

**Course Requirements and Registration Priorities
School of Science and Technology, Fall 2016**

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SST											
Mathematics											
1	MATH 355	Introduction to Proofs	3	6	MATH 162 Calculus II (170) (C and above) AND MATH 273 Linear Algebra with Applications (84) (C and above)			Mathematics	SHSS, SST		
SSH											
Biological Science											
2	BIOL 101	Biology for non-Science majors	3	6			BIOL 110 Modern Biology I (1070) (C- and above)				
3	BIOL 110	Modern Biology I	3	6				1 year UG SST	SST	SHSS	
4	BIOL 230	Human Anatomy and Physiology I	4	8	BIOL 110 Modern Biology I (107) (C and above) OR BIOL 110 Modern Biology I (1070) (C and above)			Biological Sciences	SST	SHSS	
5	BIOL 305	Introduction to Microbiology with Lab	4	8	BIOL 110 Modern Biology I (1070) (C and above) AND BIOL 120 Modern Biology II (1195) (C and above)			Biological Sciences	SST	SHSS	
6	BIOL 320	Developmental Biology with Lab	4	8	((BIOL 110 Modern Biology I (107) (C- and above) AND BIOL 110 Modern Biology I Lab (1444) (C- and above)) OR PREM 110 Pre-med Biology I with lab (1071) (C- and above) OR BIOL 110 Modern Biology I (1070) (C- and above) AND (BIOL 120 Modern Biology II (1195) (C- and above) OR (BIOL 120 Modern Biology II (177) (C- and above) AND BIOL 120 Modern Biology II Lab (1445) (C- and above))) AND ((BIOL 220 Molecular Biology of Cell (477) (C- and above) AND BIOL 220 Arc Molecular Biology of Cell Lab (478) (C- and above) OR BIOL 301 Molecular Biology of Cell with Lab (1197) (C- and above) OR BIOL 231 Human Anatomy and Physiology II (479) (C- and above))			Biological Sciences	SST	SHSS	
7	BIOL 340	Introduction to Bioinformatics with Lab	4	8	BIOL 120 Modern Biology II (1195) (C and above) AND MATH 310 Applied Statistical Methods (82) (C and above)			Biological Sciences	SST	SHSS	

8	BIOL 352	Biology of Cancer	3	6	BIOL 231 Human Anatomy and Physiology II (479) (C and above) OR BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above)			Biological Sciences	SST	SHSS	
9	BIOL 355	Critical Research Reasoning	3	6	BIOL 120 Modern Biology II (177) (C and above) OR BIOL 120 Modern Biology II (177) (C and above)			Biological Sciences	SST	SHSS	
10	BIOL 399	Biology Internship	3	6				Through Add form only			
11	BIOL 410	Immunology	3	6	BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) OR BIOL 305 Introduction to Microbiology with Lab (1642) (C and above)			Biological Sciences	SST	SHSS	
12	BIOL 455	Biotechnology	3	6	BIOL 301 Molecular Biology of Cell with Lab (1197) (C- and above)			Biological Sciences	SST	SHSS	
13	BIOL 470	Advanced Cell Biology	3	6	BIOL 301 Molecular Biology of Cell with Lab (1197) (C and above) AND (BIOL 341 Biochemistry I (2002) (C and above) OR CHEM 341 Biochemistry I (1058) (C and above))			Biological Sciences	SST	SHSS	
14	BIOL 490	Graduation Project 1	4	8				Through Add form only			
15	BIOL 501	Fundamentals of Biological Sciences	3	6							
16	BIOL 520	Statistical Methods in Life Sciences	3	6							
17	BIOL 600	Graduate Seminar Series	3	6							
18	BIOL 635	Hot Topics in Life Sciences	3	6							
19	BIOL 670	Gene Therapy	3	6							
20	BIOL 690	Research Thesis I	6	12							
Chemistry											
21	CHEM 090	Chemistry for Non-Science majors	3	6							
22	CHEM 091	Survey of Physical Science	3	6							
23	CHEM 101	General Chemistry I	3	6				1 year UG SST	SST	SHSS	
24	CHEM 101L	General Chemistry I lab	1	2		CHEM 101 General Chemistry I (113) (C and above)		1 year UG SST	SST	SHSS	

