



VIMAL JYOTHI ENGINEERING COLLEGE

JYOTHI NAGAR, CHEMPERI – 670632, KANNUR, KERALA

Affiliated to APJ Abdul Kalam Technological University, Approved by AICTE
ISO 9001: 2015 Certified | Accredited by Institution of Engineers (India), NBA, NAAC
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NAAC Cycle 2

Criterion: 1.2.1

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Event Proposal Form

1	Event Type and Name	<ul style="list-style-type: none"> • Seminar/Workshop/Conference • Guest Lecture • Industrial Visit • Placement oriented training Programme
2	Date and Time	March 4 th - 8 th 2020 - 9:00 am - 4:10pm
3	Participants/Audience	56 L&A students
4	Venue	Advanced communication Lab, Dept. of ECE.
5	Objectives	<ol style="list-style-type: none"> 1. Participants will learn the <u>Revit MEP</u> basics and how to setup a Revit project for engineering purposes 2.
6	Expected Outcomes	<ol style="list-style-type: none"> 1. Participants will become familiar with the software Revit MEP 2. Participants will gain more job opportunities related to Revit MEP
7	Connected PEOs/POs/COs	PO 1, PO2, PO3, PO4, PO5, PO11, PO12 PSp01, 2
8	Resource Requirements	64 bit system. Projector
9	Any other Relevant information	NIL.
10	Responsible Persons	<p>Ms. Anishkha Iyer</p> <p>Proposed prepared by <u>ms Teena George</u></p> <p>Recommended By <u>[Signature]</u></p>

25/2



VIMAL JYOTHI ENGINEERING COLLEGE

&

**DEPARTEMENT OF ELECTRICAL AND
ELECTRONICS ENGINEERING**

Report on value added course

“REVIT MEP”

for

2017-21 BATCH



PROPOSAL FOR THE TRAINING OF REVIT MEP SOFTWARE

Submitted to

VIMAL JYOTHI ENGINEERING COLLEGE, CHEMPERI, KANNUR, KERALA, 670632

CONTENTS

- a. Introduction Letter
- b. Proposal
- c. Terms and Conditions



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ICS/TRG/FY20/COK/AM/155
23rd January 2020

To

MRS.LALY JAMES
HEAD OF THE DEPARTMENT(EEE)
VIMAL JYOTHI ENGINEERING COLLEGE,CHEMPERI

Dear Madam,

InterCAD Systems Private Limited (ICS) is one of the leading training centres in Kerala, since its inception in 1993. ICS has strategic sales & training tie-ups with major **global software organizations** like Autodesk, Bentley, PTC, **Ansys etc.** Having trained more than 50,000 students in the past 20 years, ICS has established itself as the best CAD Education hub in the state of Kerala to impart quality training to students & professionals.

ICS is the only centre in Kerala, authorized by Autodesk as an Authorized Training Center, Authorized Certification Center, Autodesk Academic Adoption Partner & Authorized Value Added Reseller, apart from training agreements from PTC and Bentley for their design software. With our technical experience in the field of Mechanical, Civil, & Architecture, we bring value addition to our customers.

We have provided training to various Engineering Colleges, Government Polytechnic Colleges & Public sector organizations like PWD, KWA, GCDA, KAMCO, TELK to name a few.

In the light of above you are humbly request to go thru' our proposal and place the training offer on our favor.

Kindly revert back for any clarifications
Thanking you and assuring you the best of our services

For InterCAD systems Private Ltd.

Sabu S Nair
Business Manager
+91 9895 705 600

TRAINING PROPOSAL

SL.NO.	SOFTWARES	DURATION (DAYS)	TOTAL PRICE PER STUDENT
1.	REVIT MEP	5	2000/

EACH PARTICIPANTS WILL GET AN INDIVIDUAL COURSE COMPLETION CERTIFICATE

INTERCAD OFFERS

- Authorized Reseller of Engineering Software.
- Authorized Training Center of **Autodesk, Bentley, Trimble.**
- Authorized Certification Center of **Autodesk.**
- Latest version software training Facility.
- Courses Handled by Certified Professionals from Parent Companies.
- Updated & highly Specialized Courseware.
- Direct certification from **Autodesk /BENTLEY/ TRIMBLE.**

TERMS AND CONDITIONS:

- Training can be conducted at your premises
- Minimum 40 Students are required for this special offer training.
- Training timing: timing as convenient to both parties
- The Course duration includes both theory and practical.
- The systems/projector will have to be supplied from the concerned dept.
- On successful completion of the training InterCAD Systems will evaluate the ~~students and issue~~ Course Completion Certificates.

