Value Added Course on Basic Design and Drafting by Auto CAD Held on 01.02.2022 – 21.02.2022

Date of Event	**01 Feb 2022 to 21 Feb 2022**
Name and Type of Event	**Value Added Course on Basic Design and Drafting by Auto CAD**
Conducted by	Mr. Ashwini kumar and Mr. Nivedan Mahato
No. Of Participant	50

Value Added Course on Basic Design and Drafting by Auto CAD

CAD/CAM is a term which means Computer Aided Design & Computer Aided Manufacturing. It is the technology concerned with the use of digital computers to perform certain functions in design and production. Electronics brains in the form of microprocessors are parts of cars we drive, the planes in which we fly, the televisions we watch and the automated tools we use to produce such products. The Computer Aided Design or CAD systems are used to design such products. The CAD hardware typically includes computer, one or more graphics display terminals, keywords and other peripheral equipment. The CAD software consists of the computer programs to facilitate the engineering functions of the user company. Examples of these application programs include stress-strain analysis of components, dynamics response of mechanisms, heat transfer calculations and customer's markers are different. These factors give rise to differences in CAD systems requirements. Ultimately CAD/CAM will provide the technology base for the computer-integrated factory of the future.

Program outcome:

1. Apply/develop solutions or to do research in the areas of Design and simulation in Mechanical Engineering.

2. Have abilities and capabilities in developing and applying computer software and hardware to mechanical design and manufacturing fields.

3. Review and document the knowledge developed by scholarly predecessors and critically assess the relevant technological issues.

4. Formulate relevant research problems; conduct experimental and/or analytical study and analyzing results with modern mathematical / scientific methods and use of software tools.

5. Design and validate technological solutions to defined problems and communicate clearly and effectively for the practical application of their work.

Program specific outcome:

1. To impart fundamental knowledge to students in the latest technological topics on Computer Aided Design, Computer Aided Manufacturing and Computer Aided Engineering Analysis and to prepare them for taking up further research in the areas.

2. To create congenial environment that promotes learning, growth and imparts ability to work with inter-disciplinary groups in professional, industry and research organizations.

3. To broaden and deepen their capabilities in analytical and experimental research methods, analysis of data, and drawing relevant conclusions for scholarly writing and presentation.

4. To provide guidance to students for their choices in research and professional career outlook and to encourage students to take up research.

Course outcome:

The students will be able to

1. Create the different wireframe primitives using parametric representations.

2. Create surface primitives using parametric modeling.

3. Create the different solid primitives using the different representation schemes.

4. Apply geometric transformations on the created wireframe, surface and solid models.

Course content:

Module 1:

Introduction to engineering drawing, Graphic, Exploring AutoCAD User Interface, Exploring

AutoCAD Workspaces, the AutoCAD Ribbon, Setting Drawing Unit.

Module 2:

Basic Drawing Skills

Navigating 2D Drawings, *Drawing Lines and Rectangles, *Cancelling, erasing, Undoing, Drawing Circles, Arcs, Polygons, Filleting and Chamfering Lines Grid and Snap, Ortho and Polar Snapping, Polar Snap, Running Object Snaps, Object Snap Tracking.

Module 3

Editing feature

Move and Copy • Rotate and Scale • Arrays, Grip Editing • Trim and Extend • Lengthen and

Stretch • Offset and Mirror

Module 4

Dimensioning and Annotation

• Styling Dimensions • Adding Dimensions • Editing Dimensions • Creating Annotative Styles and Objects • Creating Layouts • Adjust Floating Viewports • Overriding layer Properties in Layout Viewports • Drawing on Layouts

