Curriculum

☒ Majors of Semiconductor System Engineering (반도체시스템전공)

Year	Semester	Course Code	Course Title	Credit-Lecture Hr.-Designing Hr. for accreditation for engineering education.-Prac.Training
1	2	EL6001	Introduction to Semiconductor System	1-1-0-0
1	2	EL6002	Basic Circuit Theory and Lab.	3-2-0-2
1	2	EL6003	Introduction to Programming and Practice	3-2-0-2
1	2	EL6004	Basic Creative Design	2-0-2-0
2	1	EL6005	Electromagnetics 1	3-3-0-0
2	1	EL6006	Circuit Theory	3-3-0-0
2	1	EL6007	Electronic Circuits 1	3-3-0-0
2	1	EL6008	Digital Circuits	3-3-0-0
2	1	EL6009	EDA Tool's Practical Use and Electronic Circuit Lab 1	1-0-0-2
2	2	EL6010	Electromagnetics 2	3-3-0-0
2	2	EL6011	C Programming Application Practice	3-2-0-2
2	2	EL6012	Electronic Circuits 2	3-3-0-0
2	2	EL6013	HDL Design	3-1-2-0
2	2	EL6014	EDA Tool's Practical Use and Electronic Circuit Lab 2	1-0-0-2
3	1	EL6015	μ-Processor and Practice	3-2-0-2
3	1	EL6016	Semiconductor Physics	3-3-0-0
3	1	EL6017	Digital Integrated Circuit	3-3-0-0
3	1	EL6018	Power Electronic Circuit	3-3-0-0
3	1	EL6019	Signal and System	3-3-0-0

☒ Majors of Semiconductor System Engineering (반도체시스템전공)

3	1	EL6020	Control Engineering	3-3-0-0
3	1	EL6021	Analog and Sensor Circuit Application Design	3-1-2-0
3	2	EL6022	Embedded System Design	3-1-2-0
3	2	EL6023	Semiconductor Device	3-3-0-0
3	2	EL6024	Electric Machinery and Control Circuit	3-3-0-0
3	2	EL6025	Digital Signal Processing	3-3-0-0
3	2	EL6026	Control System	3-3-0-0
3	2	EL6027	Analog Integrated Circuits	3-3-0-0
3	2	EL6028	SoC Application and Design	3-1-2-0
4	1	EL6029	Creative Design Project 1	2-0-2-0
4	1	EL6030	Advanced Topics on Semiconductor System	1-1-0-0
4	1	EL6031	Power System Design	3-1-2-0
4	1	EL6032	Full Custom IC Design	3-1-2-0
4	1	EL6033	Digital Back-end Design	3-1-2-0
4	1	EL6034	Machine Learning	3-3-0-0
4	1	EL6035	Intelligent Control System and Practice	3-2-0-2
4	1	EL6036	Semiconductor Process	3-3-0-0
4	2	EL6037	Creative Design Project 2	2-0-2-0
4	2	EL6038	Semiconductor Evaluation and Analysis	3-3-0-0
4	2	EL6039	Energy Conversion System	3-3-0-0
4	2	EL6040	Display and Drive Circuit	3-3-0-0
4	2	EL6041	Semiconductor Equipment	3-3-0-0
4	2	EL6042	System Programming	3-3-0-0

⊠ Majors of Control and Robot Engineering (제어및로봇전공)

Year	Semester	Course Code	Course Title	Credit-Lecture Hr.-Designing Hr. for accreditation for engineering education.-Prac.Training
1	2	EL2001	Logic Circuits	3-3-0-0
1	2	EL2002	Basic Creative Design	2-0-2-0
1	2	EL2014	Basic Circuit and Practice	1-0-0-2
2	1	EL2003	Electromagnetics 1	3-3-0-0
2	1	EL2004	Circuits Theory 1	3-3-0-0
2	1	EL2005	Electronic Circuits 1	3-3-0-0
2	1	EL2007	Logic Circuits Practice	1-0-0-2
2	1	EL2009	HDL Design	3-1-2-0
2	1	EL2021	Computer Architecture	3-3-0-0
2	2	EL2006	μ-Processor 1	3-2-0-2
2	2	EL2010	Electromagnetics 2	3-3-0-0
2	2	EL2011	Circuits Theory 2	3-3-0-0
2	2	EL2012	Electronic Circuits 2	3-3-0-0
2	2	EL2013	Electronic Circuits Practice 1	1-0-0-2
2	2	EL2030	C Programming Application Design	3-1-2-0
3	1	EL2015	μ-Processor 2	3-2-0-2
3	1	EL2017	Control Engineering 1	1-0-0-2
3	1	EL2018	Communication Engineering	3-3-0-0
3	1	EL2048	Sensor and Measurement Engineering	3-3-0-0
3	1	EL2020	Electronic Circuits Practice 2	1-0-0-2
3	1	EL2028	Signal and System	3-2-0-2
3	1	EL2044	Windows Programming	3-2-0-2
3	1	EL2045	Renewable Energy	3-3-0-0

3	2	EL2024	Control Engineering 2	3-3-0-0
3	2	EL2026	Robot Engineering	3-3-0-0
3	2	EL2025	Control Engineering Practice	1-0-0-2
3	2	EL2016	PLC Design	3-1-2-2
3	2	EL2050	Power Electronics Experiments	1-0-0-2
3	2	EL2029	Power Electronics	3-3-0-0
3	2	EL2034	Digital Signal Processing	3-3-0-0
3	2	EL2036	Motor Control	3-3-0-0
3	2	EL2047	Introduction to Algorithm	3-3-0-0
4	1	EL2032	Creative Design Project 1	2-0-2-0
4	1	EL2031	Automatic System	3-3-0-0
4	1	EL2033	Digital Control	3-3-0-0
4	1	EL2035	Mobile Robot Design	3-1-2-0
4	1	EL2040	Image Processing	3-3-0-0
4	2	EL2037	Creative Design Project 2	2-0-2-0
4	2	EL2049	Artificial Intelligence	3-3-0-0
4	2	EL2046	Robot Application System	3-3-0-0

⊠ Majors of Electronic Communication Engineering (전자통신전공)

Year	Semester	Course Code	Course Title	Credit-Lecture Hr.-Designing Hr. for accreditation for engineering education.-Prac.Training
1	2	EL3001	Circuits Theory 1	3-3-0-0
1	2	EL3002	Basic Creative Design	2-0-2-0
2	1	EL3003	Circuits Theory 2	3-3-0-0
2	1	EL3004	Electronic Circuits 1	3-3-0-0
2	1	EL3005	Logic Circuits and Lab.	3-2-0-2
2	1	EL3009	Electromagnetics 1	3-3-0-0
2	1	EL3007	Engineering SW Lab.	3-2-0-2
2	2	EL3046	Electromagnetics 2	3-3-0-0
2	2	EL3010	Electronic Circuits Lab.	1-0-0-2
2	2	EL3011	Electronic Circuits 2	3-3-0-0
2	2	EL3012	μ-Processor Lab.	3-2-0-2
2	2	EL3013	Java Programming	3-2-0-2
3	1	EL3014	Communication Engineering 1	3-3-0-0
3	1	EL3016	Signal and System	3-3-0-0
3	1	EL3017	Digital System Design Lab.	3-2-0-2
3	1	EL3018	Control System 1	3-3-0-0
3	1	EL3019	Semiconductor Engineering 1	3-3-0-0
3	1	EL3020	Mobile Programming	2-1-0-2
3	1	EL3021	Probability and Random Signal Processing	3-3-0-0
3	2	EL3022	Communication Engineering 2	3-3-0-0
3	2	EL3045	Communication Engineering Lab.	2-0-0-4
3	2	EL3023	Date Communication	3-3-0-0

3	2	EL3024	Digital Signal Processing	3-3-0-0
3	2	EL3025	Coding Theory	3-3-0-0
3	2	EL3026	Control System 2	3-3-0-0
3	2	EL3028	Semiconductor Engineering 2	3-3-0-0
3	2	EL3029	Discrete Signal Systems Design	3-1-2-0
4	1	EL3030	Convergence Design Project 1	2-0-2-0
4	1	EL3008	Data Structures	3-3-0-0
4	1	EL3031	Communication Network Theory	3-3-0-0
4	1	EL3032	Digital Communication System	3-3-0-0
4	1	EL3034	Intelligent Embedded Systems Theory	3-1-2-0
4	1	EL3047	Machine Learning	3-3-0-0
4	2	EL3036	Convergence Design Project 2	2-0-2-0
4	2	EL3037	Mobile Communication	3-3-0-0
4	2	EL3039	Wireless Sensor Network	2-2-0-0
4	2	EL3040	Smart Vehicle Engineering	2-2-0-0
4	2	EL3041	Information Security	3-3-0-0

☒ Majors of Electronics and Radio Communication Engineering (전자및전파전공)

