FUTURES CANADIAN COLLEGE
of BUSINESS HEALTH & TECHNOLOGY

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www.futurescollege.ca

CATIA

CERTIFICATE COURSE

Program Length: 158 Hours
Mode of Learning: Online
Students: Domestic / International
Credential: Certificate
NOC

CATIA

CERTIFICATE COURSE

Program Overview

The *CATIA* Certification Program is a modular training course designed for students and professionals aiming to enter advanced fields in product design, aerospace, automotive engineering, and complex mechanical system development. CATIA (Computer-Aided Three-dimensional Interactive Application), developed by Dassault Systèmes, is one of the most powerful and widely used 3D design platforms in high-performance industries.

This course introduces students to the CATIA environment, focusing on 3D part modeling, surface design, assemblies, and drafting. Learners develop proficiency in parametric modeling, design intent, feature-based modeling, and simulation basics. As the program progresses, students will work on real-world design challenges, preparing them to meet the demands of modern engineering and manufacturing workflows.

Upon completion, students will be capable of creating fully functional mechanical components and assemblies, ready for simulation, manufacturing, or integration into complex systems—an essential skill in industrial design, aerospace engineering, and automotive manufacturing.

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Modules:

Module 1: CATIA Interface & 3D Part Design (39.5 hours)

- Navigating the CATIA environment and workbenches
- Creating sketches and parametric constraints
- 3D part modeling with Pad, Pocket, Shaft, and Rib features
- Editing features, history tree, and part modifications

Module 2: Advanced Part Modeling & Surface Design (39.5 hours)

- Working with advanced features: multi-body parts, fillets, chamfers
- Wireframe and surface design workbench
- Creating complex surfaces and blends
- Best practices for surfacing in high-performance parts

Module 3: Assemblies & Drafting (39.5 hours)

- Creating assemblies and applying constraints
- Managing assembly hierarchies and components
- Generating 2D drawings and technical documentation
- Dimensioning, section views, and title blocks

Module 4: Simulation, Collaboration & Final Project (39.5 hours)

- Intro to kinematics and part simulation
- File management and collaboration features
- Final project: Design, assemble, and document a mechanical system
- Portfolio development and exam readiness

Admission Requirements

- Ontario Secondary School Diploma (OSSD) or equivalent
- Minimum age: 18 years
- English language proficiency (CLB Level 6 or IELTS 5.5 or equivalent)
- Basic understanding of mechanical systems or CAD software (recommended)
- Prior experience with any 3D modeling platform is an asset

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Futures Canadian College of Business, Health, and Technology formerly Futures Academy of Health was founded in 2009 in Toronto, Ontario. Approved and accepted in November 2018 by the International Student Program, Futures Canadian College is now a Designated Learning Institution.

At FCC, we strive to provide the world-class education every student deserves. With well-crafted lesson plans, that are both informative and practical, we ensure that you learn all you need to know to jumpstart your career. Our co-op programs are relevant and supportive of your desire to land that dream job!
We are committed to providing you with a learning environment that is well-equipped to motivate you to pursue your studies and ultimately, achieve your long-term goals.