I	Introductory
D	Developing
A	Advanced

Terms	Course Number	Course Name	1.Knowledge Base	--1a. Demonstrate understanding of concepts in mathematics	--1b. Demonstrate understanding of concepts in natural science	--1c. Demonstrate understanding of engineering fundamentals	--1d. Demonstrate understanding of specialized engineering knowledge	2. Problem Analysis	--2a. Formulate a problem statement	--2b. Develop models to solve engineering problems including identifying	--2c. Critically evaluate solutions of engineering problems	3. Investigation	--3a. Design experiments to investigate complex engineering problems	--3b. Gather information from relevant sources to address complex	--3c. Synthesize information to reach valid conclusions	4. Design	--4a. Define design requirements and specifications for complex, open-	--4b. Criticaly evaluate and compare design choices	--4c. Generate and refine potential solutions to complex, open-ended design problems	5. Use of Engineering Tools	--5a. Select appropriate engineering tools , considering their limitations	--5b. Modify and/or create appropriate engineering tools, identifying	--5c. Use engineering tools appropriately	6. Individual and Team Work	--6a. Contribute as an active team member or leader to complete	--6b. Collaborate with others to complete tasks effectively as a team	7. Communication Skills	--7a. Orally present information within the profession and to society at	--7b. Communicate in a written format within the profession and to	--7c. Interpret information, including instructions	8. Professionalism	--8a. Articulate the roles and responsibilities of the professional engineer in society with reference to the protection of the public and its interest.	--8b. Describe the importance of codes, standards, best practices laws and regulations within engineering problems.	9. Impact of Engineering	--9a. Identify the relevance of and uncertainty associated with the	--9b. Analyze the social, health, safety and environmental aspects of an	10. Ethics & Equity	--10a. Identify ethical and unethical behavior in professional situations	--10b. Identify how an engineer is accountable to multiple stakeholders in engineering practice.	--10c. Identify equitable and inequitable situations or behaviors	11. Economics & Project Management	--11a. Apply project management techniques in engineering projects, with attention to risk and change.	--11b.Perform economic analyses of engineering projects with attention to uncertainty and limitations.	12. Life-long Learning	--12a. Identify gaps in their knowledge, skills and abilities	--12b. Obtain and evaluate information or training from appropriate	--12c. Reflect on the use of information received
1A	ENVE 100	Environmental and Geological Engineering Concepts							I				I	I	I				I		I	I			I				I				I							I											
	MATH 116	Calculus I		I					I						I																																					
	CIVE 115	Linear Algebra		I					I						I						I																															
	CHE 102	Chemistry for Engineers				I									I							I																														
	CIVE 104	Mechanics 1			I	I			I	I	I										I				I																					I					
	CSE 1	Complementry studies elective																																																	
	COOP 1																																																		
	WATPD20	Engineering Workplace Skills 1																																																	
1B	MATH 118	Calculus II		D					I						I																																				
	CIVE 121	Computational Methods		D		I			I	I	I			I							D	D	I																												
	GEOE 153	Earth Engineering			I	I			I	I				I	I		I	I							I				I																	I			I	I	I
	CIVE 105	Mechanics 2			I	D			I												I		I																												
	GENE 123	Electrical Circuits and Instrumentation				I			I	I					I							I																													
	COOP 2																																																		
	WkRprt100																																I																			
	WATPD21	Engineering Workplace Skills 2																																																	
2A	ENVE 223	Differential Equations		D					I	I					D																																				
	ENVE 224	Probability & Statistics		D					D	I	I		D	I	D							I																													
	EARTH 238	Introductory Structural Geology				I																																													
	ENVE 280	Fluid Mechanics																																																	
	CSE 2	Complementry studies elective																																																	
	GEOE 298	Seminar																																																	

I	Introductory
D	Developing
A	Advanced

Terms	Course Number	Course Name	1.Knowledge Base	--1a. Demonstrate understanding of concepts in mathematics	--1b. Demonstrate understanding of concepts in natural science	--1c. Demonstrate understanding of engineering fundamentals	--1d. Demonstrate understanding of specialized engineering knowledge	2. Problem Analysis	--2a. Formulate a problem statement	--2b. Develop models to solve engineering problems including identifying	--2c. Critically evaluate solutions of engineering problems	3. Investigation	--3a. Design experiments to investigate complex engineering problems	--3b. Gather information from relevant sources to address complex	--3c. Synthesize information to reach valid conclusions	4. Design	--4a. Define design requirements and specifications for complex, open-	--4b. Criticaly evaluate and compare design choices	--4c. Generate and refine potential solutions to complex, open-ended design problems	5. Use of Engineering Tools	--5a. Select appropriate engineering tools , considering their limitations	--5b. Modify and/or create appropriate engineering tools, identifying	--5c. Use engineering tools appropriately	6. Individual and Team Work	--6a. Contribute as an active team member or leader to complete	--6b. Collaborate with others to complete tasks effectively as a team	7. Communication Skills	--7a. Orally present information within the profession and to society at	--7b. Communicate in a written format within the profession and to	--7c. Interpret information, including instructions	8. Professionalism	--8a. Articulate the roles and responsibilities of the professional engineer in society with reference to the protection of the public and its interest.	--8b. Describe the importance of codes, standards, best practices laws and regulations within engineering problems.	9. Impact of Engineering	--9a. Identify the relevance of and uncertainty associated with the	--9b. Analyze the social, health, safety and environmental aspects of an	10. Ethics & Equity	--10a. Identify ethical and unethical behavior in professional situations	--10b. Identify how an engineer is accountable to multiple stakeholders in engineering practice.	--10c. Identify equitable and inequitable situations or behaviors	11. Economics & Project Management	--11a. Apply project management techniques in engineering projects, with attention to risk and change.	--11b.Perform economic analyses of engineering projects with attention to uncertainty and limitations.	12. Life-long Learning	--12a. Identify gaps in their knowledge, skills and abilities	--12b. Obtain and evaluate information or training from appropriate	--12c. Reflect on the use of information received
	COOP 3																																																		
	WATPDE1	Engineering Workplace Skills Elective 1																																																	
	CIVE 204	Fluid Mechanics				D			D	D			I		D		I					I			D	D			D																						
	CIVE 221	Advanced Calculus		D					I	I																																									
	EARTH 231	Mineralogy			D				I	?				?	?								I			D		I	D																				D	
	EARTH 235	Stratigraphy and Earth History				I																																													
2B	EARTH 260	Applied Geophysics 1				D																D	D						D																						
	CSE 3	Complementry studies elective																																																
	COOP 4																																																	
	GEOE 299	Seminar																																																
	WkRprt200																												D																					
	WATPDE2	Engineering Workplace Skills Elective 2																																																
	CIVE 353	Geotechnical I			D	D	I			I	I			D	I						D	D	I		D	D																								
	EARTH 232	Petrography				I																D																												
	EARTH 458	Physical Hydrogeology			D	D			D		I										I		I																											
	EARTH 458L	Physical Hydrogeology Lab			D	D															D	D	D						D																					
	CIVE 392	Economics and Life Cycle Analysis				I			A	I	A		D		A						A	A	A										D			I	D		I	I	I			A						
3A	ARCH 277* (T	Timber: Design, Structure and Construction for Engineers																																																
	CIVE 205* (T	Solid Mechanics 2																																																
	EARTH 221*	Geochemistry 1																																																
	COOP 5																																																	
	WkRprt300																												D																					
	WATPDE3	Engineering Workplace Skills Elective 3																																																

