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PTTS

CAD DESK®

TRAINING • PLACEMENT • SOFTWARE • CONSULTANCY

AutoCAD

SUMMARY

CAD stands for "Computer Aided Design." AutoCAD is a line of two-dimensional and three-dimensional design software produced by the Autodesk Company. It is a computer-aided drafting software program used to create blueprints for buildings, bridges, computer chips, machineries, products and among other things. It includes a powerful suite of features to improve workflow and create true-to-life maps, diagrams, structures and schematics. CAD software is equal part design and analysis. AutoCAD is used across a wide range of industries, by architects, project managers, engineers, graphic designers, and many other professionals.

IT CAN BE USED IN VARIOUS FIELDS OF OPERATION SUCH AS :

- As an engineering drafting tool.
- As a graphic design tool.
- As an architectural planning tool.
- In 3D printing.
- In the fashion industry.
- As an industrial design tool.

LEARNING OBJECTIVES

AutoCAD 2D

- Understanding the AutoCAD workspace and user interface.
- Using basic drawing, editing, and viewing tools.
- Organizing drawing objects on layers.
- Adding text, hatching, and dimensions.
- Adding parametric constraints to objects.
- Setting up layers, styles, and templates.

PRODUCTIVITY TOOLS (PT)

- Inserting reusable symbols (blocks).
- Preparing a layout to be plotted.
- Using more advanced editing and construction techniques.
- Group creations
- Attribute tools

AutoCAD 3D

- Using 3D viewing techniques.
- Working with simple and composite solids.
- Creating complex solids and surfaces.
- Modifying objects in 3D space.
- Editing solids.
- Creating sections, camera perspectives, and animations.
- Converting 3D objects.
- Setting up a rendering with materials and lights.
- Creating 2D drawings from 3D models.

WHO CAN JOIN ?

- Undergraduate engineering students.
- Draftsman, architects, industrial designers, surveyors, fashion designers etc.

SolidWorks

SUMMARY

SolidWorks is a solid modeling computer-aided design (CAD) and computer-aided engineering (CAE) computer program. SolidWorks is published by Dassault Systems the makers of "Raffel" jets. SolidWorks is a solid modeler, and utilizes a parametric feature-based approach to create models and assemblies.

SolidWorks cover all aspects of your product development process with a seamless, integrated workflow—design, verification, sustainable design, communication and data management. Designers and engineers can span multiple disciplines with ease, shortening the design cycle, increasing productivity and delivering innovative products to market faster.

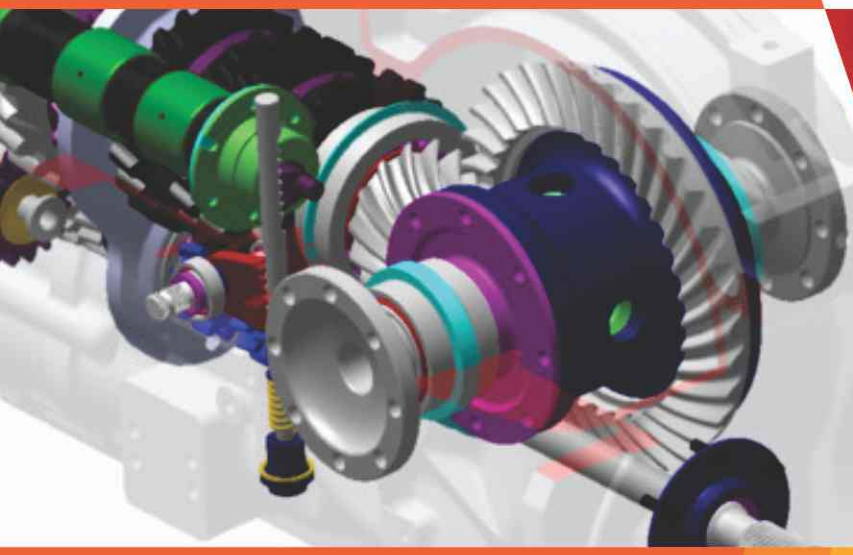
SolidWorks standard offers great ease-of-use and performance in delivering robust 3D design capabilities. Discover increased design productivity with SolidWorks Standard as you create fully detailed parts, assemblies, and production-level drawings and access all the tools required to generate complex surfaces, sheet metal flat patterns, and structural welded assemblies. The biggest advantage of SolidWorks is user friendly approach. While Catia and Creo are useful in complex design, SolidWorks is widely used in simple product and by low and medium scale industries.

LEARNING OBJECTIVES

- SolidWorks 3D CAD.
- Part and Assembly Modeling.
- 2D Drawings.
- Design Re-use and Automation.
- Animation and Visualization.
- Interference Check.
- First Pass Analysis Tools.
- Design for Manufacturing.
- Sheet Metal.
- Design Automation.
- Weldments.
- Mold Design.
- Surface modelling.
- Drawing/Drafting.

WHO CAN JOIN?

- Engineering undergraduates and individuals who wants to learn 3D modelling design skills.
- Individuals who are willing to work in field of R&D in industries.

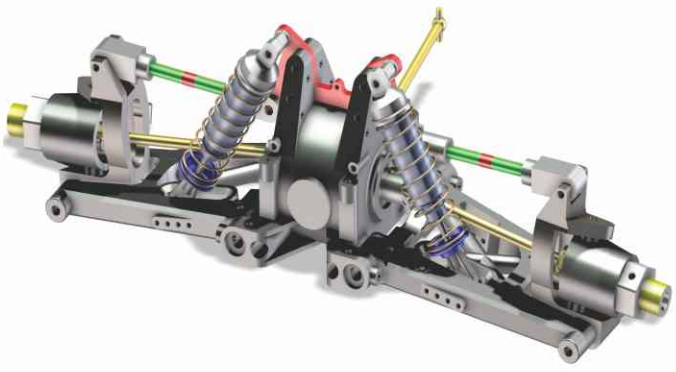


Creo

SUMMARY

Creo Parametric is the essential tool for 3D CAD. It is state-of-the-art software, which promotes best practices in design and maintains your industry standards.PTC Creo is a scalable, interoperable suite of product design software that delivers fast time to value. It helps teams create, analyze, view and leverage product designs downstream utilizing 2D CAD, 3D CAD, parametric & direct modeling.

Creo also provides an unprecedented level of interoperability – data moves seamlessly between apps and modeling modes while retaining design intent – such that companies can share data more easily with internal and external parties. By delivering new apps with seamless interoperability, Creo enables companies to make dramatic improvements in their engineering, manufacturing and service processes.



