AUTODESK PROPOSAL FOR ENGINEERING STUDENT WEBINARS

For FY Engineering Graphics Course

> *Autodesk, Inc., is a leader in 3D design, engineering and entertainment software. Since its introduction of AutoCAD software in 1982, Autodesk continues to develop the broadest portfolio of 3D software for global markets.*
>
> *Customers across the manufacturing, architecture, building, construction, and media and entertainment industries—including the last 19 Academy Award winners for Best Visual Effects—use Autodesk software to design, visualize, and simulate their ideas before they're ever built or created. From blockbuster visual effects and buildings that create their own energy, to electric cars and the batteries that power them, the work of our 3D software customers is everywhere you look.*

OVERVIEW

Autodesk is extending all co-operation to Kamaraj College of Engineering and Technology to formulate an extensive and suitable curriculum based on Autodesk's experience in the field of Design & Manufacturing. Autodesk is pleased to submit this proposal for supporting & achieving. It will also be improving student's satisfaction by providing online free training and certificates to the students. We have already partnered with Kamaraj College of Engineering and Technology for conducting faculty development workshop & committed to improve the faculty and student's knowledge and skill through FDP's and student boot camps.

The Objective

> *Conduct online webinar series to FY students and train them on cloud-based Fusion platform to earn the Autodesk certificate and support the course outcomes of Engineering Graphics Course*

- Need #1: Engage the students with cloud-based platform during COVID scenario
- Need #2: Improve the students' knowledge and skill on Industry specific course

The Opportunity

- Goal #1: Train all students in 2 Months by conducting webinar series on "2D to 3D CAD Modeling with Autodesk Fusion 360".
- Goal #2: Integrate the Autodesk Certificate with the online training to all the students
- Goal #3: Monitor the course outcome by generating attendance, engagement reports for all students
- Goal #4: Adopt distance learning strategy on cloud platform to complete students project as outcome

The Solution

> ℹ️ *Kamaraj College of Engineering and Technology will share the teaching learning strategy for the Engineering FY students*

- Kamaraj College of Engineering and Technology sends thee circulars and WhatsApp messages to all students for registration and attendance
- Kamaraj College of Engineering and Technology & Autodesk will conduct e meeting with all concerned faculty and address the challenges
- Schedule & Share the Webinar series to all students to works on the actual platform
- All the learning resources like step by Video, step guide, data files etc. will be shared by the Autodesk
- All the faculties will join as panelist during the webinar to address the questions from students

Resources

> ℹ️ *Autodesk Engagement Specialist, Fusion Catalyst, Autodesk Learning resources and Live Webinar series*

Topic: 2D to 3D CAD Modeling with Autodesk Fusion 360

Good designers and engineers know how to explore and iterate their designs. Thankfully, computer aided design (CAD) allows you to do just that—explore and iterate your design—until the model suits your needs. However, this iteration process isn't as easy as it sounds. It requires you to move quickly and seamlessly back and forth from 2D sketching to 3D modeling—and so, that's the primary skill we'll be practicing in this course.

This course covers 2D and 3D workflows, through a series of short lectures and hands-on exercises. In the first part of the course, we'll start with 2D sketching in Autodesk® Fusion 360™, and we'll review the various Fusion 360 workspaces, including: sketching and parametric modeling, free-form modeling and sculpting, and direct and assembly modeling. You'll learn the skills necessary to use CAD from the start, applying its full capabilities when exploring and changing your designs. Then, in the second part of the course, we'll transition from 2D to 3D modeling. And finally, toward the end, we'll explore and apply various 3D modeling techniques that can be used to create models that can be easily changed and experimented on.