Module 5

Introduction of 3D in Autocad

Creating and editing basic feature of 3D in Autocad

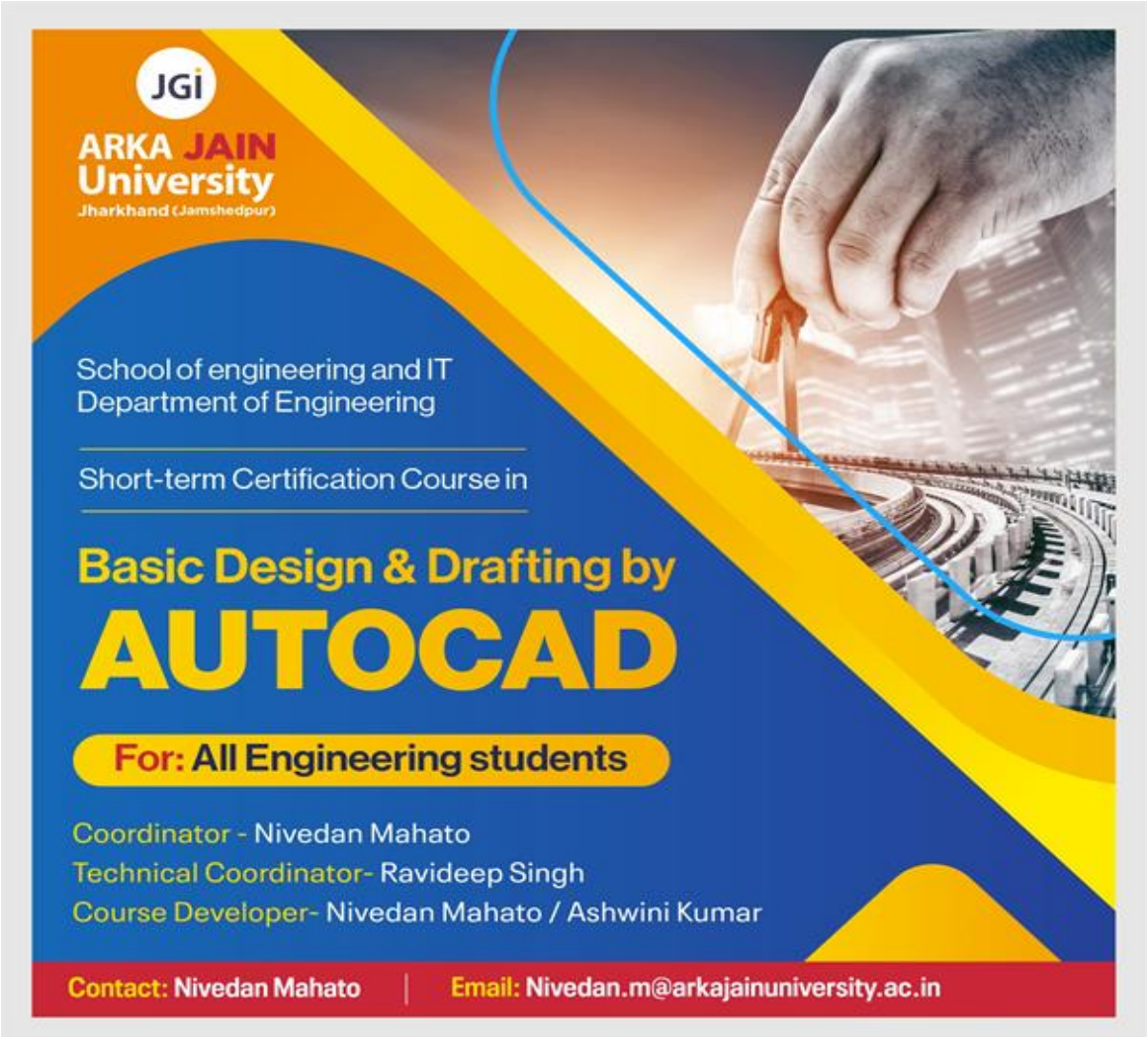
Course objective:

To impart the parametric fundamentals to create and manipulate geometric models using curves, surfaces and solids.

