
EDUFYI TECH
SOLUTIONS
VLSI
MENTORSHIP PROGRAM
60 DAYS

Who are we ..?

At Edufyi Tech Solutions, we are dedicated to transforming the educational journey for college students by offering cutting-edge virtual internships and comprehensive training programs. Our approach combines industry mentorship with practical experience, providing each student with six real-time and capstone projects per course or domain. These projects are designed to equip students with the skills and experience needed to secure their dream jobs upon graduation.

Mission:

To equip students with virtual internships and real-world projects for successful career placement through industry mentorship.

Vision:

To transform education by linking academic learning with practical experience, helping students achieve their career goals.

Lesson Plan

week 1

Introduction to VLSI Design

- What is VLSI?
- Definitions and significance of VLSI
- Applications in various industries
- Basic VLSI Technology
- Overview of CMOS technology and fabrication processes
- VLSI Design Flow
- Stages: Specification, Design, Verification, Fabrication, Testing

Lesson Plan

week 2

Digital Logic Design

- Fundamentals of Digital Logic
- Binary numbers, logic gates, and Boolean algebra
- Combinational Logic Circuits
- Design and analysis of adders, multiplexers, and encoders
- Sequential Logic Circuits
- Flip-flops, counters, and state machines

Lesson Plan

week 3

Hardware Description Languages

- Introduction to HDL
- Overview of VHDL and Verilog
- Differences and applications of both languages
- Writing HDL Code
- Basic syntax, combinational and sequential circuit design
- Simulation basics and using tools like ModelSim

Lesson Plan

week 4

Digital Design Techniques

- Register Transfer Level (RTL) Design
- Understanding RTL representation and writing RTL code
- Synthesis
- Introduction to synthesis tools and techniques
- Design constraints and optimization

Lesson Plan

week 5

Static Timing Analysis and Verification

- Timing Concepts
- Setup time, hold time, and propagation delay
- Static Timing Analysis Tools
- Understanding timing reports and analysis techniques
- Verification Methodologies
- Introduction to simulation and formal verification techniques

Lesson Plan

week 6

Analog and Mixed-Signal Design

- Advanced Analog Circuit Techniques
- Design of operational amplifiers, filters, and oscillators
- Mixed-Signal Design
- Principles of ADCs and DACs, sampling theory, and quantization
- Design challenges and considerations

Lesson Plan

week 7

Advanced VLSI Design Techniques

- Low-Power and High-Speed Design
- Techniques for power reduction and high-speed circuit design
- System-on-Chip (SoC) Architecture
- Integration of multiple components, interconnects, and protocols (AMBA, AXI)

Lesson Plan

week 8

Capstone Project and Emerging Trends

- Capstone Project Development
- Define project scope: Advanced design or verification project
- Hands-on implementation, testing, and documentation
- Future Directions in VLSI
- Discussion on emerging technologies (3D ICs, AI/ML in VLSI)
- Preparing for careers in VLSI: Skills and resources

Our Process:

>> Schedule a Demo Call

Discover more about our programs and how they can benefit your career.

>> Choose a Program

Select the plan that fits your goals and budget.

>> Enroll

Join our community and start your journey with us.

>> Engage for 2-3 Months

Stay committed for a 2-3 month period to make the most of our curriculum.

>> Acquire Skills & Experience

Gain valuable knowledge, hands-on experience, and practical skills.

