






















2011 - 2012 Major Map Aerospace Engineering (Astronautics), BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESAEASBSE

Term 1		0 - 13 Credit Hours	Critical course signified by 	Hours	Minimum Grade	Notes
	ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students			3	C	<ul style="list-style-type: none">• An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses.• ASU Math Placement Exam score determines placement in Mathematics course.• ASU 101-MAE and FSE 100 required for freshmen and should be completed first semester. Non-freshmen see Advisor for petitioning replacement electives.• CHM 113 is a prerequisite for CHM 116 and does not apply towards degree credit.• If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
	CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)			4	C	
	MAT 265: Calculus for Engineers I (MA)			3	C	
	FSE 100: Introduction to Engineering OR SES 100: Introduction to Exploration (CS) OR School approved elective			2-3	C	
	ASU 101-MAE: The ASU Experience			1		
	Minimum 2.00 GPA ASU Cumulative.					
	Term hours subtotal:			13-14		
Term 2		14 - 29 Credit Hours	Critical course signified by 	Hours	Minimum Grade	Notes
	ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students			3	C	
	MAT 266: Calculus for Engineers II (MA)			3	C	
	PHY 121: University Physics I: Mechanics (SQ)			3	C	
	PHY 122: University Physics Laboratory I (SQ)			1	C	
	Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)			3		
	Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)			3		
	Minimum 2.00 GPA ASU Cumulative.					
	Term hours subtotal:			16		
Term 3		30 - 43 Credit Hours	Critical course signified by 	Hours	Minimum Grade	Notes
	MAE 212: Engineering Mechanics			4	C	<ul style="list-style-type: none">• CRITICAL REQUIREMENT: Complete 10 critical courses by end of term 3. ENG 101 & 107 are not part of the this course count.
	MAT 275: Modern Differential Equations (MA)			3	C	
	PHY 131: University Physics II: Electricity and Magnetism (SQ)			3	C	
	PHY 132: University Physics Laboratory II (SQ)			1	C	
	MAT 267: Calculus for Engineers III (MA)			3	C	
	Complete First-Year Composition requirement.					
	Minimum 2.00 GPA ASU Cumulative.					
	Term hours subtotal:			14		
Minimum						

Term 4 44 - 58 Credit Hours Critical course signified by 	Hours	Grade	Notes
 MAE 213: Solid Mechanics	3	C	
 MAE 240: Thermofluids I	4	C	
EEE 202: Circuits I	4	C	
MAE 214: Computer-Aided Engineering I	1	C	
MAT 343: Applied Linear Algebra	3	C	
Term hours subtotal:	15		

Term 5 59 - 73 Credit Hours	Hours	Minimum Grade	Notes
MAE 318: Sensors and Controls	5	C	
MAE 345: Structures in a Space Environment	4	C	
MAE 384: Numerical Methods for Engineers (CS)	3	C	
EEE 203: Signals and Systems I	3	C	
Term hours subtotal:	15		

Term 6 74 - 89 Credit Hours	Hours	Minimum Grade	Notes
MAE 362: High-Speed Aerodynamics (L)	4	C	• MAE 360 and MAE 362 must be completed to receive (L) credit
MAE 462: Space Vehicle Dynamics and Control	3	C	
Literacy and Critical Inquiry (L)	3		
SES 311: Essentials of Astrobiology: Exploration for Life in the Universe OR BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG) OR BIO 201: Human Anatomy and Physiology I (SG) OR BME 111: Engineering Perspectives on Biological Systems	3-4		
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Term hours subtotal:	16-17		

Term 7 90 - 105 Credit Hours	Hours	Minimum Grade	Notes
EEE 304: Signals and Systems II	4	C	
MAE 400: Engineering Profession (L)	3	C	
MAE 465: Rocket Propulsion	3	C	
Upper Division Upper Division Technical Elective	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	16		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
General Elective	3		
MAE 480: Space Systems Design	3	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Upper Division Upper Division Aeronautics Elective	3	C	
Upper Division Upper Division Technical Elective	3	C	
Term hours subtotal:	15		