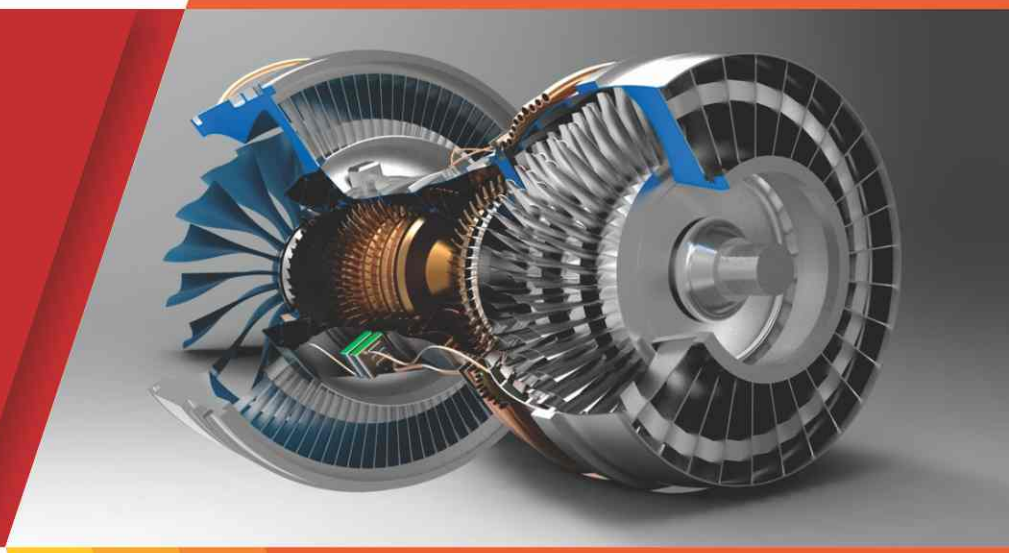
LEARNING OBJECTIVES

- 3D solid modeling.
- Robust assembly modeling.
- Sheet metal modeling.
- Weld modeling and structural framework design.
- Analysis features.
- Graphic experience and integrated design animation.
- Design for Additive Manufacturing (3D printing).
- Model Based Definition.
- Data Exchange.
- Working with imported non Creo Data.
- Integrated NC capabilities.
- Web capabilities providing instant access.
- Library of parts, features, tools, and more.
- Software customization.

WHO CAN JOIN ?

- Engineering undergraduates who are willing to work as CAD design modelling engineer.
- Individuals who are willing to skill up their technical skills.

Catia V5



SUMMARY

CATIA V5 is the leading solution for product development success. It addresses all manufacturing organizations, from OEMs through their supply chains, to small independent producers. CATIA, for virtual product design, can be applied to a wide variety of industries, from aerospace, automotive, and industrial machinery, to electronics, shipbuilding, plant design, and consumer goods. Today, CATIA is used to design anything from an airplane to jewelry and clothing. With the power and functional range to address the complete product development process, CATIA supports product engineering, from initial specification to product-in-service, in a fully-integrated manner. It facilitates reuse of product design knowledge and shortens development cycles, helping enterprises accelerate their response to market needs.

CATIA lets users to design shapes and reach high levels of surface sophistication with its 3D sketching, visualization features. With CATIA product developers can take an integrated systems engineering approach. They can do requirements engineering, systems architecture definition, detailed modeling and simulation to manage the complex development process.

LEARNING OBJECTIVES

At CAD DESK, we help you master the following capabilities of CATIA:

- Generation of 3D part in less time with more accuracy.
- Surfacing and Advanced surfacing tools.
- Development of sheet metal component.
- Drafting techniques for generating views.
- Analyze the product.
- Generate mechanism between components.
- Manufacturing process on components.

WHO CAN JOIN ?

- Undergraduates who are willing to excel their career in 3D modeling design (Specially Surfacing)
- Aeronautical, Marine and automotive industries is majorly working in CATIA V5. Individual seeking career in respective must skill up themselves in this course.

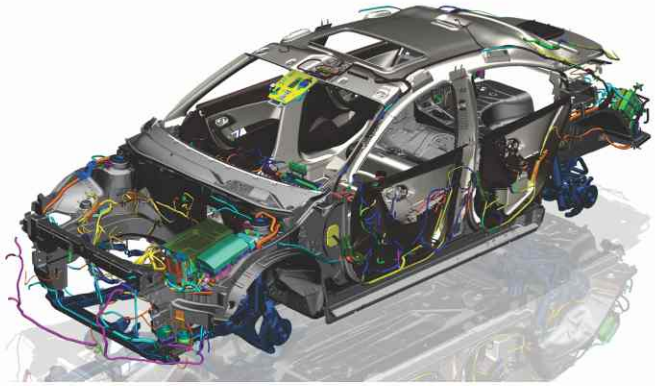
NX CAD

SUMMARY

NX CAD software package originally developed by Unigraphics, But since 2007 managed by Siemens PLM software. NX enables you to freely use any modeling approach that fits your design challenge. With the industry's most powerful and versatile CAD modeling tools, you can create and edit geometry with greater speed and flexibility.

Unlike CAD-only solutions and closed enterprise solutions, NX delivers the highest integration between development disciplines in an open, collaborative environment. You can work faster and more efficiently in the full range of design tasks, from 2D layout through 3D modeling, assembly design, drafting and documentation.

NX design tools are superior in power, versatility and productivity. You can work faster and more efficiently in the full range of design tasks, from 2D layout through 3D modeling, assembly design, drafting and documentation.



NX assembly design tools are ready for the most complex assemblies, even those with thousands of parts. You can create full multi-CAD digital mockups with NX to quickly identify issues and resolve problems.

LEARNING OBJECTIVES

- Product Design.
- Industrial Design & Styling .
- Drafting & Documentation.
- Electromechanical Design.
- Mechatronics Design Knowledge Re-Use.
- Visual Analytics and Validation.
- Process-Specific Applications.
- NX Productivity Tools.

WHO CAN JOIN?

- Undergraduate engineering students who are interested in enhancing their design modelling skills.
- Individuals who have passed, and wants to enter R&D Dept. in design industries.

NX CAM

SUMMARY

NX CAM has a tightly integrated post processing system. Multiple levels of NC program validation include G-code-driven simulation, which eliminates the need for separate simulation packages.

NX CAM provides a wide range of functionality, from simple NC programming to multi-axis machining, enabling NC programmers to address many tasks using one system. The flexibility of NX CAM means that the most demanding jobs can be completed easily

It also avails wide range of 2-axis and 3-axis machining capabilities for prismatic and freeform parts – ranging from manual tool path creation and editing to advanced, automated cutting methods.

NX CAM provides a complete turning solution that is easy enough to use on simple programs and capable enough to tackle your toughest geometry in multispindle, multi-turret applications. Turning in NX can use either 2D part profiles or full solid models. It includes routines for roughing, multiple-pass finishing, grooving, thread cutting and centerline drilling.

NX automatically applies the right feeds and speeds for a given operation and tool selection. A key NX CAM advantage facilitates integrated simulation and verification, which enables programmers to check tool paths within the NC programming session. Multiple levels of capability are available.

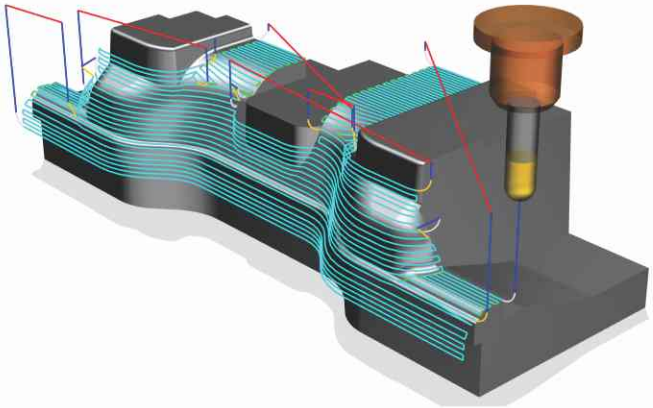
LEARNING OBJECTIVES

NX CAM has specific capabilities for :

- NX CAM 2.5-Axis Milling.
- NX CAM 3-Axis Milling.
- High-Speed Machining.
- NX CAM 5-Axis Milling.
- NX CAM Turning.
- Machinery Part Programming.
- Multi-Function Machine Tools.
- NX Turbomachinery Milling.

