

## 2012 Undergraduate Curriculum for Civil Engineering ( I )

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recita- tion	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0004311	Ethical Conduct and Fundamentals of Law	General Assessment	3	48	32		16		3.0															College of Humanities and Social Sciences
0004312	Modern Chinese History	Exam	2	32	32		0		2.0															College of Humanities and Social Sciences
0000011	Physical Education-1	Exam	1	32	32		0		1.0															Department of Physical Education
0000007	College English (Band One)	Exam	4	64	64		0		4.0															College of Foreign Languages
0001903	Calculus (Engineering)-1	Exam	5.5	99	64		0	35	5.5															College of Applied Sciences
0001908	Linear Algebra (Engineering)	Exam	3	54	48		0	6	3.0															College of Applied Sciences
0002784	Fundamentals of National Defense	General Assessment	2	32	32		0					2												Students Affairs Office
0004359	Fundamentals of Chinese Sociology	Exam	4	64	48		16				4.0													College of Humanities and Social Sciences
0000012	Physical Education-2	General Assessment	1	32	32		0				1.0													Department of Physical Education
0000008	College English (Band Two)	Exam	4	64	64		0				4.0													College of Foreign Languages
0000072	University Physics I-1	Exam	4	64	64		0	0			4.0													College of Applied Sciences
0001904	Calculus (Engineering)-2	Exam	5.5	99	64		0	35			5.5													College of Applied Sciences
0004361	Introduction to Philosophy	Exam	3	48	48		0						3.0											College of Humanities and Social Sciences
0000013	Physical Education-3	General Assessment	1	32	32		0						1.0											Department of Physical Education
0000009	College English (Band Three)	Exam	4	64	64		0						4.0											College of Foreign Languages
0000073	University Physics I-2	Exam	4	64	64		0	0					4.0											College of Applied Sciences
0003333	Probability and Statistics (Engineering)	Exam	3	54	50		0	4					3.0											College of Applied Sciences
0000014	Physical Education-4	General Assessment	1	32	32		0								1.0									Department of Physical Education
0000010	College English (Band Four)	General Assessment	4	64	64		0								4.0									College of Foreign Languages
0005699	The C Programming Language III	General Assessment	2	32	32		0											2.0						College of Computer Science
University Requirements		Sub-total	61	1074	962		32	80	18.5		18.5	2	15		5				2					
0000066	Engineering Graphics V	Exam	3	48	48	0			3.0															College of Mechanical Engineering and Applied Electronics

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recita- tion	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0007074	Freshmen Seminar Course	Exam	1	16	16	0			1															College of Architecture and Civil Engineering
0007161	Introduction to Civil Engineering I (Chinese/English)	Exam	1.5	24	24	0			1.5															College of Architecture and Civil Engineering
0000205	Engineering Mechanics III	Exam	3.5	56	56	0					3.5													College of Mechanical Engineering and Applied Electronics
0000163	Mechanics of Materials III	Exam	4	64	56	8							4.0											College of Mechanical Engineering and Applied Electronics
0003130	Civil Engineering Materials	Exam	3.5	56	46	10							3.5											College of Architecture and Civil Engineering
0001918	Mechanics of Materials V	General Assessment	1.5	24	10	14									1.5									College of Mechanical Engineering and Applied Electronics
0000215	Surveying	General Assessment	2	32	26	6									2.0									College of Architecture and Civil Engineering
0000373	Basic Hydraulics	General Assessment	2	32	28	4									2.0									College of Architecture and Civil Engineering
0000353	Engineering Geology	General Assessment	2	32	28	4									2.0									College of Architecture and Civil Engineering
0000223	Structural Mechanics I-1	Exam	4	64	64	0									4.0									College of Architecture and Civil Engineering
0000224	Structural Mechanics I-2	Exam	3	48	48	0											3							College of Architecture and Civil Engineering
0006321	Fundamentals of Concrete Structures	Exam	4.5	72	68	4											4.5							College of Architecture and Civil Engineering
0006322	Soil Mechanics	Exam	2.5	40	34	6											2.5							College of Architecture and Civil Engineering
0007764	Theory of Elasticity	Exam	1.5	24	24	0											1.5							College of Architecture and Civil Engineering
0003136	Civil Engineering Construction	Exam	4	64	64	0												4.0						College of Architecture and Civil Engineering
0002570	Engineering Mechanics VIII	General Assessment	1	16	12	4							1.0											
0006323	Principles of Steel Structure	Exam	2	32	32	0												2.0						College of Architecture and Civil Engineering
Discipline Requirements		Sub-total	46.5	744	684	60			5.5		3.5		8.5		11.5		11.5		6					
0004746	Machine Shop Training A	General Assessment	1	30	0	0	30		1.0															College of Mechanical Engineering & Applied Electronics Technology
0001942	Field Course in Engineering Graphic I	General Assessment	2	60	0	0	60				2.0													College of Mechanical Engineering and Applied Electronics
0004964	Physics Laboratory (Engineering)-1	General Assessment	1	24	2	22	0				1.0													College of Applied Sciences
0007069	Social Practices	General Assessment	2	48	0	48	0									2.0								College of Humanities and Social Sciences
0003087	Practices of National Defense	General Assessment	1	30	0	0	30					1												Students Affairs Office
0004965	Physics Laboratory (Engineering)-2	General Assessment	1.5	36	0	36	0						1.5											College of Applied Sciences