Upper Division Aeronautics Elective	Upper Division Technical Electives
MAE 313: Aircraft Dynamics and Control	Upper Division SES
MAE 360: Aerodynamics (L)	Upper Division MAE
MAE 426: Design of Aerospace Structures	
MAE 463: Propulsion	
MAE 466: Rotary Wing Aerodynamics and Performance	

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition





















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Biomedical Engineering, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESBMEBSE

Term 1 0 - 17 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 BIO 181: General Biology I (SQ) OR CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses. ASU Math Placement Exam score determines placement in Mathematics course. ASU 101-BME and Intro to Biomedical Engineering I, II, III are required for freshmen and sophomores and should be completed first semester. Non-freshmen and sophomores should complete applicable elective. See Advisor. CHM 113 is a prerequisite to CHM 116 and does not apply towards degree credit. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 BME 194: Introduction to Biomedical Engineering I OR Elective	1	C	
 BME 194: Introduction to Biomedical Engineering II OR Elective	1	C	
 BME 194: Introduction to Biomedical Engineering III OR Elective	1	C	
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-BME: The ASU Experience	1	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	17		
Term 2 18 - 33 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 BIO 181: General Biology I (SQ) OR CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4	C	<ul style="list-style-type: none"> Computation in Biomedical Engineering, MATLAB/Mathcad in BME, and Computational Biostatistics must all be completed to receive (CS) credit.
 BME 194: Applications to Math & Science to BME I	1	C	
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
BME 194: Computation in Biomedical Engineering AND Computer/Statistics/Quantitative Applications (CS)	1	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 34 - 50 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 267: Calculus for Engineers III (MA)	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 15 critical courses by end of term 3 (14 if ENG105 is taken).
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
BME 294: Cell Tissue Physiology	1	C	
BME 294: Anatomy & Physiology: Systems	1	C	
BME 294: Anatomy & Physiology: Tissues	1	C	
CHM 231: Elementary Organic Chemistry (SQ) AND CHM 235: Elementary Organic Chemistry Laboratory (SQ) OR CHM 233: General Organic Chemistry I AND CHM 237: General Organic Chemistry Laboratory I	4	C	

ECN 211: Macroeconomic Principles (SB) OR
 ECN 212: Microeconomic Principles (SB) OR
 ECN 201: Economic Issues and Analysis (SB)

3

❗ Complete First-Year Composition requirement.

❗ Minimum 2.00 GPA ASU Cumulative.

Term hours subtotal: 17

Term 4 51 - 65 Credit Hours Critical course signified by ❗	Hours	Minimum Grade	Notes
❗ BME 294: Applications of Math & Science to BME II	1	C	<ul style="list-style-type: none"> • Computation in Biomedical Engineering, MATLAB/Mathcad in BME, and Computational Biostatistics must all be completed to receive (CS) credit.
❗ MAT 275: Modern Differential Equations (MA)	3	C	
BME 294: MATLAB/Mathcad in BME AND Computer/Statistics/Quantitative Applications (CS)	1		
BME 294: Conservation Principles	1	C	
BME 294: BME Professional Development I	1	C	
EEE 202: Circuits I	4	C	
MAE 212: Engineering Mechanics	4	C	
Term hours subtotal:	15		

Term 5 66 - 81 Credit Hours	Hours	Minimum Grade	Notes
BME 394: Numerical Analysis	1	C	<ul style="list-style-type: none"> • Computation in Biomedical Engineering, MATLAB/Mathcad in BME, and Computational Biostatistics must all be completed to receive (CS) credit.
BME 394: Biomaterial/ Physiochemical Properties	1	C	
BME 394: Biomaterial Implants & Devices	1	C	
BME 394: Basic Concepts for Biological Signals and Systems	1	C	
BME 394: Transforms for BME Applications	1	C	
BME 394: Microcomputing & Embedding Systems for BME	1	C	
BME 394: Statistics for Biomedical Engineers	1	C	
BME 394: Computational Biostatistics AND Upper Division Computer/Statistics/Quantitative Applications (CS)	1	C	
BME 394: Probability for Biomedical Engineers	1	C	
BME 394: Circuits for BME Instrumentation	1	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
MAT 343: Applied Linear Algebra	3	C	
Term hours subtotal:	16		

