

Course Requirements and Registration Priorities
School of Engineering and Digital Sciences (Undergraduate), Spring 2023

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SEDS											
Chemical and Materials Engineering											
1	CHME 202	Fluid Mechanics	3	6				2 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering	
2	CHME 203	Organic and Polymer Chemistry	3	6	CHME 222 Inorganic and Analytical Chemistry (5039) (D and above)			2 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering	
3	CHME 303	Separation Processes	3	6	CHME 200 Basic Principles and Calculations in Chemical Engineering (5038) (D and above) AND CHME 201 Chemical Engineering Thermodynamics (5007) (D and above)			3 year UG SEDS Chemical and Materials Engineering	Chemical and Materials Engineering		
4	CHME 304	Chemical Reaction Engineering	3	6	CHME 200 Basic Principles and Calculations in Chemical Engineering (5038) (D and above)			3 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering		
5	CHME 305L	Chemical Engineering Laboratory I	3	6	CHME 201 Chemical Engineering Thermodynamics (5007) (D and above) AND CHME 202 Fluid Mechanics (5543) (D and above) AND CHME 300 Heat and Mass Transfer (5952) (D and above)			2 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering	
6	CHME 352	Research Practice	3	6				3 year UG SEDS Chemical and Materials Engineering	4 year UG SEDS Chemical and Materials Engineering		
7	CHME 402	Materials Chemistry	3	6				4 year UG SEDS Chemical and Materials Engineering	5 year UG SEDS Civil and Environmental Engineering		

8	CHME 403	Chemical Process Control and Safety	3	6				4 year UG SEDS Chemical and Materials Engineering	5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Civil and Environmental Engineering		
9	CHME 421	Tissue Engineering	3	6				4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering		
10	CHME 454	Transport Phenomena and Operations	3	6				4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Civil and Environmental Engineering	3 year UG SEDS Mechanical and Aerospace Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering		
11	CHME 461	Powder technology	3	6				4 year UG SEDS Chemical and Materials Engineering	3 year UG SEDS Chemical and Materials Engineering		
Civil and Environmental Engineering											
12	CEE 201	Environmental Chemistry	3	6				Instructor's Permission Required. Registration through Add Course form only!			
13	CEE 202	Environmental Engineering	3	6	CEE 201 Environmental Chemistry (4999) (D and above)			2 year UG SEDS Civil and Environmental Engineering	3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering	
14	CEE 203	Structural Analysis	3	6	MAE 200 Structural Mechanics I (5010) (D and above) OR CEE 200 Structural Mechanics I (5005) (D and above)			2 year UG SEDS Civil and Environmental Engineering	3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering	
15	CEE 301	Structural Design - Steel	3	6	CEE 203 Structural Analysis (5500) (D and above)			3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
16	CEE 303	Geotechnical Design	3	6	CEE 302 Geotechnical Engineering (5896) (D and above)			3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		

17	CEE 305	Hydraulics and Hydrology	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) OR EME 275 Fluid Mechanics I (1988) (D and above) OR CEE 304 Fluid Mechanics (6348) (D and above)			3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
18	CEE 350	Water and Wastewater Treatment Processes	3	6	CEE 201 Environmental Chemistry (4999) (D and above) AND CEE 202 Environmental Engineering (5499) (D and above)			3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
19	CEE 352	Engineering geology	3	6				3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
20	CEE 400	Transportation Engineering	3	6	CEE 204 Civil Engineering CAD and Surveying (5002) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
21	CEE 457	Air Quality Management	3	6				4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
22	CEE 458	Modern Information Technology in Construction	3	6	CEE 204 Civil Engineering CAD and Surveying (5002) (D and above)			3 year UG SEDS Civil and Environmental Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Civil and Environmental Engineering		
23	CEE 463	Individual Research Project in Civil & Environmental Engineering 1	3	6				4 year UG SEDS Civil and Environmental Engineering			
24	CEE 464	Individual Research Project in Civil and Environmental Engineering II	3	6	CEE 463 Individual Research Project in Civil & Environmental Engineering 1 (6594) (C and above)			4 year UG SEDS Civil and Environmental Engineering			
25	CEE 466	Introduction to Finite Element Methods	3	6	CEE 200 Structural Mechanics I (5005) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
26	CEE 467	Building Information Modelling for Geotechnical Engineering	3	6	CEE 303 Geotechnical Design (6158) (D and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		
27	CEE 468	Structural Design - Concrete II	3	6	CEE 300 Structural Design - Concrete (5895) (C- and above)			4 year UG SEDS Civil and Environmental Engineering	5 year UG SEDS Civil and Environmental Engineering		

