

## Ashesi University College Graduation Requirements

Computer Science Major - Class of 2019	Ashesi Credits	Course Code
<b>Mandatory Courses (all required)</b>		
Written and Oral Communication	1	ENGL 112
Pre-Calculus / Calculus 1 *	1	MATH141_A/MATH142_A
Pre-Calculus 2 / Calculus 2 *	1	MATH141_B/ MATH142_B
Text & Meaning	1	ENGL113
Foundations of Design and Entrepreneurship I	1	BUSA161_A
Foundations of Design and Entrepreneurship II	1	BUSA161_B
Statistics	1	MATH151
Introduction to Computing & Programming / Programming 1	1	CS111
Microeconomics	1	ECON101
Social Theory	1	SOAN121
Quantitative Methods	1	MATH143
Introduction to Finance / Finance for Non Finance Managers	1	BUSA220/ BUSA224A
Research Methods / Social Research Methods	1	SOAN229
Applied Calculus (ONLY if Pre-Calculus Track*)	1	MATH144
Leadership Seminar 1: What Makes a Good Leader?	0.5	SOAN111
Leadership Seminar 2: Rights, Ethics, and Rule of Law	0.5	SOAN211
Leadership Seminar 3: The Economic Development of a Good Society	0.5	SOAN311
Leadership Seminar 4: Leadership as Service	1	SOAN411
<b>Total (Pre-Calculus Track) *</b>	<b>16.5</b>	
<b>Total Calculus Track *</b>	<b>15.5</b>	

<b>Mandatory Africana Elective: Select one course from list</b>		
Africa in an International Setting: Pan-Africanism	1	POLS231_202
Africa in the International Setting	1	POLS231_201
Africa in the International Setting: A Survey of Africa's integration into the Global System	1	POLS231_203
Africa in the International Setting: China in Africa	1	POLS231_204
Africa in the International Setting: Refugees and Forced Migration in Africa	1	POLS231_205
African Literature	1	ENG215
Africa Music and Dance: Traditional and Contemporary Music	1	SOAN233
African Philosophical Thought	1	POLS233
African Repertory: Music and Dance	1	SOAN231
<b>Total</b>	<b>1</b>	
<b>Mandatory Extra Elective: Select one course from list</b>		
Macroeconomics	1	ECON102
Any Africana Elective from list above	1	
<b>Total</b>	<b>1</b>	
<b>Total Mandatory Courses (Pre-Calculus Track*)</b>	<b>18.5</b>	

<b>Total Mandatory Courses (Calculus Track*)</b>	<b>17.5</b>	
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<b>CS Required Major Courses (all required)</b>		
Computer Programming for CS / Programming 2	1	CS212
Discrete Structures and Theory	1	CS221
Data Structures and Algorithms	1	CS222
Computer Organization & Architecture	1	CS331
Human Computer Interaction	1	CS314
Software Engineering	1	CS415
Database Management	1	CS323
Intermediate Computer Programming / Programming 3	1	CS313
Web Technologies	1	CS341
Networks & Distributed Computing	1	CS432
Operating Systems and Systems Administration	1	CS433
Algorithm Design & Analysis	1	CS456
<b>Total</b>	<b>12</b>	

<b>CS Required Major Electives: Select two courses from list</b>		
Artificial Intellegence	1	CS454
Mobile Web Programming	1	CS443
Concepts of Programming languages	1	CS413
VLSI: Embedded Systems	1	CS451
Robotics	1	CS453
Advanced Database Systems	1	CS424
Ecommerce	1	CS442
Computer Graphics	1	CS452
Applied Cryptography and Computer Science Security	1	CS455
Data Mining	1	CS457
<b>Total</b>	<b>2</b>	

<b>CS Required Major Capstone: Select one color-coded option of 2 courses</b>		
<i>Thesis 1</i>	1	CS400_A
<i>Thesis 2</i>	1	CS400_B
<i>Entrepreneurship 1</i>	1	BUSA401_A
<i>Entrepreneurship 2</i>	1	BUSA401_B
Applied Senior Project	1	CS410
Additional CS Elective (select one from CS Elective list above)	1	
<b>Total</b>	<b>2</b>	

<b>CS Required Major Courses Total</b>	<b>16</b>	
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<b>CS Total Courses: Mandatory + Required + Elective (Pre-Calculus Track*)</b>	<b>34.5</b>	
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CS Total Courses: Mandatory + Required + Elective (Calculus Track*)	33.5	
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\* Note: Students are placed on either the Pre-Calculus Track or the Calculus Track. Either Calculus 1 and Calculus 2, OR Pre-Calculus 1, Pre-Calculus 2, and Applied Calculus, are required to satisfy the Calculus requirement.