

Department of Civil Engineering
115 Academic Year Freshman Course Planning Table

School Compulsory Courses				26 Credits	
Field		Course Name	credit	Grade	
Fundamental courses (12)	Foreign Language (Q)	English (I)	4	1 st year	
		optional foreign language for sophomore year	4	2nd year	
	Ability of Expressing in Spoken and Written Chinese	Ability of Expressing in Spoken and Written Chinese	2	1 st year	
	Learning and Development (N)	Learning in University	1	1 st year	
	Learning and Practice of Club (K)	Learning and Practice of Club	1	1 st year	
General Education & Core Courses (12)	Exploring Sustainability/INTRODUCTION TO ARTIFICIAL INTELLIGENCE		1/1	1 st year	
	Humanity categories	Classics in World Literature (L)	2	Each part from categories only can take up to 2 subjects for 4 credits.	
		History and Culture(P)			
		Philosophy and Religion (V)			
		Arts Appreciation and Invention (M)			
	Science categories	Global Outlook (T)	2		
		Futures Studies (R)			
		Social Analysis (W)			
		Civil Society and Participation (S)			
	Science categories	Information & Computer Education (O)	2		
		Global Technology Revolution (Z)			
		Natural Sciences (U)			
All-Out Defense Education Military Training and Nursing			1		
Physical Education			4	Not counted toward graduation credits.	
Campus and Community Service-Learning			2	1 st year	

Department Compulsory Courses			65 credits	
Course Name		credit	Grade	
INTRODUCTION TO CIVIL ENG.		1	1 st year	
CALCULUS		3	1 st year	
GENERAL PHYSICS. (I)		2	1 st year	
ENGINEERING GRAPHICS AND COMPUTER DRAWING		2	1 st year	
SURVEYING. (I)		2	1 st year	
SURVEYING LAB. (I)		1	1 st year	
APPLIED MECHANICS		3	1 st year	
BASIC ENGINEERING MATHEMATICS		3	1 st year	
GENERAL PHYSICS (II)		2	1 st year	
SURVEYING (II)		2	1 st year	
CIVIL ENGINEERING CONCEPTUAL DESIGN		1	1 st year	
ENGINEERING MATERIALS		2	2nd year	
ENGINEERING MATERIALS LABORATORY		1	2nd year	
STRENGTH OF MATERIALS		3	2nd year	
ENGINEERING MATHEMATICS (I)		3	2nd year	
COMPUTER PROGRAMMING		2	2nd year	
SOIL MECHANICS		3	2nd year	
SOIL MECHANICS LABORATORY		1	2nd year	
STRUCTURAL THEORY		3	2nd year	
FLUID MECHANICS		3	2nd year	
CONSTRUCTION MANAGEMENT		2	2nd year	
TRANSPORTATION ENGINEERING		3	3rd year	
REINFORCED CONCRETE		3	3rd year	
NUMERICAL METHOD		2	3rd year	
ENGINEERING GEOLOGY		3	3rd year	

ENGINEERING STATISTICS	2	3rd year
CONSTRUCTION METHODS	2	3rd year
FOUNDATION ENGINEERING	3	3rd year
CIVIL ENGINEERING CAPSTONE PROJECT	2	4th year

Department Elective Courses			09 Credits	
Course Name		credit	Grade	
SURVEYING LAB. (II)		1	1 st year	
DYNAMICS		2	2nd year	
BIM APPLICATION AND PROGRAMMING FUNDAMENTALS FOR ENGINEERS		2	2nd year	
STRENGTH OF MATERIALS(II)		2	2nd year	
ENGINEERING MATHEMATICS (II)		3	2nd year	
SOIL MECHANICS (II)		3	3rd year	
STRUCTURAL THEORY (II)		3	3rd year	
SOFTWARE APPLICATION IN ENGINEERING COMPUTING		2	3rd year	
ENGINEERING ECONOMICS		2	3rd year	
PROJECT PLANNING AND CONTROL		2	3rd year	
STRUCTURAL LAB.		2	3rd year	
STEEL STRUCTURE DESIGN		3	3rd year	
STRUCTURE MATRIX ANALYSIS		3	3rd year	
REINFORCED CONCRETE (II)		3	3rd year	
HIGHWAY ENGINEERING		2	3rd year	
COMPUTER-AIDED ENGINEERING TECHNOLOGY AND EXCERISE		2	3rd year	
3D MODELING AND COMPUTER AIDED DESIGN		3	3rd year	
SEMINAR		1	3rd year	
STRUCTURE DESIGN		2	4th year	
PRESTRESSED CONCRETE DESIGN		2	4th year	
CONSTRUCTION ESTIMATING		2	4th year	
ECOLOGICAL ENGINEERING METHODS		2	4th year	
PRACTICUM IN EDUCATIONAL TECHNOLOGY		3	4th year	
LOW CARBON GREEN BUILDING		2	4th year	
BRIDGES DESIGN		2	4th year	
INTRODUCTION TO WIND ENGINEERING		2	4th year	
SOIL IMPROVEMENT		2	4th year	
JUNIOR STRUCTURAL DYNAMICS		2	4th year	
TRACKWORK ENGINEERING		2	4th year	
TUNNEL ENGINEERING		2	4th year	
INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEM		2	4th year	
CONSTRUCTION LAW AND CONTRACT		2	4th year	
APPLICATION OF GEOSYNTHETICS		2	4th year	

◎ The department elective courses are mainly based on the courses offered in the current semester. The above list is for reference only. °

- (1) Total credits of compulsory subjects: 91 credits (including 26 credits of general education courses)
- (2) Minimum total number of credits required for elective courses in this department: 9 credits.
- (3) Total credits of other elective courses: 28 credits
- (4) Total credits for graduation: 128 credits