# AUTOCAD

SUBHARTI INSTITUTE OF TECHNOLOGY & ENGINEERING

(College established in 2005 & Approved by AICTE)
0121-2439043/52, Fax: 0121-2439067, E-mail: engineering@subharti.org, Web: www.engineering.subharti.org

*A constituent college of*
SWAMI VIVEKANAND SUBHARTI UNIVERSITY
(Established under U.P. Govt. Act no. 29 of 2008 and approved under section 2(f) of UGC Act 1956)

Ref: SITE/ME/VA/2019/11i

**Department of Mechanical Engineering**

Dated: 03-10-2019

**NOTICE**

The Department of ME starts a value added course on "AUTOCAD 2018". For interested students which will provide them the opportunity to enhance their knowledge in the field of CAD/CAM technology. The proposed course will be open only for ME students and the students will be enrolled on first come first serve basis. The course will be provided to the student with a cost of Rs.700/- only. This course will be coordinated by Er. Sachin Kumar & Er Krishna Kumar Sharma, Assistant professor, Department of ME.

Important Dates:

- Last date for receipt of application- 5 Oct, 2019
- Last date for acceptance application- 11 Oct, 2019

CC

- Principal
- Department of ME

ECL

- Registration Form

Registrar
Swami Vivekanand
Subharti University
MEERUT

Prof. (Dr.) RAVISH KUMAR SRIVASTAVA
**HOD (ME)**

**SWAMI VIVEKANAND SUBHARTI UNIVERSITY, MEERUT**

*DEPARTMENT OFMECHANICAL ENGINEERING*

**VALUE ADDED COURSE**

**TITLE NAME: AUTOCAD 2018**

**CONTACT HOUR: L: 3 T: 1**

## Course Objective

On completion of this Subject/Course the student shall be able to:

1. Understanding the **AutoCAD** workspace and user interface. Navigate throughout AutoCAD using major navigating tools.
2. Understand the concept and techniques to draw. Create multiple designs using several of tools. Create layers to control the objects' visibility.
3. Explain drawing using annotations. Plot or print the drawing by scale.
4. 3D modeling concepts in AutoCAD
5. Materials, lights & rendering. Working with images.
6. To use constraint for certain design.

| MODULE | PARTICULAR | CONTACT HOUR |
|---|---|---|
| 1. | Introduction of AutoCAD, Units control, Draw Menu (Introduction to computer , Introduction to AutoCAD Screen layout, Line , Circle , Arc, Ellipse , Erase, Oops , New , Open, Save, Save As, , Close, Closeal , Quit, exit ,Text, Style, Spell, Mtext ,View, Color, Line type, Line weight , Zoom, pan , Regen , Dsviewer , Regenauto, Redraw, Find, Layer ,Matchprop, Properties, Qselect , Ddim , Tolerance , Grader , Xline, Ray , Dimstyle , Polygon, Move ,Copy ,Assist , Array , Break , Mirror , Offset , Scale , Rotate , Solid, Donut , Revcloud , Limits, Dwt ings (osnap, ortho, dyn mouse ,Units ,Trim , Extend , Stretch , Bhatch, Hatch , Pline, Pedit , Fillet, Chamfer , Rename , Gripedit, Matchprop , Id, List, Dist, Area , Lengthen , Spline, Splinedit , Mline),(Line,Xline,Pline,Circle,Arc,Hatch,Gradient,ragion,Print,Table,MText,Rectangle,Spline, etc ) Modifying command Color, Line type, Function Keys F1,F2,F3,F4, (erase,copy,mirror,offset,arrey,rotate,scale,stretch,break, oin,fillet,chamfer, explode, trim, extend etc). | 4 |
| 2 | Inquiry Commands, Dimensions (Dimlinear , Dimaligned , Dimdiameter , Dimradius , Dimordinate , Dimcenter , Dimbaseline, Dimcontinuous , Ddim ,Filter , Group, Cal , Blocks, Wblock, Insert, sketch ,Blocks vs Xref , Xref ,Design center) Productivity Commands (Tool Palettes , Layout Management , Layout wizard , Pagesetup , Layout , Mview , Minsert, Divide, Measure , Mslide, Vslide, Script, Slidelib, Rscript, OLE concepts, Paste, Pastespec, Pasteblock, Pasteorig, Insertobj, Qvdrwg, Olescale, Hyperlink , Intro to Plotter and printer , Plot style Table , Plotting , DWF format, etc). 2D drawing Exercise 1, Exercise 2, Exercise 3, Exercise4 | 4 |
| 3 | Introduction of 3dD modeling Standard Primitives(Box, cylinder, sphere, cone, torus, Creating a Solid Box, Solid Cylinder, Cone, Solid Sphere, Solid Pyramid, Solid Wedge, Solid Torus,Lofting 2D Objects, 3D Objects by Sweeping 2D Objects 3D Objects Using Polysolid, 3D Objects Using Press/Pull, Controlling Mesh Primitive Options, Creating a 3D Helix) Extrude and Revolve. 3D Objects Imprinting onto a Solid, Changing the Edge Color, Copying Edges, Extruding Faces Tapering Faces, Moving Faces, Copying Faces, Offsetting Faces, Deleting Faces, Rotating Faces Changing the Color, Separating Solids, Cleaning Solids, Shelling Solids, Checking Solids | 4 |
| 4 | Modifying 3D (union, subtract, intersect, slice etc) Working with viewports and layout Mirroring Objects in 3D, Moving Objects in 3D, Aligning Objects in 3D, | 2 |

