FORGE
Your Innovation & Growth Partner

PROTOSEM™
INNOVATION ENGINEERS

CURRICULUM

Innovation Modules

Module #1 (3c) Applied Design Thinking
- Design Thinking Principles / Tool
- Customer Centric Innovation
- Applied Design Thinking Tools
- System Thinking & Reverse Engineering

Module #2 (3c) Startup Fundamentals
- Entrepreneurship Mindset
- Building Enterprise from Ideas
- Minimum Viable Business
- Intellectual Property Rights

Technology Modules

Module #3 (3c) Hardware Foundations
- Sensors & Actuators
- Communication Protocols
- Embedded Platforms
- Internet of Things

Module #4(3c) Software Fundamentals
- Programming Paradigms
- OOPS Programming
- Software Platforms
- Introduction to DS/ML

Module #5 (3c) Design & Development
- UI & UX
- App Development
- Industrial Design
- Rapid Prototyping

Specialization Tracks

Industrial Automation and Robotics

Module #6 (3c) Industrial Automation
- LabView and Data Acquisition
- PLC and Industrial Automation
- Communication Protocols
- Circuit Board Design

Module #7 (3c) Robotics
- Robot Kinematics
- Robot Operating System
- Vision Systems

Industrial AI

Module #6 (3c) Data Life Cycle Management
- Data Life Cycle
- Data Acquisition and Transformation
- EDA (Exploratory Data Analysis)
- Data Visualization and Feature Engineering

Module #7 (3c) Algorithms/ ML DevOps
- ML 101
- Statistical and Probabilistic Models
- Tensorflow Extended
- Data Ingestion, Validation, Training, Model Analysis and Evaluation