교과목 일람표 (*: Scheduled to be opened in the form of special lectures from 2022 to 2023)

▣ 학사과정

Classification	Course No.	Computer Code	Course Name	Lecture; Lab.; Credit	Semester	Track	Note
Elective basic courses	CE101	37.101	Introduction to Sustainable Civil Infra System and Environment	3:0:3	Spring, Fall		
Mandatory major courses	CE212	37.212	Environment and Sustainability: an Introduction for Engineers	3:0:3	Spring		
	CE250	37.250	Introduction to Smart City and Digital Infrastructure	3:0:3	Spring		
	CE252	37.252	Introduction to Data Science for Civil Engineers	3:1:3	Spring, Fall		
	CE253	37.253	Introduction to Sensing Technology for Civil Infrastructure Systems	3:0:3	Fall		
Elective major courses	CE201	37.201	Mechanics of Materials and Structures	3:0:3	Spring	Resilient Infrastructure	
	CE230	37.230	Introduction to Geotechnical Engineering	2:3:3	Spring	Resilient Infrastructure	
	CE240	37.240	Introduction to Architecture and Urbanism	3:0:3	Spring	Smart Urban Systems	
	CE254	37.254	Introduction to Environmental Science and Engineering	3:0:3	Fall	Sustainable Environment/Energy Infra-Systems	
	CE291	37.291	Introduction to Geospatial Analysis	3:2:3	Spring, Fall	Smart Urban Systems/Energy Infra-Systems	
	CE303	37.303	Introduction to Structural Dynamics and Earthquake Engineering	3:0:3	Fall	Resilient Infrastructure	
	CE312	37.312	Structural Analysis	3:0:3	Spring	Resilient Infrastructure	
	CE314	37.314	Principles of Structural Design	3:0:3	Fall	Resilient Infrastructure	
	CE315	37.315	Smart and Sustainable Construction Materials	2:3:3	Spring	Resilient Infrastructure	
	CE316	37.316	Data Acquisition and Signal Processing for Civil Systems	3:0:3	Fall	Resilient Infrastructure	
	CE322	37.322	Environmental monitoring and modeling*	3:0:3	Fall	Sustainable Environment	
	CE331	37.331	Energy Geomechanics	3:0:3	Spring	Energy Infra-Systems	
	CE332	37.332	Geotechnical Structure Design	3:0:3	Fall	Resilient Infrastructure	
	CE340	37.340	Construction IT and Robotics	3:0:3	Spring, Fall	Smart Urban Systems	
	CE342	37.342	Design Build*	3:0:3	Spring	Smart Urban Systems	
	CE345	37.345	Urban and Regional Planning	3:0:3	Fall	Smart Urban Systems	
	CE350	37.350	Introduction to Mobility Systems Engineering	3:0:3	Spring	Smart Urban Systems	
	CE352	37.352	System Modeling and Analysis for Construction IT	3:0:3	Spring	Energy Infra-Systems	
	CE355	37.355	Smart Mobility Project	3:0:3	Summer, Winter	Smart Urban Systems	