WHO CAN JOIN?

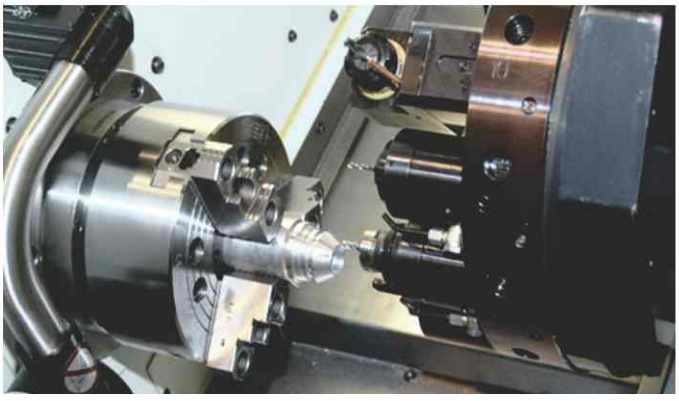
- Undergraduates who wants to startup their careers in field of production / manufacturing.
- Individuals who are willing to meet up present technology of manufacturing industries applications.



CNC PROGRAMMING

SUMMARY

The revolutionary change in factory production techniques and management that is predicted to take place by the beginning of the 21st century will require unprecedented involvement of computer controlled system in the production process. Development of Computer Numerical Control (CNC) is an outstanding contribution to the manufacturing industries. With the help of CNC technology, it has been possible to integrate production equipment into a totally computer controlled environment. The present generation of CNC machine tools is designed to meet the requirements of high productivity, flexibility and reliability to produce components of consistently high quality and accuracy combined with reduction in manufacturing cost. So it becomes essential to update the knowledge of academicians & practicing engineers in the areas of CNC programming and maintenance.



LEARNING OBJECTIVES

The objective of this program is to transfer knowledge and to impart special skills to those engaged in the promotion and facilitation of CNC technologies. The idea is to provide training from basic to advanced level in programming & maintenance, to persons coming from the colleges, various research organizations, and NGOs.

LEARNING OUTCOMES

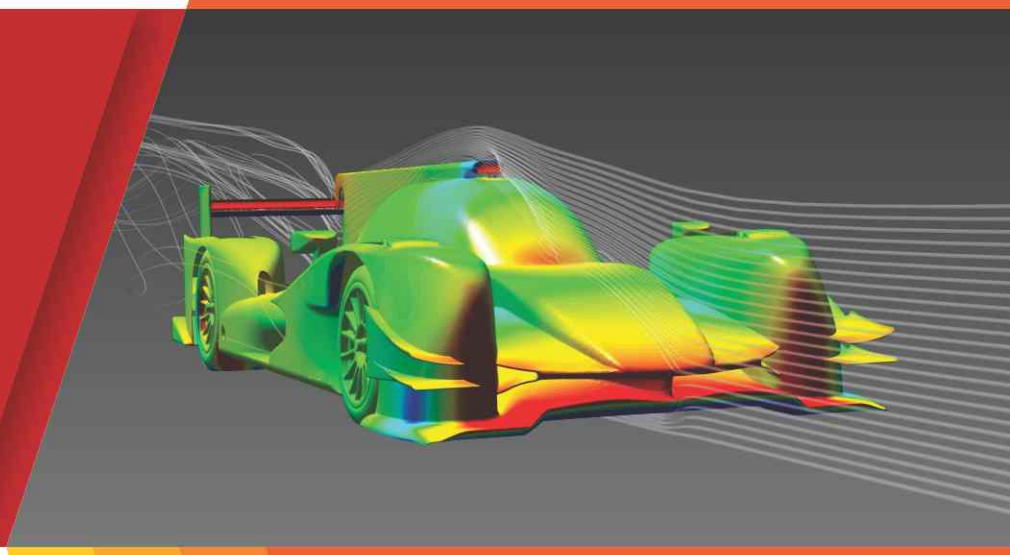
Upon completion of this course, the student will be able to:

- Introduction to CNC.
- Introduction to codes.
- G codes.
- M codes.
- Part programming.
- Import and Export program.
- Grooving cycle.
- Sub program.
- Thread cycle.
- Project on machine.
- Fundamentals of CNC MILLING.
- Manufacture of simple parts on machine.

WHO CAN JOIN?

- CNC is the base of modern manufacturing & production processes, so individuals who desire to be the master in production & manufacturing can apply for this course.

Ansys



SUMMARY

Ansys is an engineering simulation software. It was founded in 1970. Its Early Name was Swanson Analysis Systems Inc. (SASI) and was converted to Ansys 1994. Its primary purpose was to develop and market finite element analysis software for structural physics that could simulate static (stationary), dynamic (moving) and heat transfer (thermal) problems.

ANSYS enables to simulate tests or working conditions, enables to test in virtual environment before manufacturing prototypes of products. Furthermore, determining and improving weak points, computing life and foreseeing probable problems are possible by 3D simulations in virtual environment

ANSYS can carry out advanced engineering analyses quickly, safely and practically by its variety of contact algorithms, time based loading features and nonlinear material models.

ANSYS software with its modular structure as seen in the table below gives an opportunity for taking only needed features. ANSYS can work integrated with other used engineering software on desktop by adding CAD and FEA connection modules.

ANSYS Workbench is a platform which integrate simulation technologies and parametric CAD systems with unique automation and performance.

ANSYS has helped manufacturers, medical personnel, teachers, researchers and others meet the challenges they face every day with confidence

ANSYS is becoming highly demanded simulation software in India.

LEARNING OBJECTIVES

a. Structural Analysis.

- APDL
- Static Structural Analysis
- Transient Structural Analysis
- Modal (Frequency Analysis)

b. Computational fluid dynamics.

