

CE100
Introduction to
Civil Engineering

Civil Engineering
Curriculum

Lecture 8

Terms and Definitions

GPA Calculations New System

Range-Grade		Value
95-100	A+	4
90-94	A	3.75
85-89	B+	3.5
80-84	B	3
75-79	C+	2.5
70-74	C	2
65-69	D+	1.5
60-64	D	1
0-59	F	0

GPA Calculations New System

Courses Taken	Grade	Value	Credit H	Equivalence	
Course aa	A+	4	4	16	
Course bb	A	3.75	3	11.25	
Course cc	B+	3.5	3	10.5	
Course B	B	3	3	9	
Course C	C+	2.5	2	5	
Course D	D	1.5	1	3	
Course F	F	0	4	0	
		11	20	54.75	2.275

Applied Civil Engineering Curriculum

Freshman	CE 100	Introduction to C	1	0	1	ICS 101	Computer Programming	2	3	3	
	CHEM 101	General Chemistry I	3	4	4	ENGL 102	English Composition II	3	0	3	
	ENGL 101	English Composition I	3	3	4	MATH 102	Calculus II	4	0	4	
	MATH 101	Calculus I	1	3	4	PHYS 102	General Physics II	3	3	4	
	PHYS 101	General Physics I	3	4	4	PE 102	Physical Education II	0	2	1	
	PE 101	Physical Education I	0	2	1	IAS 111	Islamic Ideology	2	0	2	
			14	9	17				14	8	17
Sophomore	ENGL 214	Technical Report Writing	3	0	3	CHEM 111	Basics of Env. Chemistry	2	0	2	
	IAS 202	Arabic Rhetoric	2	0	2	ME 201	Dynamics	3	0	3	
	CE 201	Statics	3	0	3	MATH 230	Engg. Fluid Mechanics	3	0	3	
	MATH 201	Calculus III	3	0	3	CE 203	Structural Mechanics I	3	0	3	
	CE 213	Computer Graphics	1	6	3	IAS 222	The Quran and Sunnah	2	0	2	
	EE 204	Fund. Of Electric Circuits	2	3	3	CE 260	Surveying	2	3	3	
			14	9	17	CE 230	Engg. Fluid Mechanics	3	0	3	
									18	3	19
Junior	IAS 333	The Islamic System	2	0	3	CE 353	Geotechnical Engg. I	3	3	4	
	CE 305	Structural Analysis I	3	0	3	CE 341	Transportation Engg.	3	0	3	
	CE 303	Structural Materials	3	3	4	CE 343	Transportation Engg. Lab	0	3	1	
	CE 317	Com. Methods in CE	2	3	3	CE 315	Reinforced Concrete I	2	3	3	
	STAT 319	Prob. & Stats for Engrs.	2	3	3	IAS 300	Arabic Terminology	2	0	2	
	CE 331	Engg. Hydrology	2	3	3	CE 370	Water & Wastewater	3	3	4	
			14	12	18				14	8	17
summer	CE 350	Coop Field Work	0	0	0						
Senior	CE 351	Continue Coop Work	0	0	9	ECON 403	Engineering Economy	3	0	3	
							CE 420	Construction Engineering	3	0	3
							CE 4xx	Applied CE Design Elect. I	3	0	3
							XE 4xx	Applied CE Design Elect. II	3	0	3
							IAS Xxx	Technical Elective	2	0	2
							IAx 400	Technical Arabic Syntax	2	0	2
			0	0	9				19	0	19
Total Credits required in Degree Program : 133											

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Civil Engineering Science Curriculum

