

AUTOCAD PROGRAM – 12 MONTHS

AutoCAD (2D & 3D Design)

- ✓ Used In: General, Mechanical, Civil, Electrical, Architecture
- ✓ Introduction to AutoCAD interface 2D drawing & modification tools Layers, blocks, dimensioning
- ✓ 3D modeling: Extrude, Revolve, Sweep Annotation, plotting, layouts

AutoCAD Civil 3D

- ✓ Used In: Civil engineering, road & land development
- ✓ surveying & point cloud data Surface modeling, contours
Road alignments & profiles
- ✓ Grading, drainage, and pipe networks Cross-sections, quantity takeoffs

AutoCAD Mechanical

- ✓ Used In: Manufacturing, Mechanical engineering
- ✓ Mechanical drafting tools GD&T, BOM creation
Assembly & exploded views Auto dimensioning,
standards Part libraries (screws, gears)

AutoCAD Electrical

- ✓ Used In: Electrical panel design, PLC, automation
- ✓ Wiring diagrams, ladder logic Panel layouts
- ✓ Component tagging, wire numbering PLC I/O drawings
- ✓ Reports: BOM, cable lists

Revit Architecture / MEP / Structure

- ✓ Used In: BIM, Architectural, Structural & MEP design
- ✓ BIM concept & project setup Floor plans, elevations,
sections Structural framing & foundations
- ✓ MEP systems: HVAC, piping, electrical Sheets, tags, and schedules
- ✓ Family creation

3ds Max (Modeling + Rendering + Animation)

- ✓ Used In: Architecture visualization, animation, gaming
- ✓ 3D modeling: Polygons, splines, NURBS Materials & texturing
- ✓ Lighting (V-Ray, Arnold) Rendering (Interior/Exterior scenes)
- ✓ Basic animation & rigging Walkthrough creation

SolidWorks

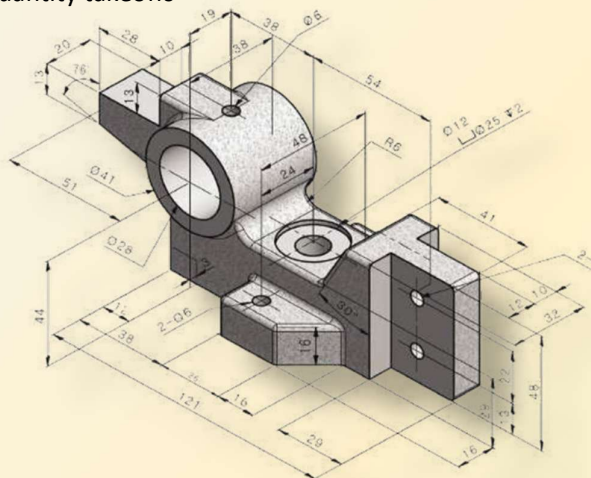
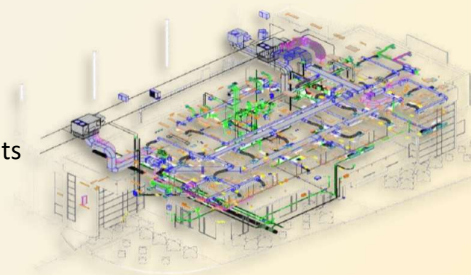
- ✓ Used In: Product design, mechanical modeling
- ✓ 3D part modeling Assemblies & mates
- ✓ 2D drawings from 3D models Simulation & motion analysis
- ✓ Sheet metal, weldments, surface modeling

CATIA

- ✓ Used In: Aerospace, automotive, industrial design
- ✓ Sketcher & Part design Assembly design Surface modeling (GSD) Drafting
- ✓ Sheet metal & DMU Kinematics Structural analysis basics
- ✓ Creo / ProE
- ✓ Used In: Mechanical & product design
- ✓ Part modeling, assemblies Surfacing & detailing Mechanism design
- ✓ Analysis tools (stress, motion) Parametric design

Fusion 360

- ✓ Used In: Cloud-based CAD/CAM, 3D printing, mechanical
- ✓ Sketch & parametric modeling Assembly & joints
- ✓ Rendering & animation CAM for CNC
- ✓ Simulation (static, thermal)



**JOB ORIENTED
COURSES**

**100% JOB
GUARANTEE**

**EXPERIENCED
FACULTY**

WEEKLY TEST

**PROJECT &
ASSIGNMENT
WORK**

SQL COURSE - 1.5 MONTHS

MODULE 1: INTRODUCTION TO DATA BASE SQL

- ✓ What is a database?
- ✓ Types of databases (Relational vs Non-Relational)
- ✓ Overview of RDBMS (MySQL, PostgreSQL, SQL Server, Oracle)
- ✓ What is SQL? History and importance
- ✓ Installing and setting up a database server (MySQL / PostgreSQL)
- ✓ SQL syntax rules

MODULE 2: BASIC SQL COMMANDS

- ✓ Creating and selecting a database
- ✓ Creating tables (CREATE TABLE)
- ✓ Data types in SQL
- ✓ Inserting data (INSERT INTO)
- ✓ Viewing data (SELECT)
- ✓ Updating data (UPDATE)
- ✓ Deleting data (DELETE)
- ✓ Truncating a table (TRUNCATE)

MODULE 3: FILTERING AND SORTING DATA

- ✓ WHERE clause
- ✓ Comparison operators (=, <>, <, >, BETWEEN, IN, LIKE)
- ✓ Logical operators (AND, OR, NOT)
- ✓ Sorting with ORDER BY
- ✓ Limiting results with LIMIT / TOP

MODULE 4: SQL FUNCTIONS

- ✓ Aggregate functions (COUNT(), SUM(), AVG(), MIN(), MAX())
- ✓ String functions (CONCAT(), SUBSTRING(), LENGTH(), REPLACE())
- ✓ Date and time functions (NOW(), CURDATE(), DATE_ADD(), DATEDIFF())
- ✓ Mathematical functions (ROUND(), CEIL(), FLOOR())

MODULE 5: GROUPING DATA

- ✓ GROUP BY clause
- ✓ Using HAVING with aggregate functions
- ✓ Grouping and filtering together

MODULE 6: JOINS IN SQL

- ✓ Introduction to relationships in databases
- ✓ INNER JOIN
- ✓ LEFT JOIN / LEFT OUTER JOIN
- ✓ RIGHT JOIN / RIGHT OUTER JOIN
- ✓ FULL JOIN / FULL OUTER JOIN
- ✓ CROSS JOIN
- ✓ Self-joins

MODULE 7: SUBQUERIES

- ✓ Single-row subqueries
- ✓ Multi-row subqueries
- ✓ Correlated subqueries
- ✓ Using subqueries in SELECT, FROM, and WHERE clauses

MODULE 8: DATA MODIFICATION S CONSTRAINTS

- ✓ Adding, modifying, and deleting columns (ALTER TABLE)
- ✓ Unique, NOT NULL, CHECK, and DEFAULT constraints

- ✓ Dropping tables and databases (DROP)
- ✓ Primary key and foreign key constraints

MODULE 9: VIEWS, INDEXES

TRANSACTIONS

- ✓ Creating and managing views
- ✓ Indexing for performance improvement
- ✓ Creating and dropping indexes
- ✓ Transactions (BEGIN, COMMIT, ROLLBACK)
- ✓ Understanding ACID properties

MODULE 10: ADVANCED SQL TOPICS

- ✓ Common Table Expressions (CTEs)
- ✓ Window functions (ROW_NUMBER(), RANK(), DENSE_RANK(), LEAD(), LAG())
- ✓ Pivot and unpivot tables
- ✓ Stored procedures and functions
- ✓ Triggers
- ✓ Query optimization basics

MODULE 11: PROJECT WORK S

PRACTICE

- ✓ Mini-project ideas:
 - Library database management
 - E-commerce order and inventory tracking
 - School student record system
 - Sales reporting dashboard using SQL queries
- ✓ Debugging and query optimization


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