



Department of Mechanical Engineering

Report on Three-Day FDP on "Introduction to Modelling and Design for the Manufacturing" using Fusion 360 by AUTODESK"

Dates: 6th to 8th Nov. 2023 at Dept. of ME, ATMECE, Mysore

Inaugural Function

Faculty Development program was organised in association with VTU Belagavi and Autodesk Inc. It was organised exclusively for the Mechanical and Allied Branches of the Engineering Colleges under Mysore region of VTU. About 25 Participants from various Institutes have registered to the FDP. Resource Persons and Course materials were sponsored by Autodesk Inc.

After the Participants got registered at the registration counter, Inauguration of the FDP was held in the seminar hall of Mechanical department ATMECE at 9:30 am. The Chief Guests of the Program were Dr. Vidyashankar S Honorable Vice-Chancellor, VTU, Belagavi who joined on-line from Belagavi, Mr. Conway Goh, Global director, Autodesk Inc. who has joined virtually through a video message, and Dr. Ramesh Pudale, Senior Program manager & India Head, Autodesk Inc.

The function was presided by Dr. A K Murthy, Honorable Principal, ATMECE. Dr M S Govinde Gowda, VTU Convener, Chairman, BOS ME and Allied Branches, VTU & Dean-Academics, ATMECE and Dr. Basavaraj L, Chairman IQAC, ATMECE was also present on the occasion.

The program begin with the Invocation by Prof. Rangaswamy, Asst. Prof. Dept. of Maths. Dr. Chethan S, Program Convener and HOD ME, welcomed all to the function. The FDP was declared open by Lighting the lamp by the dignitaries.

After that Honorable Vice-Chancellor addressed the gathering through on-line mode. He has stated the importance of such FDPs where Industry directly trains the Master Trainers and thanked profoundly the Autodesk Inc. for coming forward with the free supply of software and Resource persons to train the faculty members. He has also mentioned that such program is being conducted at other four regions of VTU simultaneously. Finally, he wished all participants a very good learning experience.

Later the Video message of Mr. Conway Goh, Global Head, Autodesk Inc. was played in the auditorium, where Mr. Goh Thanked VTU for providing such an opportunity and asked all Participants to learn and explore the Autodesk software Fusion 360.

Dr. M S Govinde Gowda, VTU Convener in his address about the FDP, Mentioned the plan and efforts made by VTU to bring the latest software into the curriculum which is supplied freely by the software company Autodesk Inc. The present FDP is aimed at Training the Master Trainers from all Institutions who in turn other faculty of their Institutes through peer learning process.

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He has asked all Participants to actively participate in the program and feel free to clear all their doubts with the resource persons.

Dr. Ramesh Pudale, Sr. Program manager & India Head, Autodesk Inc. and also the chief guest of the function, in his address highlighted the necessity of new approaches to be a part of rapidly growing technical world. He has thanked the Vice-Chancellor of VTU for providing the opportunity to use their new software 'Fusion 360' as a part of curriculum. He has also briefly explained the advantages, compatibility and usefulness of the new software.

Dr. A K Murthy, Principal, ATMECE, in his Presidential address appreciated the efforts of VTU and Software provider in conducting this FDP. He has also stressed upon the requirements of learning latest software and keeping in pace with the world. He has also congratulated the organisers for organizing the FDP and wished all participants a useful and happy learning.

Finally, Prof. Devaraj M R, Associate Professor, Dept. of ME, rendered vote of thanks. Prof. Ravikumar S was the master of the ceremony.



Inauguration of FDP

Day 1,

Session 1

Fusion 360 Licensing, Fusion 360 User Interface Exploration, Team management, File and Data management, Browser and Timeline exploration. Creating basic 2D sketches, Constraints, Profile Tools, Curve Tools, Editing Tools, Operation Tools, Constraints, construction geometries and adding dimensions. **Project 1: Gear reduction housing.**

Session 2

Creating a solid 3D body from sketches, modifying existing 3D bodies, create draft during a feature, create draft as a feature, Add ribs and plastic supports, Analyse draft on a design. Create holes and threads, use a coil feature, Mirrors and patterns, Surface creation for complex geometry, use surfaces to replace faces, Use surfaces to split bodies and faces.

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Project 2: Reciprocating saw: Connecting Rod Design

Day 2,

Session 1

The different ways to create components, use scripts to create gears, Component colour swatch and colour cycling. Use McMaster-Carr parts in a design, Copy, paste, and paste new,

Project 3: Reciprocating saw mechanical assembly.