25	CHEM 102	General Chemistry II	3	6	CHEM 101 General Chemistry I (113) (C and above)		Chemistry	SST	SHSS	
26	CHEM 102L	General Chemistry II lab	1	2	CHEM 101L General Chemistry I lab (179) (C and above)	CHEM 102 General Chemistry II (232) (C and above)	Chemistry	SST	SHSS	
27	CHEM 189c	Independent Study	3	6						
28	CHEM 211	Organic Chemistry I	3	6	CHEM 102 General Chemistry II (232) (C and above)		Chemistry	SST	SHSS	
29	CHEM 211L	Organic Chemistry I Lab	1	2	CHEM 101L General Chemistry I lab (179) (C and above)	CHEM 211 Organic Chemistry I (154) (C and above)	Chemistry	SST	SHSS	
30	CHEM 212	Organic Chemistry II	3	6	CHEM 211 Organic Chemistry I (154) (C and above) OR CHEM 191 Chemistry I for Engineers (1908) (C and above)		Chemistry	SST	SHSS	
31	CHEM 212L	Organic Chemistry II Lab	1	2	CHEM 211L Organic Chemistry I Lab (156) (C and above)	CHEM 212 Organic Chemistry II (443) (C and above) OR CHEM 292 Organic Chemistry for Biologists II (1901) (C and above)	Chemistry	SST	SHSS	
32	CHEM 220	Quantitative Chemical Analysis	3	6	CHEM 102 General Chemistry II (232) (C and above)		Chemistry	SST	SHSS	
33	CHEM 250	Descriptive Inorganic Chemistry	3	6	CHEM 102 General Chemistry II (232) (C and above)		Chemistry	SST	SHSS	
34	CHEM 331	Physical Chemistry I	3	6	CHEM 220 Quantitative Chemical Analysis (555) (C and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C and above)		Chemistry	SST	SHSS	
35	CHEM 331L	Physical Chemistry Lab	1	2	CHEM 101L General Chemistry I lab (179) (C and above)	CHEM 331 Physical Chemistry I (634) (C and above)	Chemistry	SST	SHSS	

36	CHEM 350	Advanced Inorganic Chemistry	3	6	CHEM 212 Organic Chemistry II (443) (C and above) AND CHEM 212L Organic Chemistry II Lab (444) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)		Chemistry	SST	SHSS	
37	CHEM 410	Structural Spectroscopy	4	8	CHEM 212 Organic Chemistry II (443) (C and above)		Chemistry	SST	SHSS	
38	CHEM 431	Computational Chemistry	3	6	CHEM 332 Physical Chemistry II (1056) (C and above) AND (CSCI 111 Web Programming & Problem Solving (110) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above) OR CSCI 151 Programming for Scientists and Engineers (192) (C- and above))		SST			
39	CHEM 490	Nanochemistry	3	6	CHEM 331 Physical Chemistry I (634) (C and above) AND CHEM 250 Descriptive Inorganic Chemistry (445) (C and above)		Chemistry	SST	SHSS	
Mathematics										
40	MATH 109	Mathematical Discovery	3	6			MATH 161 Calculus I (118) (C- and above)	SHSS	SST	
41	MATH 161	Calculus I	4	8				1 year UG SST	SST	SHSS
42	MATH 162	Calculus II	4	8	MATH 161 Calculus I (118) (C and above)			3 year UG SHSS, 4 year UG SHSS, SST	SHSS	
43	MATH 251	Discrete Mathematics	3	6	MATH 162 Calculus II (170) (C and above)			Computer Science, Physics, Robotics and Mechatronics, Undeclared	Mathematics, SHSS	
44	MATH 263	Calculus III	4	8	MATH 162 Calculus II (170) (C and above)			4 year UG SHSS, SST	SHSS	
45	MATH 273	Linear Algebra with Applications	4	8	MATH 161 Calculus I (118) (C and above)	MATH 162 Calculus II (170) (C and above)		4 year UG SHSS, SST	SHSS	
46	MATH 274	Introduction to Differential Equations	3	6	MATH 162 Calculus II (170) (C and above)			4 year UG SHSS, SST	SHSS	
47	MATH 301	Introduction to Number Theory	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)			Mathematics	SHSS, SST	