REVIT MEP TRAINING REPORT

A 5 day hands on internship program entitled 'REVIT MEP' on '**Mechanical Electrical and Plumbing**' was conducted by InterCAD Systems Private Limited, one of the leading training centres in Kerala, for the students of 6th semester of Electrical and Electronics Engineering of Vimal Jyothi Engineering college. The workshop was conducted from 4th March 2020 to 8th March 2020. The trainers were Mr. Abhiram and Mr. Balu from InterCAD System Pvt. Ltd.

The workshop mainly dealt with introduction to REVIT MEP Software and its basic drawing and editing tools. The students were provided an opportunity to build Building Models in order to incorporate non conflicting design of Mechanical, Electrical and Plumbing engineering in an architectural design of building and to identify the material requirements for complete construction. All the designed projects provoked the students to enhance their thinking skills and imparted students with good technical knowledge.

Students were also given training on HVAC Systems, adding duct and piping systems, and were made to work on automatic duct and piping layouts. REVIT MEP software's modelling and layout tools enabled students in placing mechanical, electrical and plumbing systems more accurately. It also helped the students in working with dimensions, tags and schedules, adding electrical and fire protection circuits, and creating documents and sheets more easily.

Day 1 : 4th March

Overview of the Revit is given. Students are familiarized with MEP Interface, Opening a Revit MEP project etc. Also studied General drawing tools, Editing Revit elements, Basic modifying tools, Additional editing tools.

Day 2 : 5th March

On this day familiarized with Starting Revit projects, Linking Revit models, Copying and monitoring linked files.

Day 3 : 6th March

Learned about Revit MEP systems, Working with Components, Creating systems – Overview, Systems Graphics, Connecting Components and Analyzing systems

Day 4 : 7th March

Learned to prepare energy analysis, Analyzing the heating and cooling loads and Exporting for secondary analysis

Day 5 : 8th March

Introduced with Hydronic piping systems, Adding mechanical equipment, Drawing piping, Creating Hydronic systems, Automatic piping layouts , Analyzing piping systems and Fire protection systems.

CONCLUSION

The Internship opportunity provided on Autodesk REVIT MEP was a great chance for learning and exposure to view technologies used in the Construction Company. In general, the program was very effective. There was an overall participation of 40 students and the students gave a very positive feedback. Certificates were given to the students who participated in the program.

REVIT MEP

<u>1. INTRODUCTION TO REVIT MEP</u> Overview of the Revit MEP Interface Opening a Revit MEP project Viewing Commands	<u>2. BASIC DRAWING AND EDITING TOOLS</u> General drawing tools Editing Revit elements Basic modifying tools Additional editing tools
<u>3. STARTING REVIT MEP PROJECTS</u> Starting Revit projects Linking Revit models Copying and monitoring linked files Setting up levels	<u>4. VIEWS</u> Duplicating views Adding callout views Setting the view display Creating elevations Creating sections Working with ceilings
<u>5. AUTODESK REVIT MEP SYSTEMS</u> About Revit MEP systems Working with Components Creating systems – Overview Systems Graphics Connecting Components Analyzing systems	<u>6. SPACES AND ZONES</u> Creating spaces Creating zones Creating colour schemes
<u>7. PERFORMANCE ANALYSIS</u> Introduction to energy analysis Preparing energy analysis Analyzing the heating and cooling loads Exporting for secondary analysis	<u>8. HVAC SYSTEMS</u> About HVAC systems Adding terminals and mechanical equipment Adding ductwork Creating duct systems Automatic Ductwork layouts
<u>9. HYDRONIC PIPING SYSTEMS</u> About Hydronic piping systems Adding mechanical equipment Drawing piping Creating Hydronic systems Automatic piping layouts Analyzing piping systems Fire protection systems	<u>10. PLUMBING SYSTEMS</u> About plumbing systems Adding plumbing fixtures Drawing piping for plumbing systems Working with plumbing systems
<u>11. ELECTRICAL SYSTEMS</u> About electrical systems Placing electrical components Creating electrical circuits Cable trays and conduit	<u>12. CONSTRUCTION DOCUMENTS</u> Setting up sheets Placing and modifying views on sheets Printing sheets

13. ANNOTATING CONSTRUCTION DOCUMENTS

Working with dimensions
Working with text
Adding detail lines and symbols
Creating legends

14. TAGS AND SCHEDULES

Adding tags
Working with schedules
Creating schedules

15. DETAILING IN REVIT MEP

Setting up detail views, Creating details , Annotating details

BIM for MEP Engineering

- This Building Modeling is the purpose-built building information modeling (BIM) developed to incorporate non conflicting design of Mechanical, Electrical, and Plumbing (MEP) engineering in an architectural design of building and to identify the material requirements for complete construction

Why MEP engineering firms should integrate BIM?

The core challenge of sticking to tight schedule and maintaining the intended and expected coordination and collaboration was identified at the very beginning of the project. The BIM deliverables were to be delivered in Autodesk Revit.

Ample opportunities such as scheduling and quantity take off are out there for the MEP firms who are ready to implement BIM, MEP Firms, ready to adopt BIM, can faster and easily fabricate the building elements directly in BIM model. It gives outstanding results in terms of Quality and efficiency. BIM for the MEP industry is rising at a light speed, yet it is still in its early times.

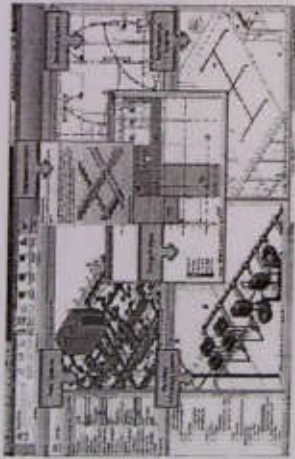
Why to Implement

- The basic requirement of the project is the material calculations for the best estimated costing
 - Normally due to uncertainties in design safe material estimate requires 20% to 25% increased material which can be exactly calculated here.
 - By the development of 3D modeling incorporated with the MEP, more exact estimation of the cost is possible.
- Through this, the project cost could be reduced upto some extent by adding it at the rate of even less than 0.5%

Revit MEP

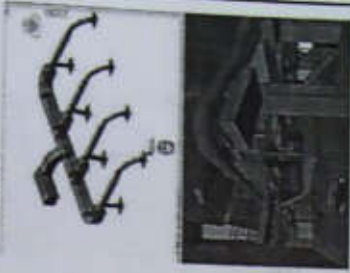
- Autodesk Revit MEP is a building information modeling (BIM) software created by Autodesk for professionals who engage in MEP engineering. MEP stands for mechanical, electrical, and plumbing, which are the three engineering disciplines that Revit MEP addresses. By utilizing BIM as opposed to computer-aided drafting (CAD), Revit MEP is able to leverage dynamic information in intelligent models — allowing complex building systems to be accurately designed and documented in a shorter amount of time. Each intelligent model created with Revit MEP represents an entire project and is stored in a single database file. This allows changes made in one part of the model to be automatically propagated to other parts of the model, thus enhancing the workflow for Revit MEP users.

Things You can do with Autodesk Revit MEP



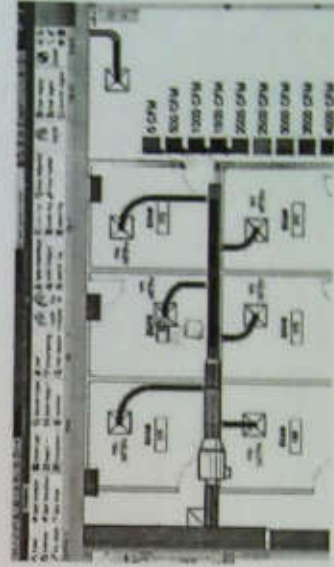
1. Duct and Pipe System Modeling

- Intuitive layout tools enable easier model modifications. Revit MEP automatically updates model views and sheets, helping to maintain document and project consistency. Engineers can create HVAC systems with mechanical functionality and provide 3D modeling for ductwork and piping as well as modify the model by dragging design elements onto the screen in almost any view. Modeling can also be done in both section and elevation views. All model views and sheets update automatically whenever a change is made anywhere for more accurate, coordinated designs and documents.



