

## Academic Study Plan for Civil and Environmental Engineering Department – Plan (136)

Level		1	2	3	4	5	6	7	Units
<b>3<sup>rd</sup></b>	<b>Course Code</b>		<b>MATH 105</b>	<b>PHY 103</b>	<b>GE 101</b>	<b>GE 102</b>	<b>GE 103</b>		<b>17</b>
	<b>Course Name</b>	University Requirement	Differential Calculus	General Physics	Fundamentals of Engineering Technology	Fundamentals of Engineering Drawing	Engineering Mechanics (Statics)		
	<b>Units/hours</b>	2 (2-0-0)	3 (3-1-0)	4 (3-1-2)	2 (1-0-2)	3 (1-0-4)	3 (3-1-0)		
	<b>Pre-requisites</b>	-	-	-	-	-	-		
<b>4<sup>th</sup></b>	<b>Course Code</b>	<b>MATH 106</b>	<b>MATH 107</b>	<b>GE 105</b>	<b>GE 108</b>	<b>CE 101</b>	<b>CE 102</b>		<b>17</b>
	<b>Course Name</b>	Integral Calculus	Algebra and Analytical Geometry	Chemistry	Engineering Mechanics (Dynamics)	Engineering Geology	Civil Engineering Drawing		
	<b>Units/hours</b>	3 (3-1-0)	3 (3-1-0)	3 (3-1-0)	3 (3-1-0)	2 (1-0-2)	3 (1-0-4)		
	<b>Pre-requisites</b>	<i>MATH 105</i>	-	-	<i>GE 103</i>	-	<i>GE 102</i>		
<b>5<sup>th</sup></b>	<b>Course Code</b>		<b>MATH 204</b>	<b>CE 210</b>	<b>CE 214</b>	<b>CE 240</b>	<b>CE 370</b>		<b>17</b>
	<b>Course Name</b>	University Requirement	Differential Equations	Soil Mechanics and Foundation Engineering I	Structural Analysis I	Hydraulics I	Surveying I		
	<b>Units/hours</b>	2 (2-0-0)	3 (3-1-0)	3 (2-1-2)	3 (3-1-0)	3 (2-1-2)	3 (2-1-2)		
	<b>Pre-requisites</b>	-	<i>MATH 106, MATH 107</i>	<i>CE 101</i>	<i>GE 103</i>	<i>GE 108</i>	<i>MATH 107</i>		
<b>6<sup>th</sup></b>	<b>Course Code</b>	<b>STAT 201</b>	<b>CEN 209</b>	<b>CE 212</b>	<b>CE 215</b>	<b>CE 217</b>	<b>CE 241</b>		<b>18</b>
	<b>Course Name</b>	Statistics and Probability	Computer Programming for Civil Engineering.	Properties and Strength of Materials I	Structural Analysis II	Reinforced Concrete Design I	Hydraulics II		
	<b>Units/hours</b>	3 (3-1-0)	3 (2-0-2)	3 (2-1-2)	3 (3-1-0)	3 (3-2-0)	3 (2-1-2)		
	<b>Pre-requisites</b>	-	-	-	<i>CE 214</i>	<i>CE 214</i>	<i>CE 240</i>		
<b>7<sup>th</sup></b>	<b>Course Code</b>		<b>GE 306</b>	<b>CE 311</b>	<b>CE 360</b>	<b>CE 363</b>	<b>CE 371</b>	<b>CE 380</b>	<b>17</b>
	<b>Course Name</b>	University Requirement	Engineering Report Writing	Soil Mechanics and Foundation Engineering II	Environmental Engineering I	Water Supply and Sewage Engineering	Surveying II	Highway and Traffic Engineering	
	<b>Units/hours</b>	2 (2-0-0)	2 (2-0-0)	3 (2-1-2)	2 (2-0-0)	2 (2-1-0)	3 (2-1-2)	3 (3-1-0)	
	<b>Pre-requisites</b>	-	<i>STAT 201</i>	<i>CE 210</i>	<i>GE 105</i>	<i>CE 241</i>	<i>CE 370</i>	<i>CE 370</i>	

## Structural Engineering Track

<b>8<sup>th</sup></b>	<b>Course Code</b>		<b>MATH 254</b>	<b>CE 313</b>	<b>CE 316</b>	<b>CE 318</b>	<b>CE 320</b>	<b>CE 399</b>	<b>17</b>
	Course Name	University Requirement	Numerical Methods	Properties and Strength of Materials II	Structural Analysis III	Reinforced Concrete Design II	Steel Structures Design I	Engineering Practice	
	Units/hours	2 (2-0-0)	3 (3-1-0)	3 (2-1-2)	3 (3-1-0)	3 (3-2-0)	3 (3-2-0)	0	
	Pre-requisites	-	MATH 204	CE 212	CE 215	CE 217	CE 214	Complete 90 Units	
<b>9<sup>th</sup></b>	<b>Course Code</b>		<b>GE 407</b>	<b>CE 419</b>	<b>CE 421</b>	<b>CE 425</b>	<b>CE 42-</b>	<b>CE 498</b>	<b>17</b>
	Course Name	University Requirement	Engineering Economy	Reinforced Concrete Design III	Steel Structures Design II	Computer Applications in Structural Engineering	Elective Course 1	Senior Design I	
	Units/hours	2 (2-0-0)	2 (2-1-0)	3 (3-2-0)	3 (3-2-0)	2 (1-0-2)	3 (3-1-0)	2 (1-0-2)	
	Pre-requisites	-	-	CE 318	CE 320	CEN 209	-	-	
<b>10<sup>th</sup></b>	<b>Course Code</b>		<b>GE 408</b>	<b>CE 422</b>	<b>CE 423</b>	<b>CE 424</b>	<b>CE 43-</b>	<b>CE 499</b>	<b>16</b>
	Course Name	University Requirement	Engineering Project Management	Methods and Equipment of Construction	Contracts and Specifications	Buildings Construction	Elective Course2	Senior Design II	
	Units/hours	2 (2-0-0)	2 (2-1-0)	2 (2-1-0)	2 (2-1-0)	3 (3-1-0)	3 (3-1-0)	2 (1-0-2)	
	Pre-requisites	-	-	-	-	CE 419	-	CE 498	