Year	Semester	Course Code	Course Title	Credit-Lecture Hr.-Designing Hr. for accreditation for engineering education.-Prac.Training
1	2	EL4001	Circuits Theory 1	3-3-0-0
1	2	EL4002	Basic Creative Design	2-0-2-0
2	1	EL4003	Electromagnetics 1	3-3-0-0
2	1	EL4004	Circuits Theory 2	3-3-0-0
2	1	EL4005	Logic Circuits	3-3-0-0
2	1	EL4006	Basic Circuit Lab.	1-0-0-2
2	2	EL4007	C Programming Application Practice	3-2-0-2
2	2	EL4008	Electromagnetics 2	3-3-0-0
2	2	EL4009	Electronic Circuits and Lab. 1	4-3-0-2
2	2	EL4011	μ-Processor and Practice	3-2-0-2
2	2	EL4044	Application Software Lab.	3-2-0-2
3	1	EL4013	Transmission line Theory	3-3-0-0
3	1	EL4014	Electromagnetics Theory	3-3-0-0
3	1	EL4015	Electronic Circuits and Lab. 2	4-3-0-2
3	1	EL4016	Communication Engineering 1	3-3-0-0
3	1	EL4018	Control Engineering	3-3-0-0
3	1	EL4019	μ-Processor Application and Design	3-1-2-0
3	1	EL4020	Microwave Engineering Lab. 1	1-0-0-2
3	1	EL4012	HDL Design	3-1-2-0
3	2	EL4021	Microwave Circuit Design	3-1-2-0
3	2	EL4022	Digital Signal Processing	3-3-0-0
3	2	EL4023	Communication Engineering 2	3-3-0-0

3	2	EL4024	Numerical Analysis and Practice	3-2-0-2
3	2	EL4025	Semiconductor Engineering	3-3-0-0
3	2	EL4026	Communication Engineering Lab.	1-0-0-2
3	2	EL4027	Microwave Engineering Lab. 2	1-0-0-2
3	2	EL4028	Design and application of Electronic Circuits	3-1-2-0
3	2	EL4045	Data Communication	3-3-0-0
4	1	EL4029	Convergence Design Project 1	2-0-2-0
4	1	EL4030	Antenna Engineering	3-3-0-0
4	1	EL4031	Digital Communication System	3-3-0-0
4	1	EL4032	DSP Application and Design	3-1-2-0
4	1	EL4033	EMC Engineering	3-3-0-0
4	1	EL4034	Internet of Things	3-3-0-0
4	2	EL4036	Convergence Design Project 2	2-0-2-0
4	2	EL4038	Satellite Communication	3-3-0-0
4	2	EL4039	CMOS RF Integrated Circuit	3-3-0-0
4	2	EL4046	Artificial Intelligence and Practice	3-2-0-2

☒ Majors of Electronics and IT Convergence (전자IT융합전공)

Year	Semester	Course Code	Course Title	Credit-Lecture Hr.-Designing Hr. for accreditation for engineering education.-Prac.Training
1	2	EL5002	Creative Thinking and Innovation (Basic Design)	2-0-2-0
1	2	EL5003	Introduction on Electronic IT Convergence	2-2-0-0
2	1	EL5001	Circuits Theory	3-3-0-0
2	1	EL5004	Digital Circuits	3-3-0-0
2	1	EL5007	C Programming Application Practice	3-2-0-2
2	1	EL5042	IT Practical Project 1	3-0-3-0
2	1	EL5024	Design Thinking	3-3-0-0
2	2	EL5005	Electronic Circuits	3-3-0-0
2	2	EL5014	μ-Processor and Practice	3-2-0-2
2	2	EL5015	Data Structures and Algorithms	3-2-0-2
2	2	EL5017	Practical TRIZ	3-3-0-0
2	2	EL5043	IT Practical Project 2	3-0-3-0
2	2	EL5050	C++ Programming	3-2-0-2
3	1	EL5018	μ-Processor Application and Practice	3-2-0-2
3	1	EL5021	Communication Engineering 1	3-3-0-0
3	1	EL5044	IT Practical Project 3	3-0-3-0
3	1	EL5019	Object-oriented Programming Languages	3-2-0-2
3	1	EL5022	Control Engineering	3-3-0-0
3	1	EL5049	Android Programming	3-3-0-0
3	2	EL5025	Creative Idea and Patent Application	2-0-2-0
3	2	EL5026	Embedded Systems and Practices	3-2-0-2

3	2	EL5027	Data Networks	3-3-0-0
3	2	EL5028	Communication Engineering 2	3-3-0-0
3	2	EL5047	HDL Design	3-0-3-0
3	2	EL5051	Operating System	3-3-0-0
4	1	EL5030	Creative Design Project 1	2-0-2-0
4	1	EL5031	Next-generation Mobile Communication	3-3-0-0
4	1	EL5032	Embedded Linux	3-3-0-0
4	1	EL5033	Network Programming	3-3-0-0
4	1	EL5034	Android Programming	3-3-0-0
4	1	EL5045	ROS based autonomous flying UAV	3-3-0-0
4	2	EL5036	Creative Design Project 2	2-0-2-0
4	2	EL5029	Internet of Things	3-3-0-0
4	2	EL5035	Blockchain and Security	3-3-0-0
4	2	EL5037	Military Real-time Software System	3-3-0-0
4	2	EL5038	Introduction to Machine Learning	3-3-0-0
4	2	EL5048	XR(Metabus) Programming	2-2-0-0