Course Requirements and Registration Priorities
School of Science and Technology, Spring 2018

#	Abbr	Title	Cr(US)	Cr(ECTS)	PreRequisite	CoRequisite	AntiRequisite	1st priority registration	2nd priority registration	3rd priority registration	4th priority registration
SST											
Biological Science											
1	BIOL 101	Biology for non-Science majors	3	6				SHSS			
2	BIOL 110	Modern Biology I with Lab	4	8			BIOL 110 Modern Biology I (C- and above) OR BIOL 110 Modern Biology I Lab (C- and above)	Biological Sciences, Chemistry	SST	SHSS	
3	BIOL 120	Modern Biology II with Lab	4	8	BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above) OR (BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above))		BIOL 120 Modern Biology II (C- and above) OR BIOL 120 Modern Biology II Lab (C- and above)	Biological Sciences, Chemistry	SST	SHSS	
4	BIOL 220	Molecular Biology of Cell with Lab	4	8	(BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above) OR (BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above))) AND (BIOL 120 Modern Biology II with Lab (C- and above) OR (BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above)))			Biological Sciences	SST	SEng, SHSS	
5	BIOL 231	Human Anatomy and Physiology II	4	8	BIOL 230 Human Anatomy and Physiology I (C- and above)			Biological Sciences	SST	SEng, SHSS	
6	BIOL 341	Biochemistry I	3	6	CHEM 211 Organic Chemistry I (C- and above) OR CHEM 291 Organic Chemistry for Biologists I (C- and above)			Biological Sciences	SST	SEng, SHSS	
7	BIOL 356	Junior Research	3	6	BIOL 355 Jr. Research Seminar (C- and above)			Biological Sciences	SST	SEng, SHSS	

8	BIOL 370	Genetics	3	6	(BIOL 110 Modern Biology I (C- and above) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND (BIOL 120 Modern Biology II (C- and above) OR BIOL 120 Modern Biology II with Lab (C- and above)) AND (BIOL 220 Molecular Biology of Cell (C- and above) OR BIOL 220 Molecular Biology of Cell with Lab (C- and above))			Biological Sciences	SST	SEng, SHSS	
9	BIOL 420	Bioethics	3	6	((BIOL 110 Modern Biology I (C- and above) AND BIOL 110 Modern Biology I Lab (C- and above)) OR BIOL 110 Modern Biology I with Lab (C- and above) OR PREM 110 Pre-med Biology I with lab (C- and above)) AND ((BIOL 120 Modern Biology II (C- and above) AND BIOL 120 Modern Biology II Lab (C- and above)) OR BIOL 120 Modern Biology II with Lab (C- and above))			Biological Sciences	SST	SEng, SHSS	
10	BIOL 430	Histology	3	6	BIOL 230 Human Anatomy and Physiology I (C- and above) AND BIOL 231 Human Anatomy and Physiology II (C- and above)			Biological Sciences	SST	SEng, SHSS	
11	BIOL 440	Neuroscience	3	6	BIOL 231 Human Anatomy and Physiology II (C- and above)			Biological Sciences	SST	SEng, SHSS	
12	BIOL 491	Senior Thesis 2	4	8	BIOL 490 Senior Honors Thesis (C- and above)			Through Add form only			
13	BIOL 492	Directed study in Biology	3	6				Through Add form only			
14	BIOL 530	Bioethics Principles and Practices	3	6				1 year Graduate SST Biological Sciences			
15	BIOL 550	The Eukaryotic Cells in Health and Disease	3	6				1 year Graduate SST Biological Sciences			
16	BIOL 560	Molecular Biology of Prokaryotic Cells	3	6				1 year Graduate SST Biological Sciences			
17	BIOL 600	Graduate Seminar Series	3	6				1 year Graduate SST Biological Sciences, 2 year Graduate SST Biological Sciences			