Term 6 82 - 96 Credit Hours	Hours	Minimum Grade	Notes
BME 394: Engineering Design Method	1	C	<ul style="list-style-type: none"> • 6 hrs of Professional Electives required. 9 hrs of General Electives required. See Advisor for approved courses.
BME 394: 3D Spatial & Graphic Design/ Modeling	1	C	
BME 394: BME Professional Development II	1	C	
BME 394: Mass Transport	1	C	
BME 394: Momentum Transport	1	C	
BME 394: Heat/ Energy Transport	1	C	
BME 394: Filters & Stochastic Process	1	C	
BME 394: Design of Experiments & Clinical Trials	1	C	
BME 394: Applications of Math & Science to BME III	1	C	
Lower Division or Upper Division General Elective	3		
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Term hours subtotal:	15		

Term 7 97 - 108 Credit Hours	Hours	Minimum Grade	Notes
BME 494: Capstone I AND Upper Division Literacy and Critical Inquiry (L)	1	C	<ul style="list-style-type: none"> • 6 hrs of Professional Electives required. 9 hrs of General Electives required. See Advisor for approved courses.
BME 494: Capstone II AND Upper Division Literacy and Critical Inquiry (L)	1	C	
BME 494: Capstone III AND Upper Division Literacy and Critical Inquiry (L)	1	C	

BME 494: Instrumentation I	1	C
BME 494: Instrumentation II	1	C
BME 494: Instrumentation III	1	C
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3	
Upper Division Professional Elective	3	C
Term hours subtotal:	12	

- BME Capstone I, II, and III must all be completed to receive (L) credit.

Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
BME 494: Capstone IV AND Upper Division Literacy and Critical Inquiry (L)	1	C	<ul style="list-style-type: none"> • 6 hrs of Professional Electives required. 9 hrs of General Electives required. See Advisor for approved courses. • BME Capstone IV, V, and VI must all be completed to receive (L) credit.
BME 494: Capstone V AND Upper Division Literacy and Critical Inquiry (L)	1	C	
BME 494: Capstone VI AND Upper Division Literacy and Critical Inquiry (L)	1	C	
Upper Division Professional Elective	3	C	
Complete 2 courses: Upper Division General Elective	6	C	
Term hours subtotal:	12		

Notes:

- Major GPA calculation includes all BME courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition























General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Chemical Engineering, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCEBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHE 100: Introduction to Chemical Engineering	2	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101 or College specific equivalent First Year Seminar required of all freshman students. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 CHM 113: General Chemistry I (SQ)	4	C	
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CHE: The ASU Experience	1		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 30 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 116: General Chemistry II (SQ)	4	C	
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	14		
Term 3 31 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHE 211: Introduction to Chemical Processing	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 10 critical courses by end of term 3.
Bioscience Elective	3		
MAT 242: Elementary Linear Algebra	2		
MAT 275: Modern Differential Equations (MA)	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
 Complete First-Year Composition requirement.			
Term hours subtotal:	14		
Term 4 45 - 59 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHE 231: Introduction to Transport Phenomena I: Fluids	3	C	
 MAT 267: Calculus for Engineers III (MA)	3	C	
 MAE 384: Numerical Methods for Engineers (CS)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3		

Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR
 Social and Behavioral Sciences (SB) AND Global Awareness (G) OR
 Social and Behavioral Sciences (SB) AND Historical Awareness (H)

Term hours subtotal: 15

Term 5 60 - 75 Credit Hours	Hours	Minimum Grade	Notes
CHE 334: Introduction to Transport Phenomena II: Heat and Mass Transfer	3	C	
CHE 342: Introduction to Applied Chemical Thermodynamics	3	C	
CHM 233: General Organic Chemistry I	3		
CHM 237: General Organic Chemistry Laboratory I	1		
2** Level Engineering Elective	3		
Upper Division Chemistry Content Technical Elective	3		
Term hours subtotal:	16		