Freshman	CE 100	Introduction to C	1	0	1	ICS 101	Computer Programming	2	3	3	
	CHEM 101	General Chemistry I	3	4	4	ENGL 102	English Composition II	3	0	3	
	ENGL 101	English Composition I	3	0	3	MATH 102	Calculus II	4	0	4	
	MATH 101	Calculus I	4	0	4	PHYS 102	General Physics II	3	3	4	
	PHYS 101	General Physics I	3	3	4	PE 102	Physical Education II	0	2	1	
	PE 101	Physical Education I	0	2	1	IAS 111	Islamic Ideology	2	0	2	
			14	9	17				14	8	17
Sophomore	IAS 200	Arabic Rhetoric	2	0	2	CHEM 111	Basics of Env. Chemistry	2	0	2	
	CE 201	Statics	3	0	3	ME 201	Dynamics	3	0	3	
	MATH 201	Calculus III	3	0	3	MATH 202	Elementary Diff. Equations	3	0	3	
	ME 203	Thermodynamics	3	0	3	CE 203	Structural Mechanics I	3	0	3	
	CE 260	Surveying	2	3	3	IAS 222	The Quran and Sunnah	2	2	2	
	EE 204	Fund. Of Electric Circuits	2	3	3	CE 213	Computer Graphics	1	6	3	
			15	6	17	CE 230	Engg. Fluid Mechanics	3	0	3	
									17	6	19
Junior	ENGL 214	Tech. Report Writing	3	0	3	CE 353	Geotechnical Engg. I	3	3	4	
	CE 305	Structural Analysis I	3	0	3	CE 343	Transportation Engg. Lab.	0	3	1	
	CE 303	Structural Materials	3	3	4	CE 315	Reinforced Concrete I	2	3	3	
	CE 317	Com. Methods in CE	2	3	3	IAS 300	Arabic Terminology	2	0	2	
	STAT 319	Prob. & Stats for Engrs.	2	3	3	CE 341	Transportation Engg.	3	0	3	
	CE 331	Engg. Hydrology I	2	3	3	CE 370	Water & Wastewater Engg.	3	3	4	
			15	12	19				13	12	17
summer	CE 399	Summer Work	0	0	0						
Senior	IAS 333	The Islamic System	2	0	2	CE 420	Construction Engg.	3	0	3	
	IAS 400	Technical Arabic Syntax	2	0	2	CE 4xx	Elective II	3	0	3	
	CE 411	CE Senior Design Project	0	9	3	CE 4xx	Elective III	3	0	3	
	CE 4xx	Elective I	3	0	3	XE Xxx	Technical Elective	3	0	3	
	ECON 403	Engineering Economy	3	0	3	IAS 4xx	IAS Elective	2	0	2	
				10	9	13				14	0
Total Credits required in Degree Program : 133											

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Structural & Material Engineering - Core

CE 201 Statics

CE 203 Structural Mechanics I

CE 303 Structural Materials

CE 305 Structural Analysis I

CE 315 Reinforced Concrete I

CE 420 Construction Engineering

Structural & Material Engineering - Electives

CE 405 Structural Analysis II

CE 406 Structural Mechanics II

CE 408 Steel Design I

CE 415 Reinforced Concrete II

CE 417 Reinforced Concrete III

CE 418 Steel Design II

CE 401 Concrete Technology

**CE 402 Durability, Evaluation &
Repair of Concrete Structures**

Geotechnical Engineering – Core & Electives

Core

CE 353 Geotechnical Engineering

Electives

CE 453 Geotechnical Engineering II

CE 454 Soil Stabilization & Site Improvement

CE 455 Foundation Design

CE 456 Seepage Analysis

Transportation Engineering

Core

CE 260 Surveying

CE 341 Transportation Engineering

CE 341 Transportation Engineering Laboratory

Transportation Engineering

Electives

CE 440 Highway & Airport Materials

CE 441 Design of Pavement

**CE 442 Construction & Maintenance
Of Highways & Airports**

CE 443 Highway Planning & Design

**CE 444 Traffic Engineering &
Roadway Safety**

**Water Resources
&
Environmental Engineering**

Core

**CE 111 Basics for Environmental
Chemistry**

CE 230 Engineering Fluid Mechanics

CE 331 Engineering Hydrology

**CE 370 Water & Wastewater
Engineering**

**Water Resources
&
Environmental Engineering**

Electives

CE 430 Engineering Hydrology II

CE 432 Hydraulic Engineering

CE 433 Ground Water Engineering

CE 434 Irrigation Engineering

**CE 435 Theory & Design of
Water Wells**

Transportation Core & Elective

Core

- CE 260 Surveying (3-3-3)
- CE 341 Transportation Engineering (3-3-3)
- CE 341 Transportation Engineering Laboratory (3-3-3)

Electives

- CE 440 Highway & Airport Materials (3-0-3)
- CE 441 Design of Pavement (3-0-3)
- CE 442 Construction & Maintenance of Highways & Airports (2-3-3)
- CE 443 Highway Planning & Design (2-3-3)
- CE 444 Traffic Engineering & Roadway Safety (2-3-3)

Geotechnical Core & Elective

Core

- CE 353 Geotechnical Engineering (3-3-3)

Electives

- CE 453 Geotechnical Engineering II (3-0-3)
- CE 454 Soil Stabilization & Site Improvement (3-0-3)
- CE 455 Foundation Design (2-3-3)
- CE 456 Seepage Analysis (2-3-3)

Water Resources & Environmental Engineering

Core

- CE 111 Basics for Environmental Chemistry (3-3-3)
- CE 230 Engineering Fluid Mechanics (3-3-3)
- CE 331 Engineering Hydrology (3-3-3)
- CE 370 Water & Wastewater Engineering (3-3-3)

Electives

- CE 430 Engineering Hydrology II (3-0-3)
- CE 432 Hydraulic Engineering (3-0-3)
- CE 433 Ground Water Engineering (2-3-3)
- CE 434 Irrigation Engineering (2-3-3)
- CE 435 Theory & Design of Water Wells (2-3-3)