18	BIOL 637	Fundamentals of Advanced Microscopy	3	6	BIOL 501 Fundamentals of Biological Sciences (C- and above)			1 year Graduate SST Biological Sciences, 2 year Graduate SST Biological Sciences			
19	BIOL 699	Research Thesis II	6	12				2 year Graduate SST Biological Sciences			
Chemistry											
20	CHEM 092	Survey of Environmental Sciences for Non-Science Majors	3	6				SHSS			
21	CHEM 101	General Chemistry I	3	6				Biological Sciences, Chemistry	SST	SHSS	
22	CHEM 102	General Chemistry II	3	6	CHEM 101 General Chemistry I (C and above)			Biological Sciences, Chemistry	SST	SHSS	
23	CHEM 102L	General Chemistry II lab	1	2	CHEM 101L General Chemistry I lab (C and above)	CHEM 102 General Chemistry II (C and above)		Biological Sciences, Chemistry	SST	SHSS	
24	CHEM 211	Organic Chemistry I	3	6	CHEM 102 General Chemistry II (C and above)			2 year SST Biological Sciences, Chemistry	Biological Sciences	SST	
25	CHEM 211L	Organic Chemistry I Lab	2	4	CHEM 102L General Chemistry II lab (C and above)	CHEM 211 Organic Chemistry I (C and above)		2 year SST Biological Sciences, Chemistry	Biological Sciences	SST	
26	CHEM 212	Organic Chemistry II	3	6	CHEM 211 Organic Chemistry I (C and above) OR CHEM 191 Chemistry I for Engineers (C and above)			Chemistry	Biological Sciences	SST	
27	CHEM 212L	Organic Chemistry II Lab	2	4	CHEM 211L Organic Chemistry I Lab (C and above)	CHEM 212 Organic Chemistry II (C and above) OR CHEM 292 Organic Chemistry for Biologists II (C and above)		Chemistry	Biological Sciences	SST	
28	CHEM 320	Instrumental Analysis with Labs	4	8	CHEM 220 Quantitative Chemical Analysis with lab (C and above)			Chemistry	Biological Sciences	SST	
29	CHEM 331	Physical Chemistry I	3	6	CHEM 220 Quantitative Chemical Analysis with lab (C and above) AND PHYS 162 Physics II for Scientists and Engineers with Laboratory (C and above)			Chemistry	Biological Sciences	SST	

30	CHEM 332	Physical Chemistry II	3	6	CHEM 331 Physical Chemistry I (C and above) AND MATH 274 Introduction to Differential Equations (C- and above)			Chemistry	Biological Sciences	SST	
31	CHEM 332L	Physical Chemistry II Lab	1	2	CHEM 331L Physical Chemistry Lab (C and above)	CHEM 332 Physical Chemistry II (C and above)		Chemistry	Biological Sciences	SST	
32	CHEM 380	Research Methods	3	6				Chemistry	Biological Sciences	SST	
33	CHEM 442	Biochemistry II with Lab-Metabolic Biochemistry	3	6	CHEM 341 Biochemistry I (C and above) AND CHEM 212 Organic Chemistry II (C and above)			Chemistry	Biological Sciences	SST	
34	CHEM 451	Applied Homogenous Catalysis	3	6	CHEM 450 Advanced Inorganic Chemistry (C and above)			Chemistry	Biological Sciences	SST	
35	CHEM 490	Nanochemistry	3	6	CHEM 331 Physical Chemistry I (C and above) AND CHEM 350 Descriptive Inorganic Chemistry (C and above)			Chemistry	Biological Sciences	SST	
36	CHEM 491	Special Topics in Chemistry	3	6				Chemistry	Biological Sciences	SST	
Computer Science											
37	CSCI 151	Programming for Scientists and Engineers	4	8			ROBT 102 Programming for robotics and physics (C- and above) OR CSCI 150 Fundamentals of Programming (C- and above)	1 year SST	SST	SHSS	
38	CSCI 152	Performance and Data Structures	4	8	CSCI 151 Programming for Scientists and Engineers (C- and above) OR CSCI 150 Fundamentals of Programming (C- and above) OR CSCI 261 Object Oriented Programming with Java I (C- and above) OR ROBT 102 Programming for robotics and physics (C- and above)			1 year SST	SST	SHSS	
39	CSCI 232	Operating Systems	3	6	CSCI 231 Computer Systems and Organization (C- and above)			2 year SST Computer Science	Computer Science	SEng, SHSS, SST	
40	CSCI 233	Computer Networks	3	6	CSCI 152 Performance and Data Structures (C- and above)		CSCI 233 Computer Networks (C- and above)	2 year SST Computer Science	Computer Science	SEng, SHSS, SST	
41	CSCI 245	System Analysis and Design	3	6	CSCI 241 Database Systems (C- and above)			Computer Science	SST	SEng, SHSS	
42	CSCI 330	Mobile Computing	3	6	CSCI 232 Operating Systems (C- and above)			Computer Science	SST	SEng, SHSS	

