

**Civil, Environmental, Construction Engineering  
Tentative Five Year Course Planner**

Course	Course Title	CREDIT	Summer 2020	Fall 2020	Spring 2021	Summer 2021	Fall 2021	Spring 2022	Summer 2022	Fall 2022	Spring 2023	Summer 2023	Fall 2023	Spring 2024	Summer 2024	Fall 2024	Spring 2025	Summer 2025	Fall 2025	Spring 2026	Course Coordinator
CCE 4003	INTRO TO CONST IND	3	3.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Tatari
CCE 4004	CONSTRUCTION METHODS	3	3.0		●			●			●			●			●			●	Tatari
CCE 4034	CONS EST & SCHEDULE	3	3.0		●			●			●			●			●			●	Oloufa
CCE 4402	CONSTR EQUIPMT & PROD	3	3.0					●			●			●			●			●	Oloufa
CCE 4810C	CONSTR ENGR DESIGN	3	2.2		●			●			●			●			●			●	Oloufa
CCE 4813	MECH & ELECT SYS BLDGS	4	4.0		●			●			●			●			●			●	Oloufa
CCE 5006	INFRASTRUCTURE SYS MGMT	3	3.0					●			●			●			●			●	Oloufa
CCE 5205	DECISION SUPPORT INFRA PROJ	3	3.0																		
CCE 5220	SUSTAINABLE INFRASTRUCTURE SYSTEMS	3	3.0		●			●			●			●			●			●	Tatari
CCE 6036	ADV CONS PLAN + CONTROL	3	3.0					●			●			●			●			●	Oloufa
CCE 6045	COST ANALY SUSTAIN SYSTEMS	3	3.0					●			●			●			●			●	Tatari
CCE 6211	DES & MODEL CONSTR PROCESS	3	3.0																		
CCE 6817	DYNAMICS OF SUSTAINABLE SYS	3	3.0			●					●						●				Tatari
CEG 4011C	GEOTECH ENGR I	4	3.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Nam
CEG 4012	GEOTECH ENGR II	3	3.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Arboleda
CEG 4203	GEOTECH METHODS CASE STUDIES	3	3.0					●			●			●			●			●	Nam
CEG 4801C	GEOTECH DESIGN	3	2.2	●		●		●			●			●			●			●	Arboleda
CEG 5405	SEEPAGE IN SOILS	3	3.0		●						●			●			●			●	Nam
CEG 6065	SOIL DYNAMICS	3	3.0					●			●			●			●			●	Nam
CEG 6115	FOUNDATION ENGR	3	3.0		●			●			●			●			●			●	Arboleda
CEG 6317	ADV GEOTECH ENGR	3	3.0					●			●			●			●			●	Arboleda
CEG 6515	RETAIN STRUCT SLOPE STABILITY	3	3.0		●						●			●			●				Arboleda
CEG 6610	SMART UNDERGROUND STRUC	3	3.0					●			●			●			●				Arboleda
CES 4100C	STRUCT ANALYSIS I	4	3.3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Mackie
CES 4205	STRUCTURAL MECHANICS	3	3.0		●						●			●			●			●	Mackie
CES 4605	STEEL STRUCTURES	3	3.0		●			●			●			●			●			●	Zaurin
CES 4702	REINF CONC STRUCTURES	3	3.0		●			●			●			●			●			●	Apostolakis
CES 4743C	STRUCTURAL DESIGN	3	2.2		●			●			●			●			●			●	Mackie
CES 5144	MATRIX METH STRUCT ANALYSIS	3	3.0		●			●			●			●			●			●	Catbas
CES 5325	BRIDGE ENGINEERING	3	3.0					●			●			●			●			●	Catbas
CES 5606	ADV STEEL STRUCTURES	3	3.0					●			●			●			●			●	Zaurin