Certifications

Internship Certificate

Training Certificate

Course Certificate

letter Of Recommendation

APPROVED FROM

MINISTRY OF CORPORATE AFFAIRS
GOVERNMENT OF INDIA

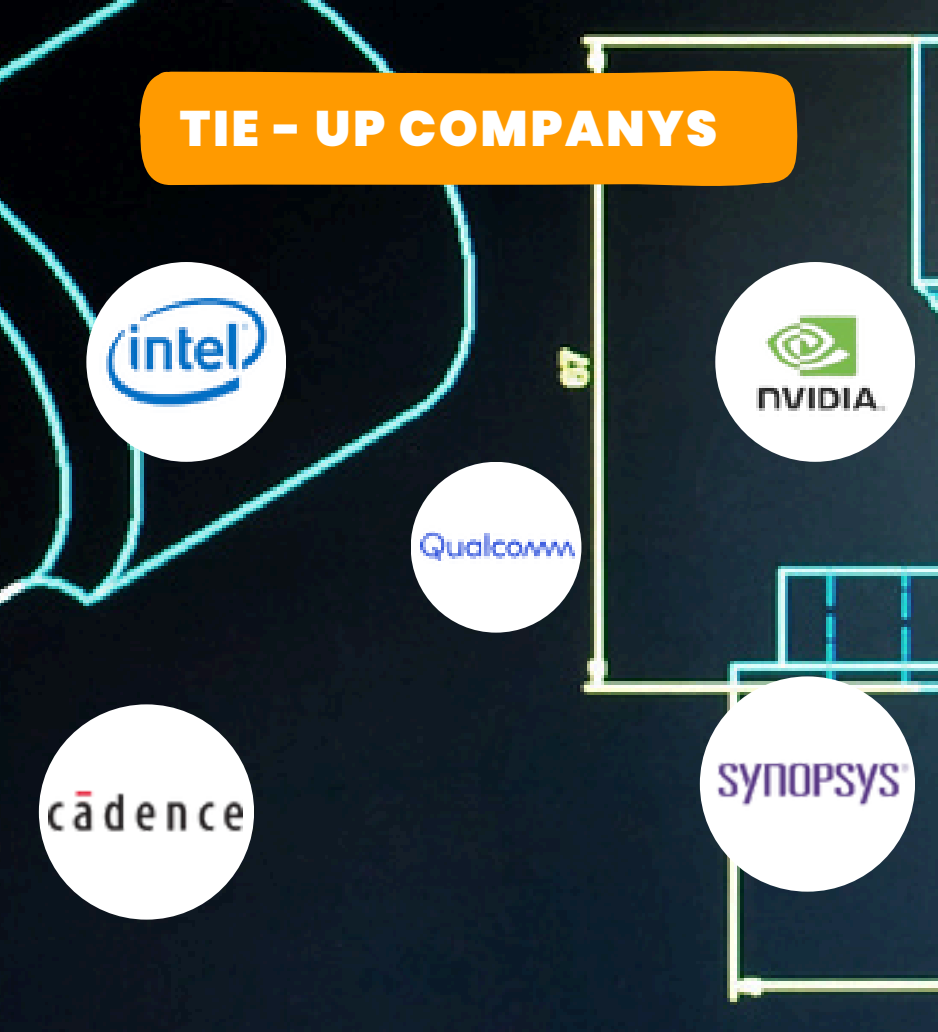
MSME

ISO 9001

AICTE

Credential Platform Partner

wipro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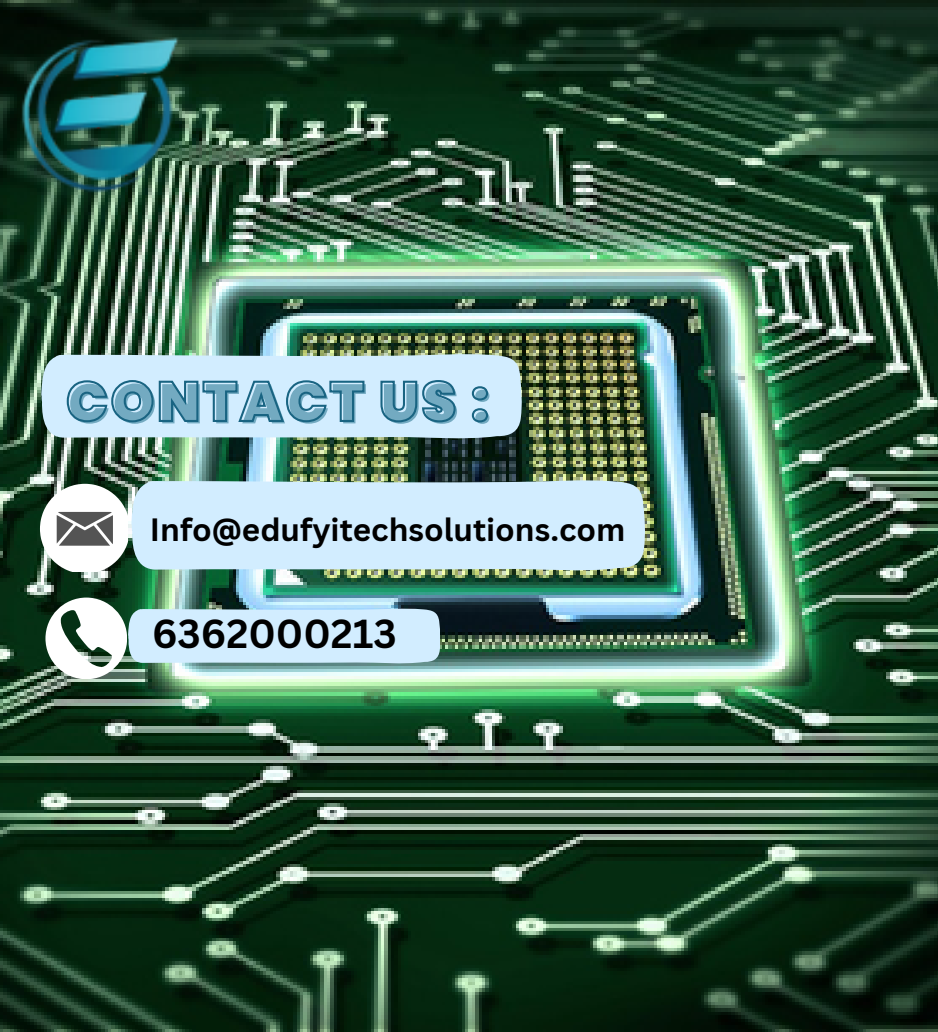
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