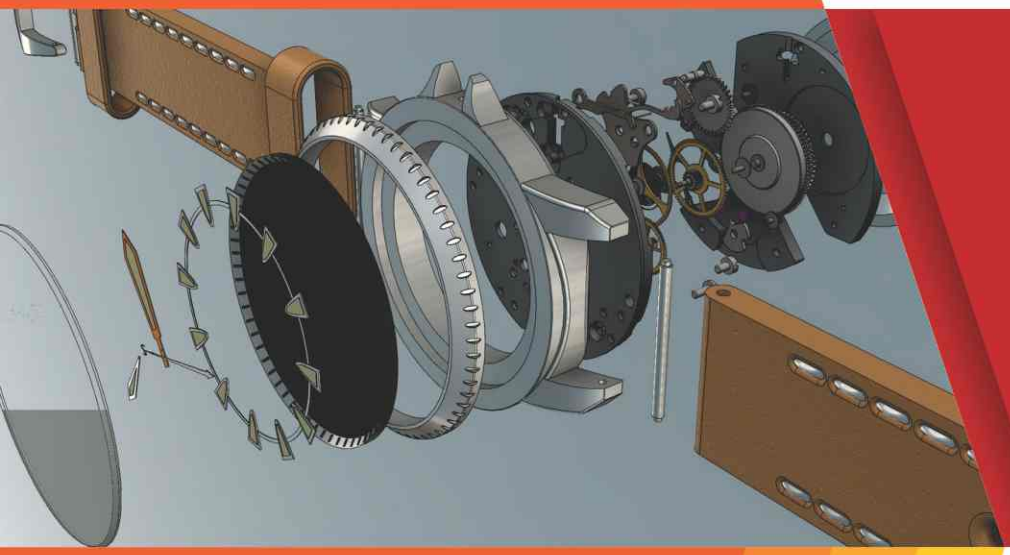
- Fluent
- CFX
- ICEM CFD

c. Computational heat transfer.

- Steady State Thermal Analysis.
- Transient Thermal Analysis.

WHO CAN JOIN?

- Undergraduates willing to excel their careers in design simulation.
- Post graduates who wants to be the expertise in R&D simulation.



Fusion 360

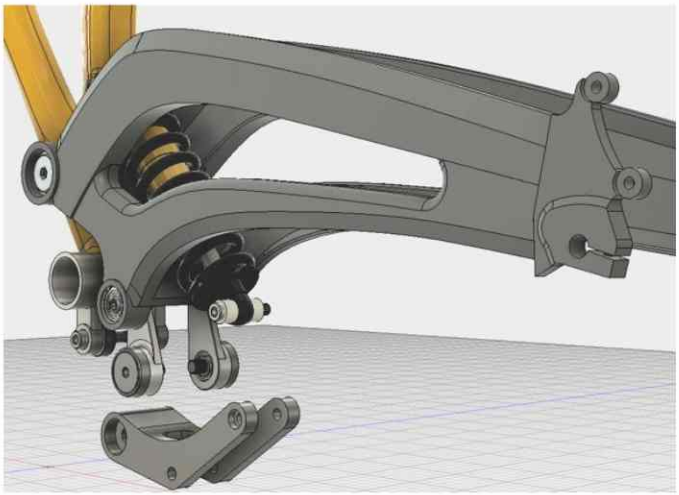
SUMMARY

Fusion 360 is a cloud-based 3D CAD, CAM, and CAE platform for product development. It combines industrial and mechanical design, simulation, collaboration, and machining in a single package. The tools in Fusion 360 enable fast and easy exploration of design ideas with an integrated concept-to-production toolset.

Fusion 360 involves all the modelling capabilities similar to the 3D modelling software with more efficiency and result generation.

LEARNING OBJECTIVES

- Introduction.
- Sketch entities.
- Sketch modifying tools.
- Part modeling.
- Solid modifying.



- Construction tool & inspect.
- Assembly.
- Freeform.
- Surface modeling.
- Animation.
- Simulation.
- CAM.
- Drawing.

WHO CAN JOIN?

- Engineering undergraduates and individuals who wants to learn 3D modelling design skills.
- Individuals who are willing to work in field of R&D in industries.

Staad.Pro

SUMMARY

STAAD.Pro is a structural analysis and design software. It is capable of analyzing and designing civil engineering structures such as buildings, bridges, tunnels and space trusses, plants and footings. It can generate dynamic loads (wind, earthquake and moving) as per building codes of selected countries. It envisage capacity to carry out linear elastic (static and dynamic) and nonlinear dynamic analysis both.

It can carry out design of steel and reinforced concrete buildings as per codes of selected countries and additional module of STAAD foundation can design all isolated, raft or piles foundations. Biggest advantage of STAAD Pro is having a simple and easy to learn user interface that has made this software widely used in structural designing.

STAAD Pro takes two generalize approach for structural engineering and incorporate many analysis methods like static, linear, nonlinear, pushover, FEM etc., henceforth make it most preferred software in India and Asian countries.

LEARNING OBJECTIVES

At cad desk we will make you expert in the following topics:

- Overview of Structural Analysis and Desig.
- Geometry creation Methods.
- Supports Assignment.
- Loading.
- Understanding & Calculating Building Loads.
- Introduction to Floor load & Live load as per IS 875-I & II.
- Introduction to RCC Design As per IS 456.
- Wind Load Design As per IS 875 III.
- Calculation of Wind load as per IS 875 Part 3.
- Seismic Analysis & Design as per IS-1893.
- STEEL Design in STAAD Pro As Per IS-800.
- FEM Modelling in STAAD.Pro.
- Water Tank Design.

WHO CAN JOIN ?

This course can be joined by any undergraduate/ graduate civil engineer, who is willing to make career in the field of design and construction. This course is not useful for career in structural designing but it also give an edge to candidates, those are willing to make career in the civil construction.

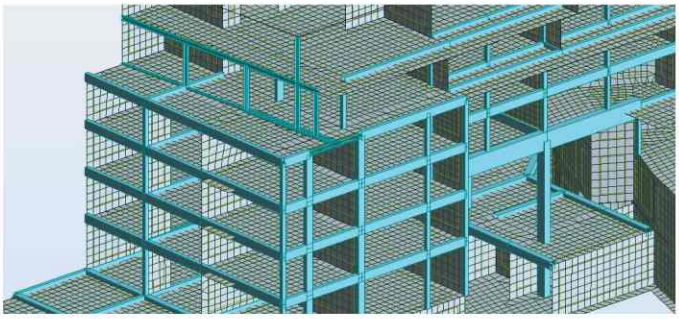
Etabs

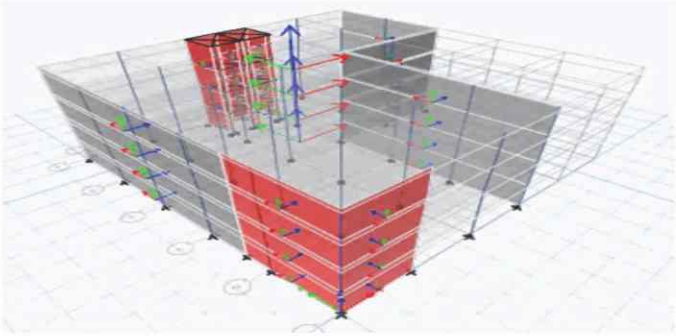
SUMMARY

ETABS is an engineering designing software that caters multi-story building analysis and design. Preliminary limited to building design it encapsulate advance building modeling and drawing options. Modeling tools and templates, code-based load prescriptions, analysis methods and solution techniques, all coordinate with the grid-like geometry unique to this class of structure.

Being specific to building design, it provides all operations of analysis, design and drawings on a single platform. E-Tabs is well equipped to handle simplified lateral procedures, Push-over analysis, Response Spectrum Analysis and Response History Analysis. E-Tabs can also be utilized for handling large scale seismic projects including those that involve Non-Linear Modelling.

It can carry out design of steel and reinforced concrete buildings as per codes of selected countries and inbuilt foundation design module can design major footing also. One of the biggest advantage apart from analysis of ETABS is having capabilities to generate drawings as well.