| | | |
|---|---|---|
| 5 | Rotating Objects in 3D, Creating a 3D Rectangular Array, Creating a Stepped 3D Rectangular Array, Creating a 3D Polar Array, Creating a Stepped 3D Polar Array, Creating a 3D Path Array, Scaling Objects in 3D. 3D drawing Exercise 1, Exercise 2, Exercise 3, Exercise 4, AUTOCAD REVIEW | 2 |

## Course Outcome

Upon successful completion of this course, it is expected that:

1. Student's ability to hand letter will improve.
2. Student's ability to perform basic sketching techniques will improve.
3. Students will be able to draw projections and sections.
4. Student's ability to use engineering scales will increase.
5. Student's ability to produce engineered drawings will improve.
6. Students will become familiar with office practice and standards.
7. Students will become familiar with Auto Cad.twn-dimensional and three dimensional drawings.

## REFERENCE BOOKS


1. Nelson Johnson (1989) AutoCAD, McGraw-Hill, Inc.
2. Prof Sham Tickoo Purdue Univ, August 2, 2017AutoCAD Plant 3D 2018:Publications, CADCIM Technologies.
3. Cheryl R. Shrock and Steve Heather Advanced AutoCAD 2018, Publications Industrial Press.
4. Fane, Bill, (June 12, 2019) AutoCAD for Dummies.
5. James (April 30, 2015), AutoCAD 2016 SDC Publications.


## Additional Learning Source

1. https://skillscouter.com/online-autocad-courses/
2. https://www.linkedin.com/learning/autocad-2018-essential-training
3. https://blog.scitraining.com/what-is-drafting-in-autocad/
4. https://www.hitechcaddservices.com/news/autocad-mechanical-2d-drawings-not-going-obsolete-in-3d-world/
5. https://www.thesourcecad.com/autocad-basic-3d-practice-drawing-tutorial/
6. https://cloud2k.edupage.org/cloud/vykresy.pdf?z%3A5aKAaqreDvLVDsKfShHKvUgL%2B5hZLRjWRIiXjY0jEF3KDjsWzOKIEA0UhtVaeTuM

## REPORT OF COMPLETION

### AutoCAD -18

We are highly grateful to Dr. Manoj Kapil, principal, Subharti institute of technology and engineering Meerut for providing permission to conduct the fifteen days value added course (AutoCAD-2018) in the Mechanical engineering department. **The AutoCAD -18** training is successfully completed by the students in the institute. Following are the outcomes that the students have learned during the training.