1. Demonstrate basic concepts of the AutoCAD software.
2. Apply basic concepts to develop construction (drawing) techniques.
3. Ability to manipulate drawings through editing and plotting techniques.
4. Understand geometric construction
5. Produce template drawings
6. Produce 2D Orthographic Projections
7. Understand and demonstrate dimensioning concepts and techniques
8. Understand Section and Auxiliary Views

9. Become familiar with the use of Blocks, Design Center, and Tool Palettes
10. Become familiar with Solid Modeling concepts and techniques

Poster of the Event



Brochure

Course Content:

- **Module 1:**
  Introduction to Engineering Drawing, Graphic, Exploring AutoCAD User Interface, Exploring AutoCAD Workspaces, The AutoCAD Ribbon, Setting Drawing Unit.
- **Module 2:**
  Basic Drawing Skills
  Navigating 2D Drawings, *Drawing Lines and Rectangles, *Cancelling, Erasing, Undoing, Drawing Circles, Arcs, Polygons, Filleting and Chamfering Lines Grid and Snap, Ortho and Polar Snapping, Polar Snap, Running Object Snaps, Object Snap Tracking.
- **Module 3**
  Editing feature
  Move and Copy, Rotate and Scale, Arrays & Grip Editing, Trim and Extend, Lengthen and Stretch, Offset and Mirror
- **Module 4**
  Dimensioning and Annotation
  Styling Dimensions, Adding Dimensions, Editing Dimensions, Creating Annotative Styles and Objects, Creating Layouts, Adjust Floating Viewports, Overriding layer Properties in Layout Viewports, Drawing on Layouts
- **Module 5**
  Introduction of 3D in AUTOCAD
  Creating and editing basic feature of 3D in Autocad

Course Objective:

- To impart the parametric fundamentals to create and manipulate geometric models using curves, surfaces and solids.
- Demonstrate basic concepts of the AutoCAD software.
- Apply basic concepts to develop construction (drawing) techniques.
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- Produce template drawings
- Produce 2D Orthographic Projections
- Understand and demonstrate dimensioning concepts and techniques
- Understand Section and Auxiliary Views
- Become familiar with the use of Blocks, Design Center, and Tool Palettes
- Become familiar with Solid Modeling concepts and techniques.

Process of Enrollment & certification:

Fill out the enrolment form and submit it to the course head by downloading it from the university's official website or using the Google form link. Following successful enrollment, participants will attend a 30-hour session in which 70% attendance is required. At the end of the each module, The participant will be submitting an assignment each and at the end of module. To be eligible for the certificate, the participant must complete at least three out of five assignments and score at least 70% on the evaluation paper. The participant will receive a certificate from ARKA JAIN University in Jharkhand after successfully completing the assignment and evaluation paper.

JGi

ARKA JAIN University
Jharkhand (Jamshedpur)

School of engineering and IT
Department of Engineering

Short-term Certification Course in

Basic Design & Drafting by AUTOCAD

Registration Link:

https://docs.google.com/forms/d/e/1FAIpQLSeP–Rx_DPAEm18Xdu3h4jwz4i-_aJoEDrUzb-ZIGZL46hDhQ/viewform?usp=sf_link

About the Course:

- **COURSE DEVELOPER**
  Nivedan Mahato / Ashwini Kumar
- **COURSE DURATION:** 30 Hours | **COMMENCEMENT DATE:** 1st February, 2022 | **BATCH NO:** First
- **COURSE LOCATION**
  ARKA JAIN University, Jharkhand and Online (Google Meet)
- **MODE OF LEARNING:**
  On-Campus and Online
- **WHO CAN ENROLL? :**
  All Engineering students of ARKA JAIN University, Jharkhand
  Registration fee: 200/-

Program Outcome:

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- Have abilities and capabilities in developing and applying computer software and hardware to mechanical design and manufacturing fields.
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- Formulate relevant research problems; conduct experimental and/or analytical study and analyzing results with modern mathematical / scientific methods and use of software tools.
- Design and validate technological solutions to defined problems and communicate clearly and effectively for the practical application of their work.