Session 2

Distributed designs, create as-built joints, Create joints, Joint origins and midplane joints, Drive joints and motion studies. Interference detection and contact sets, Isolation, and opacity control, create groups and organize a timeline. **Project 4: Control Box Distributed Design.**

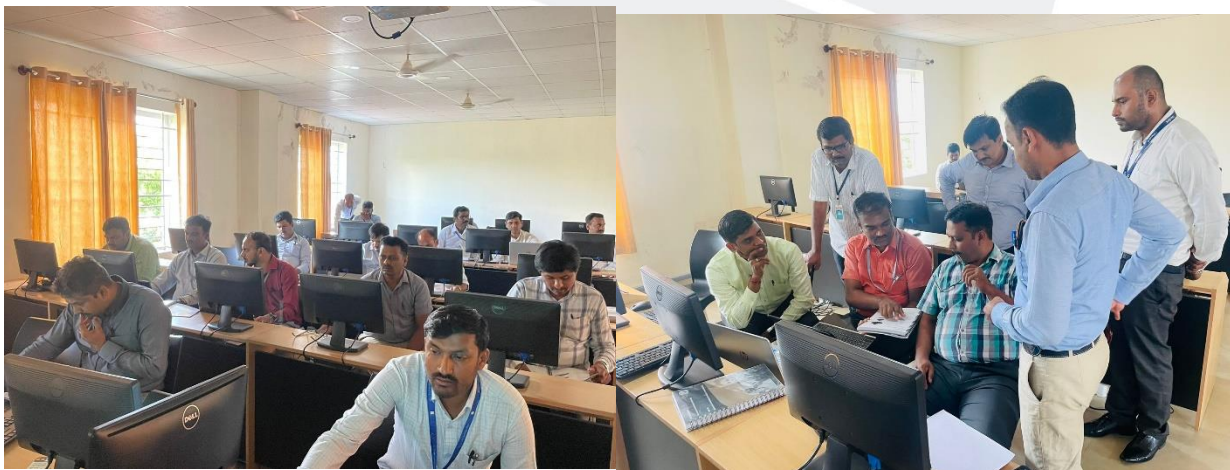
Day 3,

Session 1

Introduction to technical drawing: Explode a 3D model for a drawing, Create a drawing sheet and views. Introduction to technical drawing: Explode a 3D model for a drawing, Create a drawing sheet and views. **Project 5: Reciprocating Saw: Detailed Drawing and GD&T**

Session 2

Animations workspace; **Project 6: Saw Casing Rendering / Final Challenge.**



Session and discussion on Fusion 360

Formative feedback was taken at the end of each day and the same was shared with the Resource person for needful (copy attached). Summative feedback was taken at the end of the FDP which was mandatory for all and the report is attached with this.

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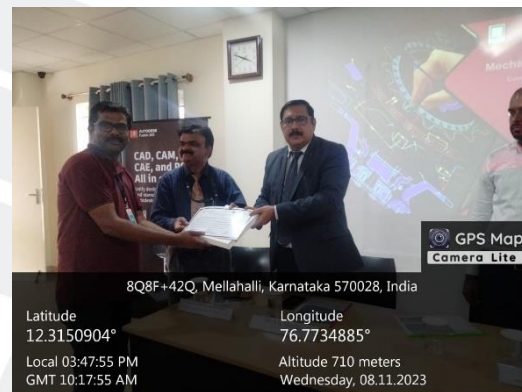
After the session 2 on day 3, A Valedictory function was conducted. Honorable Principal Dr. A K Murthy presided over, in the presence of Dr. M S Govinde Gowda, VTU Convener & Dean Academics, ATMECE. Participants were requested to share their experience during the function. Prof. Yogesh kumar from Maharaja Institute of Technology, Mysuru expressed that the arrangements made by the organising committee was excellent and hospitality was of the top level. However, few confusions are there for all regarding the syllabus and the course conducted. Expectations of the participants is not met completely. The software is good, and the trainer was efficient and friendly. And requested the concerned to address this confusions.

Dr. M S Govinde Gowda gave the clarifications and assured all Participants that their feedback is very well noted and Action taken will be intimated to them later.

Participation certificates, Attendance certificates and a gift Voucher from Autodesk is distributed to all Participants.

Dr. A K Murthy, Honourable Principal, ATMECE in his Presidential address congratulated the Participants and organisers for having successfully conducted the FDP. And urged all Participants to make use of the knowledge gained.

Finally, Dr. Chethan, Program Convener rendered Vote of Thanks. Prof. Hemanth B R. was the Master of the ceremony.



Valedictory of FDP