CES 5706	ADV REINF CONCRETE	3	3.0		●			●			●			●			●			●	Yun
CES 5821	MASONRY/TIMBER	3	3.0																		
CES 6010	STRUCTURAL RELIABILITY	3	3.0			●					●			●			●				Mackie
CES 6116	FINITE ELEMENT STRUC ANALY	3	3.0			●					●			●			●				Catbas
CES 6170	BNDRY ELEM CIV ENGR	3	3.0																		
CES 6209	DYNAMICS OF STRUC	3	3.0		●						●			●			●				Catbas
CES 6220	WIND/EARTHQUAKE ENGR	3	3.0			●					●			●			●				Apostolakis
CES 6230	ADV STRUC MECHANICS	3	3.0					●			●			●			●			●	Apostolakis
CES 6527	NONLINEAR STRUCTURAL ANALYSIS	3	3.0					●			●			●			●			●	Mackie
CES 6715	PRESTRESSED CONCRETE	3	3.0					●			●			●			●			●	Yun
CES 6840	COMPOSITE STL/CONC STR	3	3.0																		
CES 6876	SMART CITY BUILT INFRASTRUCTURE	3	3.0											●						●	Sun
CGN 3405	APPL NUM METHODS FOR CIVIL ENG	3	3.0	□	●	●	□	●	●	□	●	●	□	●	●	□	●	●	□	●	Agarwal
CGN 3501C	CIVIL ENGINEERING MATLS	3	2.2	□	●	●	□	●	●	□	●	●	□	●	●	□	●	●	□	●	Filler
CGN 3700C	CE MEASUREMENTS	2	2.2	□	●	●	□	●	●	□	●	●	□	●	●	□	●	●	□	●	Dozier
CGN 4309	INTRO TO SMART CITIES	3	3.0		●			●			●			●			●			●	Zaki
CGN 4808C	CIVIL ENGINEERING CAPSTONE	3	2.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Zaurin
CGN 5340	IOT: APPLICATIONS IN SMART CITIES	3	3.0		□						●			●			●				Agarwal
CGN 5341	INTERDISC INTRO TO SMART CITIES	3	3.0		●			●			●			●			●			●	Agarwal/Zaki
CGN 5506	ADVANCED PAVEMENT & CE MATLS	3	3.0																		Nam
CGN 5617	INTELLIGENT INFRASTR MANAGEMENT	3	3.0			●					●			●			●				Guo
CGN 5877	MONITORING INFRASTR SYSTEMS	3	3.0																		Yun
CGN 6342	MODEL HUMAN BEHAVIOR EMERGING DATA	3	3.0			●					●			●			●				Hasan
CGN 6343	CYBER-PHYSICAL SYSTEMS AND SMART CITIES	3	3.0					●			●			●			●			●	Agarwal
CGN 6655	REG PLAN DES DEV	3	3.0		●			●			●			●			●			●	Eluru
CWR 3201	ENGINEERING FLUID MECH	3	3.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Kibler
CWR 4120	HYDROLOGY	3	3.0		●			●			●			●			●			●	Wahl
CWR 4124	HYDROGEOLOGY	3	3.0			●		●			●			●			●			●	Wang
CWR 4202C	HYDRAULICS	3	3.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Singh
CWR 4812C	WATER RESOURCES DESIGN	3	2.2	●	●		●	●		●	●		●	●		●	●		●	●	Wang
CWR 5125	GROUNDWATER HYDROLOGY	3	3.0					●			●			●			●			●	Wang
CWR 5205	HYDRAULIC ENGINEERING	3	3.0					●			●			●			●			●	Singh
CWR 5515	NUMERICAL METHODS IN CEE	3	3.0																		
CWR 5545	WATER RESOURCES ENGRG	3	3.0			□					□										Wang
CWR 5634	WAT RES CHANGING ENV	3	3.0					●			●			●			●			●	Wang
CWR 5999	COASTAL SYSTEMS ANALYSIS	3	3.0		●						●			●			●				Wahl

