

## 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, Filletting 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.
  - Ability to manipulate drawings through editing and plotting techniques.
  - Understand geometric construction
  - 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.



**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](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:

- Apply/develop solutions or to do research in the areas of Design and simulation in Mechanical Engineering.
- Have abilities and capabilities in developing and applying computer software and hardware to mechanical design and manufacturing fields.

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



AUTODESK  
AUTOCAD

- 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.

## 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.