By the end of the course, Students will be able to

- **Create cloud projects, manage, open and save models in Fusion 360.**
- **Create and edit 2D Sketches and 3D models using Fusion 360 parametric tools to add constraints, dimensions, and control geometric relationships.**
- **Sculpt and freeform 3D models using Fusion 360 T-Splines technology and import a sketch or image to use for reference.**
- **Use direct editing tools in Fusion 360 and rapidly modify the design of existing and imported 3D CAD models.**
- **Use Fusion 360 assembly modeling tools and features, to create and drive working joints for parts in a product assembly.**
- **Apply physical materials and assign appearances to 3D models.**
- **Use the Fusion 360 documentation environment to create technical drawings, parts lists, and other documentation for 3D models.**

Schedule with Lesson plan (90 minutes Each)

Following is a complete list of all project deliverables:

Deliverable	Description
27th April 2021	Introduction to Webinar Series Objective, Plan and Preparation, Account Creations and File Management,
4th May 2021	Modeling from 2D Sketches to 3D CAD Model, Model Workflows
11th May 2021	Parametric Sketching, Sketch dimensions, Constraints, Construction of Planes
18th May 2021	Import and calibrate reference images in Fusion 360. Sketch the main shape of the saw trigger using splines and lines in Fusion 360. Edit splines, add dimensions, and apply constraints to sketches in Fusion 360. Use the attached canvas image for reference.
8th June 2021	Create sketches using Splines and Slots in Fusion 360.Construct work planes and sketch on faces in Fusion 360. Create advanced Circular and Rectangular Pattern Sketches in Fusion 360. Create advanced sketches using Projections and Intersections.
15th June 2021	Import and calibrate reference images in Fusion 360. Create, move, and edit a T-Spline face using the Fusion 360 Sculpt workspace. Create, move, and edit a T-Spline cylinder using the Fusion 360 Sculpt workspace. Insert edges of T Spline forms using the Fusion 360 Sculpt workspace.
29th June 2021	Use Fusion 360 to create a component from a body for assembly modeling. Use Fusion 360 to ground new components for assembly modeling. Use Fusion 360 to create a new Joint for assembly modeling.
6th July 2021	Generate technical drawings from your CAD models using ISO or ASME. Create exploded views using the Animation Workspace. Place multiple drawing views and styles on a drawing sheet. Modify and change drawing views and styles. Add Geometric Dimensioning and Tolerance (GD&T), annotations, and tables to your drawings.
13th July 2021	Quiz, Online Certification completion

Timeline for Execution

> **i** *Will effectively start from last week of April 2021*

CONCLUSION

We look forward to working with Kamaraj College of Engineering and Technology and supporting First Year Engineering Course student and faculties, Integrated Autodesk Certification for the students. We are confident that we can meet the COVID challenges ahead and stand ready to partner with you in delivering a Webinar series with certification.

Feedback Form | Skill Enrichment Course for "Engineering Graphics Subject (GE1271)" |
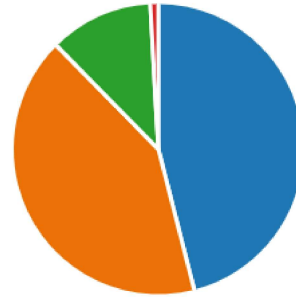
113	01:11	Active
Responses	Average time to complete	Status

1. Whether all the doubts were cleared by the resource person

🔵 Strongly Agree	52	
🟠 Agree	47	
🟢 Neutral	13	
🔴 Disagree	1	

2. Whether all the concepts were clearly delivered by the resource person

🔵 Strongly Agree	46	
🟠 Agree	46	
🟢 Neutral	21	
🔴 Disagree	0	
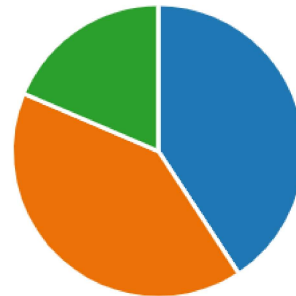
3. Whether the concepts taught enriched your perception about Engineering Graphics

🔵 Strong Agree	51	
🟠 Agree	48	
🟢 Neutral	14	
🔴 Disagree	0	

4. Give your suggestion to improve further.

110
Responses

11 respondents (**10**%) answered **good** for this question.

new things

useful course

session is good students

things

great platform

useful

class

good

No suggestions

Teachig is good

Nice

course

good course

issues

design

suggestions sir

offline classes

course is very interesting

designs using Fusion