43	CSCI 336	Ubiquity and Sensing	3	6	CSCI 233 Computer Networks (C- and above)			Computer Science	SST	SEng, SHSS	
44	CSCI 353	Programming Paradigms	4	8	CSCI 152 Performance and Data Structures (C- and above) AND MATH 251 Discrete Mathematics (C- and above)			3 year SST Computer Science	Computer Science	SEng, SHSS, SST	
45	CSCI 361	Software Engineering	3	6	CSCI 152 Performance and Data Structures (C- and above)			3 year SST Computer Science	Computer Science	SEng, SHSS, SST	
46	CSCI 398	Directed Study	3	6				Through Add form only			
47	CSCI 399	Internship II	3	6				Through Add form only			
48	CSCI 408	Senior Project I	3	6				4 year SST Computer Science			
49	CSCI 409	Senior Project II	3	6	CSCI 408 Senior Project I (C- and above)			Through Add form only			
50	CSCI 462	Open Source Software	3	6	CSCI 361 Software Engineering (C- and above)			Computer Science	SST	SEng, SHSS	
51	CSCI 502	Hardware Software Co-Design	3	6	CSCI 501 Software Principles and Practice (C- and above)			1 year Graduate SST Computer Science, 1 year Graduate SST Robotics and Mechatronics			
52	CSCI 591	Advanced Artificial Intelligence	3	6	CSCI 501 Software Principles and Practice (C- and above)			1 year Graduate SST Computer Science			
Mathematics											
53	MATH 161	Calculus I	4	8				Biological Sciences, Chemistry	SST	SHSS	
54	MATH 162	Calculus II	4	8	MATH 161 Calculus I (C and above)			1 year SST	SST	SHSS	
55	MATH 251	Discrete Mathematics	3	6	MATH 160 Pre-Calculus (C- and above) OR MATH 161 Calculus I (C- and above) OR MATH 162 Calculus II (C- and above) OR Test "ALEKS" BETWEEN 75 and 100 OR CPS "MATH" BETWEEN 60 and 100			Computer Science, Mathematics	SST	SHSS	
56	MATH 263	Calculus III	4	8	MATH 162 Calculus II (C- and above)			2 year SST Undeclared, Mathematics	SST	SHSS	
57	MATH 273	Linear Algebra with Applications	4	8	MATH 161 Calculus I (C and above)	MATH 162 Calculus II (D and above)		Mathematics	SST	SHSS	

58	MATH 274	Introduction to Differential Equations	3	6	(MATH 162 Calculus II (C- and above) OR MATH 263 Calculus III (C- and above)) AND MATH 273 Linear Algebra with Applications (C- and above)			2 year SST Undeclared, Mathematics	SST	SHSS	
59	MATH 310	Applied Statistical Methods	3	6	MATH 161 Calculus I (C- and above)		SOC 203 Quantitative Methods in Sociology (C- and above) OR PLS 211 Quantitative Methods in Political Science (C- and above)	Mathematics	SST	SHSS	
60	MATH 321	Probability	3	6	MATH 162 Calculus II (C- and above) OR MATH 263 Calculus III (C- and above)		ECON 211 Economic Statistics (C- and above) OR PLS 211 Quantitative Methods in Political Science (C- and above)	Mathematics	SST	SHSS	
61	MATH 322	Mathematical Statistics	3	6	MATH 321 Probability (C- and above)			Mathematics	SST	SHSS	
62	MATH 351	Numerical Methods with Applications	3	6	MATH 274 Introduction to Differential Equations (C- and above) AND MATH 263 Calculus III (C- and above)			Mathematics	SST	SHSS	
63	MATH 361	Real Analysis I	3	6	MATH 263 Calculus III (C- and above)			Mathematics	SST	SHSS	
64	MATH 407	Graph Theory	3	6	MATH 301 Introduction to Number Theory (C- and above) OR (MATH 251 Discrete Mathematics (C- and above) AND MATH 273 Linear Algebra with Applications (C- and above))			Mathematics	SST	SHSS	
65	MATH 412	Nonlinear Optimization	3	6	MATH 273 Linear Algebra with Applications (C- and above) AND (MATH 263 Calculus III (C- and above) OR MATH 169 Accelerated Calculus (C- and above))			Mathematics	SST	SHSS	
66	MATH 417	Cryptography	3	6	MATH 273 Linear Algebra with Applications (C- and above) AND (MATH 251 Discrete Mathematics (C- and above) OR MATH 301 Introduction to Number Theory (C- and above) OR MATH 355 Introduction to Proofs (C- and above))			Mathematics	SST	SHSS	