Term 6 76 - 90 Credit Hours	Hours	Minimum Grade	Notes
CHE 352: Transport Laboratories (L)	3	C	
CHE 433: Modern Separations	3	C	
CHE 442: Introduction to Chemical Reactor Design	3	C	
CHM 234: General Organic Chemistry II	3		
IEE 220: Business/Industrial Engr	3		
Term hours subtotal:	15		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
CHE 432: Principles of Chemical Engineering Design	3	C	
CHE 451: Chemical Engineering Laboratory	3		
CHE 461: Process Dynamic Control (CS)	3		
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Upper Division Chemistry Content Technical Elective	3		
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
Complete 2 courses: CHE 4** Elective	6		<ul style="list-style-type: none"> MSE 208 cannot be used to meet the Natural Science or MSE Technical Elective requirement.
CHE 462: Process Design (L)	3		
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Upper Division Natural Science or MSE Technical Elective	3		
Term hours subtotal:	15		

2** Level Engineering Elective	Bioscience Elective	Natural Science Electives
BME 2** Elective	BCH 361: Principles of Biochemistry	MSE 3** Elective
CEE 2** Elective	BCH 461: General Biochemistry	MSE 4** Elective
CSE 2** Elective	BCH 463: Biophysical Chemistry	
ECE 2** Elective	BIO 181: General Biology I (SQ)	
EEE 2** Elective	BME 111: Engineering Perspectives on Biological Systems	
IEE 2** Elective	BME 235: Physiology for Engineers	
MAE 2** Elective	BME 318: Biomaterials	
MSE 2** Elective	BME 411: Biomedical Engineering I	
	CHE 475: Biochemical Engineering	
	MBB 245: Principles of Molecular and Cellular Biology I (SQ)	

MBB 247: Principles of Molecular and Cellular Biology II

MIC 205: Microbiology (SG)

MIC 220: Biology of Microorganisms

Chemistry Content Technical Elective

CHM 3** Elective

BCH 4** Elective

Notes:

- Major GPA calculation includes MAE 384, all Technical Electives, and all CHE courses.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition






















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.


2011 - 2012 Major Map Civil Engineering, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCEEBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101 or College specific equivalent First Year Seminar required of all freshman students and should be completed the first semester. • CHM 113 is a prerequisite for CHM 116 and does not apply toward degree credit. • If ENG 105 is taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CEE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 242: Elementary Linear Algebra	2	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 3 32 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 210: Engineering Mechanics I: Statics	3	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 12 critical courses by end of term 3.
 MAT 267: Calculus for Engineers III (MA)	3	C	
 MAT 275: Modern Differential Equations (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	13		
Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 212: Engineering Mechanics II: Dynamics	3	C	

 CEE 213: Introduction to Deformable Solids	3	C
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG) OR BME 111: Engineering Perspectives on Biological Systems OR CHM 231: Elementary Organic Chemistry (SQ) OR GLG 101: Introduction to Geology I (Physical) (SQ & G)	3	
EEE 202: Circuits I OR MAE 240: Thermofluids I	4	
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB) OR ECN 201: Economic Issues and Analysis (SB)	3	
Term hours subtotal:	16	

Term 5 61 - 77 Credit Hours	Hours	Minimum Grade	Notes
CEE 321: Structural Analysis and Design	4	C	
CEE 351: Geotechnical Engineering	4	C	
CEE 353: Civil Engineering Materials	3	C	
CEE 384: Numerical Methods for Engineers (CS)	3	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Term hours subtotal:	17		

Term 6 78 - 92 Credit Hours	Hours	Minimum Grade	Notes
CEE 300: Engineering Business Practice (L)	3	C	
CEE 341: Fluid Mechanics for Civil Engineers	4	C	
CEE 361: Introduction to Environmental Engineering	4	C	
CEE 372: Transportation Engineering	4	C	
Term hours subtotal:	15		

Term 7 93 - 107 Credit Hours	Hours	Minimum Grade	Notes
CEE 400: Earth Systems Engineering and Management ((L or HU)& H)	3		
Complete 3 courses: Upper Division Technical Elective	9	C	<ul style="list-style-type: none"> Technical Elective and Design Elective requirements: Complete a total of 2 design electives and 4 technical electives during Term 7 and Term 8. See Advisor for guidance in selection.
Upper Division Design Elective	3	C	
Term hours subtotal:	15		

