



SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE

SCHOOL OF MECHANICAL ENGINEERING DEPARTMENT OF MECHANICAL ENGINEERING

Organizes Training Program on

DRAFTING AND MODELLING USING



23rd SEPTEMBER to 11th OCTOBER 2019

Course Contents:

- ◆ Introduction to CATIA Tools
- ◆ Part Modelling
- ◆ Generative Shape Design
- ◆ Assembly Modelling
- ◆ Kinematic Simulation

FREE REGISTRATION

CERTIFICATE WILL BE PROVIDED

For more details and Registrations Contact:

**Mr.J.Jeyajeevahan
Assistant Professor
Department of Mechanical Engineering
Mob: 91769 01505**

A Short Term course on Drafting and Modeling using CATIA V5

Course outline

Computer Aided Design (CAD) is the powerful tool in design and manufacturing industries with its flexibility, reliability, efficient and cost effectiveness. With the use of CAD software, one can easily visualize and see the final product at the design stage itself with the use of computer. The final product can be modified easily according to the need of application. **Sathyabama Institute of Science and Technology, Department of Mechanical Engineering** offers a course on Computer Aided Design (CAD) using CATIA V5 software. CATIA is a multi-platform software suite for CAD, CAM, CAE, PLM, etc. This software is developed by a French company Dassault Systems, which is one of the popular and powerful CAD packages available on PC platforms and also a general-purpose CAD program for Part and Assembly Models. One can customize the powerful drawing tool to suit their specific application. The course discusses about

COURSE CONTENTS

Module	Topics	Name of the Faculty	No of Sessions	Venue
1	Introduction-CATIA as CAD software: Concept of Parametric Modeling, Feature Based Modeling, User Interface, Mouse operations, File types and Management, drawing profiles. Major user industries of CATIA. Why CATIA is preferred?	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall
2	Sketcher: Profile toolbar, operation (corner, chamfer, transformations, project 3D element), constraints, types of constraints, workbench.	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall
3	Modeling of Machined component – 1: Material Addition and Removal (Pad, Pocket, Shaft, and Groove),	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall

	Sketch and Positioned Sketch, Types of Fillets, Types of Chamfer, Types of Hole.			
4	Modeling of Machined component – 2: Pattern (Rectangular, Circular, User), Thread/Tap, Datum Features (Plane, Axes, Points), Simple Draft.	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall
5	Advance Design features :- Axis System, Types of draft, Shell, Stiffener, rib slot, Multi-section solid, Removed multi-section solid, Apply Material, Measure	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall
6	Introduction To Multibody concept: Copy Paste, Paste special, Insert body, Boolean Operations (Add, remove, Intersect), Transformation (Translation, Mirror, Scaling, Affinity). Advance Features: Parameters, Formula, Relations, Design Table.	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall
7	Introduction to Drafting & Detailing Theory: (types Generative – Interactive), Initial Drafting setting, Sheet Background, Views (ortho, ISO), Dimensions (Generate	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall

	Dimension & Create Dimension).			
8	Views:- (Aux, Section, Details, Clipping, Broken), View properties, DATUMS & Tolerance. Annotations: GD & T, Symbols, Note, Leaders, Table, Symbols (Machining, Roughness, Welding, Custom), Dress-up Toolbar.	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall
9	Surfacing Modeling based Plastic Component: Environment, Tool bars, Surface Creation (Extrude, Revolve, Sphere, and Cylinder), Surface Modification, Surface Editing (Trim, Split, Shape Fillet, Close Surface, and Thickness). Surfacing: Offset, Fill, Blend, Join, healing, Project-Combine.	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall
10	Introduction to Assembly: Types of assembly approach, Types of Constrains and DOF, placement of components in the Assembly, Manipulating Components, Assembly Drafting: Scene (Exploded View), Bill of material, Balloon creation, Graph Tree Reordering.	Mr.J.Jeyajeevahan	3 hrs	Seminar Hall

Course Outcome

On successful completion of this course students will be able to:

- Understand the concepts of CAD and CAD tools.
- Visualize 3D objects using 2D design data.
- Sketch of Orthogonal Projection using 3D Models
- Design and Create Part models and Assembly models
- Create Drafting from Part and Assembly Models.

Couse Handling Faculty

Mr.J.Jeyajeevahan
Assistant Professor
Department of Mechanical Engineering
Mob: 91769 01505

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING
CHENNAI – 600119.

