

KEY FEATURES

- 24×7 Support on exercises.
- **Free Demo classes**
- Case studies
- 4.7/5 rating
- Industry standard tools
- Two decade of experience
- World class course structure
- Expert mentorship on Hardware Design career
- 100% Placement Support
- Lifelong membership

COURSES OFFERED

DATA

ENGINEERING

- Data Analytics
- Machine Learning
- Business Analytics
- Python

SYSTEM

ENGINEERING

- IoT
- Hardware Design
- Embedded System
- VLSI Design

PRODUCT

ENGINEERING

- Product Design
- Product Management
- Digital Marketing
- Start your Startup

SOFTWARE

ENGINEERING

- AI
- Cloud
- Full Stack
- Develops

Location:

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DESIGN NATION
— IMPARTING EXCELLENCE —

SYSTEM ENGINEERING HARDWARE DESIGN



DESIGN NATION
— IMPARTING EXCELLENCE —



ABOUT THE COURSE

Hardware design involves, design of computer hardware components, including circuit boards, microchips, schematics and scanners. They draft different designs and make prototypes to test for accuracy and also get involved with manufacturing hardware and supervise the installation process. Computer mother boards, Mobile circuit boards and Video game boards are few popular products of Hardware design.

Hardware Design, program is specifically designed with an objective to provide a sound platform and prepare attendees for a successful career in the field of Hardware Design. The course content, the advanced lab, 1:5 classroom strength allows special focus on individual performance

INFRASTRUCTURE

1. ARM Cortex Board
2. Arduino Board
3. Raspberry Pi Mod-4 IoT Board
4. Arduino Uno Board
5. ARM Cortex starter kit
6. Xilinx SPartan-6 starter kit
7. Xilinx Zync starter Kit
8. 100+ Variety of Sensors
9. PIC and Rabbit 5000 Microcontrollers

COURSE CURRILCULUM

1. **Introduction of PCB**
2. **Advantages of PCB**
3. **Schematics Creation**
 - Starting a project
 - Basics used for operating design tool
 - Component Selection from Libraries to circuit design
 - Placing, Editing & connecting Components for Ckt design (Th, SMD)
 - Top—down & Down — top Circuit check list
 - Multiple peaces and interconnetions of schematics
 - Component creation for over own Libraries
 - Exporting and importing Schematic data
4. **Pad's Design**
 - Importing PCB
 - Foot print Generation & Package selection
 - Component check based on requirement
 - Components placing
 - Details of Routing tracks and adjustments by Layers
 - Layout Creation & components connection –Through hole, SMD
 - Design rules check (DRC) Check

- Pad / pattern Editors creation for over own Libraries
 - Final PCB Board Creator
5. **Reference component names / Adding Reference Texts silk screen prints on PCB**
 6. **PCB manufacturing rules:**
 - Tracks , PAD's , Hole width and design rules
 - Gerber file generation for manufacturing
 7. **Knowledge on Symbols**
 - SMD Through Hole
 - Resistors (Sizes/ Watt's?..) Resistors (Sizes/Watt's?)
 - Capacitors (Sizes?) Capacitors (Sizes?)
 - IC's (Sizes?) IC's (Sizes?)
 - Component Editors using Data sheet (Through hole, SMD)
 - Component calling / Connecting
 - Pattern Editors using Data sheet (Through hole, SMD)
 - Board's quality based on copper pour

SCHOLARSHIP

1. Scholarship will be provided based on online test and technical interview performance.
2. Candidates with score 80% in Engineering and 90% above in online test will be selected.
3. Candidates with good GATE score can avail additional scholarship T&C Apply.