SUMMER SCHOOL





VLSI DIGITAL LOGIC DESIGN AND SYNTHESIS FOR FPGA (ONLINE MODE)

JULY 14 - JULY 19, 2025

COURSE DURATION: 6 DAYS

SKILLS TARGETED

- •BE/BTECH IN
- •COMPUTER SCIENCE AND ENGINEERING
- •ELECTRONICS AND COMMUNICATION ENGINEERING,
- •ELECTRICAL ENGINEERING,
- •ELECTRONICS AND INSTRUMENTATION ENGINEERING.
- •PG DIPLOMA/MS/MSC IN

ELECTRONICS OR ELECTRONICS DESIGN

•ITI IN

ELECTRONICS DESIGN

BODHISATWA MAZUMDAR, PHD, ASSOCIATE PROFESSOR, DEPARTMENT OF CSE, IIT INDORE

I.INTRODUCTION AND VLSI DESIGN REPRESENTATION (DAY 1):

- VLSI DESIGN CYCLE FRONT END DESIGN FLOW & BACKEND DESIGN FLOW
- FPGA DESIGN FLOW
- DESIGN STYLES AND HDL LANGUAGE FEATURES
- OPERATORS AND MODELING EXAMPLES
- DESCRIPTION STYLES

II. COMBINATIONAL LOGIC DESIGN (DAY 2 – DAY 3):

• PROCEDURAL ASSIGNMENT AND EXAMPLES: ADDER, SUBTRACTOR, MULTIPLIER, COMPARATOR, MULTIPLEXING, DEMULTIPLEXING, ENCODERS, DECODERS, PARITY CHECKERS

III. SEQUENTIAL LOGIC DESIGN (DAY 4 - DAY 5):

• SYNCHRONOUS LOGIC DESIGN, FLIP-FLOPS, COUNTERS, REGISTERS MODELING FINITE STATE MACHINES.

IV. DIGITAL SYSTEM DESIGN (DAY 6):

I2C/UART PROTOCOL DESIGN.

SCAN & PAY



UPI ID: 106864527708217@cnrb

ANIRUDDHA KUSHWAHA, PHD,
ASSISTANT PROFESSOR,
DEPARTMENT OF CSE, IIT INDORE

Email: aniruddha@iiti.ac.in

Registration fee is Rs. 2360 (Including 18% GST)

Registration form link: https://forms.gle/1pEov7U9j87Hk6do9