit, and when are they used?
- 10. How do you add a schedule to a sheet in Revit?

### PART-B

### [Answer any one Questions (10×1=10) Marks ]

### Create a project in Revit:

- Set up project units to metric or imperial standards.
- Add three reference levels and corresponding grids.
- Save the project using a custom template.
- Draw external walls using two different wall types.
- Add a minimum of two doors and three windows to the model.
- Ensure proper alignment with grids and levels.

### Model a complete floor system:

- Create a floor with custom boundaries.
- Add dimensions and annotations to document the layout.
- Modify the floor type and assign a material to it.
- Add a roof with a slope at the top level.
- Include stairs connecting the first and second levels.
- Generate 3D and elevation views to visualize the structure.



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# Efficate for Old Satishap

This is to certify that My. ABDUL LATHEEF. R/TX has completed three days workshop on "REVIT STRUCTURE FOR BUILDING INFORMATION MODELLING" from 22.04.2024 to 24.04.2024 conducted by the Department of Civil Engineering, M.I.E.T. Engineering College (Autonomous), Tiruchirappalli.

MY M COURSE

Er.M.BALACHANDRAN INSTRUCTOR













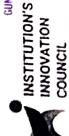
Dr.P.V.PREMALATHA

Mrs.L.KIRUTHIKA

COORDINATOR

HOD/CIVIL







Dr.A.NAVEEN SAIT



### Centificate of Participation

This is to certify that Mr / Ms ....Thannakki. Selvan .. S.....

held from ... 25-03-24..... to ... 30-03-24.....

M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPALLI - 620 007.

Managing Director 3

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