



RASHTRIYA UCHCHATAR SHIKSHA ABHIYAN (RUSA)



**Centre for University – Industry Collaboration
Anna University, Chennai**

Programme on “**Career Guidance**”

**(Skill Development Programme funded by Government of
India / Government of Tamil Nadu)**

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Anna University, Chennai**



**Programme on “Career Guidance”
(Skill Development Programme funded by Govt. of India / Govt. of TN)**

STUDENT
PHOTO

Registration Form

Name of the student : _____

Roll Number : _____

Branch / % of Marks : _____

College Address in full : _____

Residential Address in full : _____

Telephone Number : _____

Mobile Number : _____

e-mail ID : _____

Community : OC / BC / MBC / SC / ST

I, _____, here by agree to attend the **Programme on “Career Guidance”** organized by the AU-CUIC sponsored by Rashtriya Uchchatar Shiksha Abhiyan (**RUSA**). I also admit that I have not paid any programme fees to the College / University / Company.

I will attend the training programme in all the specified days.

Signature of the Student

Signature of the Principal with Seal

ELIGIBILITY & CONTACT DETAILS

Any student pursuing Degree in Engineering from CEG / MIT / ACT / SAP campuses of Anna University and University Engineering Colleges only (UG - 2nd to final year / PG – 1st to final year / Ph.D – any semester) who wants to register for Skill Development Programme offered under RUSA Scheme in **AU-FRG Institute for CAD/CAM may kindly contact the following:**

Dr. M. Pradeep Kumar

Director

AU-FRG Institute for CAD/CAM, Anna University, Chennai - 600 025

Ph: 044 - 2235 1991 / 2235 8051

M: 9176563279

Email ID: annacad@annauniv.edu

**Details of Skill
Development Programme
offered by
AU-FRG Institute for
CAD/CAM**



AU-FRG Institute for CAD/CAM

**Department of Higher Education Rashtriya Uchchar Shiksha Abhiyan
(RUSA)**

**State Project Directorate DOTE Campus, Guindy, Chennai Government
of Tamilnadu.**



**Skill Development Camp in Government Colleges under RUSA Entrepreneur
Hubs**

COURSE CONTENT

**AU-FRG ICC, CEG CAMPUS,
ANNA UNIVERSITY, GUINDY,
CHENNAI – 600025,
TAMILNADU**



AU-FRG Institute for CAD/CAM

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Certificate Programme in Fusion360.

Course Contents

Sector - QP	CAD/CAM/CAE - Fusion360
NSQF level	8/9
Stream	Mechanical Engineering, Automobile Engineering, Aerospace Engineering
Total number of hours and break up	100 Hrs. (T: 15 Hrs, P: 45 Hrs., H: 40 Hrs.)
Occupational Standards	
Expected Learning outcome	
Skills focused	3D Modeling, Assembly, Generative design , Simulation And Manufacturing
Course approved by	To be approved by the Anna University, Chennai.
Placement areas	<ul style="list-style-type: none"> • Mechanical Industry • Automotive Industry • Aerospace Industry • Entrepreneur / Self-employed

* T = Theory, P=Practical, H=hands on training / Aptitude / Project work / task-oriented activities

Course Outline

Course Code	Paper Title	Theory / Practical	Internal Marks	External Marks	Total
	DESIGN	Theory + Practical	25	25	50
	SIMULATION AND MANUFACTURING	Theory + Practical	25	25	50
	DRAWING(Drafting)and OTHERS	Theory + Practical	25	25	50
	GENERATIVE DESIGN	Theory + Practical	25	25	50
	SOFT SKILLS	Aptitude + task-oriented activities	25	25	50
	PROJECT	Project work	25	25	50
Total					300



Certificate Programme in Fusion360.

Course Contents

Course Code	Course Title	Theory / Practical
	CAD/CAM/CAE - Fusion360.	
Unit No	Modules	
I	<u>DESIGN:</u> Account Creation -IntroductiontoFusion360UI -Sketch based feature-Assembly Basics-Applying joints-Surface modeling-Sheet metal- Extra Add ins	20 Hrs (T 5Hrs + P 15Hrs)
II	<u>SIMULATION AND MANUFACTURING:</u> Introduction to Simulation & Manufacturing -Types of analysis(static ,Modal, Thermal And Shape optimization) – 3d creation - Results - Manufacturing (Tool setup -Stock setup - Additive manufacturing - Extract NC file Coding)	20 Hrs (T 5Hrs + P 15 Hrs)
III	<u>DRAWING(Drafting)and OTHERS:</u> Drawing From design and From Animation, Rendering and Animation using Fusion 360	10 Hrs (T 5Hrs + P 5 Hrs)
IV	<u>GENERATIVE DESIGN:</u> Introduction to generative design - Applying geometries - Apply Load And Constraints - Materials Setup - Outcomes -Result	10 Hrs (T 5Hrs + P 5 Hrs)
IV	<u>SOFT SKILLS:</u> Communication skill - Resume building skill - Group discussion skill - Interview skill.	H 25Hrs
V	<u>PROJECT:</u>	15Hrs
Total		100 Hrs