I	Introductory
D	Developing
A	Advanced

Terms	Course Number	Course Name	1.Knowledge Base	--1a. Demonstrate understanding of concepts in mathematics	--1b. Demonstrate understanding of concepts in natural science	--1c. Demonstrate understanding of engineering fundamentals	--1d. Demonstrate understanding of specialized engineering knowledge	2. Problem Analysis	--2a. Formulate a problem statement	--2b. Develop models to solve engineering problems including identifying	--2c. Critically evaluate solutions of engineering problems	3. Investigation	--3a. Design experiments to investigate complex engineering problems	--3b. Gather information from relevant sources to address complex	--3c. Synthesize information to reach valid conclusions	4. Design	--4a. Define design requirements and specifications for complex, open-	--4b. Criticaly evaluate and compare design choices	--4c. Generate and refine potential solutions to complex, open-ended design problems	5. Use of Engineering Tools	--5a. Select appropriate engineering tools , considering their limitations	--5b. Modify and/or create appropriate engineering tools, identifying	--5c. Use engineering tools appropriately	6. Individual and Team Work	--6a. Contribute as an active team member or leader to complete	--6b. Collaborate with others to complete tasks effectively as a team	7. Communication Skills	--7a. Orally present information within the profession and to society at	--7b. Communicate in a written format within the profession and to	--7c. Interpret information, including instructions	8. Professionalism	--8a. Articulate the roles and responsibilities of the professional engineer in society with reference to the protection of the public and its interest.	--8b. Describe the importance of codes, standards, best practices laws and regulations within engineering problems.	9. Impact of Engineering	--9a. Identify the relevance of and uncertainty associated with the	--9b. Analyze the social, health, safety and environmental aspects of an	10. Ethics & Equity	--10a. Identify ethical and unethical behavior in professional situations	--10b. Identify how an engineer is accountable to multiple stakeholders in engineering practice.	--10c. Identify equitable and inequitable situations or behaviors	11. Economics & Project Management	--11a. Apply project management techniques in engineering projects, with attention to risk and change.	--11b.Perform economic analyses of engineering projects with attention to uncertainty and limitations.	12. Life-long Learning	--12a. Identify gaps in their knowledge, skills and abilities	--12b. Obtain and evaluate information or training from appropriate	--12c. Reflect on the use of information received
3B	CIVE 382	Hydrology and Open Channel Flow			D	D	D		D	D	I		I	D	I						D	I	I		D																										
	EARTH 333	Introductory Sedimentology				D																D																													
	EARTH 390	Methods in Geological Mapping				D																	A					D	D																						
	EARTH 437	Rock Mechanics				A							D	A	A						D	A							A																						
	EARTH 438	Engineering Geology				A							D	A	A							A						A	A																						
	CSE 4	Complementry studies elective																																																
	GEOE 399	Seminar																																																
	COOP 6																																																	
4A	GEOE 400	Geological Engineering Design Project 1		A	A	A	A		A	A	A		A	A	A		A	A	A						A	A		A	A																					
	CIVE 354	Geotechnical Engineering 2			I		I		D	I	I			D	I			D			D	D	I		D	D																								
	GEOE 498	Seminar																																																
	TE 1	Technical Elective 1																																																
	TE 2	Technical Elective 2																																																
	TE 3	Technical Elective 3																																																
	WkRprt400																												A																						
4B	GEOE 401	Design Project 2		A	A	A	A		A	A	A		A	A	A		A	A	A		A	A	A		A	A		A	A			A	A		A	A						A	A		A	A	A	A	A	A
	CIVE 554	Geotechnical 3				A			A	A	A		A	A	A		A		A		A	A	A						A			A	A		A	A						A	A		A	A	A	A	A	A
	GENE 411	Engineering Law and Ethics																														A	A		A	A		A	A	A									
	GEOE 499	Seminar																																																
	-	TE 4																																																
	-	TE 5																																																