48	MATH 302	Abstract Algebra I	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)			Mathematics	SHSS, SST		
49	MATH 310	Applied Statistical Methods	3	6	MATH 161 Calculus I (118) (C and above)		MATH 322 Mathematical Statistics (1165) (D and above)	2 year UG SST Biological Sciences, 2 year UG SST Computer Science, 3 year UG SST Biological Sciences, 3 year UG SST Computer Science, 4 year UG SST Biological Sciences, 4 year UG SST Computer Science	Mathematics, SHSS		
50	MATH 321	Probability	3	6	MATH 162 Calculus II (170) (C and above)		ECON 211 Economic Statistics (2280) (C- and above) OR PLS 211 Quantitative Methods (221) (C- and above)	4 year UG SHSS, Computer Science, Mathematics	SHSS, SST		
51	MATH 351	Numerical Methods with Applications	3	6	MATH 274 Introduction to Differential Equations (484) (C and above) AND MATH 263 Calculus III (81) (C and above)		ENG 202 Numerical Methods in Engineering (5506) (C and above)	Mathematics	SHSS, SST		
52	MATH 361	Real Analysis I	3	6	MATH 263 Calculus III (81) (C and above) AND MATH 251 Discrete Mathematics (85) (C and above)			Mathematics	SHSS, SST		
53	MATH 399	Internship	3	6							
54	MATH 411	Linear Programming	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 263 Calculus III (81) (C and above)			Mathematics	SHSS, SST		
55	MATH 425	Stochastic Processes	3	6	MATH 321 Probability (482) (C and above) OR ECON 211 Economic Statistics (2280) (C and above)			Mathematics	SHSS, SST		
56	MATH 440	Regression Analysis	3	6	MATH 322 Mathematical Statistics (1165) (C and above)		SOC 203 Quantitative Methods in Sociology (1377) (C and above) OR PLS 211 Quantitative Methods (221) (C and above)	Mathematics	SHSS, SST		

57	MATH 449	Statistical Programming	3	6	MATH 322 Mathematical Statistics (1165) (C and above)			Mathematics	SHSS, SST		
58	MATH 471	Nonlinear Differential Equations	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 274 Introduction to Differential Equations (484) (C and above)			Mathematics	SHSS, SST		
59	MATH 480	Complex Analysis	3	6	MATH 263 Calculus III (81) (C and above)			Mathematics	SHSS, SST		
60	MATH 481	Partial Differential Equations	3	6	MATH 274 Introduction to Differential Equations (484) (C and above)	MATH 480 Complex Analysis (618) (C and above)		Mathematics	SST	SHSS	
Physics											
61	PHYS 161	Physics I for Scientists and Engineers with Laboratory	4	8		MATH 161 Calculus I (118) (C and above)	PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above)	1 year UG SST	SST	SHSS	
62	PHYS 201	Introductory Astronomy I	3	6				Physics	SHSS, SST		
63	PHYS 221	Classical Mechanics I	3	6	(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)) AND MATH 273 Linear Algebra with Applications (84) (C- and above)			Physics	SHSS, SST		
64	PHYS 261	Modern Physics with laboratory	4	8	MATH 162 Calculus II (170) (C- and above) AND (PHYS 152 Introductory Physics II with Lab (1176) (C- and above) OR 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))			Physics	SHSS, SST		
65	PHYS 361	Classical Electrodynamics I	3	6		PHYS 315 Mathematical Methods of Physics (653) (D and above) OR PHYS 411 Advanced Mathematical Physics (3142) (D and above)		Physics	SHSS, SST		

66	PHYS 411	Advanced Mathematical Physics	3	6	MATH 274 Introduction to Differential Equations (484) (C- and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (173) (C- and above)			Physics	SST	SHSS	
67	PHYS 452	Quantum Mechanics II	3	6	PHYS 451 Quantum Mechanics I (1415) (C- and above)			Physics	SHSS, SST		
68	PHYS 465	Advanced Experimental Physics	3	6	PHYS 370 Optics with Laboratory (1405) (C- and above)			Physics	SHSS, SST		
69	PHYS 473	Introduction to Solid State Physics	3	6	PHYS 280 Thermodynamics and Statistical Physics (1179) (C- and above) AND PHYS 451 Quantum Mechanics I (1415) (C- and above)			Physics	SHSS, SST		
70	PHYS 491	Directed Study of Advanced Physics Topics	3	6				Through Add form only			
71	PHYS 505	Classical Mechanics	3	6							
72	PHYS 511	Computational Modeling and Simulation	3	6							
73	PHYS 515	Classical Electrodynamics	3	6							
74	PHYS 530	Solid State Physics	3	6							
75	PHYS 545	Advanced Instrumentation Methods	3	6							
76	PHYS 550	Advanced Mathematical Physics	3	6							
77	SST 501	Teaching and Learning	3	6							
78	SST 503	Laboratory Practicum	3	6	SST 501 Teaching and Learning (2260) (C- and above) AND SST 502 Teaching Practicum (2824) (C- and above)						
79	SST 591	Research Methods	3	6							
80	SST 693	Thesis Proposal	3	6	SST 591 Research Methods (3184) (C- and above)						