Program Specific Outcome:

- To impart fundamental knowledge to students in the latest technological topics on Computer Aided Design, Computer Aided Manufacturing and Computer Aided Engineering Analysis and to prepare them for taking up further research in the areas.
- To create congenial environment that promotes learning, growth and imparts ability to work with inter-disciplinary groups in professional, industry and research organizations.
- To broaden and deepen their capabilities in analytical and experimental research methods, analysis of data, and drawing relevant conclusions for scholarly writing and presentation.
- To provide guidance to students for their choices in research and professional career outlook and to encourage students to take up research.

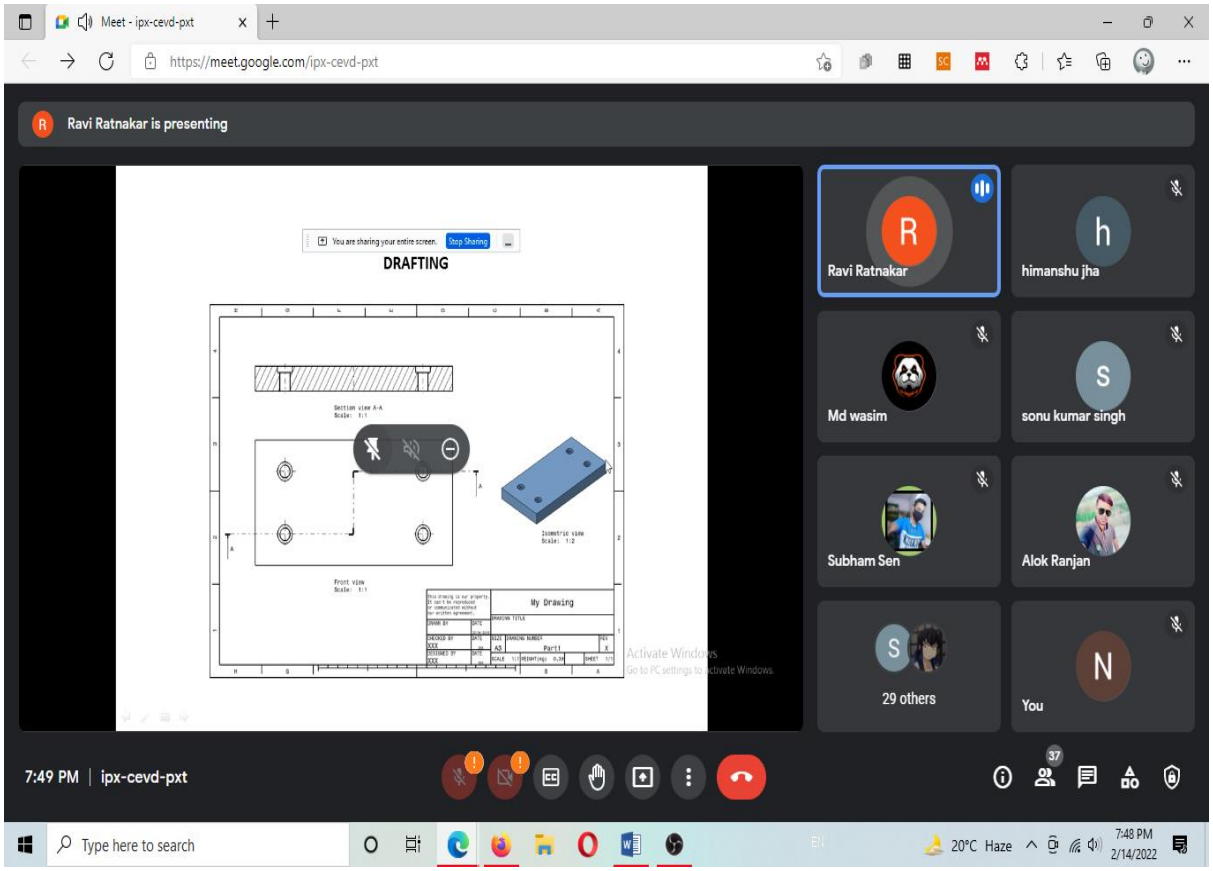
AUTODESK AUTOCAD

Course Outcome:

The students will be able to

- Create the different wireframe primitives using parametric representations.
- Create surface primitives using parametric modeling.
- Create the different solid primitives using the different representation schemes.
- Apply geometric transformations on the created wireframe, surface and solid models.