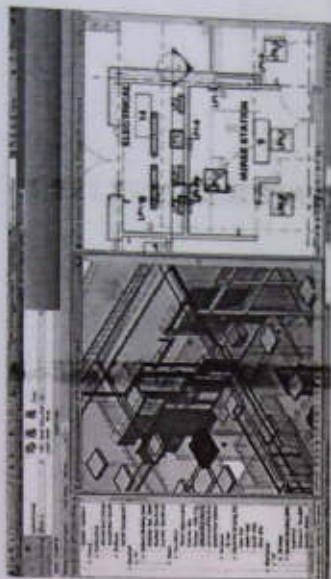
2. Duct and Pipe Sizing/Pressure Calculations

- With built-in calculators in Autodesk Revit MEP software, engineers can perform sizing and pressure loss calculations according to industry standard methods and specifications, including the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) fitting loss database. System sizing tools instantly update the size and design parameters of duct and pipe elements without the need for file exchanges or third-party applications. Select a dynamic sizing method for the ductwork and piping systems in your plans using duct sizing and pipe sizing tools, including friction, velocity, static regain, and equal friction sizing method for duct sizing, and velocity or friction method for pipe sizing.



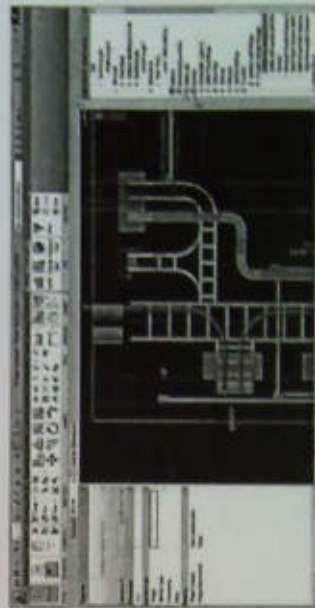
3. HVAC and Electrical System Design

- Communicate design intent visually with room color-fill plans. With color schemes, team members no longer have to spend time deciphering spreadsheets and using colored pencils on printed plans. All revisions and alterations to color-fill plans are updated automatically across the model. Create any number of schemes, and maintain better consistency for the duration of the project. Three dimensional modeling for ductwork and piping enables users to create HVAC systems that can be clearly shown using color schemes for design airflow, actual airflow, mechanical zones, and more. Create electrical color schemes for power loads, lighting per area, and more.



4. Conduit and Cable Tray Modeling

- Revit MEP contains powerful layout tools that enable easier modeling of electrical and data cable trays and conduit. Better coordinate and create accurate construction drawings using real-world conduit and cable tray combinations. New schedule types can report the overall length of cable tray and conduit runs, resulting in rapid quantification of required materials.



5. Automatic Generation of Construction Document Views

- Automatically generate plan, section, elevation detail, and schedule views that more precisely reflect design information. Synchronized model views from a common database enable more consistent, coordinated change management. The entire electrical, plumbing, and mechanical design team benefits from more accurate, coordinated construction documents that building information modeling provides.



Unsurpassed AutoCAD Support

- Leverage the millions of professionally trained AutoCAD users worldwide to share and complete MEP projects faster. Revit MEP provides seamless support for AutoCAD software's DWG™ file format enabling you to save and share files with confidence. DWG technology from Autodesk is the authentic, accurate, and reliable way to store and share design data.



COURSE OUTCOMES

1. Students able to understand the basic concepts and operations of REVIT MEP
2. Students able to understand and analyze the drawing tools, editing tools and modifying tools.
3. Students able to understand the creation of elevations and system graphics.
4. Students able to analyze the energy consumption, heating and cooling systems.
5. Students able to apply the software for creating electrical circuits and prepare schedule.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M				H				H	M		H
CO2	H	H	M	M	H				H	M		H
CO3	H	M			H				H	M		H
CO4	H	H	H	H	H				H	M		H
CO5	H				H	H		M	H	M	M	H


LALY JAMES
 HOD EEE, VJEC

CERTIFICATE OF COMPLETION

CONGRATULATIONS!