Term 8 108 - 120 Credit Hours	Hours	Minimum Grade	Notes
CEE 486: Integrated Civil Engineering Design (L)	4	C	
Upper Division Design Elective	3	C	
Upper Division Technical Elective	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G)	3		<ul style="list-style-type: none"> Technical Elective and Design Elective requirements: Complete a total of 2 design electives and 4 technical electives during Term 7 and Term 8. See Advisor for guidance in selection.
Term hours subtotal:	13		

Design Elective	Technical Elective
CEE 412: Pavement Analysis and Design	CEE 462: Unit Operations in Environmental Engineering
CEE 475: Highway Geometric Design	CEE 467: Environmental Microbiology
CEE 420: Steel Structures	CEE 452: Foundations
CEE 421: Concrete Structures	CEE 420: Steel Structures
CEE 441: Water Resources Engineering	CEE 421: Concrete Structures
CEE 466: Urban Water System Design	CEE 423: Structural Design
CEE 452: Foundations	CEE 432: Developing Software for Engineering Applications
CEE 462: Unit Operations in Environmental Engineering	CEE 281: Surveying

CEE 412: Pavement Analysis and Design

CEE 474: Transportation Systems Planning

CEE 475: Highway Geometric Design

CEE 481: Civil Engineering Project Management

CEE 483: Highway Materials, Construction, and Quality

CEE 440: Hydrology

CEE 441: Water Resources Engineering

CEE 466: Urban Water System Design

Notes:

- 2.00 GPA required in all upper division CEE and other approved technical elective courses combined. A maximum of 2 "D" grades allowed in this calculation.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition






















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.


2011 - 2012 Major Map Civil Engineering (Construction Engineering), BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCECBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101 or College specific equivalent First Year Seminar required of all freshman students. CHM 113 is a prerequisite for CHM 116 and does not apply towards degree credit If ENG 105 is taken a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CEE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 242: Elementary Linear Algebra	2	C	<ul style="list-style-type: none"> If ENG 105 is taken a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 3 32 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 210: Engineering Mechanics I: Statics	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT; Complete 12 critical courses by end of term 3
 MAT 267: Calculus for Engineers III (MA)	3	C	
 MAT 275: Modern Differential Equations (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	13		
Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 212: Engineering Mechanics II: Dynamics	3	C	

 CEE 213: Introduction to Deformable Solids	3	C
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG) OR BME 111: Engineering Perspectives on Biological Systems OR CHM 231: Elementary Organic Chemistry (SQ) OR GLG 101: Introduction to Geology I (Physical) (SQ & G)	3	
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB) OR ECN 201: Economic Issues and Analysis (SB)	3	
EEE 202: Circuits I	4	
Term hours subtotal:	16	

Term 5 61 - 76 Credit Hours	Hours	Minimum Grade	Notes
CEE 384: Numerical Methods for Engineers (CS)	3	C	
<i>Complete 3 courses:</i> CEE 300: Engineering Business Practice (L) OR CEE 321: Structural Analysis and Design OR CEE 341: Fluid Mechanics for Civil Engineers OR CEE 351: Geotechnical Engineering OR CEE 353: Civil Engineering Materials OR CEE 361: Introduction to Environmental Engineering OR CEE 372: Transportation Engineering	10-12	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Term hours subtotal:	16-18		

Term 6 77 - 92 Credit Hours	Hours	Minimum Grade	Notes
<i>Complete 4 courses:</i> CEE 300: Engineering Business Practice (L) OR CEE 321: Structural Analysis and Design OR CEE 341: Fluid Mechanics for Civil Engineers OR CEE 351: Geotechnical Engineering OR CEE 353: Civil Engineering Materials OR CEE 361: Introduction to Environmental Engineering OR CEE 372: Transportation Engineering	16-14	C	
Term hours subtotal:	16-14		

Term 7 93 - 107 Credit Hours	Hours	Minimum Grade	Notes
CEE 281: Surveying	3	C	
CEE 400: Earth Systems Engineering and Management ((L or HU)& H)	3	C	
CEE 412: Pavement Analysis and Design OR CEE 483: Highway Materials, Construction, and Quality	3	C	
CEE 420: Steel Structures OR CEE 421: Concrete Structures	3	C	
CEE 452: Foundations	3	C	
Term hours subtotal:	15		