Computer Science

28	CSCI 111	Web Programming and Problem Solving	3	6			CSCI 101 Introduction to Computational Sciences (147) (D and above) OR CSCI 115 Programming Fundamentals (5257) (D and above) OR CSCI 151 Programming for Scientists and Engineers (192) (D and above) OR ENG 101 Programming for Engineers (4517) (D and above)	SSH, SoM			
29	CSCI 115	Programming Fundamentals	4	8			CSCI 101 Introduction to Computational Sciences (147) (D and above) OR CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 151 Programming for Scientists and Engineers (192) (D and above) OR ENG 101 Programming for Engineers (4517) (D and above)	1 year UG SOM, 2 year UG SOM, 3 year UG SOM, 4 year UG SOM, Biological Sciences, Chemistry, Mathematics	SSH		

30	CSCI 151	Programming for Scientists and Engineers	4	8			CSCI 111 Web Programming and Problem Solving (110) (D and above) OR CSCI 115 Programming Fundamentals (5257) (D and above) OR ENG 101 Programming for Engineers (4517) (B- and above)	Computer Science, Robotics Engineering, Robotics and Mechatronics	Physics, Undeclared SEDS	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
31	CSCI 152	Performance and Data Structures	4	8	CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR ENG 101 Programming for Engineers (4517) (B- and above)			Computer Science, Robotics Engineering, Robotics and Mechatronics	Undeclared SEDS, Undeclared SSH	GSB, GSE, GSPP, SEDS, SMG, SSH, SoM
32	CSCI 245	System Analysis and Design	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science		
33	CSCI 262	Software Project Management	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science		
34	CSCI 270	Algorithms	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)	MATH 251 Discrete Mathematics (85) (D and above)		Computer Science		
35	CSCI 272	Formal Languages	3	6	CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR ENG 101 Programming for Engineers (4517) (B- and above)	MATH 251 Discrete Mathematics (85) (D and above)		Computer Science		
36	CSCI 281	Human-Computer Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science		
37	CSCI 307	Research Methods	3	6				3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science		

38	CSCI 325	Introduction to Parallel Systems and Graphics Processing Unit Programming	3	6	CSCI 332 Operating Systems (490) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
39	CSCI 332	Operating Systems	3	6	CSCI 231 Computer Systems and Organization (194) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
40	CSCI 333	Computer Networks	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
41	CSCI 409	Senior Project II	3	6	CSCI 408 Senior Project I (1481) (C- and above)			4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
42	CSCI 447	Machine Learning: Theory and Practice	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
43	CSCI 462	Open Source Software	3	6	CSCI 361 Software Engineering (640) (C- and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
44	CSCI 490	Brain Computer Interface	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above)			3 year UG SEDS Computer Science, 4 year UG SEDS Computer Science, 5 year UG SEDS Computer Science			
45	CSCI 495	Connectionist Models of Computation	3	6	MATH 251 Discrete Mathematics (85) (C- and above)			Computer Science			
Electrical and Computer Engineering											
46	ELCE 201	Circuit Theory	3	6	ELCE 200 Introduction to Electrical Circuits (4991) (C- and above)			2 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	

47	ELCE 201L	Circuit Theory Laboratory	1	2		ELCE 201 Circuit Theory (5507) (D and above)		2 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	
48	ELCE 202	Digital Logic Design	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) AND ENG 101 Programming for Engineers (4517) (C- and above)			2 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	
49	ELCE 202L	Digital Logic Design Laboratory	1	2		ELCE 202 Digital Logic Design (4992) (D and above)		2 year UG SEDS Electrical and Computer Engineering	3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	
50	ELCE 300	Microprocessor Systems	3	6	ELCE 202 Digital Logic Design (4992) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering	
51	ELCE 300L	Microprocessor Systems Laboratory	1	2		ELCE 300 Microprocessor Systems (6183) (C- and above)		3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering	