SEDS

Computer Science

81	CSCI 151	Programming for Scientists and Engineers	4	8			ROBT 102 Programming for robotics and physics (188) (C- and above) OR CSCI 150 Fundamentals of Programming (1501) (C- and above)	1 year UG SST	SST	SHSS	
82	CSCI 231	Computer Systems and Organization	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science	SST	SHSS	
83	CSCI 262	Software Project Management	3	6	CSCI 152 Performance and Data Structures (489) (C and above)			Computer Science	SST	SHSS	
84	CSCI 281	Human-Computer Interaction	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science	SST	SHSS	
85	CSCI 325	Introduction to Parallel Systems and GPU Programming	3	6	CSCI 332 Operating Systems (490) (C- and above)			Computer Science	SST	SHSS	
86	CSCI 330	Mobile Computing	3	6	CSCI 332 Operating Systems (490) (C- and above)			Computer Science	SST	SHSS	
87	CSCI 341	Database Systems	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science	SST	SHSS	
88	CSCI 361	Software Engineering	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science	SST	SHSS	
89	CSCI 390	Artificial Intelligence	3	6	CSCI 152 Performance and Data Structures (489) (C- and above)			Computer Science	SST	SHSS	
90	CSCI 398	Directed Study	3	6							
91	CSCI 408	Senior Project I	3	6				CS major only			
92	CSCI 434	Information Security	3	6		CSCI 333 Computer Networks (1145) (D and above)		Computer Science	SST	SHSS	
93	CSCI 471	Complexity and Computability	3	6	MATH 251 Discrete Mathematics (85) (C- and above)			Computer Science	SST	SHSS	
94	CSCI 501	Software Principles and Practice	3	6							
95	CSCI 512	Information Theory	3	6							
96	CSCI 525	Quantum Computing	3	6							
97	CSCI 531	Distributed Systems	3	6							
98	CSCI 545	Big Data Analytics	3	6							

Robotics and Mechatronics

99	ROBT 201	Mechanics: Statics and Dynamics	3	6	MATH 162 Calculus II (170) (C- and above) AND (PHYS 161 Physics I for Scientists and Engineers with Laboratory (116) (C- and above) OR PHYS 171 Physics I for Physics Majors with Laboratory (1401) (C- and above))			Robotics and Mechatronics	SST	SHSS	
100	ROBT 203	Electrical and Electronic Circuits I with Lab	4	8	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) OR (PHYS 141 Physics I for non-majors with Lab (1437) (C- and above) AND PHYS 142 Physics II for non-majors with Lab (1438) (C- and above)))			Robotics and Mechatronics	SST	SHSS	
101	ROBT 205	Signals and Sensing with Lab	4	8	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 and Mechatronics	SST	SHSS	
102	ROBT 301	Mechanical Design with CAD and Machining Laboratory	4	8	ROBT 201 Mechanics: Statics and Dynamics (475) (C- and above)			Robotics and Mechatronics	SST	SHSS	
103	ROBT 303	Linear Control Theory with Lab	4	8	ROBT 202 System Dynamics and Modeling (68) (C- and above) AND MATH 274 Introduction to Differential Equations (484) (C- and above)			Robotics and Mechatronics	SST	SHSS	
104	ROBT 305	Embedded Systems	3	6	ROBT 206 Microcontrollers with Lab (476) (C- and above)			Robotics and Mechatronics	SST	SHSS	
105	ROBT 307	Power Electronics	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (491) (C- and above)			Robotics and Mechatronics	SST	SHSS	
106	ROBT 401	Robot Dynamics and Control	3	6	ROBT 303 Linear Control Theory with Lab (623) (C- and above)			Robotics and Mechatronics	SST	SHSS	
107	ROBT 407	Machine Learning with Applications	3	6	MATH 273 Linear Algebra with Applications (84) (C and above) AND MATH 321 Probability (482) (C and above) AND CSCI 152 Performance and Data Structures (489) (C and above)			Robotics and Mechatronics	SST	SHSS	
108	ROBT 501	Robot Manipulation and Mobility	3	6							
109	ROBT 503	Dynamic Systems and Control	3	6							

110	ROBT 605	Robotic Motion Planning	3	6	ROBT 501 Robot Manipulation and Mobility (2263) (C- and above) AND CSCI 501 Software Principles and Practice (2408) (C- and above)						
111	ROBT 611	Industrial Robotics	3	6	ROBT 501 Robot Manipulation and Mobility (2263) (C- and above) AND CSCI 501 Software Principles and Practice (2408) (C- and above)						