Term 8 108 - 120 Credit Hours	Hours	Minimum Grade	Notes
CEE 486: Integrated Civil Engineering Design (L)	4	C	
CEE 481: Civil Engineering Project Management	3	C	
Technical Elective	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G)	3		
Term hours subtotal:	13		

Technical Elective
CEE 412: Pavement Analysis and Design
CEE 420: Steel Structures
CEE 421: Concrete Structures
CEE 423: Structural Design
CEE 432: Developing Software for Engineering Applications

CEE 440: Hydrology
CEE 441: Water Resources Engineering
CEE 462: Unit Operations in Environmental Engineering
CEE 466: Urban Water System Design
CEE 467: Environmental Microbiology
CEE 474: Transportation Systems Planning
CEE 475: Highway Geometric Design
CEE 483: Highway Materials, Construction, and Quality

- Notes:**
- 2.00 GPA required in all upper division CEE and other approved technical elective courses combined. A maximum of 2 "D" grades allowed in this calculation.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

- General University Requirements Legend**
- General Studies Core Requirements:
- Literacy and Critical Inquiry (L)
 - Mathematical Studies (MA)
 - Computer/Statistics/Quantitative Applications (CS)
 - Humanities, Fine Arts and Design (HU)
 - Social and Behavioral Sciences (SB)
 - Natural Science - Quantitative (SQ)
 - Natural Science - General (SG)

- General Studies Awareness Requirements:
- Cultural Diversity in the U.S. (C)
 - Global Awareness (G)
 - Historical Awareness (H)

First-Year Composition






















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.


2011 - 2012 Major Map Civil Engineering (Environmental Engineering), BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCEEBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101 or College specific equivalent First Year Seminar required of all freshman students and should be completed the first semester. • CHM 113 is a prerequisite to CHM 116 and does not apply towards degree credit • If ENG 105 is taken, then a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CEE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 242: Elementary Linear Algebra	2	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 3 32 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 210: Engineering Mechanics I: Statics	3	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 12 critical courses by end of term 3
 MAT 267: Calculus for Engineers III (MA)	3	C	
 MAT 275: Modern Differential Equations (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	13		
Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 212: Engineering Mechanics II: Dynamics	3	C	

 CEE 213: Introduction to Deformable Solids	3	C
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG) OR BME 111: Engineering Perspectives on Biological Systems OR CHM 231: Elementary Organic Chemistry (SQ) OR GLG 101: Introduction to Geology I (Physical) (SQ & G)	3	
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB) OR ECN 201: Economic Issues and Analysis (SB)	3	
MAE 240: Thermofluids I	4	
Term hours subtotal:	16	

Term 5 61 - 77 Credit Hours	Hours	Minimum Grade	Notes
CEE 341: Fluid Mechanics for Civil Engineers	4	C	
CEE 353: Civil Engineering Materials	3	C	
CEE 361: Introduction to Environmental Engineering	4	C	
CEE 384: Numerical Methods for Engineers (CS)	3	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Term hours subtotal:	17		

Term 6 78 - 92 Credit Hours	Hours	Minimum Grade	Notes
CEE 300: Engineering Business Practice (L)	3	C	
CEE 321: Structural Analysis and Design	4	C	
CEE 351: Geotechnical Engineering	4	C	
CEE 372: Transportation Engineering	4	C	
Term hours subtotal:	15		

Term 7 93 - 107 Credit Hours	Hours	Minimum Grade	Notes
CEE 440: Hydrology	3	C	
CEE 466: Urban Water System Design	3	C	
CEE 467: Environmental Microbiology	3	C	
CEE 400: Earth Systems Engineering and Management ((L or HU)& H)	3	C	
Technical Elective	3	C	
Term hours subtotal:	15		

Term 8 108 - 120 Credit Hours	Hours	Minimum Grade	Notes
CEE 441: Water Resources Engineering	3	C	
CEE 462: Unit Operations in Environmental Engineering	3	C	
CEE 486: Integrated Civil Engineering Design (L)	4	C	
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	13		

