

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

(For 2019 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
General Requirement	R	Seminar(1)	1	1st	1		Biomedical Engineering and Circuit Systems	E	Medical Physics	3	1st		3
	R	Seminar(2)	1	1st		1		E	Design and Application of Mixed-Signal Integrated Circuits	3	1st		3
	R	Seminar(3)	1	2nd	1			E	Nano Circuit Design	3	1st		3
	R	Seminar(4)	1	2nd		1		E	VLSI Computer-Aided Circuit Design	3	2nd	3	
	R	Ph.D. thesis	6					E	VLSI Digital Signal Processing Design	3	2nd	3	
	R	English Technical Writing (1) (2)	2	1st	1	1		E	Biomedical Imaging System	3	2nd	3	
	E	Scientific Writing	3	1st		3		E	Embedded Systems Programming	3	2nd	3	
	E	Advanced English Writing	0	4th	0	0		E	Bionedical Information Processing	3	2nd		3
Communications	E	Number Theory	3	1st	3		Power and Control	E	Medical Instrumentation	3	2nd		3
	E	Optoelectronics	3	1st		3		E	Fuzzy Control	3	1st	3	
	E	Communication Theory	3	1st		3		E	Artificial Neural Network	3	1st		3
	E	Detection and Evaluation Theory	3	1st		3		E	Power System Stability and Control	3	1st		3
	E	Queueing Theory	3	1st		3		E	Solid State Energy Conversion	3	1st		3
	E	Advanced Digital Signal Processing	3	1st		3		E	Nonlinear Control	3	2nd	3	
	E	Principle and Application of Computer Vision	3	1st		3		E	Power Quality	3	2nd	3	
	E	Advanced Error Control Cording and Applications	3	1st		3		E	Renewable Energy Technologies	3	2nd	3	
	E	Cryptology	3	2nd	3			E	Robust Control	3	2nd	3	
	E	Wireless Network	3	2nd	3			E	Advanced Topics of Electric Machines and Drives	3	2nd	3	
	E	Network Security	3	2nd		3		E	Electrical Machine Control	3	2nd		3
	E	Spread Spectrum Communication	3	2nd		3		E	Electromagnetic Transients Analysis	3	2nd		3
	E	Adaptive Filter Principle	3	2nd		3		E	Adaptive Control	3	2nd		3
		E	Biomedical Electronics	3	1st	3							
E		Medical Imaging	3	2nd	3								
E		SOC Systems Design Overview	3	1st	3								
E		Digital Silicon Intellectual Property Design	3	1st	3								
E		Biomedical Application of Chip Design and Experimental	3	1st		3							
E		Pattern Recognition	3	1st		3							
E		Advanced Computer Architecture	3	1st		3							
E		Biomedical Signal Analysis	3	1st		3							
Comments	1. Graduation credits: 30 (12 credits for the General Requirement courses including 6 credits of Ph.D. thesis, and at least 18 credits from the elective courses.												
	2.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.												
	3. The certification of English proficiency is mandatory based on the requirement of "The implementation plan of English capability testing for Ph. D. students of Engineering School at Chang Gung University"												
	4. "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.												
	5. Seminar (1)(2)(3)(4) are required for the 1st and 2nd years (1 credit for each course). Total 8 semesters of Seminar courses have to pass before graduation. This requirement is not applicable to the Ph.D. students who graduate within 4 academic years and pass all the Seminar courses every semester before graduation. The time in school of the 5th and above year Ph.D. students will be managed by their academic advisors and basically should attend the lab weekly meeting to maintain the interaction in academic study.												

Chair of Department:

Wen-piao Lin

2019/04/03