

Ashesi University College Graduation Requirements

Electrical and Electronic Engineering Major - Class of 2019	Ashesi Credits	Course Code
Mandatory Courses (all required)		
Written and Oral Communication	1	ENGL 112
Text & Meaning	1	ENGL113
Foundations of Design and Entrepreneurship I	1	BUSA161_A
Foundations of Design and Entrepreneurship II	1	BUSA161_B
Microeconomics	1	ECON101
Social Theory	1	SOAN121
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 for Engineers: Leadership as Service	1	SOAN411_A
Total	8.5	

Mandatory Africana Elective: Select one course from list		
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
Total	1	

Total Mandatory Courses	9.5	
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Required Technical Courses (Required of all Engineering Majors)		
Calculus 1	1	MATH142_A
Calculus 2	1	MATH142_B
Statistics for Engineering and Economics	1	MATH152
Multivariable Calculus and Linear Algebra	1	MATH211
Differential Equations and Numerical Methods	1	MATH 221
Computer Programming for Engineering	1	CS112
Physics I: Mechanics	1	SC112
Physics II: Electromagnetism	1	SC113
Materials Science & Chemistry	1	SC221
Total	9	

EE Additional Required Major Courses		
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ENGR 112 Introduction to Engineering	1	ENGR112
CE 122 Applied Programming for Engineers	1/2	CE122
EE 222 Circuits and Electronics	1	EE222
ENGR 212 Instrumentation for Engineering	1/2	ENGR212
EE 242 Introduction to Electrical Machines and Power Electronics	1	EE242
EE 321 Communication Systems	1	EE2321
ENGR 311 System Dynamics	1	ENGR311
ENGR 312 Control Systems	1	ENGR312
CE 322 Digital Systems Design	1	CE322
CE 451 Embedded Systems	1	CE451
ENGR 300 Third Year Group Project & Seminar	1/2	ENGR300
ME 411 Fundamentals of Thermal Fluid Science and Heat Transfer	1	ME411
EE 342 Advanced Electrical Machines and Power Electronics	1	EE342
ENGR 400 Senior Project	1	ENGR400
ENGR 401 Senior Project & Seminar	1	ENGR401
ENGR 413 Project Management and Professional Practice	1	ENGR413
Total	14.5	

EE Required Major Electives: Select two courses from list		
BUSA 304 Operations Management	1	BUSA304
BUSA 444 Supply Chain Management	1	BUSA444
ECON 321 Risk Management+	1	ECON321
ECON 341 Operations Research+	1	ECON341
ENGR 414 Introduction to Environmental Science and Engineering	1	ENGR414
CS 222 Data Structures and Algorithms	1	CS222
CS 312 Intermediate Computer Programming	1	CS312
CS 415 Software Engineering	1	CS415
CS 432 Networks and Distributed Computing	1	CS432
CS 435 Operating Systems	1	CS435
CS 453 Robotics	1	CS453
EE 421 Digital and Analog Signal Processing in Telecommunications	1	EE421
EE 451 Power Engineering	1	EE451
EE 453 Power Systems Analysis	1	EE453
ME 301 Mechanical Machine Design	1	ME301
ME 311 Mechanics of Materials / Structural Engineering	1	ME311
ME 421 Thermal Systems & Applications	1	ME421
ME 431 Fluid Mechanics & Applications	1	ME431
Total	2	

EE Required Major Courses Total	25.5	
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EE Total Courses: Mandatory + Required + Elective	35	
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