

### BYU

### USU

### Required by USU Major

Course	Cr	Course	Cr	Course Title	BE <sup>5</sup>	CI <sup>5</sup>	EN <sup>5</sup>	CS <sup>5</sup>	CM <sup>5</sup>	EL <sup>5</sup>	ME <sup>5</sup>
No Equivalent		BENG 1880	3	Quantitative Biological Systems	X						
No Equivalent		BENG 2330	3	Properties of Biomaterials	X						
MEEN 321	3	BENG 2400	3	Biological Thermodynamics	X		X				
BIO 100	3	BIOL 1010	3	Biology and the Citizen		X	X	X			
BIO 130	4	BIOL 1610 + 1615	3+1	Biology I	X						
No Equivalent		BIOL 3300	4	General Microbiology	X						
CEEN 100a+100b	1	CEE 1880	1	CEE Orientation & Computer Applications		X	X				
CEEN 113	3	CEE 2240	3	Engineering Surveying		X	X				
CHEM 105 + 107	4+1	CHEM 1210+1215	4+1	Principles of Chemistry I + Lab I	X	X	X	X <sup>4</sup>			X
CHEM 106	4	CHEM 1220+1225	4+1	Principles of Chemistry II + Lab II			X	X <sup>4</sup>			
CHEM 351	3	CHEM 2300	3	Principles of Organic Chemistry	X		X				
CHEM 353 or 354	1	CHEM 2315	1	Organic Chemistry Lab I	X						
CHEM 481	3	CHEM 3700	3	Introduction to Biochemistry	X						
No Equivalent		CHEM 3710	1	Introduction to Biochemistry Lab	X						
CS 142 <sup>1,2</sup>	3	CS 1400	4	Intro to Computer Science - CS 1	X	X	X	X	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
CS 235 <sup>1</sup>	3	CS 1410	3	Intro to Computer Science - CS 2				X	X	X	
CS 240 <sup>1</sup>	4	CS 2420	3	Algorithms & Data Structures - CS 3				X	X		
No Equivalent		CS 2410	3	Intro to Event-driven Programming & GUIs				X			
No Equivalent		CS 2610	3	Developing Web Applications				X			
No Equivalent		CS 3000	1	Undergraduate Seminar				X			
CS 345	3	CS 3100	3	OS + Concurrency				X	X		
CS 224	3	CS 3810	3	Organization & Architecture				X			
ECEN 240	4	ECE 2250	3	Electrical Circuits I					X	X	
ECEN 240	4	ECE 2290	3	Electrical Circuits II					X	X	
ECEN 220	3	ECE 2700	4	Digital Circuits					X	X	
ENGL 115	3	ENGL 1010	3	Introduction to Writing	X	X	X	X	X	X	X
ENGL 316	3	ENGL 2010	3	Intermediate Writing	X	X	X	X	X	X	X
CEEN 103	3	ENGR 2010	3	Engineering Mechanics - Statics	X	X	X				X
CEEN 204	3	ENGR 2030	3	Engineering Mechanics - Dynamics		X	X				X
CEEN 203	3	ENGR 2140	3	Mechanics of Materials	X	X					X
MATH 411	3	ENGR 2450	3	Engineering Numerical Methods	X						
ECEN 301	3	ENGR 2210	3	Fundamental Electronics	X	X <sup>3</sup>					X
CEEN 112	3	ENGR 2270	2	Computer Engineering Drafting	X	X	X				
GEOL 111	4	GEO 1110+1115	3+1	Dynamic Earth		X					
No Equivalent		MAE 1200	2	Engineering Graphics							X
MEEN 250	3	MAE 2160	3	Material Science							X
No Equivalent		MAE 2165	1	Material Science Lab							X
MEEN 321	3	MAE 2300	3	Thermodynamics I		X <sup>3</sup>					X
MATH 112	4	MATH 1210	4	Calculus I	X	X	X	X	X	X	X
MATH 113 <sup>1</sup>	4	MATH 1220	4	Calculus II	X	X	X	X	X	X	X
MATH 314 <sup>1</sup>	3	MATH 2210	3	Multivariable Calculus		X				X	X
MATH 313+334	3+3	MATH 2250	4	Linear Algebra & Differential Equations	X	X	X				X
MATH 313	3	MATH 2270	3	Linear Algebra				X	X	X	
MATH 334	3	MATH 2280	3	Ordinary Differential Equations					X	X	
No Equivalent		MATH 3310	3	Discrete Mathematics				X	X		
No Equivalent		MATH 5710	3	Introduction to Probability						X	
PHSCS 121+123	3+3	PHYS 2210 + 2215	4+1	General Physics - Science I	X	X	X	X <sup>4</sup>	X	X	X
PHSCS 220+123	3+3	PHYS 2220 + 2225	4+1	General Physics - Science II				X <sup>4</sup>	X	X	X

<sup>1</sup>Series should be completed at one school (byu.edu).

<sup>2</sup>Mechanical Engineering requires C++ or C. Electrical/Computer Engineering requires C++.

<sup>3</sup>Civil Engineering students can choose one out of ENGR 2210 and MAE 2300.

<sup>4</sup>Computer Science students can choose either PHYS 2210&2220 or CHEM 1210&1220.

<sup>5</sup>BE= Biological Engineering, CI = Civil Engineering, EN = Environmental Engineering, CS = Computer Science, CM = Computer Engineering, EL = Electrical Engineering, ME = Mechanical Engineering.

Additional classes may be acceptable for the professional program. Contact USU for more information.

# ACADEMIC YEAR 2017 - 18