## FI587 Processing and Characterization of Semiconductor Materials

Processing and Characterization of Semiconductor Materials					
Undergraduate					
FI587					
-					
-					
7 <sup>th</sup>					
Dadi Rusdiana					
Dadi Rusdiana					
Bahasa Indonesia					
Elective Course					
Contact hours per week during the semester	Class Size				
2 hours 30 minutes	20				
The total workload is 136 hours/8160 minutes (4.8 ECTS) per semester, consisting of 35 hours/2100 minutes lectures (1.24 ECTS) 42 hours/2520 minutes structured activities (1.48 ECTS) and 42 hours/2520 minutes self-study (1.71 ECTS) per week for 14 weeks 17 hours/1020 minutes for two exams (0.6 ECTS).					
Credit points: 4.8 ECTS					
Pre-requisites course(s): FI560 Solid State Physics					
<ul> <li>After taking this course the students have ability to:</li> <li>CLO1. Explain the technique of making semiconductor materials and their characterization both conceptually and procedurally</li> <li>CLO2. Develop and apply it in accordance with the development of science and technology.</li> <li>Techniques for making bulk targets, techniques for making thin layers of semiconductors, techniques for making masks and etchings in the lithography process, thin film characterization methods such as X-ray differentiate.</li> </ul>					
	Undergraduate FI587 - - 7 <sup>th</sup> Dadi Rusdiana Dadi Rusdiana Dadi Rusdiana Bahasa Indonesia Elective Course Contact hours per week during the semester Contact hours per week during the semester 2 hours 30 minutes The total workload is 136 hours/2 42 hours/2520 minutes structured hours/2520 minutes structured hours/2520 minutes self-study (1.7 17 hours/1020 minutes for two exant 4.8 ECTS FI560 Solid State Physics After taking this course the students CLO1. Explain the technique of ma their characterization both co CLO2. Develop and apply it in acco science and technology. Techniques for making bulk targets of semiconductors, techniques for lithography process, thin film chara diffraction, scanning electron spectroscopy, and measurement of				

	The final mark will be weight as follow:						
	No	CLO	Assessment Object	Assessment Techniques	Weight		
	1	CLO1	Subject specific competences: a. Assignments b. Exam	Written	10 %		
			- Mid exam	Written test	35%		
Study/exam achievements:			- Final exam	Written test	35%		
	2	CLO2	Subject specific competences: - Experiment	Written	10%		
			report - Presentati on	Performance	10%		
	Total	100%					
Forms of media:	Board, LCD Projector, Laptop/Computer, LMS						
Literature:	<ol> <li>G.S. May and C.J. Spanos, (2006). Fundamentals of Semiconductor Manufacturing and Process Control, 1st Edition, Wiley-IEEE Press</li> <li>S.A. Campbell, (2012). Fabrication Engineering at the Micro- and Nanoscale (The Oxford Series in Electrical and Computer Engineering), 4th Edition, Oxford University Press</li> <li>M.P. Groover, (2011). Introduction to Manufacturing Processes, 1st Edition Wiley.</li> </ol>						

## PLO and CLO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CLO1												
CLO2												