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recita- tion	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0001200	Practice of Surveying	General Assessment	1	30	0	0	30									1.0								College of Architecture and Civil Engineering
0006338	Highway Survey Practice	General Assessment	1	30	0	0	30									1.0								College of Architecture and Civil Engineering
0005374	Cognitive Practice	General Assessment	1	30	0	0	30									1.0								College of Architecture and Civil Engineering
0001219	Engineering Geology Field Work	General Assessment	1	30	0	0	30									1.0								College of Architecture and Civil Engineering
0001292	Curriculum Design for Building Architecture	General Assessment	1	30	0	0	30										1							College of Architecture and Civil Engineering
0007772	Course Design of Bridge Concrete Structures	General Assessment	2.5	75	0	0	75										2.5							College of Architecture and Civil Engineering
0007773	Course Design of Bridge Engineering	General Assessment	1.5	45	0	0	45										1.5							College of Architecture and Civil Engineering
0001203	Practice of Road Alignment Survey and Design	General Assessment	3.5	105	0	0	105												3.5					College of Architecture and Civil Engineering
0001291	Bridge Substructure and Foundation Project	General Assessment	1	30	0	0	30													1.0				College of Architecture and Civil Engineering
0001318	Engineering of Embankment and Pavement Design Project	General Assessment	1	30	0	0	30													1				College of Architecture and Civil Engineering
0006336	Concrete Structure and Masonry Structure Design Project-1	General Assessment	1.5	45	0	0	45												1.5					College of Architecture and Civil Engineering
0006341	Steel Structure Course Design I	General Assessment	1.5	45	0	0	45													1.5				College of Architecture and Civil Engineering
0006340	Curriculum of Road Alignment Survey and Design	General Assessment	1	30	0	0	30												1					College of Architecture and Civil Engineering
0007774	Concrete Structure and Masonry Structure Design Project-2	General Assessment	2	60	0	0	60													2				College of Architecture and Civil Engineering
0003465	Practice of Foundation Design	General Assessment	1	30	0	0	30										1							College of Architecture and Civil Engineering
0007685	Professional Design Program	General Assessment	2	60	0	0	60														2			College of Architecture and Civil Engineering
0001325	Design Work for Engineering Construction	General Assessment	1	30	0	0	30														1.0			College of Architecture and Civil Engineering
0007686	Professtional Practice	General Assessment	4	120	0	0	120														4			College of Architecture and Civil Engineering
0005233	Senior Project	General Assessment	16	480	0	0	480																16	College of Architecture and Civil Engineering
Practical Requirements		Sub-total	53	1563	2	106	1455		1		3	1	1.5			6	6		6	5.5	7		16	
Discipline Electives			2.5	40	40										2.5									
Major Requirements			4	64	64													2		2				
Major Electives			18	288	288												5.5		7		5.5			
GEESEM:EM			2	32	32												2							

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
General Education Electives			13.5	216	216									3		4		4.5		2				
Electives		Sub-total	40	640	640	0	0	0	0	0	0	0	0	0	5.5	0	11.5	0	13.5	0	9.5	0	0	
Total for Theoretical Instruction			147.5	2458	2286		92	80	24		22	2	23.5		22		23		21.5		9.5		0	
Total for Practical Instruction			41.5	1218	2	106	1110		1		3	1	1.5			5	2		1.5	3.5	7		16	
Innovation Requirements			4	96			96											2		2				
Total			193	3772	2288	106	1298	80	25	0	25	3	25	0	22	5	25	0	25	3.5	18.5	0	16	

Notation: GEESEM:EM is the abbreviation for General Education Electives for Science and Engineering Majors: Economics and Management.

