CATIA
SYLLABUS COPY

Engineered for skill enhancement.

PROGRAM HIGHLIGHTS

Accredited Certificates:
✓ Earn ISO-certified credentials upon successful completion.
Internships:
✓Engage in industry-relevant opportunities to gain hands-on experience.
Placement Assistance:
✓ Receive career guidance from seasoned professionals to navigate the job market.
Basic to Advanced Level Training:
✓ Receive career guidance from seasoned professionals to navigate the job market.
Live & Recorded Lectures:
✓ Benefit from training that covers both fundamental and advanced topics in CATIA.
Real-Time Projects:
✓ Participate in hands-on projects to apply theoretical knowledge to practical scenarios.

ABOUT US

- **OUR MISSION :**

NxtSync is dedicated to bridging the gap between theoretical knowledge and practical application in CATIA. Our mission is to equip students with advanced skills that enhance employability and prepare them for a technology-driven future.

- **OUR VISION--UPSKILL**: Empowering professionals for the future.
- **INNOVATE**: Fostering creativity and breakthrough solutions in construction.
- **EXCEL**: Preparing industry-ready construction managers.

WHY CATIA?

- **Industry Standard:** CATIA is widely used in industries such as automotive, aerospace, and manufacturing for product design and development.
- **Comprehensive Toolset:** Offers robust tools for 3D modeling, simulation, and analysis.
- **Career Opportunities:** Proficiency in CATIA opens doors to various roles in design and engineering sectors.

LEARNING PATH

- Introduction to CATIA
- Sketching Fundamentals
- Part Design Basics
- Intermediate Part Design
- Advanced Part Design
- Assembly Design
- Surface Modeling
- Sheet Metal Design
- Weldments and Frame Design
- Simulation and Analysis
- Collaboration and Data Management

DETAILED MODULE BREAKDOWN

Module 1: Introduction to CATIA

- Overview of CATIA software and its applications.
- Understanding the user interface and navigation.
- Introduction to parametric 3D modeling concepts.

Module 2: Sketching Fundamentals

- Creating and editing 2D sketches.
- Applying sketch constraints and dimensions.
- Understanding sketching best practices.

Module 3: Part Design Basics

- Creating basic 3D features (extrude, revolve, sweep
- Understanding feature-based parametric modeling.
- Using the feature manager tree for feature management.

Module 4: Intermediate Part Design

- Exploring advanced modeling techniques (fillets, chamfers, patterns).
- Working with synchronous and ordered modeling workflows.
- Utilizing advanced features like blends, lofts, and ribs.

Module 5: Advanced Part Design

- Mastering complex modeling tasks with surface modeling.
- Creating sheet metal parts and utilizing specialized features.
- Exploring assembly modeling techniques.

Module 6: Assembly Design

- Inserting and positioning components within assemblies.
- Applying assembly constraints and relationships.
- Exploring assembly features and manipulation tools.

Module 7: Surface Modeling

- Creating and editing surfaces using loft, sweep, and boundary features.
- Converting solid models to surfaces and vice versa.
- Managing surface and solid interactions.

Module 8: Sheet Metal Design

- Understanding sheet metal design principles and terminology.
- Creating sheet metal parts with bends, flanges, and forming tools.
- Unfolding and flattening sheet metal parts.

Module 9: Weldments and Frame Design

- Creating welded structures and frames. Utilizing weldment and frame design tools.
- Adding standard and custom structural members.

Module 10: Simulation and Analysis

- Introduction to finite element analysis (FEA).
- Analyzing stress, displacement, and factor of safety in parts and assemblies.
- Optimizing designs for performance and reliability.

Module 11: Collaboration and Data Management

- Working with Product Data Management (PDM) systems.
- Collaborating with team members and stakeholders.
- Managing design revisions and version control.

ASSIGNMENT'S &ASSESSMENTS

- Weekly hands-on assignments to reinforce learning.
- Mid-term Construction mini-projects

WHY CHOOSE NXTSYNC?

- ☑ Industry-Aligned CATIA Curriculum
- ☑ Hands-on Real-World Projects
- ☑ Expert Mentorship & Career Guidance
- ☑ Flexible Learning Schedule
- ☑ ISO-Certified CATIA

Start Your CATIA Journey with NxtSync Today!

THANK YOU