List of Participants

S.No.	Register No.	Name of the Student
1.	37150001	ABHISHEIK KUMAR. M
2.	37150002	ABINASH. J
3.	37150003	ABY MAMMEN VARGHESE
4.	37150004	ADARSH KUMAR
5.	37150005	ADDEPALLI KONDA SAI NAGA VAMSI VARDHAN
6.	37150006	ADESH. V
7.	37150007	AKASH. I
8.	37150008	ALAN SHAJI LUKOSE
9.	37150009	AMALADOSS VINOD CASTRO. C
10.	37150010	AMIRTHARAJAMANI. M
11.	37150011	ANDLURU NAVEEN REDDY
12.	37150032	BOBBA KARTHIK PAVAN CHOWDARY
13.	37150033	BODALA ARAVIND SWAMY
14.	37150034	BODAPATI RAVI NAGENDRA
15.	37150035	BOGAM SANTHOSH
16.	37150036	BOLISETTY SURAJ
17.	37150037	BOOBALAN. L
18.	37150038	BOSCO AGNALD. R
19.	37150039	CHANDAVOLU VENKATA SAI KIREETI
20.	37150040	CHEBROLU LAKSHMI SRINIVASA PAVAN
21.	37150041	CHINTALA RAGHURAM
22.	37150042	CHUKKA HARSHVARDHAN REDDY
23.	37150043	DABBAKUTI THREE VENKATA SIVANAGA SAI
24.	37150044	DAREDDY TARUNANAND REDDY
25.	37150045	DAVIS LAZAR
26.	37150046	DEBAJYOTI BHATTACHARJEE
27.	37150058	EESHWAR. R. S

28.	37150059	EZHIL EDINBURGH KOMAGAN. A
29.	37150060	GADIRAJU CHARAN KRISHNA
30.	37150061	GOKULA KANNAN. V
31.	37150062	GOVARDHAN. B
32.	37150063	GOWSIK SARAN. R. S
33.	37150064	GUGGILAPU SRI HARSHA
34.	37150065	GUMMADEVALLI GOPINATH
35.	37150066	GUNDE DANIEL
36.	37150067	GURUPRAKASH. R
37.	37150068	GUTTULA BHAVANI KIRAN
38.	37150069	HABEEBULLAH. M. A
39.	37150070	HAMILTON V DE PAUL
40.	37150071	HARI PRASAD. N
41.	37150072	HARIHARAN. S
42.	37150073	HARISHPRASANNA. P



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SCHOOL OF MECHANICAL ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

**Organizes Training Program on
DRAFTING AND MODELLING USING CATIA**

23rd SEPTEMBER to 11th OCTOBER 2019

PARTICIPATION CERTIFICATE

This is to certify that Mr. ABY MAMMEN VARGHESE of 3rd Year Mechanical has attended the 3 week Training Programme on **DRAFTING AND MODELLING USING CATIA** organized by the Department of Mechanical Engineering, Sathyabama Institute of Science and Technology, Chennai from 23rd September to 11th October 2019.

Dr.G.ARUNKUMAR
HOD MECHANICAL

Dr.S.PRAKASH
DEAN MECHANICAL



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SCHOOL OF MECHANICAL ENGINEERING DEPARTMENT OF MECHANICAL ENGINEERING



ORGANIZES 3 WEEK HANDS ON TRAINING PROGRAMME ON

INDUSTRIAL ROBOTICS AND PROGRAMMING

11th to 29th November 2019

**Complete coverage of following Topics including
Hands on Training at Centre for Robotics:**

- | | |
|----------------------------|-----------------|
| » Introduction to Robotics | » Looping |
| » Kit & Software Overview | » Sensors |
| » Calibration | » Line Follower |

OPEN TO ALL STUDENTS OF SCHOOL OF MECHANICAL ENGINEERING

For more details and Registrations Contact:

Mr.R.B.Durairaj

Assistant Professor

Department of Mechanical Engineering

Mob: 73055 33500

Mr.J.Jeyajeevahan

Assistant Professor

Department of Mechanical Engineering

Mob: 91769 01505

www.sathyabama.ac.in

CENTER FOR ROBOTICS & AUTOMATION

CERTIFICATE COURSE ON INDUSTRIAL ROBOTICS

ABOUT THE CENTER

The Centre of Excellence for Robotics and Automation was established in 2019 to cater the automation knowledge needs of the students and to undergo an extensive research in the field of robotics and Artificial intelligence. This center has an exclusive Industrial robot of ABB IRB 1520 (6 axis) to perform basic operations, programming, and advanced control systems which helps for the students to gain knowledge in operating an industrial robot with hands-on experience.