Screenshot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Ravi Ratnakar is presenting
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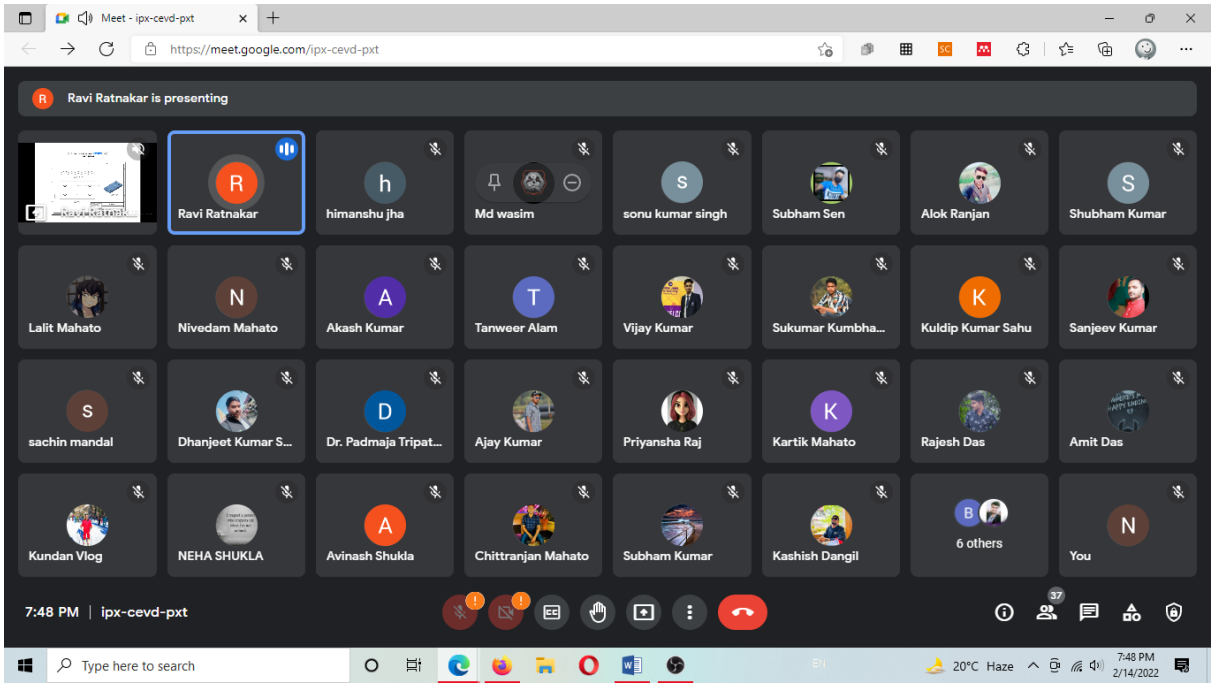
Meet - ipx-cevd-pxt
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Ravi Ratnakar is presenting
Ravi Ratnakar
himanshu jha
Md wasim
sonu kumar singh
Subham Sen
Alok Ranjan
Shubham Kumar
Lalit Mahato
Nivedam Mahato
Akash Kumar
Tanweer Alam
Vijay Kumar
Sukumar Kumbha...
Kuldip Kumar Sahu
Sanjeev Kumar
sachin mandal
Dhanjeet Kumar S...
Dr. Padmaja Tripat...
Ajay Kumar
Priyansha Raj
Kartik Mahato
Rajesh Das
Amit Das
Kundan Vlog
NEHA SHUKLA
Avinash Shukla
Chittranjan Mahato
Subham Kumar
Kashish Dangil
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