INTEGRATED CIRCUIT TESTING CERTIFICATE

Requirements

Testing integrated circuits is a critical element in the integrated circuit industry. In fact, testing has become the bottle-neck for many companies, with inefficient test programs preventing the release of products onto the market. With few colleges offering courses in this area, students at RHIT have a unique specialization opportunity, making them marketable and extremely valuable in the integrated circuit industry.

This certificate intends to provide the student with a solid background in test and product engineering and broaden that background with other courses pertinent to the test and product engineering field. A strong test/product engineer requires knowledge about integrated circuit design, systems design, board design, semiconductor fabrication, and statistics. Therefore, courses in these areas can be chosen for the elective portion of the certificate.

The test and product engineering certificate could be completed by an electrical or computer engineering student without overloading if the certificate courses are mapped to all but one of the Area, Technical, and Free electives. Electives have been chosen so that students can pursue the semiconductor certificate or a math minor in conjunction.

Certificate Requirements

Code	Title	Hours
ECE 351	Analog Electronics	4
Select two of the following:		8
ECE 557	Analog Test & Product Engineering	
ECE 558	Mixed-Signal Test & Product Engineering	
ECE 531	Digital Test & Product Engineering	
Select three of the following:		12
ECE 551	Digital Integrated Circuit Design	
ECE 552	Analog Integrated Circuit Design	
ECE 553	Radio-Frequency Integrated Circuit Design	
ECE 343	High-Speed Digital Design (required for CPE program)	
ECE 416	Introduction to MEMS: Fabrication & Applications	
ECE 454	System Level Analog Electronics	
ECE 557	Analog Test & Product Engineering (if not used for required testing course)	
ECE 558	Mixed-Signal Test & Product Engineering (if not used for required testing course)	
ECE 531	Digital Test & Product Engineering (if not used for required testing course)	
PH 405	Semiconductor Materials & Applications	
NE 406	Semiconductor Devices & Fabrication	
EMGT E445	Quality Methods	
EMGT E446	Statistical Methods in Six Sigma	
Total Hours		**24**

For further information about the certificate program, please contact the ECE department.