

Summary Report: Expert Lecture Series (Even Semester 2024–25)

Department of Electronics and Communication Engineering, Maharaja Agrasen Institute of Technology

The Department of Electronics and Communication Engineering at Maharaja Agrasen Institute of Technology organized a **3-lecture expert series** during the **even semester of the academic year 2024–25** for **3rd-year students**. The lectures were delivered by **Mr. Vaibhav Mishra** and **Mr. Deepanshu**, distinguished professionals from **Aujas Company**.

The series focused on key topics from the subject **VHDL Programming (ECE-306T)**, aiming to bridge the gap between **industry and academia**. The sessions offered students valuable exposure to **FPGA technology, Verilog HDL, and hardware design using HDL and Python**, combining theoretical concepts with practical applications in **VLSI and Embedded Systems**.

The initiative encouraged students to engage with real-world tools, methodologies, and design workflows relevant to today’s semiconductor and embedded systems industry.

S. No.	Date	Topic / Title	Speaker & Organization	Venue & Time	No. of Students	Coordinators	Key Highlights / Outcomes
1	29th Jan 2025	“Introduction to FPGA”	Mr. Vaibhav Mishra, Aujas Company	Room 422, 2:00 PM – 3:00 PM	18	Dr. Anamika Jain	Covered FPGA architecture, design flow, applications, and tools. Students learned about FPGA use-cases in VLSI and Embedded Systems.
2	20th Feb 2025	“Introduction to Verilog”	Mr. Deepanshu, Aujas Company	Room 443, 11:30 AM – 12:30 PM	19	Dr. Anamika Jain	Introduced Verilog HDL syntax, modeling styles, and simulation. Strengthened understanding of HDL-based digital design.
3	9th Apr	“Hardware Design using HDL and	Mr. Vaibhav Mishra & Mr.	Seminar Hall 401B, 11:00	40	Dr. Anamika Jain, Dr. Sumedha	Focused on integrating HDL and Python for FPGA design and

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	2025	Python on FPGA”	Deepanshu, Aujas Company	AM – 1:00 PM		Gupta	verification. Provided practical exposure to hardware design and simulation workflows.

Overall Summary:

The **3-lecture expert series on VHDL and FPGA-based Hardware Design** successfully bridged theoretical concepts with industry applications. Students gained valuable insights into **FPGA architecture, Verilog HDL, and Python integration**, enhancing their **skills for VLSI and Embedded Systems projects**.



Coordinator:

Dr. Anamika Jain

Report on Expert Lecture Series (Odd Semester 2024–25)

Department of Electronics and Communication Engineering, Maharaja Agrasen Institute of Technology

The Department of Electronics and Communication Engineering at Maharaja Agrasen Institute of Technology organized a **5-lecture expert series** during the **odd semester of the academic year 2024–25** for **3rd-year students**. The lectures were delivered by **Mr. Vaibhav Mishra** and **Mr. Deepanshu**, distinguished professionals from **Aujas Company**.

This expert lecture series focused on key topics from the subject **Microelectronics (ECC-305)** in the 5th semester. The initiative aimed to bridge the gap between **industry and academia**, providing students with exposure to **VLSI design methodologies, IC fabrication technologies, EDA tools, and circuit simulation techniques**. Through these sessions, students gained valuable insights into **practical workflows, modern semiconductor trends, and professional design practices** used in the microelectronics industry.

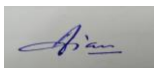
Summary of Expert Lecture Series

S. No.	Date	Topic / Title	Speaker & Organization	Venue / Mode & Time	No. of Students	Coordinators	Key Highlights / Outcomes
1	22nd Aug 2024	“Introduction to Microelectronics and VLSI Design Flow”	Mr. Vaibhav Mishra, Aujas Company	Room 446, 12:00 PM – 1:00 PM	35	Dr. Anamika Jain	Provided an overview of microelectronics, VLSI methodologies, front-end & back-end design flows, and career opportunities in semiconductors.
2	10th Sep 2024	“IC Fabrication Technologies”	Mr. Vaibhav Mishra, Aujas Company	Room 446, 12:00 PM – 1:00 PM	37	Dr. Anamika Jain	Covered IC fabrication steps—oxidation, diffusion, lithography, etching, and deposition. Emphasized process precision and advancements in nanometer-scale technologies.
3	17th	“VLSI Design Flow from	Mr. Deepanshu,	Room 446,	30	Dr. Anamika	Explained the complete VLSI design cycle from RTL

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	Sep 2024	RTL Specification to GDS"	Aujas Company	12:00 PM – 1:00 PM		Jain	coding to GDS file generation. Discussed front-end and back-end stages, logic optimization, and verification.
4	22nd Oct 2024	"Introduction to EDA Tools"	Mr. Deepanshu, Aujas Company	Room 446, 12:00 PM – 1:00 PM	25	Dr. Anamika Jain	Introduced major EDA tools for design, simulation, and verification. Explained front-end and back-end automation and industry applications.
5	5th Nov 2024	"Schematic Entry and Digital Circuit Simulation"	Mr. Vaibhav Mishra, Aujas Company	Online (Google Meet), 7:00 PM – 8:00 PM	40	Dr. Anamika Jain	Demonstrated schematic entry, digital circuit creation, and simulation techniques. Emphasized verification, debugging, and real-world design practices.

Overall Summary:

The **Expert Lecture Series on Microelectronics (ECC-305)** provided an excellent learning platform for students to connect classroom theory with industrial practices. Through these five lectures, participants gained practical exposure to **VLSI design flow, IC fabrication, EDA tools, and circuit simulation**, fostering both technical competence and professional readiness for careers in **VLSI, semiconductor design, and microelectronics**.



Coordinator:

Dr. Anamika Jain

