

Silicon: The Cornerstone of Modern Microelectronics



Silicon Day @ UNIMIB

Silicon remains the cornerstone of microelectronics thanks to its abundance, low cost, and optimal bandgap, which enables precise charge carrier control in advanced CMOS circuits packing billions of transistors on a single chip. This powers everything from microprocessors and sensors to photovoltaic cells, with decades of refined fabrication ensuring unmatched scalability and reliability.

Students in **materials science**, **physics**, and **chemistry** should dive into silicon to connect fundamental concepts like doping, band structure, and defect engineering to cutting-edge applications. This knowledge opens doors to high-demand careers in semiconductor R&D, including silicon photonics, quantum devices, and booming sectors like AI hardware and renewables. That's why **UNIMIB**, leveraging its historical partnership with **GlobalWafers MEMC**, organizes a dedicated silicon workshop open to all students.

February 4, 2026, room U6-21

13.30-13.40	Institutional Greetings	
13.40-13.50	Introduction to GlobalWafers MEMC	E. Barbera
13.50-15.00	Applications of Si Wafers in Electronics	G. Esuperanzi
15.00-16.00	Crystal Process	M.V. Ciampolillo
16.00-16.15	Break	
16.15-17.45	Wafering Processes	E. Corsi, F. Tapparo

February 5, 2026, room U6-21

13.30-14.40	Epitaxy and Thermal Treatments	E. Corsi, C. Gatti
14.40-15.55	Measurement Techniques for Si Wafers	C. Sanna
15.55-16.10	Break	
16.10-17.30	Characterization Techniques for Si Wafers	C. Sanna