67	MATH 423	Actuarial Mathematics II	3	6	MATH 321 Probability (C- and above)			Mathematics	SST	SHSS	
68	MATH 460	Topology	3	6	MATH 361 Real Analysis I (C- and above)			Mathematics	SST	SHSS	
69	MATH 461	Real Analysis II	3	6	MATH 361 Real Analysis I (C- and above)			Mathematics	SST	SHSS	
70	MATH 477	Applied Finite Element Methods	3	6	MATH 351 Numerical Methods with Applications (C and above)			Mathematics	SST	SHSS	
71	MATH 480	Complex Analysis	3	6	MATH 263 Calculus III (C- and above)			Mathematics	SST	SHSS	
72	MATH 482	Fourier Analysis	3	6	MATH 263 Calculus III (C- and above) AND MATH 274 Introduction to Differential Equations (C- and above)			Mathematics	SST	SHSS	
73	MATH 490	Special Topics in Mathematics	3	6				Mathematics	SST	SHSS	
74	MATH 499	Capstone Project	3	6				Through Add form only			
75	MATH 500Z	Linear Algebra with Applications	0	0				Through Add form only			
76	MATH 512	Optimization Methods and Techniques	3	6	MATH 517 Scientific Modeling and Simulation with Mathematics (B- and above)			1 year Graduate SST Applied Mathematics			
77	MATH 541	Data Analysis and Statistical Learning	3	6	MATH 540 Statistical Analysis (B- and above)			1 year Graduate SST Applied Mathematics			
78	MATH 551	Advanced Numerical Methods	3	6	MATH 517 Scientific Modeling and Simulation with Mathematics (B- and above)			1 year Graduate SST Applied Mathematics			
Physics											
79	PHYS 161	Physics I for Scientists and Engineers with Laboratory	4	8		MATH 161 Calculus I (D and above) OR MATH 162 Calculus II (D and above)	PHYS 171 Physics I for Physics Majors with Laboratory (C- and above)	SST	SEng, SHSS		
80	PHYS 162	Physics II for Scientists and Engineers with Laboratory	4	8	PHYS 161 Physics I for Scientists and Engineers with Laboratory (C- and above) OR PHYS 151 Introductory Physics I with Lab (C- and above)		PHYS 172 Physics II for Physics Majors with Laboratory (C- and above)	SST	SEng, SHSS		
81	PHYS 202	Introductory Astrophysics	3	6	(PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above)) AND (MATH 161 Calculus I (C- and above) OR MATH 169 Accelerated Calculus (C- and above))			SST	SEng, SHSS		