Technical Elective
CEE 281: Surveying
CEE 412: Pavement Analysis and Design
CEE 420: Steel Structures
CEE 421: Concrete Structures
CEE 452: Foundations
CEE 474: Transportation Systems Planning
CEE 475: Highway Geometric Design
CEE 481: Civil Engineering Project Management

CEE 483: Highway Materials, Construction,
and Quality

BIO 320: Fundamentals of Ecology

BCH 361: Principles of Biochemistry

CHM 302: Environmental Chemistry

CHM 341: Elementary Physical Chemistry

PUP 442: Environmental Planning

PUP 475: Environmental Impact Assessment

CEE 499: Individualized Instruction

Notes:

- 2.00 GPA required in all upper division CEE and other approved technical elective courses combined. A maximum of 2 "D" grades allowed in this calculation.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition






















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.


2011 - 2012 Major Map Civil Engineering (Sustainable Engineering), BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCEESUBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101 or College specific equivalent First Year Seminar required of all freshman students and should be completed the first semester. • CHM 113 is a prerequisite to CHM 116 and does not apply towards degree credit. • If ENG 105 is taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CEE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 242: Elementary Linear Algebra	2	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
CEE 181: Introduction to Sustainable Engineering: Technological, Social, & Sustainable System	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 3 32 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 210: Engineering Mechanics I: Statics	3	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 12 critical courses by end of term 3
 MAT 267: Calculus for Engineers III (MA)	3	C	
 MAT 275: Modern Differential Equations (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	13		
Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 212: Engineering Mechanics II: Dynamics	3	C	

 CEE 213: Introduction to Deformable Solids	3	C
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB) OR ECN 201: Economic Issues and Analysis (SB)	3	
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG) OR BME 111: Engineering Perspectives on Biological Systems OR CHM 231: Elementary Organic Chemistry (SQ) OR GLG 101: Introduction to Geology I (Physical) (SQ & G)	3	
MAE 240: Thermofluids I	4	
Term hours subtotal:	16	

Term 5 61 - 77 Credit Hours	Hours	Minimum Grade	Notes
CEE 341: Fluid Mechanics for Civil Engineers	4	C	
CEE 353: Civil Engineering Materials	3	C	
CEE 361: Introduction to Environmental Engineering	4	C	
CEE 384: Numerical Methods for Engineers (CS)	3	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Term hours subtotal:	17		

Term 6 78 - 92 Credit Hours	Hours	Minimum Grade	Notes
CEE 300: Engineering Business Practice (L)	3	C	
CEE 321: Structural Analysis and Design	4	C	
CEE 351: Geotechnical Engineering	4	C	
CEE 372: Transportation Engineering	4	C	
Term hours subtotal:	15		

Term 7 93 - 107 Credit Hours	Hours	Minimum Grade	Notes
CEE 400: Earth Systems Engineering and Management ((L or HU)& H)	3	C	
SOS 300: Advanced Concepts and Integrated Approaches in Sustainability	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G)	3		
Complete 2 courses: Upper Division Design Elective	6	C	
Term hours subtotal:	15		

- Design Elective requirements:
See Advisor for guidance in selection.

Term 8 108 - 120 Credit Hours	Hours	Minimum Grade	Notes
CON 448: Sustainable Construction OR Approved Technical Elective	3	C	
CEE 486: Integrated Civil Engineering Design (L)	4	C	
CEE 485: Sustainable Civil and Environmental Systems Engineering	3	C	
CEE 494: Sustainable Energy and Material Use	3	C	
Term hours subtotal:	13		

- Technical Elective requirements:
See Advisor for guidance in selection.

Approved Technical Elective	Design Electives
CEE 281: Surveying	CEE 412: Pavement Analysis and Design
CEE 412: Pavement Analysis and Design	CEE 420: Steel Structures
CEE 420: Steel Structures	CEE 421: Concrete Structures
CEE 421: Concrete Structures	CEE 441: Water Resources Engineering
CEE 462: Unit Operations in Environmental Engineering	CEE 452: Foundations
CEE 452: Foundations	CEE 462: Unit Operations in Environmental Engineering
CEE 474: Transportation Systems Planning	CEE 466: Urban Water System Design
CEE 475: Highway Geometric Design	CEE 475: Highway Geometric Design