LEARNING OBJECTIVES

- Draw Floor/Wall Objects
- Add Structural Objects Manually
- Select Structural Objects:
- Edit the Model Geometry
- Load the Structural Model
- Define Load Cases
- Analyze the Model
- Result Verification
- Design
- Detailing

WHO CAN JOIN?

- This course can be joined by any undergraduate/ graduate civil engineer, who is willing to make career in the field of design and construction.
- This course is not useful for career in structural designing but it also give an edge to candidates, those are willing to make career in the civil construction.

Revit Architecture

SUMMARY

Autodesk Revit Architecture is an architectural design and documentation software application for architects and building professionals resolve limitation of 2D workings.

Building information model is the feature that make up Revit Architecture specifically designed to support architects and allied services.

BIM or Building Information Modelling is a process which cater and manage specific information in object form instead of lines and curves. For example door or wall is a defined object, containing relevant information for Revit while AutoCAD store it as a group of lines or curves.

This capability makes it usable to all linked personnel viz. architecture, structure, MEP consultant, contractor etc. to work together using same information on single platform. Unlike other programs, any modification in building is reflected in entire project thus making it less erroneous for all collaborators.

Its associativity with similar tools like AutoCAD, Revit structure or Revit MEP, facilitates planners to account real time construction constraints in advance.

LEARNING OBJECTIVES

At CAD DESK we will make you expert in the following topics:

- Introduction
- Doors and Windows
- Walls
- component
- Managing Views
- Lighting
- Stairs
- Ramp, Railing and Ramps, Rooms
- Material Takeoff
- Visibility & Graphics
- Ceiling
- Curtain Walls
- Massing
- Site Design

WHO CAN JOIN?

- Individuals who currently work in or are pursuing careers in architectural and other building professional fields will discover many benefits of using Revit Architecture. The BIM workflow offered by Revit Architecture not only maximizes productivity but also helps to streamline your design and documentation workflows.
- Architecture, Civil and Interior designing students/ professional can learn Revit architecture. Candidate without technical background may also find this software very useful for career in CAD drafting.

Revit Structure

SUMMARY

Autodesk's Revit Structure is a Building Information Modeling (BIM) tool for structural engineers, which associatively may work with Revit architecture models.

Revit structure is an extension in Revit architecture and used by design engineers to model or place structural components like beam, column, footing, walls etc. as per architectural requirements. It can calculate loads and geometric constrains of modeled parts and can further transfer to analysis software viz. Staad Pro, Robot for design.

It can import analysis and design files also from various software to prepare component's drawing with accuracy.

With the advantage of BIM, Revit Structure helps to improve multi-discipline coordination of structural design documentation, minimize errors, and enhance collaboration between structural engineers and extended project team members, such as architects, MEP engineers, and owners.

LEARNING OBJECTIVES

At CAD DESK we will make you expert in the following topics of generating:

- Walls
- Foundation
- Floors and Slab
- Column Rebar Detailing
- Schedule
- Sheet
- Legend
- Family Creation
- Column
- Beam
- Reinforcement
- TRUSS
- Symbols
- Visibility & Graphics
- In-Place Families

WHO CAN JOIN ?

- Individuals who currently work in or are pursuing careers in structural and other building professional fields will discover many benefits of using Revit structure.
- Architectural & Civil Engineering students/ professional can learn Revit structure to enhance work proficiency and employability. Candidates without deep structural knowledge may also find this software very useful for career in structural drafting.

3Ds Max & V-ray

SUMMARY

3ds Max is an animation software from Autodesk which provides a comprehensive 3D modeling, animation, rendering, and compositing solutions for different industries. Developed and produced by Autodesk Media and Entertainment, It can create complex geometries, possess flexible plug-in architecture and generate a realistic view.

Though 3Dsmax has variety of roles in different industries and is frequently used by video game developers, movie makers, TV commercial studios but it has created a distinct place in architecture and interior visualization.

Now a days it is widely used by architects and civil engineers for photo realistic 3D visualization of their designs. Its interoperability with other CAD software make it more adaptable for designers. Not limiting to architectural visualization or walkthrough, it is widely being used in product manufacturing, interior designing, automobile and many more.

3ds max associates many plug-in like V-ray, mental ray etc. to perform specific tasks as per requirement. V-Ray for 3ds Max is the most complete lighting, shading and rendering toolkit in the market, making speed and simplicity accessible to all artists. The latest version delivers powerful feature set, technical advances and support for open source technologies.

LEARNING OBJECTIVES

- 3D modeling and texturing.
- 3D rendering.
- Configurable user interface.
- Adobe after Effects interoperability.
- Compositing integration.
- Animation and VFX.
- Walk through.
- Lighting.
- V-Ray is simply the best for realistic visualization.
- There is Extensive Material Library and resources in V-Ray.

WHO CAN JOIN ?

- Individuals seeking career in 3d VFX, animation and 3D visualization should go for this course.
- Architecture students / professionals requires knowledge of these software at utmost.
- Civil Engineering students looking forward for scope in building planning and construction shall definitely edge, after learning this course.

Quantity Takeoff

SUMMARY

Estimation and costing is an essential part of building construction and accurate forecasting the cost of future projects is an important skill for civil engineers and cost estimators.

Quantity Takeoff is the software by Autodesk, which helps you perform a takeoff on an entire building information model in just minutes—as opposed to days using traditional methods. The software provides greater flexibility than typical databases or spreadsheets, enabling a smoother, more accurate work-flow for cost estimators.

Quantity take off can take advantage of digital property data means it can automatically calculate quantities from a drawing results in reduction of manual tedious efforts and errors. For example it can measure length of walls and automatic deduct doors and windows area from it. Its interoperability with CAD platform makes this easy task for most user.

Quantity take off can create detailed materials reports much faster than paper-based processes. It can keep workflow digital and help ensure that reports, materials quantities, and other data remain up to date.

LEARNING OBJECTIVES

At cad desk we will make you expert in the following topics:

- Estimation.
- Take off tools.
- Manual takeoff tools.
- Automatic takeoff tools.
- Organizing projects.
- Work breakdown.
- structure.
- Area takeoff tools.
- Catalog.
- Create catalog.
- DWG Image creation.

WHO CAN JOIN ?

- Civil engineers.

Primavera

SUMMARY

Primavera currently managed by Oracle Inc., is a powerful planning tool use in all over the world to plan projects mainly in terms of time, resources and cost. It includes project management, product management, collaboration and control capabilities, and integrates with other enterprise software such as Oracle and SAP's ERP systems.

Primavera provides projects management program for the construction, IT, manufacturing, oil and gas industries.

Primavera specially focused on PPM or project portfolio management. It can schedule. The solution of the primavera enables user to measure progress, assure governance, improve team collaboration and prioritize project investments and resources.

Primavera is best suited for large scale projects due its tremendous capabilities of activity management, time and resource management and extensive reporting interface.

LEARNING OBJECTIVES

At cad desk we will make you expert in the following topics:

- Creating a new project
- Linking of activities
- Successors & Predecessors
- Project scheduling
- Creation of Base calendar
- Entering a non-work period in project
- Adjusting thickness of Activities Bar
- Changing the Bar color
- Change of End point shape and color Labelling of Activity Bar
- column Sight lines Customization
- Types of Activity form
- Activity Data Type item
- WBS Type, Structure creation in WBS, Entering Data in WBS, Organizing the WBS activities.