You have successfully completed an Autodesk® Authorized Training Center® course specifically designed to satisfy your training requirements. Authorized Training Center instructors deliver quality—learning experiences with courses related to Autodesk products utilizing relevant content and comprehensive courseware. Autodesk's vision is to help people imagine, design, and create a better world.

Certificate No. **AP1111096103634648282**

AP1111096103634648282

AMAL K

NAME

REVIT MEP

COURSE TITLE

SABU S NAIR

INSTRUCTOR

INTERCAD SYSTEMS (PVT) - TRIVANDRUM

AUTODESK AUTHORIZED TRAINING CENTER

REVIT MEP 2020

PRODUCT

08-MARCH-2020

COURSE DATE

41-100 HOURS

COURSE DURATION

AUTODESK.
Authorized Training Center

CERTIFICATE OF COMPLETION

CONGRATULATIONS!

You have successfully completed an Autodesk® Authorized Training Center® course specifically designed to satisfy your training requirements. Authorized Training Center instructors deliver quality-learning experiences with courses related to Autodesk products utilizing relevant content and comprehensive courseware. Autodesk's vision is to help people imagine, design, and create a better world.

Certificate No. **AP1111096103634652598**

SIDHARTH RAJESH P

NAME

REVIT MEP

REVIT MEP 2020

COURSE TITLE

PRODUCT

SABU S NAIR

08-MARCH-2020

41-100 HOURS

INSTRUCTOR

COURSE DURATION

INTERCAD SYSTEMS (PVT) - TRIVANDRUM

AUTODESK AUTHORIZED TRAINING CENTER



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PHOTO GALLERY



SIGMOS INDIA TRAINING REPORT-

PHASE 1 (13/1/2020 – 15/1/2020)

A 3 day training program on Electrical System Design was conducted by Sigmos India, Cochin for the final (2016-2020 batch) year students of Vimal Jyothi Engineering college. The workshop was conducted from 13th January 2020 to 15th January 2020. The trainers were Mr.Sajin Babu, Mr. Shyam, Mr. Faslu, Mr. Sajin and Mr. Jinson from Sigmos India.

The workshop mainly dealt with introduction to electrical system design. The students were provided an opportunity analyse different electrical drawings and then design the electrical system for a normal residential flat and then analyse its power requirements etc.

The students were also given training in AUTOCAD on how to draw the various electrical system element and this will help the students to develop further complex electrical system.

The training program was the first phase of the 18 day training which is to be conducted for final year students.

CONCLUSION

In general the program was very effective and imparted the students good technical knowledge. There was an overall participation of 47 students and the students gave a very positive feedback.

PHOTO GALLERY





SIGMOS INDIA TRAINING REPORT

A 5 day hands on internship program entitled 'E-HOT 2019' on 'Electrical Power and Control' was conducted by Sigmoid India, Cochin for the final(2016-2020) and prefinal year(2017-2021) students of Vimal Jyothi Engineering college. The workshop was conducted from 1st July 2019 to 5th July 2019. The trainers were Ms. Jinu and Mr. Jinson from Sigmoid India.

The workshop mainly dealt with introduction to contactors and also the wiring of different circuits. The students were provided an opportunity to do the wiring of different control circuits with the wide array of components were provided. All the designing different circuits provoked the students to enhance their thinking skills.

The training also covered the fundamental principles of PLC and the students were made to do PLC programming. There was also a visit to the electrical room of the college and the trainers explained the students about the different components in the room and their functions and features.

CONCLUSION

In general the program was very effective and imparted the students good technical knowledge. There was an overall participation of 12 students and the students gave a very positive feedback.

PHOTO GALLERY





IMPACT ASSESSMENT

SIGMOS INDIA

Internship training associated with our branch of study was conducted in Vimal Jyothi Engineering College by SIGMOS India. A 5-day hands on internship program entitled 'E-HOT 2019' on 'Electrical Power and Control' was conducted by Sigmos India, Cochin for the final (2016-2020) and prefinal year (2017-2021) students of Vimal Jyothi Engineering college. The workshop was conducted from 1st July 2019 to 5th July 2019. The trainers were Ms. Jinu and Mr. Jinson from Sigmos India.