82	PHYS 222	Classical Mechanics II	3	6	PHYS 221 Classical Mechanics I (C- and above)			Physics	SST		
83	PHYS 270	Computational Physics with Laboratory	3	6	(CSCI 150 Fundamentals of Programming (C- and above) OR CSCI 151 Programming for Scientists and Engineers (C- and above)) AND MATH 263 Calculus III (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above))	MATH 273 Linear Algebra with Applications (D and above)		Physics	SST		
84	PHYS 280	Thermodynamics and Statistical Physics	3	6	MATH 263 Calculus III (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above))			Physics	SST		
85	PHYS 362	Classical Electrodynamics II	3	6	PHYS 361 Classical Electrodynamics I (C- and above)			Physics	SST		
86	PHYS 370	Optics with Laboratory	4	8	PHYS 361 Classical Electrodynamics I (C- and above)			Physics	SST		
87	PHYS 395	Research Methods	3	6	PHYS 261 Modern Physics with laboratory (C- and above) OR PHYS 270 Computational Physics with Laboratory (C- and above)			Physics	SST		
88	PHYS 451	Quantum Mechanics I	3	6	(PHYS 315 Mathematical Methods of Physics (C- and above) OR PHYS 411 Advanced Mathematical Physics (C- and above)) AND PHYS 221 Classical Mechanics I (C- and above) AND PHYS 361 Classical Electrodynamics I (C- and above)			Physics	SST		
89	PHYS 483	Statistical Mechanics	3	6				Physics	SST		
90	PHYS 491	Directed Study of Advanced Physics Topics	3	6				Through Add form only			
91	PHYS 495	Physics Colloquium	0	0				Through Add form only			
92	PHYS 499	Graduation Project	3	6	PHYS 451 Quantum Mechanics I (C- and above)			Through Add form only			
93	PHYS 510	Quantum Mechanics	3	6				1 year Graduate SST Physics			
94	PHYS 520	Statistical Physics	3	6				1 year Graduate SST Physics			

95	SST 502	Teaching Practicum	3	6	SST 501 Teaching and Learning (C- and above)			1 year Graduate SST Applied Mathematics, 1 year Graduate SST Computer Science, 1 year Graduate SST Physics, 1 year Graduate SST Robotics and Mechatronics			
96	SST 504	Innovation & Entrepreneurship	3	6				1 year Graduate SST Computer Science, 1 year Graduate SST Physics, 1 year Graduate SST Robotics and Mechatronics			
97	SST 592	Research Seminar	3	6				1 year Graduate SST Applied Mathematics, 1 year Graduate SST Computer Science, 1 year Graduate SST Physics, 1 year Graduate SST Robotics and Mechatronics			
98	SST 692	Thesis	15	30				2 year Graduate SST Computer Science, 2 year Graduate SST Physics, 2 year Graduate SST Robotics and Mechatronics			
Robotics and Mechatronics											
99	ROBT 202	System Dynamics and Modeling	3	6	MATH 162 Calculus II (C- and above) AND (PHYS 162 Physics II for Scientists and Engineers with Laboratory (C- and above) OR PHYS 172 Physics II for Physics Majors with Laboratory (C- and above))			Robotics and Mechatronics	SST	SHSS	
100	ROBT 204	Electrical and Electronic Circuits II with Lab	4	8	ROBT 203 Electrical and Electronic Circuits I with Lab (C- and above)			Physics, Robotics and Mechatronics	SST	SHSS	

101	ROBT 206	Microcontrollers with Lab	4	8	CSCI 151 Programming for Scientists and Engineers (C- and above) OR ROBT 102 Programming for robotics and physics (C- and above) OR CSCI 150 Fundamentals of Programming (C- and above)			Computer Science, Robotics and Mechatronics	SST	SHSS	
102	ROBT 302	Mechanical Design II	3	6	ROBT 301 Mechanical Design I (C- and above)			Robotics and Mechatronics	SST	SHSS	
103	ROBT 304	Electromechanical Systems with lab	4	8	ROBT 204 Electrical and Electronic Circuits II with Lab (C- and above)			Robotics and Mechatronics	SST	SHSS	
104	ROBT 308	Industrial Automation	3	6				Computer Science, Robotics and Mechatronics	SST	SHSS	
105	ROBT 310	Image Processing	3	6	MATH 162 Calculus II (C- and above) AND MATH 273 Linear Algebra with Applications (C- and above)			Computer Science, Robotics and Mechatronics	SST	SHSS	
106	ROBT 402	Robotic/Mechatronic System Design	3	6	ROBT 204 Electrical and Electronic Circuits II with Lab (C- and above) AND ROBT 206 Microcontrollers with Lab (C- and above) AND ROBT 302 Mechanical Design II (C- and above)			Robotics and Mechatronics			
107	ROBT 414	Human-Robot Interaction	3	6	CSCI 152 Performance and Data Structures (C- and above)			Computer Science, Robotics and Mechatronics	SST	SHSS	
108	ROBT 491	Graduation Project	3	6				Robotics and Mechatronics			
109	ROBT 502	Robot Perception & Vision	3	6	ROBT 501 Robot Manipulation and Mobility (C- and above)			1 year Graduate SST Robotics and Mechatronics			