WHO CAN JOIN ?

- Management is part of everybody's job and it should be learned by every engineering and management professional aspiring to work at mega projects or at managerial levels.
- Engineering students from Civil, Mechanical, electrical and IT streams, for engineering and construction, aerospace, Oil and gas and industrial manufacturing can learn this course.
- It is essential for management students as well.

MS Project

SUMMARY

Microsoft Office Project, also referred to as Microsoft Project, is a suite of tools for more efficient project and portfolio management. Project is used in a variety of industries including construction, manufacturing, pharmaceuticals, government, retail, financial services and health care.

The main modules of Microsoft Project include project work and project teams, schedules and finances. Microsoft Project is designed to help users set realistic goals for project teams and customers by creating schedules, distributing resources and managing budgets.

The Project Guide helps users create projects, track tasks, and report results. The software helps contractors gain control over their resources and finances by simplifying the assignment of resources to tasks and budgets to projects. Microsoft Project management software is closely integrated with Microsoft Office suite and also includes a Client Access License (CAL) that allows easy connection with Office Project Server.

LEARNING OBJECTIVES

At cad desk we will make you expert in the following topics:

- Understand the topics required to create a project plan.
- Setup the software
- Define calendars
- Add tasks and organise tasks
- Format the display
- Add logic and constraints
- Use tables, views and filters
- Print reports
- Records and track the progress
- Create and assign resources
- Analyse resources
- Update resourced projects
- Customize the projects options
- Understand the different techniques for scheduling

WHO CAN JOIN ?

- Aspirants interested in engineering and construction, aerospace, Oil and gas and industrial manufacturing can go for this course. Management students can also be benefited through it.

AutoCAD Civil 3D

SUMMARY

AutoCAD Civil 3D software is a civil engineering design and documentation solution that is used for designing, drafting and documentation, analysis, defining workflows, surveying and mapping of civil projects.

It's a powerful tool for civil engineers and useful in planning and placement of any structure which is being constructed on earth. A user can plan canal, river, road,

transmission line, dams anything which is being laid on this earth. It is a superior software that can link survey data for instruments and satellites, can read google map and convert in 3D surface, can do minor detailing and can do laborious earthwork calculation and many other.....

Civil 3D is have many integrated benefits for infrastructure design and planning over other software. Its AutoCAD friendly environment, generalized approach, survey, satellite linking and detailed reports make is usable for all civil engineers and it can be considered a replacement of conventional CAD working.

LEARNING OBJECTIVES

At cad desk we will make you expert in the following topics:

- Styles and Objects
- Working with Survey Tools
- Working with Points
- Designing Corridors
- Working with Sections
- Working with Pipe Networks
- Working with Pressure Pipe Networks
- Working with Plan Production Tools
- Rendering
- Feature Lines
- Transferring Data
- Grading

WHO CAN JOIN?

- It is a must do course for every civil engineering passing out or working professional. With rapidly gaining popularity and enormous shifting of projects on this platform.

MX Road

SUMMARY

MX Road is an advanced modelling tool developed by Bentley that enables the design of all types of roads. MX road is based on 3D string modelling technology which creates 3D surface and thus providing user relevant picture of project. Automated design alternatives, accurate and fast detailing and working by different people on same project simultaneously makes this software best suited for highway engineers.

It is capable of doing all roads related work like alignment fixing, super elevation, pavement layers, intersection deign everything with high accuracy and super ease.

LEARNING OBJECTIVES

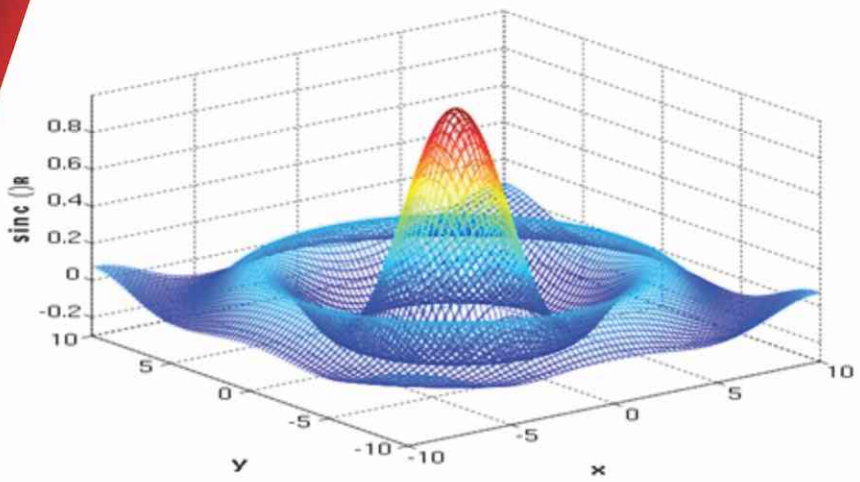
- Introduction
- CAD Environment
- Enhanced menu and GUI changes
- Element of geometry design

- Status: Deriving information from display
- Surface analysis
- Edit models
- Design- quick alignment
- Design- Vertical profile
- Design- alignment by element method
- Road design- carriageways
- Junction design

WHO CAN JOIN?

- Engineering graduates willing to work in roads and highway sector is a must do program even for site engineers.
- Professional already working in similar field with conventional design methods am also shift for better and accurate workings. Water and sewerage engineers, geotechnical engineers and surveyor often requires working on it.

Matlab



SUMMARY

MATLAB is a high-performance language for technical computing. It integrates computation, visualization, and programming in an easy-to-use environment where problems and solutions are expressed in familiar mathematical notation.

MATLAB is an interactive system whose basic data element is an array that does not require dimensioning. This allows you to solve many technical computing problems, especially those with matrix and vector formulations, in a fraction of the time it would take to write a program in a scalar no interactive language such as C or FORTRAN.

The name MATLAB stands for matrix laboratory. MATLAB was originally written to provide easy access to matrix software developed by the LINPACK and EISPACK projects, which together represent the state-of-the-art in software for matrix computation.

MATLAB has evolved over a period of years with input from many users. In university environments, it is the standard instructional tool for introductory and advanced courses in mathematics, engineering, and science. In industry, MATLAB is the tool of choice for high-productivity research, development, and analysis.

