

Class Syllabus

Course Information	School Year	2022	School Semester	집중이수	Class Number	ECE9128	Class Code	
	Course Name	고급 집적회로 설계 (Advanced Integrated Circuit Design)			Course Type	English		
	Credit Theory Practice	3-3-0			Lecture Type			
	Lecturing Department	DEPARTMENT OF ELECTRONIC ENGINEERING			Department in Charge	DEPARTMENT OF ELECTRONIC ENGINEERING		
	Lecture Schedule	2022.7.4-7.25 (Mon-Fri, 9am-12am)						
Information about the Faculty	Department	Electrical and Electronic Engineering, Nanyang Technological Univ.			Name	Taehyung Kim		
	Contact				E-MAIL	thkim@ntu.edu.sg		
	Homepage							
Course Schedule	2022.7.4 09:00-12:00 Basic principles of low-power circuits (1) 2022.7.5 09:00-12:00 Basic principles of low-power circuits (2) 2022.7.6 09:00-12:00 Basic low-power circuit design techniques (1) 2022.7.7 09:00-12:00 Basic low-power circuit design techniques (2) 2022.7.8 09:00-12:00 Advanced low-power circuit design techniques (1) 2022.7.11 09:00-12:00 Advanced low-power circuit design techniques (2) 2022.7.12 09:00-12:00 Adaptive circuit design techniques to compensate variations (1) 2022.7.13 09:00-12:00 Adaptive circuit design techniques to compensate variations (2) / Midterm report submission 2022.7.14 09:00-12:00 Low voltage circuit design technique to maximize energy efficiency (1) 2022.7.15 09:00-12:00 Low voltage circuit design technique to maximize energy efficiency (2) 2022.7.18 09:00-12:00 Low voltage embedded memories for energy-efficient systems (1) 2022.7.19 09:00-12:00 Low voltage embedded memories for energy-efficient systems (2) 2022.7.20 09:00-12:00 Introduction to Artificial Intelligence and machine learning techniques 2022.7.21 09:00-12:00 In-memory computing for AI and ML systems (1) 2022.7.22 09:00-12:00 In-memory computing for AI and ML systems (2) 2022.7.25 09:00-12:00 Final exam							
Course Objective	This course covers various design techniques to implement energy-efficient digital integrated circuits for embedded/AI/ML applications.							