

Lecturer	Prof. Dr. Mehdi B. Tahoori
Course Objectives	The objective of this module is to have a hands-on practice on major steps in digital design and test automation flow, from system-level specification to physical design and verification, using industrial EDA toolsets which are predominantly used in the industry and academia. The participants will work on some sample designs and go through all major design and test steps, one by one, in different sessions of the module. So, by the end of this module, they become familiar with the steps and tool chain in the digital design and test automation flow.
Contents	The topics include system-level specification and simulation; high-level synthesis; logic-level synthesis and simulation; design for testability; test pattern generation and fault simulation; physical design and verification; timing analysis and closure; area, delay, and power estimation and analysis.
Learning Targets/ Skills	<p>After course completion, participants should be able to:</p> <ul style="list-style-type: none"> • Understand different steps in EDA • Operate EDA tools and handle essential tasks • Understand and perform the system level design specification and simulation • Understand and perform the RTL level design and simulation • Discover reliability issues of digital circuit by ATPG tools • Understand and perform circuit level simulation and extract basic characteristics of the circuit and optimized them
Pre-Requisites	Basic knowledge of electronics and digital design, C programming
Duration	Approx. 5x8 h
Teaching Method	Basic lecture with slides, discussions, lab work
Course Material	Slides, lab work materials, user manuals
Literature	
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