ABOUT THE SCHOOL OF MECHAICAL ENGINEERING

The School of Mechanical Engineering consists of four core departments which include, Department of Mechanical Engineering, Department of Mechatronics Engineering, Department of Aeronautical Engineering and Department of Automobile Engineering. The departments have state of the art laboratory and research facilities which enable students and faculty members to carry out outstanding research activities. The vision of the school is to provide high quality education in the field of mechanical engineering, thereby enabling the students to meet the requirements of the industry and also to create research centers to help industry and society. The school of mechanical engineering always strives to collaborate with national and international institutions to excel in its academic pursuit.

ABOUT THE COURSE

An industrial robot is a robot device that is employed in manufacturing. Industrial Robotics is one of the highly emerging markets with diverse range of applications across all industry verticals. The high cost of labour in the Asia Pacific market and increasing demand of automation has led to hike in the industrial robot's shipments for applications ranging from basic consumer applications to factory applications. The market size of industrial robotics was valued at \$28.9 Million in 2019, and it is estimated to grow at a CAGR of 9.5% during 2020-2025. The ongoing shift to automation is surging the demand for the industrial robots and the related skills. This course focuses on the fundamentals, terminologies and basic operations of the industrial robots for the students and research scholars to meet the ever changing demands on industrial needs for Robotics.

COURSE HIGHLIGHTS

- ✓ Hands on Experience with ABB IRB1520 Industrial Robot
- ✓ Dedicated Sessions on Program Industrial Robot
- ✓ Dedicated sessions on robot kinematics using MATLAB
- ✓ Certificate will be Provided in association with Professional Bodies
- ✓ **. Value Added Program on Industrial Robotics and Programming**

Module	Topics	Name of the Faculty	No of Sessions	Venue
1	Introduction to Robotics Introduction to Industry 4.0 Need of Robots in Manufacturing Robot Configuration , Work Volume & Pay load Robot Kinematics Robot Grippers Robot Gripper Design Robot Actuators Robot Sensors	Dr.R.B.Durairaj	10 hrs	Seminar Hall
2	Robot Machine Vision System Robot Control System Flexible Manufacturing Systems Robot work cell Industrial Application for Robots Robots in Medical Applications Robots in Hazardous Environment Robot Safety and Maintenance	Dr.R.B.Durairaj	10 hrs	Seminar Hall
3	Introduction to Robot Programming Teach Pendant / Flex Pendant Robot Coordinates , TCP , Interfacing with Flex Pendant	Dr.R.B.Durairaj	10 hrs	Seminar Hall

	Basic Operations using Flex Pendant Jogging Mode – Practical - I Motion Commands – Practical - II Basic Pick and Place Operation – Practical - III Programming for Palletizing – Practical - IV			
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Course Coordinator
Dr.R.B.Durairaj M.Tech (Robotics)., PhD.,
Assistant Professor,
Center of Robotics & Automation
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Chennai – 119
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Mobile: 7305533500

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

CHENNAI – 600119.

List of Participants

S.No.	Register No.	Name of the Student
1.	3615013	AKSHAY SETHU
2.	3615015	AMAN. N
3.	3615016	AMARJIT ROY
4.	3615017	AMIDELA HARISH
5.	3615019	ANNAMALAI. S
6.	3615021	ANTONY JACKWIN. J
7.	3615023	ARAVIND SRI KRISHNA. B. R. S.
8.	3615025	ARNAB MALLIK
9.	3615031	ASHISH KUMAR TIWARI
10.	3615034	BALACHANDAR. R
11.	3615035	BALACHANDAR. V
12.	3615037	BANREDDY SATHISHKUMARREDDY
13.	3615038	BAVISETTI VENKATA KISHOR BABU
14.	3615039	BHARADWAJ PARUVADA
15.	3615040	BHARADWAJ SRIHARI
16.	3615041	BHARATH. K
17.	3615043	BHUMIREDDY SREEDHAR REDDY
18.	3615044	BOBBITI VIKAS REDDY
19.	3615051	CHALLA APPARAO
20.	3615054	CHIMAKURTHY VENKATA SUBRAMANYAM
21.	3615055	CHINTA KOTA NAVEEN
22.	3615057	CHITHARANJAN. R
23.	3615058	CHITNIDI SWAMY SARAN KUMAR
24.	3615059	CHITTAMURU NIKHIL
25.	3615060	CHITTURI DINESH KRISHNA KUMAR
26.	3615061	CHURCHILL AMAL RAJ. S
27.	3615063	DANIEL. K
28.	3615064	DEEPAK KUMARESH. K. S.