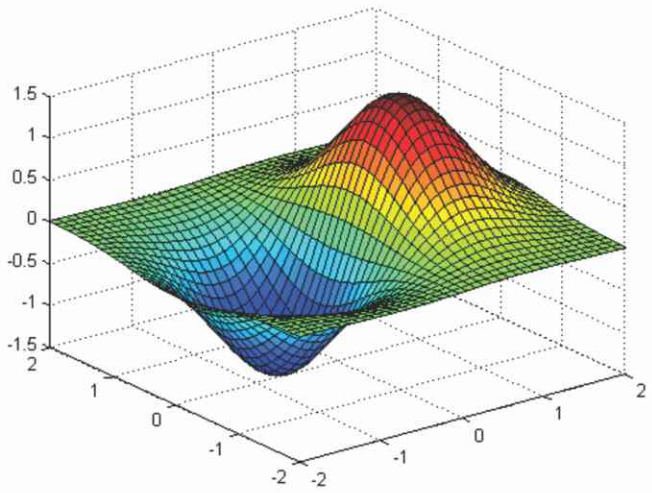
LEARNING OBJECTIVES

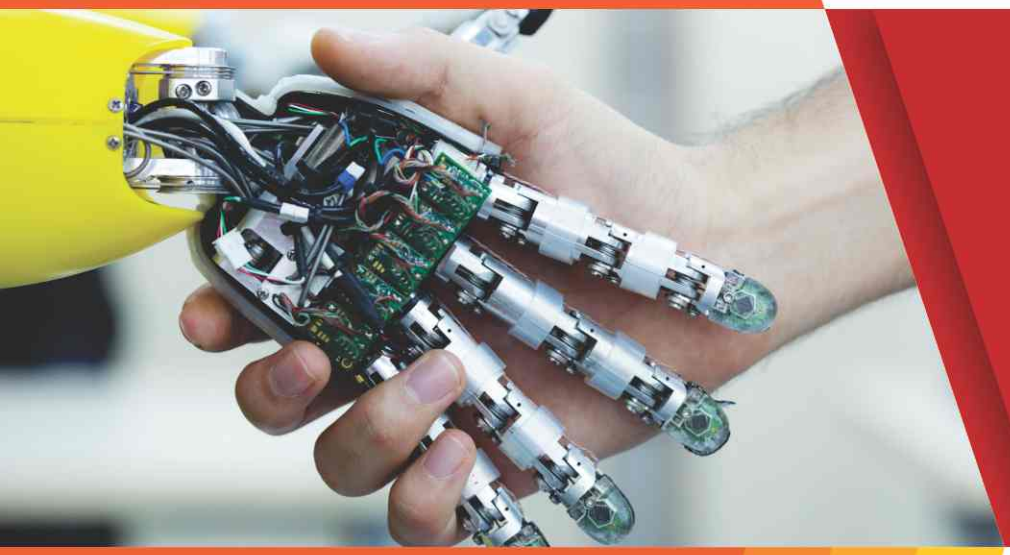
Typical uses include :

- Math and computation
- Algorithm development
- Modeling, simulation, and prototyping
- Data analysis, exploration, and visualization
- Scientific and engineering graphics
- Application development, including Graphical User Interface building

WHO CAN JOIN?

- Engineering graduates looking forward for a career as mathematical testing and analytical engineer.
- Individuals who are already working in industries and wants to meetup present generation technology for mathematical modelling in various industries i.e. Aerospace, Automobile and embedded system.





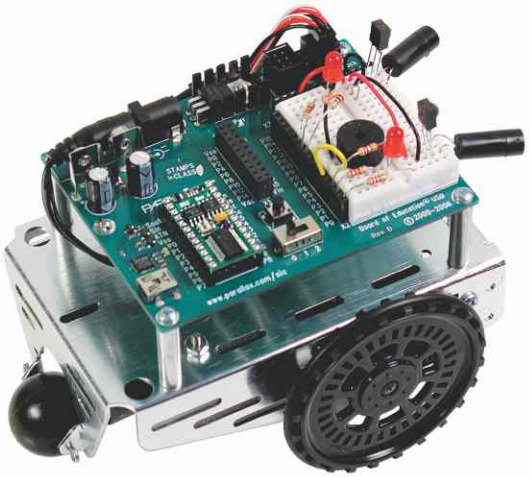
Robotics

SUMMARY

Robotics is the interdisciplinary branch of engineering and science that includes mechanical engineering, electrical engineering, computer science, and others.

These technologies are used to develop machines that can substitute for humans. Robots can be used in any situation and for any purpose, but today many are used in dangerous environments (including bomb detection and de-activation), manufacturing processes, or where humans cannot survive. Robots can take on any form but some are made to resemble humans in appearance.

Robotic systems typically include three components: a mechanism which is capable of exerting forces and torques on the environment, a perception system for sensing the world and a decision and control system which modulates the robot's behavior to achieve the desired ends.



The courses build towards a capstone in which you will learn how to program a robot to perform a variety of movements such as flying and grasping objects.

LEARNING OBJECTIVES

Robotics field has emerged as major role in automation and advanced technology:

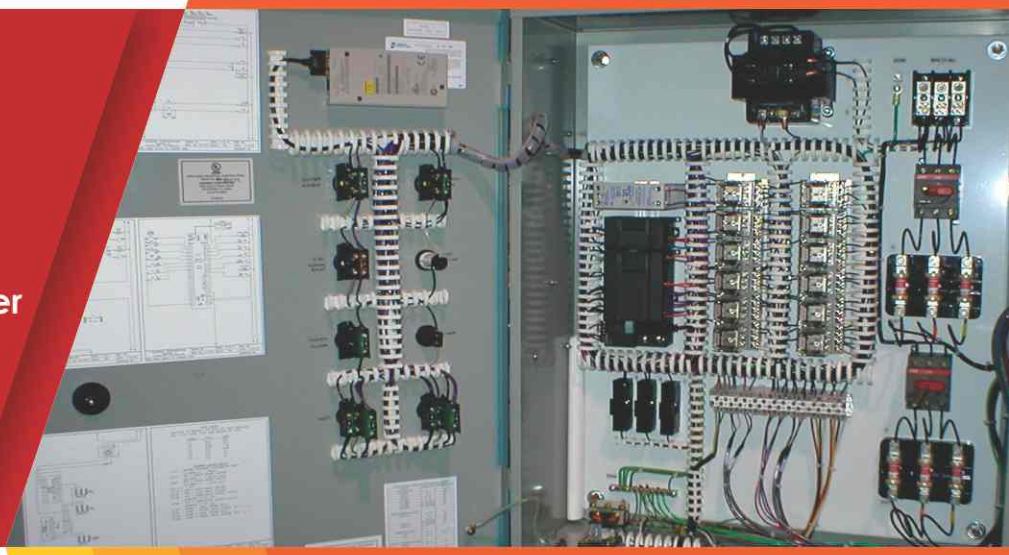
- Introduction to robotics
- Introduction to Manual Robotics
- Introduction to Autonomous Robots.
- Welcoming LINE FOLLOWER CONCEPT
- Interface Motor Driver with IR sensor.
- Serial and Parallel Communication.
- Introduction to DTMF Technology
- Integrating DTMF with motors.
- Introduction to GSM based technology
- Introduction to LCD.
- Advance LCD Display Patterns
- Seven Segment Display.
- Integrating keypad Matrix with motors
- Understanding Ultrasonic sensor
- Introduction to soldering .....Etc

WHO CAN JOIN ?

- Engineering graduates who are willing to work as mechatronics & robotic engineer in future.
- Individuals from schools to industries can join the course to skill up their technical skills .

PLC

Programmable Logic Controller



SUMMARY

Programmable logic controller (PLC), or programmable controller is an industrial digital computer which has been ruggedized and adapted for the control of manufacturing processes, such as assembly lines, or robotic devices, or any activity that requires high reliability control and ease of programming and process fault diagnosis.