Students who attended the training were

1. ANASWARA M K
2. DHANYA P
3. GOPIKA R
4. HIFASBNU SIDDIQUE
4. JISHNU J PURUSHOTHAMAN
5. MEGNA SUDEEP
6. RAVEENA M
7. SREEHARI P
8. V. V. POOJA RAJ
9. SELMA TOMY
10. NITHYA JOHN
11. NAVAMI ARAVIND
12. SHABREENA M

The workshop mainly dealt with introduction to contactors and also the wiring of different circuits. The students were provided an opportunity to do the wiring of different control circuits with the wide array of components were provided. All the designing different circuits provoked the students to enhance their thinking skills.

The training also covered the fundamental principles of PLC and the students were made to do PLC programming. There was also a visit to the electrical room of the college and the trainers explained the students about the different components in the room and their functions and features

All these functions and working that we had learned and experienced from the training in the 'Electrical Power and Control' are related to Power Electronics a subject in the 5th Semester – EE305, Electrical System Design a subject in the 7th semester-EE405 the program was very effective and imparted the student's good technical knowledge. There was an overall participation of 12 students and the students gave a very positive feedback.

SGMOS INTERNSHIP 1019 JULY 1-6 2019

SL. NO	NAME OF STUDENT	IN	AN	FN	AS	FN	AN	FN	AN	FN	AN
1	HIFASBU	Hifasbu	Hifasbu	Hifasbu	Hifasbu	Hifasbu	Hifasbu	Hifasbu	Hifasbu	Hifasbu	Hifasbu
2	ISHNU J P	Ishnu J P	Ishnu J P	Ishnu J P	Ishnu J P	Ishnu J P	Ishnu J P	Ishnu J P	Ishnu J P	Ishnu J P	Ishnu J P
3	SREEMARI	Sreemari	Sreemari	Sreemari	Sreemari	Sreemari	Sreemari	Sreemari	Sreemari	Sreemari	Sreemari
4	DHANYA P	Dhanya P	Dhanya P	Dhanya P	Dhanya P	Dhanya P	Dhanya P	Dhanya P	Dhanya P	Dhanya P	Dhanya P
5	MELCA	Melca	Melca	Melca	Melca	Melca	Melca	Melca	Melca	Melca	Melca
6	EDIPKA	Edipka	Edipka	Edipka	Edipka	Edipka	Edipka	Edipka	Edipka	Edipka	Edipka
7	RAVEENA	Raveena	Raveena	Raveena	Raveena	Raveena	Raveena	Raveena	Raveena	Raveena	Raveena
8	ANGSIVARA	Angsivara	Angsivara	Angsivara	Angsivara	Angsivara	Angsivara	Angsivara	Angsivara	Angsivara	Angsivara
9	POCIARAJ	Pociaraj	Pociaraj	Pociaraj	Pociaraj	Pociaraj	Pociaraj	Pociaraj	Pociaraj	Pociaraj	Pociaraj
10	SARFELNA	Sarfelna	Sarfelna	Sarfelna	Sarfelna	Sarfelna	Sarfelna	Sarfelna	Sarfelna	Sarfelna	Sarfelna
11	TITHYA JOHN	Tithya John	Tithya John	Tithya John	Tithya John	Tithya John	Tithya John	Tithya John	Tithya John	Tithya John	Tithya John
12	SELMA TOMY	Selma Tomy	Selma Tomy	Selma Tomy	Selma Tomy	Selma Tomy	Selma Tomy	Selma Tomy	Selma Tomy	Selma Tomy	Selma Tomy



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
REVIT MEP - INDUSTRIAL TRAINING - IMPACT REPORT

Topic: REVIT MEP- INDUSTRIAL TRAINING

Date: 4TH march 2020-8th march 2020

Semester and academic year: S6, 2019-20

Duration (no of days): 5 days

Batch: S6, (2017-21 EEE Batch)

A 5 day hands on internship program entitled 'REVIT MEP' on 'Mechanical Electrical and Plumbing' was conducted by InterCAD Systems Private Limited, one of the leading training centres in Kerala, for the students of 6th semester of Electrical and Electronics Engineering of Vimal Jyothi Engineering college. The workshop was conducted from 4th March 2020 to 8th March 2020. The trainers were Mr. Abhiram and Mr. Balu from InterCAD System Pvt. Ltd.

a. Knowledge acquired

The workshop mainly dealt with introduction to REVIT MEP Software and its basic drawing and editing tools. The students were provided an opportunity to build Building Models in order to incorporate non conflicting design of Mechanical, Electrical and Plumbing engineering in an architectural design of building and to identify the material requirements for complete construction. All the designed projects provoked the students to enhance their thinking skills and imparted students with good technical knowledge.