52	ELCE 302	Electric Machines	3	6	ELCE 201 Circuit Theory (5507) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
53	ELCE 302L	Electrical Machines Laboratory	1	2	ELCE 201 Circuit Theory (5507) (C- and above)	ELCE 302 Electric Machines (5919) (C- and above)		3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
54	ELCE 303	Power System Analysis	3	6	ELCE 200 Introduction to Electrical Circuits (4991) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering

55	ELCE 305	Data Structures and Algorithms	3	6	CSCI 151 Programming for Scientists and Engineers (192) (C- and above) OR ENG 101 Programming for Engineers (4517) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
56	ELCE 308	Communication Systems	3	6	ELCE 203 Signals and Systems (4993) (C- and above)			3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
57	ELCE 309	Individual Study	3	6				3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering

58	ELCE 310L	Electronics Instrumentation and Measurement	1	2	ELCE 201 Circuit Theory (5507) (C- and above)	ELCE 301 Electronic Circuits (5918) (C- and above)		3 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	1 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering, Electrical and Computer Engineering
59	ELCE 403	Introduction to Adaptive Signal Processing	3	6	ELCE 307 Digital Signal Processing (5921) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering
60	ELCE 458	Numerical Optimization Techniques and Computer Applications	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering
61	ELCE 459	Design of Application Specific Electronic Circuits	3	6	ELCE 301 Electronic Circuits (5918) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering
62	ELCE 486	Photonics for Engineering	3	6	MATH 162 Calculus II (170) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			5 year UG SEDS Electrical and Computer Engineering	4 year UG SEDS Electrical and Computer Engineering	Electrical and Computer Engineering

Mechanical and Aerospace Engineering

63	ENG 101	Programming for Engineers	3	6			CSCI 151 Programming for Scientists and Engineers (192) (F) OR CSCI 111 Web Programming and Problem Solving (110) (F) OR CSCI 115 Programming Fundamentals (5257) (F) OR CSCI 152 Performance and Data Structures (489) (F) OR CSCI 408 Senior Project I (1481) (F) OR CSCI 409 Senior Project II (1483) (F)	1 year UG SEDS, 2 year UG SMG, Undeclared SMG	2 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Computer Engineering	SEDS	
64	ENG 102	Engineering Materials I	3	6				1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Mechanical and Aerospace Engineering, Undeclared SEDS	Civil and Environmental Engineering, Mechanical and Aerospace Engineering		

65	ENG 103	Engineering Materials II	3	6				1 year UG SEDS Chemical and Materials Engineering, 1 year UG SEDS Civil and Environmental Engineering, 1 year UG SEDS Electrical and Computer Engineering, 1 year UG SEDS Undeclared	2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Chemical and Materials Engineering, 3 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Electrical and Computer Engineering, Civil and Environmental Engineering	SEDS	
66	ENG 201	Applied Probability and Statistics	3	6	MATH 162 Calculus II (170) (C- and above)			2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Electrical and Computer Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Chemical and Materials Engineering, 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Electrical and Computer Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
67	ENG 202	Numerical Methods in Engineering	3	6	ENG 200 Engineering Mathematics III (Differential Equations and Linear Algebra) (5009) (D and above)			2 year UG SEDS Chemical and Materials Engineering, 2 year UG SEDS Civil and Environmental Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Chemical and Materials Engineering, 3 year UG SEDS Civil and Environmental Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering		

68	ENG 300	Interdisciplinary Project	3	6				Instructor's Permission Required. Registration through Add Course form only!		
69	ENG 400	Capstone Project	3	6				4 year UG SEDS Chemical Engineering, 4 year UG SEDS Chemical and Materials Engineering, 4 year UG SEDS Electrical and Computer Engineering, 4 year UG SEDS Electrical and Electronic Engineering, 4 year UG SEDS Mechanical Engineering, 4 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Chemical Engineering, 5 year UG SEDS Chemical and Materials Engineering, 5 year UG SEDS Civil and Environmental Engineering, 5 year UG SEDS Electrical and Computer Engineering, 5 year UG SEDS Electrical and Electronic Engineering, 5 year UG SEDS Mechanical Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	
70	MAE 205	Material and Manufacturing I	3	6				2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering
71	MAE 206	Engineering Dynamics I	3	6				2 year UG SEDS Mechanical and Aerospace Engineering	3 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering
72	MAE 305	Fluid Mechanics II	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) OR EME 275 Fluid Mechanics I (1988) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering
73	MAE 306	Computer Aided Engineering	3	6	ENG 202 Numerical Methods in Engineering (5506) (D and above) AND MAE 201 Computer Aided Design (5011) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering
74	MAE 307	Engineering Dynamics II	3	6	MAE 206 Engineering Dynamics I (5535) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering

75	MAE 350	Structural Mechanics II	3	6	MAE 200 Structural Mechanics I (5010) (D and above) OR CEE 200 Structural Mechanics I (5005) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
76	MAE 351	Vehicle Propulsion Systems	3	6	MAE 301 Engineering Thermodynamics (5927) (D and above) OR BENG 226 Engineering Thermodynamics (1553) (D and above)			3 year UG SEDS Mechanical and Aerospace Engineering	4 year UG SEDS Mechanical and Aerospace Engineering	Mechanical and Aerospace Engineering	
77	MAE 451	Unmanned Aerial Vehicle Design	3	6	(MAE 303 Control Systems (5929) (D and above) AND MAE 454 Aerodynamics (6576) (D and above)) OR MMAE 603 Modern Control Engineering (4500) (C- and above)			4 year UG SEDS Mechanical and Aerospace Engineering			
78	MAE 455	Flight Performance and Mechanics	3	6	MAE 454 Aerodynamics (6576) (D and above) OR MAE 305 Fluid Mechanics II (6173) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
79	MAE 456	Materials and Manufacturing II	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	

80	MAE 457	Feasibility Analysis of Clean Energy Technologies	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering		
81	MAE 460	Advanced Topics in Computational Fluid Dynamics	3	6	MAE 300 Fluid Mechanics I (5926) (D and above) AND ENG 202 Numerical Methods in Engineering (5506) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
82	MAE 463	Micro-Electro-Mechanical Systems and Microsystems technology	3	6				4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	
83	MAE 464	Mechanics of Soft Materials	3	6	ENG 102 Engineering Materials I (4708) (D and above)			4 year UG SEDS Mechanical and Aerospace Engineering	1 year UG SEDS Mechanical and Aerospace Engineering, 2 year UG SEDS Mechanical and Aerospace Engineering, 3 year UG SEDS Mechanical and Aerospace Engineering, 5 year UG SEDS Mechanical and Aerospace Engineering	SEDS	

Robotics and Mechatronics

84	ROBT 202	System Dynamics and Modeling	3	6	MATH 162 Calculus II (170) (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (1402) (C- and above))			Robotics Engineering, Robotics and Mechatronics			
85	ROBT 204	Electrical and Electronic Circuits II with Lab	4	8	ROBT 203 Electrical and Electronic Circuits I with Lab (62) (C- and above)			Robotics Engineering, Robotics and Mechatronics			
86	ROBT 206	Microcontrollers with Lab	4	8	CSCI 150 Fundamentals of Programming (1501) (C and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C and above) OR ENG 101 Programming for Engineers (4517) (C and above)			Computer Science, Robotics Engineering, Robotics and Mechatronics			
87	ROBT 304	Electromechanical Systems with lab	4	8	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above)			Robotics Engineering, Robotics and Mechatronics	SEDS		
88	ROBT 308	Industrial Automation	3	6				Robotics Engineering, Robotics and Mechatronics	SEDS		
89	ROBT 312	Robotics I: Kinematics and Dynamics	3	6	ROBT 201 Mechanics: Statics and Dynamics (475) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above)			Robotics Engineering, Robotics and Mechatronics	SEDS		
90	ROBT 402	Robotic/Mechatronic System Design	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above) AND ROBT 206 Microcontrollers with Lab (476) (C- and above)			5 year UG SEDS, Robotics Engineering, Robotics and Mechatronics	SEDS		
91	ROBT 491	Graduation Project	3	6				5 year UG SEDS, Robotics Engineering, Robotics and Mechatronics	SEDS		