Certificate Programme in ComputerAided Manufacturing-3D PRINTING

Sector - QP	Computer Aided Manufacturing - 3D PRINTING
NSQF level	8/9
Stream	All Branches
Total number of hours and break up	100 Hrs. (T: 30 Hrs., P: 30 Hrs., H: 40 Hrs.)
Occupational Standards	
Expected Learning outcome	
Skills focused	Rapid Prototyping , 3D Modeling, Model slicing, 3D Printing
Course approved by	To be approved by the Anna University, Chennai.
Placement areas	<ul style="list-style-type: none"> • Mechanical Industry • Automotive Industry • Medical Industry • Entrepreneur / Self-employed

* (T= Theory, P=Practical, H=hands on training / Aptitude / Project work / task-oriented activities)

Course Outline

Course Code	Paper Title	Theory / Practical	Internal Marks	External Marks	Total
	3D MODEL CREATION	Theory + Practical	25	25	50
	PART ORIENTATION & SLICING	Theory + Practical	25	25	50
	3D-PRINTING	Theory + Practical	25	25	50
	SOFT SKILLS	Aptitude + task-oriented activities	25	25	50
	PROJECT	Project work	25	75	100
				Total	300



Certificate Programme in Computer Aided Manufacturing-3D PRINTING

Course Contents

Course Code	Course Title	Theory / Practical
	Computer Aided Manufacturing - 3D PRINTING	
Unit No	Modules	
I	<u>3D MODEL CREATION:</u> Introduction to Rapid Prototyping / Additive Manufacturing- Solid model creation - Sketching - 3D Modeling- Assembly - Generative Design - Conversion of CAD model to STL format	20 Hrs (T 10Hrs + P 10Hrs)
II	<u>PART ORIENTATION & SLICING:</u> Slicing Software - Part orientation - surface finish - support generation - Model slicing and tool path generation - Material selection - Types of 3D Printing materials	20 Hrs (T 10Hrs + P 10Hrs)
III	<u>3D-PRINTING:</u> Model Printing on RP machine - Post processing - Application of Additive Manufacturing in Automobile, Medical, Aeronautical etc.	20 Hrs (T 10Hrs + P 10 Hrs)
IV	<u>SOFT SKILLS:</u> Communication skill - Resume building skill - Group discussion skill - Interview skill.	H 25Hrs
V	<u>PROJECT:</u>	15Hrs
Total		100 Hrs



Certificate Programme in Computer Aided Engineering-ANSYS.

Course Contents

Sector - QP	Computer Aided Engineering-ANSYS.
NSQF level	8/9
Stream	Mechanical Engineering, Automobile Engineering, Aerospace Engineering, Material science Engineering.
Total number of hours and break up	100 Hrs. (T: 20Hrs., P: 40 Hrs., H: 40 Hrs.)
Occupational Standards	
Expected Learning outcome	
Skills focused	Modeling, Structural Analysis, Thermal Analysis, Steady state analysis, Transient Analysis
Course approved by	To be approved by the Anna University, Chennai.
Placement areas	<ul style="list-style-type: none"> • Mechanical Industry • Automotive Industry • Aerospace Industry • Entrepreneur / Self-employed

* (T = Theory, P=Practical, H=hands on training / Aptitude / Project work / task-oriented activities)

Course Outline

Course Code	Paper Title	Theory / Practical	Internal Marks	External Marks	Total
	ANSYS APDL	Theory + Practical	25	50	75
	ANSYS WORKBENCH	Theory + Practical	25	50	75
	SOFT SKILLS	Aptitude + task-oriented activities	25	25	50
	PROJECT	Project work		100	100
				Total	300



Certificate Programme in Computer Aided Engineering-ANSYS.

Course Contents

Course Code	Course Title	Theory / Practical
	Computer Aided Engineering-ANSYS.	
Unit No	Modules	
I	<p><u>ANSYS APDL:</u> Introduction to FEA & ANSYS Graphical User Interface - Basics & general analysis procedure - Modeling - Creating 1D and 2D model - Select entities and Component manager - Structural Analysis: Static - Modal - Harmonic - Transient analysis - Thermal Analysis: Steady state thermal analysis.</p>	30 Hrs (T10 Hrs + P 20 Hrs)
II	<p><u>ANSYS WORKBENCH:</u> Introduction to FEA & ANSYS Graphical User Interface - Basics & general analysis procedure - Modeling - Creating 1D-2D and 3D model - Engineering Data sheet - Meshing - Quad and Tetrahedron mesh - Volume mesh - Areas mesh - Line meshing - Free and mapped meshing - Mesh quality check - Structural Analysis - Static-Modal - Harmonic - Nonlinear & Transient analysis - Thermal Analysis - Steady state thermal and Transient thermal analysis.</p>	30 Hrs (T10 Hrs + P 20 Hrs)
III	<p><u>SOFT SKILLS:</u> Communication skill - Resume building skill - Group discussion skill - Interview skill.</p>	H 25Hrs
IV	<p><u>PROJECT:</u></p>	15Hrs
Total		100 Hrs