## Water and Environmental Engineering Track

<b>8<sup>th</sup></b>	<b>Course Code</b>		<b>MATH 254</b>	<b>CE 342</b>	<b>CE 343</b>	<b>CE 318</b>	<b>CE 320</b>	<b>CE 399</b>	<b>17</b>
	Course Name	University Requirement	Numerical Methods	Hydraulic Structures	Irrigation and Drainage Engineering	Reinforced Concrete Design 2	Steel Structures Design 1	Engineering Practice	
	Units/hours	2 (2-0-0)	3 (3-1-0)	3 (3-1-0)	3 (3-1-0)	3 (3-2-0)	3 (3-2-0)	0	
	Pre-requisites	-	MATH 204	CE 241	CE 241	CE 217	CE 214	Complete 90 Units	
<b>9<sup>th</sup></b>	<b>Course Code</b>		<b>GE 407</b>	<b>CE 444</b>	<b>CE 445</b>	<b>CE 461</b>	<b>CE 44-</b>	<b>CE 498</b>	<b>17</b>
	Course Name	University Requirement	Engineering Economy	Computer Applications in Water Engineering	Hydrology	Environmental Engineering II	Elective Course 3	Senior Design I	
	Units/hours	2 (2-0-0)	2 (2-1-0)	2 (1-0-2)	3 (3-1-0)	3 (2-0-2)	3 (3-1-0)	2 (1-0-2)	
	Pre-requisites	-	-	CEN 209	CE 241	CE 360	-	-	
<b>10<sup>th</sup></b>	<b>Course Code</b>		<b>GE 408</b>	<b>CE 422</b>	<b>CE 423</b>	<b>CE 463</b>	<b>CE 46-</b>	<b>CE 499</b>	<b>16</b>
	Course Name	University Requirement	Engineering Project Management	Methods and Equipment of Construction	Contracts and Specifications	Water and Wastewater Treatment	Elective Course 4	Senior Design II	
	Units/hours	2 (2-0-0)	2 (2-1-0)	2 (2-1-0)	2 (2-1-0)	3 (3-1-0)	3 (3-1-0)	2 (1-0-2)	
	Pre-requisites	-	-	-	-	CE 363	-	CE 498	

## Surveying and Transportation Engineering Track

<b>8<sup>th</sup></b>	<b>Course Code</b>		<b>MATH 254</b>	<b>CE 372</b>	<b>CE 381</b>	<b>CE 318</b>	<b>CE 320</b>	<b>CE 399</b>	<b>17</b>
	Course Name	University Requirement	Numerical Methods	Geodetic Surveying	Highway Materials and Construction	Reinforced Concrete Design II	Steel Structures Design I	Engineering Practice	
	Units/hours	2 (2-0-0)	3 (3-1-0)	3 (2-1-2)	3 (2-1-2)	3 (3-2-0)	3 (3-2-0)	0	
	Pre-requisites	-	<i>MATH 204</i>	<i>CE 371</i>	<i>CE 380</i>	<i>CE 217</i>	<i>CE 214</i>	<i>Complete 90 Units</i>	
<b>9<sup>th</sup></b>	<b>Course Code</b>		<b>GE 407</b>	<b>CE 473</b>	<b>CE 474</b>	<b>CE 482</b>	<b>CE 47-</b>	<b>CE 498</b>	<b>17</b>
	Course Name	University Requirement	Engineering Economy	Computer Applications in Surveying Engineering	Photogrammetry	Railway Engineering	Elective Course 5	Senior Design I	
	Units/hours	2 (2-0-0)	2 (2-1-0)	2 (1-0-2)	3 (3-1-0)	3 (3-1-0)	3 (3-1-0)	2 (1-0-2)	
	Pre-requisites	-	-	<i>CEN 209</i>	<i>CE 372</i>	<i>CE 371</i>	-	-	
<b>10<sup>th</sup></b>	<b>Course Code</b>		<b>GE 408</b>	<b>CE 422</b>	<b>CE 423</b>	<b>CE 475</b>	<b>CE 48-</b>	<b>CE 499</b>	<b>16</b>
	Course Name	University Requirement	Engineering Project Management	Methods and Equipment of Construction	Contracts and Specifications	Remote Sensing	Elective Course 6	Senior Design II	
	Units/hours	2 (2-0-0)	2 (2-1-0)	2 (2-1-0)	2 (2-1-0)	3 (3-1-0)	3 (3-1-0)	2 (1-0-2)	
	Pre-requisites	-	-	-	-	<i>CE 474</i>	-	<i>CE 498</i>	

<b>Univ. Req. = 12</b>	<b>College Req. = 42</b>	<b>Dept. Req. = 59</b>	<b>Track Req. = 23</b>	<b>Total = 136 units</b>
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