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Elective major courses	CE356	37.356	Artificial Intelligence Application in Mobility	3:1:3	Spring, Fall	Smart Urban Systems	
	CE371	37.371	Chemistry for Sustainable Environment	3:0:3	Fall	Sustainable Environment	
	CE372	37.372	Water and Wastewater Engineering	3:0:3	Fall	Sustainable Environment	
	CE373	37.373	Hydraulics and Hydrology	3:0:3	Spring, Fall	Sustainable Environment/Energy Infra-Systems	
	CE377	37.377	Smart Water Management for Sustainable Environment	3:0:3	Spring	Sustainable Environment	
	CE393	37.393	Construction Management and Project Scheduling	3:0:3	Spring	Resilient Infrastructure	
	CE421	37.421	Energy Geotechnology and Geology	3:0:3	Fall	Energy Infra-Systems	◎
	CE422	37.422	Underground City*	3:0:3	Spring	Smart Urban Systems/Energy Infra-Systems	◎
	CE437	37.437	Soil and Site improvement	3:0:3	Fall	Resilient Infrastructure	◎
	CE441	37.441	Urban Design Studio	3:0:3	Fall	Smart Urban Systems	◎
	CE444	37.444	Architectural Design Studio*	3:0:3	Spring	Smart Urban Systems	◎
	CE446	37.446	Space and Society*	3:0:3	Fall	Smart Urban Systems	◎
	CE462	37.462	Introduction to Resilience Engineering	3:0:3	Fall	Resilient Infrastructure	◎
	CE473	37.473	Engineered Bioprocesses for Environmental Sustainability	3:0:3	Fall	Sustainable Environment	◎
	CE475	37.475	Waste Management for Circular Environments	3:0:3	Fall	Sustainable Environment/Energy Infra-Systems	◎
	CE476	37.476	Civil Infrastructure and Environment Design Using Artificial Intelligence and Smart Technology	1:6:3	Spring, Fall		◎
	CE481	37.481	Special Topics in Civil and Environmental Engineering	3:0:3	Spring, Fall		◎ Subtitle is assigned
	CE482	37.482	Short course in Civil and Environmental Engineering Ⅰ	1:0:1	Summer		Subtitle is assigned
	CE483	37.483	Short course in Civil and Environmental Engineering Ⅱ	2:0:2	Summer		Subtitle is assigned
	CE484	37.484	Special Topics in Civil and Environmental Engineering Ⅰ	1:0:1	Spring, Fall		◎ Subtitle is assigned
	CE485	37.485	Special Topics in Civil and Environmental Engineering Ⅱ	2:0:2	Spring, Fall		◎ Subtitle is assigned
Research	CE490	37.490	B.S. Thesis Research	0:6:3	Spring, Fall		
	CE495	37.495	Individual Study	0:6:1	All		
	CE496	37.496	Seminar	1:0:1	Spring, Fall		

◎: Course mutually recognized by undergraduate and graduate programs

※Course classification, course title, and mutual recognition of credits may differ according to the effective year of the requirements.