29.	3615065	DEEPAK VIGNESHWARAN. N
30.	3615066	DEERAJ. B
31.	3615067	DEVARAJ. M
32.	3615068	DEVARAPALLI SATISH
33.	3615071	DHATCHINAMOORTHY. R
34.	3615072	DHEEBAN. S
35.	3615073	DINESH. R
36.	3615076	ELAVENDHAN. E
37.	3615077	ENIYAVAN. G
38.	3615078	ESHWAR. J
39.	3615125	KISHAN PRADIP
40.	3615129	KOKA SAI KARTHIK
41.	3615131	KOLLIPARA TEJA
42.	3615134	LEO GAIND
43.	3615135	LINGAMPALLY SAI KUMAR
44.	3615167	MUNI SAI PREETHAM
45.	3615169	MUTHUKUMAR. S
46.	3615170	MYNAMPATI BALASUBRAMANYAM
47.	3615171	NAIR AKHIL AJAYKUMAR
48.	3615172	NALI ROHIT



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DEPARTMENT OF MECHANICAL ENGINEERING

Organizes a 3 Week Technical Training Program on
INDUSTRIAL ROBOTICS AND PROGRAMMING

11th to 29th NOVEMBER 2019

PARTICIPATION CERTIFICATE

This is to certify that Mr. MYNAMPATI BALASUBRAMANYAM of 4th Year
Mechanical has attended the 3 week Training Programme on **INDUSTRIAL ROBOTICS**
AND PROGRAMMING organized by the Department of Mechanical Engineering,
Sathyabama Institute of Science and Technology, Chennai from 11th to 29th November 2019.


Dr.G.ARUNKUMAR
HOD MECHANICAL


Dr.S.PRAKASH
DEAN MECHANICAL



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SCHOOL OF MECHANICAL ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
ORGANIZES 3 WEEK HANDS ON TRAINING PROGRAM ON



AUTOMOTIVE SKETCHING AND CLAY MODELLING

10th to 28th FEBRUARY 2020

Course Modules:

- » Automotive body layout, proportions, packaging, and themes
- » Introduction to freehand sketching of simple geometries
- » Sketching Car block in 1, 2, and 3-point perspectives
- » Preparation, Forming, Curing, Finishing and Painting of Clay Models

OPEN TO ALL STUDENTS OF SCHOOL OF MECHANICAL ENGINEERING
(Registrations will be on a First Come First Serve basis)

For more details and Registration Contact:

Mr.S.LAKSHMISANKAR

Assistant Professor

Department of Mechanical Engineering

Mob: 97908 41997

Training on Automotive Sketching and Clay Modelling

Content outline

1. Proportions of the human figure
2. Basic anatomy
3. Methods of hand building figurative sculpture in clay
4. Safe handling of dry clay and glaze materials
5. Historical and contemporary perspectives in figurative sculpture

Introduction

- Introduce the wide range of skills required for vehicle design and manufacture;
- Briefly set the historical scene and development of vehicles and their design;
- Introduce the vast range of possibilities for vehicle design;
- Demonstrate the interactivity of processes within the design and manufacture of vehicles.

Produce creative works that demonstrate innovation in concepts, formal language and/or materials

Describe, analyze and interpret created artwork

Recognize elements of design in works of art

Learning outcomes

1. Manipulate a quantity of clay into a likeness of the human form using basic sculpture and ceramic techniques.
2. Create a realistic likeness of the human head by manipulating a clay cylinder using compression, stretching, and addition.
3. Identify from examples distinct historical stylistic treatments of the human form.
4. Be able to create a likeness of the human form in a distinct historical style using clay.
5. Analyze a figurative sculpture in terms of the design continuum.