## 2012 Undergraduate Curriculum for Civil Engineering ( II )

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters																Responsible Unit
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII	8		
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	16 W		
0000107	Electrical Engineering Technology II	General Assessment	2.5	40	30	0	10								2.5									College of Electronic Information and Control Engineering	
Discipline Electives		Sub-total	2.5	40	30		10								2.5										
0003468	Hydrology of Bridge and Culvert	General Assessment	1	16	16	0	0								1									College of Architecture and Civil Engineering	
0007775	Highway Engineering Survey	Exam	1.5	24	20	4	0								1.5									College of Architecture and Civil Engineering	
0000350	Building Architecture	Exam	3.5	56	56	0	0										3.5							College of Architecture and Civil Engineering	
0007776	Road Alignment Survey and Design	Exam	2.5	40	40	0	0										2.5							College of Architecture and Civil Engineering	
0006330	Bridge Engineering III-1	Exam	2.5	40	36	4	0										2.5							College of Architecture and Civil Engineering	
0003457	Rock Mechanics	Exam	2	32	32	0	0												2					College of Architecture and Civil Engineering	
0006324	Concrete Structure and Masonry Construction	Exam	3	48	48	0	0												3					College of Architecture and Civil Engineering	
0006331	Bridge Engineering III-2	Exam	1.5	24	24	0	0												1.5					College of Architecture and Civil Engineering	
0006332	Tunnel and Tunneling II	Exam	2	32	32	0	0												2					College of Architecture and Civil Engineering	
0007777	Bridge Substructures and Foundations	Exam	2	32	32	0	0												2					College of Architecture and Civil Engineering	
0006327	Embankment and Pavement Engineering	Exam	3	48	48	0	0												3					College of Architecture and Civil Engineering	
0006325	Design of Steel Structures	Exam	1.5	24	24	0	0												1.5					College of Architecture and Civil Engineering	
0007778	Foundation Engineering	Exam	2	32	32	0	0										2							College of Architecture and Civil Engineering	
0007779	Underground Structure Design	Exam	2	32	32	0	0												2					College of Architecture and Civil Engineering	
0000656	Seismic Design of Buildings	Exam	2	32	32	0	0														2			College of Architecture and Civil Engineering	
0007694	Seismic Design of Bridge and Underground Engineering	Exam	2	32	32	0	0														2			College of Architecture and Civil Engineering	
0007696	Underground Space Planning	General Assessment	1.5	24	24	0	0														1.5			College of Architecture and Civil Engineering	
0000852	Design of Tall Buildings	Exam	2	32	32	0	0														2			College of Architecture and Civil Engineering	
0003134	Budgetary Estimate of Civil Engineering	General Assessment	2	32	32	0	0														2			College of Architecture and Civil Engineering	
0007696	Construction Project Management	General Assessment	2	32	32	0	0														2			College of Architecture and Civil Engineering	

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0007697	Railway Track Engineering	Exam	3	48	48	0	0											3					College of Architecture and Civil Engineering	
0007698	Planning and Design of Urban Rail Transit	Exam	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0007699	Embankment Engineering	Exam	2.5	40	40	0	0											2.5					College of Architecture and Civil Engineering	
0007700	Elevated Structure Engineering of Urban Rail Transit	Exam	2	32	32	0	0													2			College of Architecture and Civil Engineering	
Major Requirements		Sub-total	51	816	808	8	0								2.5		10.5		22.5		15.5			
0007767	Integrated Technique for Road Survey and Design	General Assessment	2	32	32	0	0										2						College of Architecture and Civil Engineering	
0002407	Technology of Structural Testing	General Assessment	2	32	20	12	0											2					College of Architecture and Civil Engineering	
0003464	Finite Element Method of Structural Analysis	General Assessment	2	32	32	0	0											2					College of Architecture and Civil Engineering	
0007771	New Type Decoration Materials and Its Application	General Assessment	2	32	32	0	0											2					College of Architecture and Civil Engineering	
0007770	Ground Treatment	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0006335	Slope Engineering	General Assessment	2	32	32	0	0											2					College of Architecture and Civil Engineering	
0006333	Investigation Technology of Geotechnical Engineering	General Assessment	2	32	32	0	0											2					College of Architecture and Civil Engineering	
0007769	Road Engineering Blasting	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0007768	Numerical Analysis of Bridge Structures	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0006334	Foundation Pit Engineering	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0005915	Prestressed Concrete Structures	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0003461	Geotechnical Engineering Monitoring Technology	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0003455	Maintenance and Strengthening for Bridges	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0000870	Traffic Engineering	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0001005	Large-span Space Structures	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0001007	Real Estate Evaluation	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0001019	Building Supervision and Contract Management	General Assessment	2	32	32	0	0											2					College of Architecture and Civil Engineering	
0007714	Theory and Technique of Urban Rail Transit	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0007715	Theory and Technology of Track Translation	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recitation	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0007716	Monitoring & Detection Technology in Engineering Construction	General Assessment	1.5	24	24	0	0													1.5			College of Architecture and Civil Engineering	
0007717	Auxiliary Construction Method of Underground Engineering	General Assessment	2	32	32	0	0													2			College of Architecture and Civil Engineering	
0007718	Track Laying and Maintenance	General Assessment	2	32	32	0	10													2			College of Architecture and Civil Engineering	
Major Electives		Sub-total	43.5	696	678	12	10										2		12		29.5			

Vice-Director:

Vice-President:

Date:

Date: