Department of Physical Environmental & Computer Science - B.S. - Computer Science

REVISED PROGRAM

FIXED/REQUIRED CORE

Course	Course Title	Credits
English Composition		
ENGL 112	College Composition I	3
ENGL 150	College Composition II	3
Mathematics and Quantitative Reasoning		
MTH 115	Nature of Mathematics	3
RECOMMENDED MATH COURSE: MTH 138 College Algebra & Trigonometry		
Life and Physical Sciences		
BIO 101 **OR**	Introduction to the Science of Biology **OR**	
PHS 101	Introduction to Physical Science	3
PHY 114	Basic Physics **(RECOMMENDED)**	
TOTAL		**12**
	FLEXIBLE CORE	
World Cultures and Global Issues		
ENGL 212	World Literature: The Evolving Canon	3
U.S. Experience in its Diversity		
HIST 200	The Growth and the Development of the U. S.	3
Creative Expressions		
ART 100	Introduction to World Art	3
MUS 100	Introduction to World Music	3
Individual and Society		
SSC 101	Culture, Society, and Social Change	3
Scientific World		
CS 140	Computer Science Seminar	3
TOTAL		**18**

COLLEGE OPTION (See Selections Below)

SOCIO-CULTURAL COURSES

Choose from 1 of the following:

FREN 101 and FREL 101	Beginning French I with Lab	**OR**
SPAN 101 and SPAL 101	Beginning Spanish I with Lab	**OR**
FREN 201	Intermediate French I	**OR**
SPAN 201	Intermediate Spanish I	**OR**
SPAN 203	Spanish for Native Speakers I	**OR**

INTEGRATIVE KNOWLEDGE COURSES

Choose 1 course from each group:

HUMANTIES:

FREN 102 and FREL 102	Beginning French II with Lab	**OR**
SPAN 102 and SPAL 102	Beginning Spanish II with Lab	**OR**
FREN 202	Intermediate French II	**OR**
SPAN 202	Intermediate Spanish II	**OR**
SPAN 204	Spanish for Native Speakers II	**OR**

NATURAL SCIENCE OR MATH:

CS 151	Introduction to Computing	

SOCIAL & BEHAVIORAL SCIENCES:

ECON 430	War on Drug	**OR**
HIST 300	Women Leaders in Civil Rights	**OR**
MASS 473	Hip Hop: Political, Historical, Social	

TOTAL		**12**
	MAJOR REQUIREMENTS and ELECTIVES	
CS 241	Discrete Structures	3
CS 244	Object-Oriented Programming	3
CS 246	Data Structures	3
CS 260	Digital Systems	4
CS 265	Unix Systems Programming	3
CS 281	Database Systems	3
CS 312	Analysis of Algorithms	3
CS 315	Operating Systems	3
CS 325	Computer Architecture	3
CS 345	Scientific Programming	3
CS 350	Programming Language Paradigms	3
CS 360	Software Engineering	3
CS 300	Theoretical Computer Science	3
MTH 151	Precalculus	4
MTH 202	Calculus I	4
Required Computer Science Electives (one from area A, B & C)		9
Technical Electives from below		6
Physics Requirements		8
Mathematics Requirements		7
TOTAL		**78**
GRAND TOTAL		**120**

	A. Networks	
CS 305	Data Communication	3
CS 307	Local and Wide Area Networks	3
CS 308	Computer and Network Security	3
	B. Platform-Based Development	
CS 309	Network Programming	3
CS 355	Mobile Applications Development	3
	C. Computational Science	
CS 319	Introduction to GIS	3
CS 321	Remote Sensing	3
CS 380	Intelligent Systems	3
CS 390	Scientific Programming II	3
AST 215	Space Science I	4

AST 216	Space Science II	4
MTH 204	Calculus III	4
	Technical Electives	**6**
AST 300 Level		
CHM 300 Level		
CS 300 Level		
MTH 300 Level		
PHY 300 Level		
	Physics Requirements	**8**
PHY/L/W 212	University Physics II	4
PHY/L/W 213	University Physics III	4
	Mathematics Requirements	**7**
MTH 203	Calculus II	4
MTH 237	Probability and Statistics	3

Note 1: Mathematics and Quantitative Reasoning: Students placed in MTH 151 (Pre-Calculus) or MTH 202 (Calculus I) are exempted from taking MTH 138 (College Algebra and Trigonometry). MTH 151 or MTH 202 will fulfill the Mathematics and Quantitative Reasoning requirement. Students who have already taken MTH 115 will have fulfilled the Mathematics and Quantitative Reasoning of Pathways/General Education. Students will be required to take the Mathematics sequence required for the Program.

Note 2: Life and Physical Sciences: Students placed in BIO 201 (General Biology I) are exempted from BIO 101 (Introduction to the Science of Biology). Students placed in PHY 205 (Introduction to Physics I) or PHY 211 (University Physics I) are exempted from PHS 101 (Introduction to Physical Science) and PHY 114 (Basic Physics). Students placed in CHM 201 (General Chemistry I) are exempted from CHM 112 (Basic Chemistry). Students placed in BIO 201 or PHY 211 or PHY 205 or CHM 201 will fulfill the Life and Physical Sciences requirement. Students who have already taken BIO 101 or PHS 101 or PHY 114 or CHM 112 will have fulfilled the Life and Physical Sciences of Pathways/General Education. Students will be required to take the Science sequence required for the Program.