2. Value Added Program on Automotive Sketching and Clay Modelling

Module	Topics	Name of the Faculty	No of Sessions	Venue
1	Course Overview Overview to automotive sketching Workshop Practice Model Making with simple materials Model Making with clay Alias basics	Mr.S.Lakshmisankar	6 hrs	Seminar Hall

	Alias modelling-1			
2	Vehicle packaging Clay modeling project-1 Clay modeling project-2 Alias modelling-2	Mr.S.Lakshmisankar	6 hrs	Seminar Hall
3	Clay modeling project-3 Alias Design Project-1 Clay modeling project-4	Mr.S.Lakshmisankar	6 hrs	Seminar Hall
4	Internship/Project - Clay or Digital Sculpting	Mr.S.Lakshmisankar	12 hrs	Seminar Hall

Course Coordinator:

Mr.S.Lakshmisankar

Assistant Professor,

School of Mechanical Engineering

**Sathyabama Institute of Science and Technology,
Chennai – 119**

Mail id: sls.mech@gmail.com

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

CHENNAI – 600119.

Participants list

S.No.	Register No.	Name of the Student
1.	3615002	ABDUL MAHER KHALIQ
2.	3615003	ADHARSH. A
3.	3615004	ADIVISHNU MALLIKHARJUNA RAKESH
4.	3615009	AJITH. N
5.	3615010	AKASH DEB NATH
6.	3615011	AKASH KUMAR. S
7.	3615012	AKHIL SAJEEVU
8.	3615060	CHITTURI DINESH KRISHNA KUMAR
9.	3615061	CHURCHILL AMAL RAJ. S
10.	3615063	DANIEL. K
11.	3615064	DEEPAK KUMARESH. K. S.
12.	3615065	DEEPAK VIGNESHWARAN. N
13.	3615066	DEERAJ. B
14.	3615083	GOKULNATH. A
15.	3615084	GONPATI SAI KUMAR
16.	3615085	GOPINATH. K
17.	3615086	GORLE JITENDRA
18.	3615102	JASTI MOHAN KRISHNA
19.	3615103	JASWANTH. C. P.
20.	3615105	JAYA PRAKASH. A
21.	3615176	NARASIMMAN. K.
22.	3615177	NARUKULA SAI LAXMAN
23.	3615178	NAVIEN MARTAHNDAN. M.
24.	3615180	NITHIN. R
25.	3615181	ODURI PAVAN RAM
26.	3615183	PALETI BHARGAV
27.	3615184	PALURU ROHITH SREENIVAS
28.	3615187	PARAMESWARAN. T

29.	3615189	PAVANESH RAJU. B
30.	3615195	POLA SUBRAHAMANYAM
31.	3615199	PRAGADEESHWAR. D
32.	3615201	PRAVEEN ANDREWS. E
33.	3615202	PRAVEENKUMAR. V
34.	3615204	PUTCHAKAYALA PAVAN SAI VENKATA ANIL
35.	3615206	RAGURAM. J. K.
36.	3615210	RAJ KISHAN SINGH
37.	3615211	RAJA KAVIESWARAN. R
38.	3615212	RAJESH. S. S.
39.	3615263	SUBHAM KANDOI
40.	3615264	SUDHARSHAN VISWAK. R
41.	3615265	SUDHEER BABU G. V. S. S. A. D.
42.	3615266	SUJITH RAJ. S
43.	3615268	SURENDRAN. H
44.	3615271	SYAMALA SANDEEP KUMAR REDDY
45.	3615273	TADIKONDA ANIRUDH
46.	3615274	TADIKONDA JITENDRA SIVA PRASAD
47.	3615276	TARUN. S
48.	3615304	YADLA SAI PAVAN



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DEPARTMENT OF MECHANICAL ENGINEERING

Organizes a 3 Week Hands on Training Program on

AUTOMOTIVE SKETCHING AND CLAY MODELLING

10th to 28th FEBRUARY 2020

PARTICIPATION CERTIFICATE

This is to certify that Mr. PRAGADEESHWAR. D of 4th Year Mechanical has attended the 3 week Hands on Training Programme on **AUTOMOTIVE SKETCHING AND CLAY MODELLING** organized by the Department of Mechanical Engineering, Sathyabama Institute of Science and Technology, Chennai from 10th to 28th February 2020.

Dr.G.ARUNKUMAR
HOD MECHANICAL

Dr.S.PRAKASH
DEAN MECHANICAL