

Course List for international Doctor of Philosophy (Ph.D.) Degree Program (Offered by Department of Electrical Engineering), Chang Gung University
(For 2022 Calendar Year Admission)

R: Required; E: Elective													
Fields	R/E	Course Title	Credits	Year of Class	1st Semester	2nd Semester	Fields	R/E	Course Title	Credits	Year of Class	1st Semester	2nd Semester
College compulsory course	R	English Technical Writing(1)(2)	2	1st	1	1	Biomedical Engineering and Circuit Systems	E	Biomedical Application of Chip Design and Experimental	3	1st		3
								E	Artificial Intelligence and Pattern Recognition	3	1st		3
General Requirement	R	Seminar(1)(2)	4	1st	2	2		E	Advanced Computer Architecture	3	1st		3
	R	Seminar(3)(4)	4	2nd	2	2		E	Design and Application of Mixed-Signal Integrated Circuits	3	1st		3
	R	Ph.D. thesis	6					E	Nano Circuit Design	3	1st		3
	E	Scientific Writing	3	1st		3		E	VLSI Computer-Aided Circuit Design	3	2nd	3	
	E	Advanced English Writing	0	2nd	0	0		E	Biomedical Imaging System	3	2nd	3	
								E	Embedded Systems Programming	3	2nd	3	
								E	Biophotonic engineering and experiments	3	2nd	3	
Communications	E	Number Theory	3	1st	3			E	Bionedical Information Processing	3	2nd		3
	E	Optoelectronics	3	1st		3		E	Medical Instrumentation	3	2nd		3
	E	Communication Theory	3	1st		3							
	E	Principle and Application of Computer Vision	3	1st		3	Power and Control	E	Fuzzy Control	3	1st	3	
	E	Advanced Error Control Cording and Applications	3	1st		3		E	Artifical Neural Network	3	1st		3
	E	Cryptology	3	2nd	3			E	Power System Stability and Control	3	1st		3
	E	Wireless Network	3	2nd	3			E	Solid State Energy Conversion	3	1st		3
	E	Network Security	3	2nd		3		E	Renewable Energy Technologics	3	1st		3
E	Adaptive Filter Principle	3	2nd		3	E		Power Quality	3	2nd	3		
Additional regulation	E	Biomedical Electronics	3	1st	3			E	Nonlinear Control	3	2nd	3	
	E	Medical Imaging	3	2nd	3			E	Advanced Topics of Electric Machines and Drives	3	2nd	3	
	E	SOC Systems Design Overview	3	1st	3		E	Electrical Machine Control	3	2nd		3	
	E	Digital Silicon Intellectual Property Design	3	1st	3		E	Electromagnetic Transients Analysis	3	2nd		3	
	E	Biomedical Signal Analysis	3	1st	3		E	Adaptive Control	3	2nd		3	
Additional regulation	1. Graduation credits: 34 (10 credits for the General Requirement courses including 8 credits of Seminar (1)(2)(3)(4) , 2 credits of English Technical Writing(1)(2), and at least 18 credits from the elective courses. 2. 6 credits of thesis will be awarded upon the completion of oral defense exam. 3. A total of at most 9 credits from the courses offered by the College of Engineering other than this graduate institute can be counted for fulling the elective course requirement for the candidate of this graduate institute. 4. The certification of English proficiency is mandatory based on the requirement of "The implementation plan of English capability testing for graduate students of Engineering School at Chang Gung University" 5. "Thesis Writing" courses are required for the 2nd and above years and the 6 credits of "Ph.D. Thesis" will be granted after the pass of Ph.D. desertation defense. 6. Ph.D. students must take the compulsory Seminar course in the first year and second year (total 8 credit hours). 7. Students must complete 'English Technical Writing (1)' with a minimum score of 70 before they are eligible to enroll in 'English Technical Writing (2)'.												

Chair of Department:

Wen-piao Lin 09/14

2023/09/14