Students were also given training on HVAC Systems, adding duct and piping systems, and were made to work on automatic duct and piping layouts. REVIT MEP software's modelling and layout tools enabled students in placing mechanical, electrical and plumbing systems more accurately. It also helped the students in working with dimensions, tags and schedules, adding electrical and fire protection circuits, and creating documents and sheets more easily.

b. Skills learned: (skills and any career-specific abilities that you gained during your project like technical skills, problem analysis, etc. Discuss any of the skills that you learned as part of courses at the college)

The students were able to acquire few skills for the career such as the REVIT MEP Software and its basic drawing and editing tools. Students are able to understand and evaluate the Building Models in order to incorporate non

conflicting design of Mechanical, Electrical and Plumbing engineering in an architectural design and got an exposure to design and analytical skills during the session.

c. **Impact analysis:** Compare the **knowledge and skills sets** that you gained (mentioned as per para a& b above) before and after your internship/visit

Use scale from 1 to 4

Poor = 1 satisfactory = 2, very good = 3 and excellent = 4

Sl. No	Knowledge/Skills	Before	After
1	Practical application of Engineering concepts	1	4
2	Exposure to Design and Analytical skills	1	2
3	Introduced modern engineering tools, REVIT MEP	0	4
4	Research based knowledge	1	2
5	Contributed to your lifelong learning	1	3
6	Apply knowledge of electrical fundamentals, analog & digital electronics to the field of electrical & electronics systems in industry.	2	3
7	Develop technical knowledge, skill, and competence to identify comprehend and solve problems in research and academic related to industrial drives & control	1	3

d). Connected POs & PSOs Attainment

(Select relevant POs /PSOs and rate the same for the Industrial Training /internships/Industrial visits undergone)

Use scale from 1 to 3

1 -Poor, 2-Medim, 3- High

POs	Rating			POs	Rating			PSOs	Rating		
	3	2	1		3	2	1		3	2	1
PO 1	3			PO 7			1	PSO 1	3		
PO 2		2		PO 8			1	PSO 2	3		
PO 3	3			PO 9	3						
PO4			1	PO 10		2					
PO 5	3			PO 11		2					
PO 6			1	PO 12	3						

| Program Outcomes (POs)

Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Design Development of Solutions: Design solutions for complex engineering problems and design systems, components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

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 solutions.

Modern Tool Usage: Create, select, and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for, sustainable development.

- **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **Individual and Team Work:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.
- **Communication:** Communicate effectively in complex engineering activities with the engineering community and with non-engineers, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- **Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management practices and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **Lifelong Learning:** Recognize the need for, and take the initiative and ability to engage in independent and lifelong learning in the broadest context of technological change.

| Program Specific Outcomes (PSOs)

- Apply the knowledge of electrical fundamentals, circuit design, control engineering, analog & digital electronics to the field of electrical & electronics systems in industry.
- Develop technical knowledge, skill, and competence to search, comprehend and solve problems in research and analysis related to power system, AUTOMOBILE, industrial drive & control.

| Program Educational Objectives (PEOs)

- Graduates will achieve broad and in-depth knowledge of Electrical & Electronics Engineering relating to industrial practices and research to analyze the practical problems and think creatively to generate innovative solutions using appropriate technologies.
- Graduates will make valid judgment, synthesize information from a range of sources and communicate them in soundways appropriate to the discipline.
- Graduates will sustain intellectual curiosity and pursue lifelong learning not only in areas that are relevant to Electrical & Electronics Engineering, but also that are important to society.
- Graduates will adapt to different roles and demonstrate leadership in global working environment by respecting diversity, professionalism and ethical practices.

Vision

To evolve as a centre of excellence, to train students in contemporary technologies, to meet the needs of global industry and to develop them into skillful engineers imbued with human values and professional ethics.

Mission

To produce competent and disciplined Electrical & Electronics Engineers through delivery of quality education to meet the ongoing global challenges in alignment with technical education system and society.