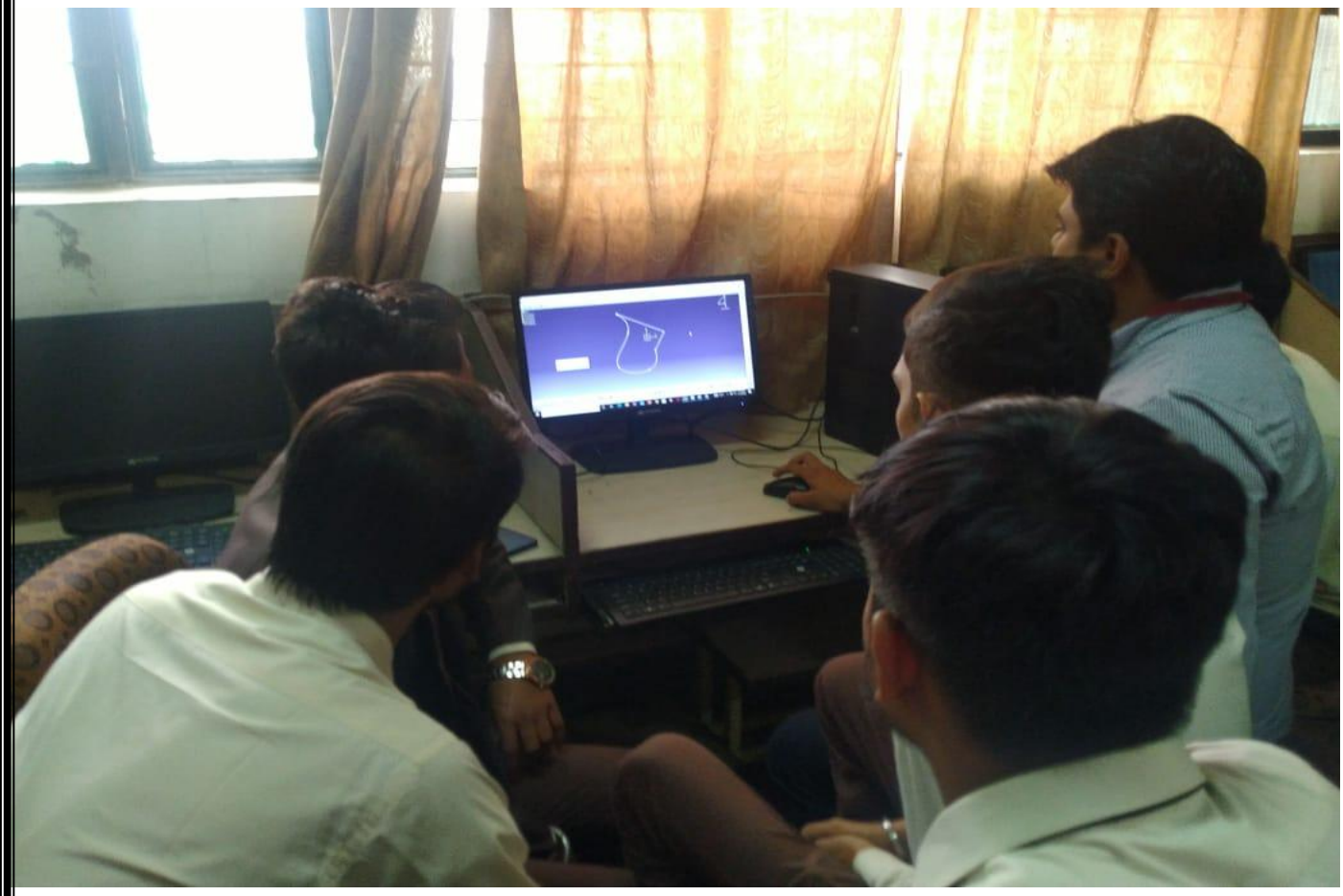
AutoCAD18 is the software that prepares 2D and 3D technical drawings. These drawings are used as blueprints to construct products and structures, such as buildings, machinery, toys, microchips, plumbing & electrical systems, vehicles and a host of other manufactured goods. AutoCAD drafting professionals hold a range of job titles, including engineer, drafter, estimator, designer, modeler, architect and illustrator.

The constant guidance and encouragement received from Principal, SITE has been of great help in carrying out the training and is acknowledged with reverential thanks.

CO-ORDINATOR

HOD (ME)

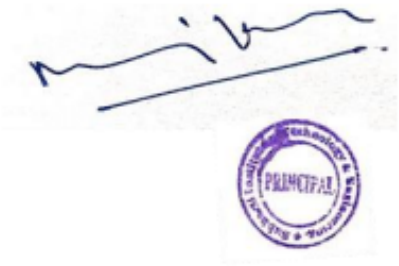
Registrar
Swami Vivekanand
Subharti University
MEERUT



Participants during value added course

## LIST OF STUDENTS

| S. NO. | STUDENT NAME | FATHER NAME |
|---|---|---|
| 1 | Hrishikesh | Hrishikesh |
| 2 | Aman Ansari | Aman Ansari |
| 3 | AmrendraPratap Singh | AmrendraPratap Singh |
| 4 | Anup Kumar Sharma | Anup Kumar Sharma |
| 5 | Avinash Kumar | Avinash Kumar |
| 6 | Balram Sharma | Balram Sharma |
| 7 | Irshad Khan | Irshad Khan |
| 8 | Md. KhurshidAlam | Md. KhurshidAlam |
| 9 | Mohammad Adnan | Mohammad Adnan |
| 10 | Rahul Monga | Rahul Monga |
| 11 | RanjeetGautam | RanjeetGautam |
| 12 | Ravi Ranjan | Ravi Ranjan |
| 13 | SafdarAsharaf | SafdarAsharaf |
| 14 | Chandan Mani | Chandan Mani |
| 15 | Mohit Sharma | Mohit Sharma |
| 16 | Sharoon Safi | Sharoon Safi |
| 17 | Sulanthung N Jami | Sulanthung N Jami |
| 18 | ArchitShukla | ArchitShukla |
| 19 | ShivamPratap Singh | ShivamPratap Singh |



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# CERTIFICATE OF TRAINING

**This Certificate is Presented to**

## AMAN ANSARI

**For Successfully Completing "AUTOCAD TRAINING"**
**As the Part of Value aided Course Organized by Mechanical Engineering Department**
**During 14 October 2019 to 04 November 2019.**

| Mr. Sachin Kumar | Mr. K K Sharma | Prof. (Dr.) Ravish Shrivastava | Prof. (Dr.) Manoj Kapil |
|---|---|---|---|
| Course Coordinator | Course Coordinator | HOD ME Department | Principal |

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# CERTIFICATE OF TRAINING

**This Certificate is Presented to**

## RAHUL MONGA

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**This Certificate is Presented to**

## SHAROON SAFI

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|---|---|---|---|
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# CERTIFICATE OF TRAINING

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## RAVI RANJAN

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