The program is written on a computer and is downloaded to the PLC via cable. These loaded programs are stored in non – volatile memory of the PLC. During the transition of relay control panels to PLC, the hard wired relay logic was exchanged for the program fed by the user. A visual programming language known as the Ladder Logic was created to program the PLC.

Almost any production line, machine function, or process can be greatly enhanced using this type of control system. However, the biggest benefit in using a PLC is the ability to change and replicate the operation or process while collecting and communicating vital information.

Another advantage of a PLC system is that it is modular. That is, you can mix and match the types of Input and Output devices to best suit your application.

PLC HARDWARE INCLUDES

- CPU
- Memory
- I/O section
- O/P Section
- Power supply

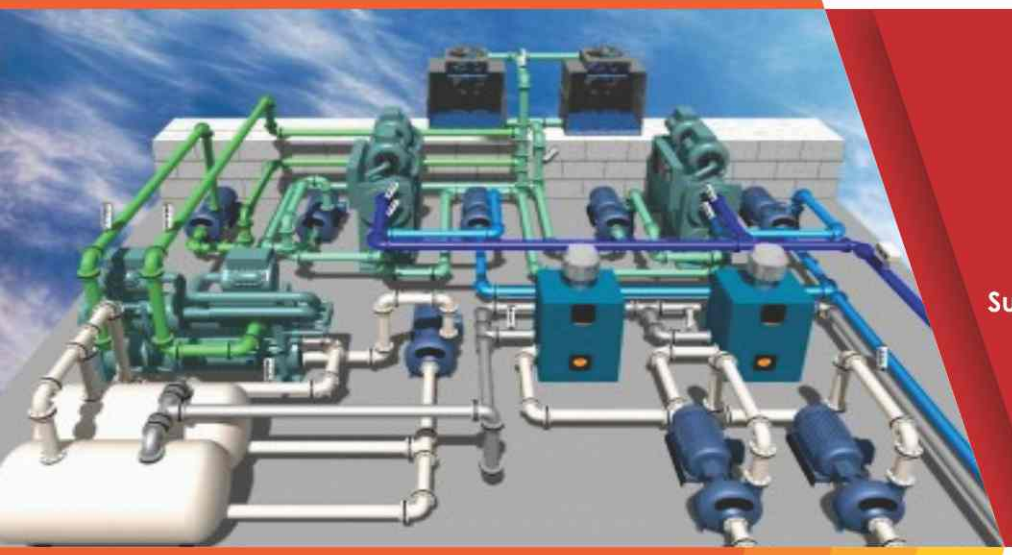
- Programming device

LEARNING OBJECTIVES

- Characteristics of a PLC (synchronous, asynchronous)
- Analysis of the process schematic –
- Statement of the interlocking functions and the safety requirements
- Creating of a control system function chart in conformity with DIN 40719, part 6
- Selection of the necessary hardware units
- Programming
- Simulation
- Start-up procedure, testing

WHO CAN JOIN?

- Undergraduates and individuals who are interested in exceling their career handling and maintaining in various electronic control and manufacturing processes (ex: robotics devices and assembly lines.) in industries.



SCADA

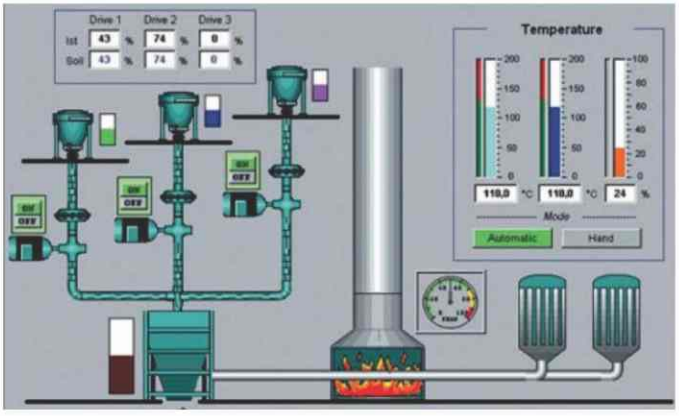
Supervisory Control and Data Acquisition

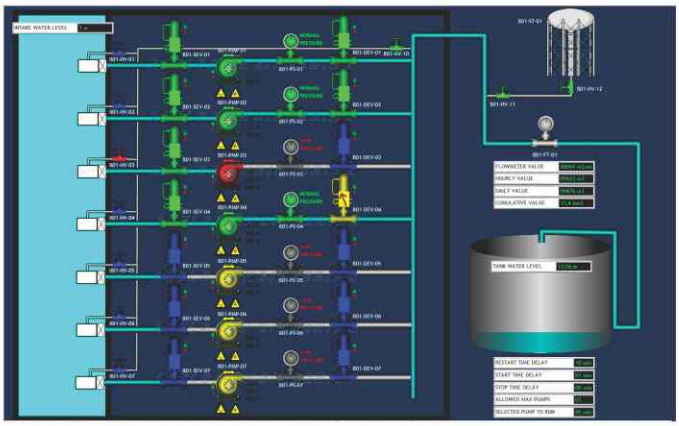
SUMMARY

Supervisory control and data acquisition (SCADA) is a control system architecture that uses computers, networked data communications and graphical user interfaces for high-level process supervisory management.

SCADA system usage have become popular from the 1960s with the increase in need of monitoring and controlling the equipment. The recent advancements in technology have made-advanced, automated SCADA systems with maximum efficiency at reduced cost, according to the alarming requirements of the company.

The SCADA software processes, distributes, and displays the data, helping operators and other employees analyze the data and make important decisions. SCADA systems are crucial for industrial organizations since they help to maintain efficiency, process data for smarter decisions, and communicate system issues to help mitigate downtime.





LEARNING OBJECTIVES

Supervisory control and data acquisition (SCADA) is a system of software and hardware elements that allows industrial organizations to:

- Control industrial processes locally or at remote locations.
- Monitor, gather, and process real-time data.
- Directly interact with devices such as sensors, valves, pumps, motors, and more through human-machine interface (HMI) software.
- Record events into a log file.

WHO CAN JOIN?

- Individuals / engineers who wants to enhance skills in data study and calculation in electric equipment & plant network.

IACD

Master Diploma in Interior Architecture & Civil Design

SUMMARY

Interior designing is an art of enhancing aesthetics and optimum utilization of interior space of buildings. With the improvement in earning potential, inclination towards interior design has increased many folds in recent years and interior design has emerged as eminent vocation.

Interior designing is not limited of residence planning only. Different types of buildings and their exteriors have unique style and design viz. homes, offices, hotels, gyms, shipping malls, theater each built environment has its unique style and design. It is applied and used in vide varieties of buildings.

Closely associated with architects, our course emphases not only interior design aspects but basics of architecture and civil engineering for better understanding among all collaborators.

LEARNING OBJECTIVES

- Construction technology.
- Materials and finishes.
- Design principles.
- Drawing and drafting.
- Interior designing.
- Furniture design.
- Paints colours.
- Acoustics.
- Land scaping.
- Vastu.
- Cost estimation.
- Module making.

WHO CAN JOIN?

After completion of course candidate can work with :

- Interior design firms.
- Architectural firms.
- Infra structure developers & builders.
- Furniture manufacturing firms.
- Interior design ships.
- Free lancer.

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