Faculty Signature

LALAY JAMES
HOD EEE, VJEC

INDUSTRIAL TRAINING FEEDBACK FORM

Name of the student	: ABHIRAM CP
Roll number and Semester	: 01, 56
Date of training	: 4-8 th MARCH 2020
Name of the company	: Inter CAD Systems Private Limited
Type of the industry	: CAD system

Sl.No.	Questions	Very good	Good	Average	Poor
1.	Was the training technically helpful to you?	✓			
2.	How would you rate the relevance of the training with the curriculum?	✓			
3.	How you feel about the working environment of the industry?	✓	✓		
4.	Whether the employees were able to clarify your doubts?		✓		
5.	Can you identify any recent technology over their?		✓		
6.	Whether the industry is updated with the current technical changes?	✓			
7.	Can you rate the importance of an electrical engineer at that industry?	✓			
8.	Were you able to analyze the working machines and equipments at that industry with the theoretical knowledge?	✓			
9.	Can you solve a problem practically by the knowledge obtained from your industrial training in future?		✓		
10.	Do you prefer to have this kind of training in future?	✓			
11.	Give overall rating to industrial training		✓		

INDUSTRIAL TRAINING FEEDBACK FORM

Name of the student	: Akhil TP
Roll number and Semester	: 02, 56
Date of raining	: 4-8 th March 2020
Name of the company	: Inter CAD systems private limited
Type of the industry	: CAD system

Sl.No.	Questions	Very good	Good	Average	Poor
1.	Was the training technically helpful to you?		✓		
2.	How would you rate the relevance of the training with the curriculum?	✓			
3.	How you feel about the working environment of the industry?		✓		
4.	Whether the employees were able to clarify your doubts?	✓			
5.	Can you identify any recent technology over their?	✓			
6.	Whether the industry is updated with the current technical changes?	✓			
7.	Can you rate the importance of an electrical engineer at that industry?	✓			
8.	Were you able to analyze the working machines and equipments at that industry with the theoretical knowledge?		✓		
9.	Can you solve a problem practically by the knowledge obtained from your industrial training in future?	✓			
10.	Do you prefer to have this kind of training in future?	✓			
11.	Give overall rating to industrial training	✓			

INDUSTRIAL TRAINING FEEDBACK FORM

Name of the student	: Akshay K.V
Roll number and Semester	: 03, 56
Date of training	: 4-8 th March 2020
Name of the company	: Inter CAD systems private limited
Type of the industry	: CAD system

Sl.No.	Questions	Very good	Good	Average	Poor
1.	Was the training technically helpful to you?	✓			
2.	How would you rate the relevance of the training with the curriculum?	✓			
3.	How you feel about the working environment of the industry?		✓		
4.	Whether the employees were able to clarify your doubts?		✓		
5.	Can you identify any recent technology over their?		✓		
6.	Whether the industry is updated with the current technical changes?		✓		
7.	Can you rate the importance of an electrical engineer at that industry?	✓			
8.	Were you able to analyze the working machines and equipments at that industry with the theoretical knowledge?		✓		
9.	Can you solve a problem practically by the knowledge obtained from your industrial training in future?	✓			
10.	Do you prefer to have this kind of training in future?	✓			
11.	Give overall rating to industrial training	✓			

INDUSTRIAL TRAINING FEEDBACK FORM

Name of the student	: Amal K
Roll number and Semester	: 04, S6
Date of raining	: 4-8 th MARCH 2020
Name of the company	: INTER CAD SYSTEMS PRIVATE LIMITED
Type of the industry	: CAD SYSTEMS

Sl.No.	Questions	Very good	Good	Average	Poor
1.	Was the training technically helpful to you?	✓			
2.	How would you rate the relevance of the training with the curriculum?	✓			
3.	How you feel about the working environment of the industry?	✓			
4.	Whether the employees were able to clarify your doubts?	✓			
5.	Can you identify any recent technology over their?	✓			
6.	Whether the industry is updated with the current technical changes?		✓		
7.	Can you rate the importance of an electrical engineer at that industry?	✓			
8.	Were you able to analyze the working machines and equipments at that industry with the theoretical knowledge?	✓			
9.	Can you solve a problem practically by the knowledge obtained from your industrial training in future?		✓		
10.	Do you prefer to have this kind of training in future?	✓			
11.	Give overall rating to industrial training	✓			