

# Bachelor of Arts in Applied Computer Science

Catalog Year: 2016-2017

Total Degree Credit hours: 120

## General Education Requirements (See DegreeWorks or catalog for prerequisites)

A-1	<b>ENGL 1101</b> Composition I	3	
	<b>ENGL 1102</b> Composition II	3	
A-2	<b>MATH 1113</b> Pre-Calculus or <b>MATH 1112</b>	3	

### Area A: Essential Skills

**9 credit hours**

Must complete all three requirements in this area within first 30 credit hours. Math may be completed with (MATH 1111 + MATH 1112) or MATH 1113. Students must have C or better on all classes in this area.

B-1	<b>ECON 1000</b> Contemporary Economic Issues	2	
B-2	<b>FL 1002</b> Intro to Foreign Lang I or <b>COM 1100</b> Human Communication	3	

### Area B: Institutional Options

**5 credit hours**

Students may need to take FL 1001 before FL 1002. FL denotes any foreign language and can be any with designators such as FREN, GRMN, SPAN etc.

C-1	<b>ENGL 2000-level</b> Literature	3	
C-2	<b>ART/DANC/MUSI/TPS 1107</b> Arts and Culture of the World	3	

### Area C: Humanities/Arts

**6 credit hours**

Choose one course from both groups.

D-1	<b>MATH 1190</b> Calculus I	4	
D-2	<b>CHEM 1211/L or CHEM 1151/L or PHYS 1111/L or PHYS 2211/L or BIOL 1107/L</b>	8	
	<b>CHEM 1212/L or CHEM 1152/L or PHYS 1112/L or PHYS 2212/L or BIOL 1108/L</b>		

### Area D: Science, Math & Technology

**11 credit hours**

Must complete a science sequence. "L" denotes accompanying lab section.

*Chem 1211/L is a prerequisite of BIOL 1107/L.*

E-1	<b>POLS 1101</b> American Government	3	
E-2	<b>HIST 2111/2112</b> US History	3	
E-3	<b>HIST 1100/1111/1112</b> World History	3	
E-4	<b>CRJU/GEOG/PSYC/SOCI/STS 1101, ANTH 1102 or ECON 2100</b>	3	

### Area E: Social Sciences

**12 credit hours**

Choose one course from each group for requirements E-2 to E-4.

<b>KSU 1101</b> First Year Seminar	3	
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## Area F Lower Division Major Requirements

Prerequisites			
F-1	<b>ACST 2301</b> Problem Solving and Computer Game Programming	No Prerequisite	3
F-2	<b>IS 2200</b> Info Systems and Communication	ENGL 1101, MATH 1111/1112/1113	3
F-3	<b>MATH 1107</b> Elementary Statistics	MATH 1112 or 1113	3
F-4	<b>CS 1301</b> Programming Principles I	MATH 1112 or 1113	4
F-5	<b>FL 2001</b> Intermediate Foreign Lang I	FL 1002	3
F-6	<b>FL 2002</b> Intermediate Foreign Lang II	FL 2001	2

Students should begin ACST 2301 within their first or second semester in the major.

Student may wish to take the Department of Foreign Languages computerized adaptive placement exam to determine proper placement into the appropriate starting level language course. Students who place at a lower level (1001/1002) must work their way up to FL 2001 and FL 2002.

Students must have a C or better on all courses included in Area F.

Notes:

## Upper Division Major Courses 31 credit hours

Prerequisites			
<b>ACST 3150</b> Programming with .NET Framework	ACST 2301	4	
<b>IS 3260</b> Web Development I	IS 2200 & permission of Coles College	3	
<b>CS 3410</b> Intro to Database Systems	CS 1301 & ACST 3150	3	
<b>ACST 3510</b> Computer Architecture & Robotics	ACST 3150	3	
<b>ACST 3530</b> Linux Operating Systems	ACST 3510	3	
<b>ACST 3330</b> Data Structures and Database Applications	CS 3410	3	
<b>ACST 3540</b> Social Media & Global Computing	ACST 3150	3	
<b>ACST 3710</b> Digital Game Design	ACST 3150	3	
<b>ACST 4620</b> Computing Security	ACST 3530	3	
<b>CS 4850</b> Senior Project	Department Approval	3	

Overrides are required for CS 3410 and CS 4850

Students must have a C or better in all Upper Division courses.

## Required Minor or Concentration (15 -18 hours)

Select one minor or concentration from this list, or as approved by the CS Department

Applied Mathematics Minor	Chemistry Minor
Mathematics of Computing Certificate	Information Security & Assurance Minor
Applied Stats & Data Analysis Minor	Geographical Information Systems Concentration
Business Information Systems Minor ***	High Performance Computing Certificate

Students must have a C or better in all formal minor/concentration courses.

\*\*\* If you choose to pursue the Information Systems minor, 6 credit hours will be shared between your major requirements and your minor requirements. You still need 123 credit hours to graduate, so you will need to take at least 6 additional credit hours in a computing (CS, SWE, CGDD, IT, IS, ISA) or other approved discipline in addition to what is required above. Please meet with an advisor regularly if you pursue this minor.

## Major Electives

Choose any 6 credit hours

Prerequisites			
<b>CSED 4416</b> Teaching of Computer Science	Department Approval	3	
<b>ACST 3720</b> Process and Systems Modeling	ACST 3710	3	
<b>ACST 4320</b> Data Warehousing & Mining	CS 1301 & ACS 3150	3	
<b>ACST 4550</b> Mobile Computing with Android	ACST 3150	3	
<b>ACST 4570</b> Cloud Computing	ACST 3530	3	
<b>IS 3760</b> Web Development II	IS 3260	3	
<b>CS 4305</b> Software Engineering or <b>SWE 3313</b>	Department Approval	3	

Students must have a C or better in all Major Electives