▣ 대학원과정

Classification	Course No.	Computer Code	Course Name	Lecture; Lab.; Credit (Assignment)	Semester	Note
Elective Courses	CE501	37.501	Advanced Mechanics of Materials	3:0:3(5)	Spring	◎
	CE502	37.502	Advanced Soil Mechanics	3:1:3(4)	Spring	◎
	CE504	37.504	Advanced Environmental Chemistry	3:1:3(12)	Fall	◎
	CE505	37.505	Applied Mathematics	3:0:3	Spring	◎
	CE514	37.514	Advanced Structural Dynamics	3:1:3(12)	Fall	◎
	CE515	37.515	Mechanics of Composite Materials	3:1:3(12)	Fall	
	CE516	37.516	Finite Element Analysis	3:1:3(6)	Fall	
	CE518	37.518	Reliability Analysis of Structures	3:0:3(8)	Fall	
	CE519	37.519	Bridge Engineering & Design	3:1:3(6)	Fall	◎
	CE520	37.520	Introduction to Smart Structure Technology	2:3:3(5)	Spring	◎
	CE530	37.530	Geophysical Exploration for Energy Resources	3:0:3	Fall	◎
	CE531	37.531	Geotechnical Experiments	1:6:3(6)	Spring	◎
	CE532	37.532	Rock Engineering with IT	3:1:3(4)	Fall	◎
	CE533	37.533	Site Investigation and IT based Monitoring	3:2:3(6)	Fall	◎
	CE534	37.534	Analysis of Soil Behavior by IT	3:0:3(4)	Fall	
	CE536	37.536	Design of Smart-City Underground Structures	3:1:3(4)	Spring	
	CE539	37.539	Earth Retaining Structures for Smart-City	3:0:3(4)	Fall	◎
	CE541	37.541	Sustainable Infrastructure Systems Engineering	3:0:3	Fall	◎
	CE545	37.545	Applications of Artificial Intelligence to Transportation System Analyses	3:0:3	Spring or Fall	◎
	CE547	37.547	Transportation System analysis and Operations	3:0:3	Spring	◎
	CE551	37.551	Soft Computing Techniques for Engineering Design	3:0:3	Spring	◎
	CE553	37.553	IT for Smart City	3:0:3	Spring	◎
	CE554	37.554	Mechanical Design of Civil Robot	3:0:3	Spring or Fall	◎
	CE558	37.558	Introduction to Civil Robotics	3:0:3	Spring or Fall	◎
	CE560	37.560	Smart and Green Environmental Design	3:0:3	Spring	◎
	CE563	37.563	Modeling Autonomous Driving and Intelligent Transportation Systems	3:0:3	Fall	◎
	CE564	37.564	Technology and the Smart City	3:0:3	Spring	◎
	CE571	37.571	Environmental Engineering Laboratory	1:6:3(10)	Fall	◎
	CE572	37.572	Environmental Microbiology and Biotechnology	3:0:3	Fall	◎
	CE573	37.573	Advanced Membrane-based Water Treatment	3:1:3(6)	Fall	
	CE577	37.577	Integrated Water Resources Management	3:1:3(5)	Fall	◎
	CE579	37.579	Hazardous and Industrial Waste Treatment	3:1:3(8)	Fall	
	CE580	37.580	Structural Pattern Recognition for Statistical Health Monitoring	2:3:3	Spring	◎
	CE582	37.582	Environmental Electrochemistry	3:0:3	Spring	
	CE583	37.583	Advanced Dynamics and Nonlinear Control of Civil Robots	3:0:3	Spring	◎
	CE590	37.590	Elastoplastic Analysis and Design of Structural Systems	3:1:3	Spring	◎

Classification	Course No.	Computer Code	Course Name	Lecture; Lab.; Credit (Assignment)	Semester	Note
	CE596	37.596	Special Topics in Structural Engineering Design for U-Space	2:3:3	Fall	
	CE597	37.597	Special Topics in Geotechnical Engineering Design for U-Space	3:1:3(4)	Spring	
	CE598	37.598	Special Topics in Environmental Engineering Design for U-Space	3:1:3(4)	Fall	
	CE599	37.599	Special Topics in U-Space Construction IT Design	3:0:3	Spring	◎
	CE611	37.611	Inelastic Analysis of Reinforced Concrete Structures	3:0:3(6)	Spring	
	CE614	37.614	Stability of Structures for Smart-City	3:1:3(6)	Fall	
	CE617	37.617	Earthquake Engineering	3:1:3(8)	Spring	
	CE619	37.619	Vibration Control of Structures	3:1:3(12)	Fall	
	CE623	37.623	Fracture Mechanics of Concrete	3:0:3	Fall	
	CE631	37.631	Advanced Numerical Soil Mechanics	2:3:3(6)	Spring	
	CE633	37.633	Advanced Soil Dynamics	3:1:3(6)	Spring	
	CE636	37.636	Geotechnical Earthquake Engineering & Design	3:0:3(4)	Spring	
	CE637	37.637	Theory of Geophysics	3:0:3(4)	Spring	
	CE672	37.672	Smart City Environmental Unit Processes	3:1:3(5)	Spring	
	CE772	37.781	Advanced Topics in Civil and Environmental Engineering	3:0:3	Spring or Fall	Subtitle is assigned
Research	CE960	37.960	M.S. Thesis Research	0:3:3	Spring, Fall	
	CE966	37.966	Seminar (M.S,)	1:0:1	Spring, Fall	
	CE980	37.980	Ph.D. Thesis Research	0:3:3	Spring, Fall	
	CE986	37.986	Seminar (Ph.D.)	1:0:1	Spring, Fall	

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