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CWR 6007	ECOHYDRAULICS	3	3.0					●						●						●	Kibler
CWR 6102	ADVANCED HYDROLOGY	3	3.0	●						●							●				Singh
CWR 6126	GROUNDWATER MODELING	3	3.0	●						●						●					Wang
CWR 6235	OPEN CHANNEL HYDRAULICS	3	3.0		●						●						●				Kibler
CWR 6236	RIVER ENGRG & SED TRNSPT	3	3.0		●						●			●							Singh
CWR 6535	MDLG WATER RES SYSTEMS	3	3.0		□						□						□				
CWR 6539	FIN ELEM SUR WTR MDLG	3	3.0	□							□						□				
CWR 6606	STOCHASTIC RIVER NETWORK	3	3.0		●						●					●					Singh
CWR 6660	WATER POLICY, PLNG & GOVERN	3	3.0				●				□					●					Kibler
EES 4111C	BIOL PROCESS CONTROL	4	3.3		●			●			●			●			●				Randall
EES 4202C	CHEM PROCESS CONTROL	4	3.3	●			●			●			●			●			●		Sadmani
EES 5318	INDUSTRIAL ECOLOGY	3	3.0		●						●						●				Chang
EGN 3310	ENGR ANALYSIS-STATICS	3	3.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Mackie
EGN 3310H	ENGR ANALYSIS-STATICS (HONORS)	3	3.0				●	●	●	●	●	●	●	●	●	●	●	●	●	●	Mackie
EGN 3331C	MECHANICS OF MATLS	3	3.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Sun
ENV 3001	ENVIRONMENTAL ENGINEERING	3	3.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Randall
ENV 4120	AIR POLL & HAZ WASTE CONTROL	3	3.0	●			●				●			●			●			●	Yu
ENV 4122C	AIR POLL CTRL DESIGN	3	2.2		●			●			●			●			●			●	Yu
ENV 4341	SUSTAINABLE RESOURCE MGMT	3	3.0	●			●				●			●			●			●	Chang
ENV 4433C	ENV ENGR WASTEWATER DESIGN	3	2.2	●			●				●			●			●			●	Randall
ENV 4531	ENV ENGR OPS & PROCESSES	3	3.0	●	●	●	●	●	●	●	●	□	●	●	□	●	●	□	●	●	Sadmani
ENV 4561	ADV ENV ENGR OPS & PROCESSES	3	3.0	●	●	●	●	●	●	●	□		●	□		□		□		●	Lee
ENV 4562C	ENV ENGR WATER TRTMT DESIGN	3	2.2		●			●			●			●			●			●	Duranceau
ENV 5410	WATER TRTMT	3	3.0		●						●						●				Sadmani
ENV 5505	SLUDGE MGMT OPS	3	3.0				●						●						●		Randall
ENV 5517	CHEM & BIO PROCESSES	3	3.0																		Randall
ENV 5636	ENV & WATER RESOURCES	3	3.0				●						●							●	Chang
ENV 6015	PHYS/CHEM TRTMT SYS	3	3.0	●			●				●			●			●			●	Duranceau
ENV 6016	BIOL TRTMT SYS	3	3.0		●			●					●				●			●	Randall
ENV 6030	ENV BIOTECHNOLOGY	3	3.0				●						●							●	Lee
ENV 6046	MEMBRANE MASS TRANSFER	3	3.0								□					□					Sadmani
ENV 6047	ENV INFORMATICS	3	3.0				●							●						●	Chang
ENV 6106	ATMOS DISPERSION MDLG	3	3.0		●						●										Yu
ENV 6126	DES AIR POLLUTION CONTROLS	3	3.0					●						●						●	Liu
ENV 6128	SMART AIR QUALITY MON AIR POLL CONTROL	3	3.0	●							●					●					Yu
ENV 6347	HAZ WASTE INCINERATION	3	3.0								●										
ENV 6519	AQUATIC CHEM PROCESSES	3	3.0		●			●						●						●	Duranceau
ENV 6533	SMART WATER WASTEWATER MGMT	3	3.0					●						●						●	Lee
ENV 6558	INDUSTRIAL WASTE TRTMT	3	3.0	●							●					●					Sadmani
ENV 6616	ECOLOG ENGR RCVG WATER IMPAC	3	3.0	●							●					●					Chang
TTE 3810	HIGHWAY ENGINEERING	3	3.0	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	Hasan
TTE 4274	TRANSPORTATION ENGRG SYS	3	3.0	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	Al-Deek
TTE 4300	TRANSPORTATION ANALYTICS	3	3.0		●			●						●			●			●	Eluru
TTE 4601C	URBAN SYSTEMS DESIGN	3	2.2		●			●						●			●			●	Eluru
TTE 5204	TRAFFIC ENGINEERING	3	3.0		●			●						●			●			●	Abou-Senna
TTE 5531	ACTIVE MOBILITY TECH: SYNERGY CHALLENGE	3	3.0				●						●							●	Zaki
TTE 5532	POLICY ASPECTS SMART CITY TRANSP	3	3.0								□					□					McQueen
TTE 5805	GEOM DESIGN TRANS SYS	3	3.0	●			●			□						□					Abdel-Aty
TTE 5835	PAVEMENT ENGINEERING	3	3.0	●							●						●				Nam
TTE 6205	HIGHWAY CAPACITY	3	3.0					●						●						●	Al-Deek
TTE 6256	TRAFFIC OPERATIONS	3	3.0	●			●				●			●			●			●	Al-Deek
TTE 6270	INTELLIGENT TRANS SYS	3	3.0	●			●				●					●				●	Al-Deek
TTE 6275	CONNECTED AND AUTONOMOUS VEHICLES	3	3.0	□							□					□					Abdel-Aty
TTE 6315	TRAFFIC SAFETY ANALYSIS	3	3.0		□						□					□					Abdel-Aty
TTE 6526	PLANNING & DESIGN AIRPORTS	3	3.0																		
TTE 6533	MOBILITY SMART CITIES: TECH APPL AREAS	3	3.0		●						●					●					Zaki
TTE 6608	ALGORITHMS/MODELS FOR SMART CITIES	3	3.0	●				●					●			●				●	Hasan
TTE 6625	MASS TRANSPORTATION SYS	3	3.0																		
TTE 6667	DISCRETE CHOICE ANALYSIS	3	3.0				●						●							●	Eluru
TTE 6668	TRANSPORTATION NETWORKS	3	3.0								●			●						●	Guo

KEY:

□ As Resources Permit

rev:

11/16/2022