CEE 481: Civil Engineering Project
Management

CEE 483: Highway Materials, Construction,
and Quality

BIO 320: Fundamentals of Ecology

CHM 302: Environmental Chemistry

CHM 341: Elementary Physical Chemistry

PUP 442: Environmental Planning

PUP 475: Environmental Impact Assessment

CEE 499: Individualized Instruction

Notes:

- 2.00 GPA required in all upper division CEE and other approved technical elective courses combined. A maximum of 2 "D" grades allowed in this calculation.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition



















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Computer Science, BS

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCSEBS

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 110: Principles of Programming with Java (CS)	3	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester. If ENG 105 is taken, a 3 credit hour applicable elective must also be taken prior to graduation. See advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CSE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 2 16 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 205: Object-Oriented Programming and Data Structures (CS)	3	C	<ul style="list-style-type: none"> General Elective cannot include CSE, MAT, PHY, BIO, CHM or other Science course.
 MAT 266: Calculus for Engineers II (MA)	3	C	
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG)	4		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
General Elective	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 32 - 47 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 120: Digital Design Fundamentals	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 8 critical courses by end of term 3.
 MAT 243: Discrete Mathematical Structures	3	C	
 MAT 267: Calculus for Engineers III (MA)	3	C	
Lab Science Requirement	4		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 4 48 - 63 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 230: Computer Organization and Assembly Language Programming	3	C	
 CSE 240: Introduction to Programming Languages	3	C	
MAT 343: Applied Linear Algebra	3		

Lab Science Requirement	4
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3
Term hours subtotal:	16

Term 5 64 - 76 Credit Hours	Hours	Minimum Grade	Notes
CSE 301: Computing Ethics	1	C	
CSE 310: Data Structures and Algorithms	3	C	
CSE 360: Introduction to Software Engineering	3	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	13		

Term 6 77 - 91 Credit Hours	Hours	Minimum Grade	Notes
CSE 340: Principles of Programming Languages	3	C	
CSE 355: Introduction to Theoretical Computer Science	3	C	
CSE 4** Elective	3	C	
Upper Division Technical Elective	3	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

- See Advisor or <http://engineering.asu.edu/cidse> for list of Technical Electives.

Term 7 92 - 105 Credit Hours	Hours	Minimum Grade	Notes
CSE 430: Operating Systems	3	C	
CSE 485: Computer Science Capstone Project I (L)	3	C	
Complete 2 courses: CSE 4** Elective	6	C	
General Elective	2		
Term hours subtotal:	14		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
CSE 486: Computer Science Capstone Project II (L)	3	C	
Complete 2 courses: CSE 4** Elective	6	C	
Upper Division Technical Elective	3	C	
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

- See Advisor or <http://engineering.asu.edu/cidse> for list of Technical Electives.
- General Elective cannot include CSE, MAT, PHY, BIO, CHM or other Science course.

Lab Science Requirements
PHY 121: University Physics I: Mechanics (SQ)AND PHY 122: University Physics Laboratory I (SQ)
PHY 131: University Physics II: Electricity and Magnetism (SQ)AND PHY 132: University Physics Laboratory II (SQ)
CHM 113: General Chemistry I (SQ)AND CHM 116: General Chemistry II (SQ)
GLG 101: Introduction to Geology I (Physical) (SQ & G)AND GLG 103: Introduction to Geology I-Laboratory (SQ)
GLG 102: Introduction to Geology II (Historical) (SG & H)AND GLG 104: Introduction to Geology II-Laboratory (SG)

AST 321: Introduction to Planetary and
Stellar Astrophysics (SQ) AND AST 113:
Astronomy Laboratory I (SQ)

AST 322: Introduction to Galactic and
Extragalactic Astrophysics (SQ) AND AST
114: Astronomy Laboratory II (SQ)

Notes:

- Major GPA calculation includes FSE 100, IEE 380, MAT 343, Technical Electives, and all CSE courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
**Hrs Resident Credit for
Academic Recognition:** 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition



















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Computer Science (Information Assurance), BS

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCSEIBS

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 110: Principles of Programming with Java (CS)	3	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101-CSE should be taken first semester. If ENG 105 is taken, a 3 credit hour applicable elective must also be taken prior to graduation. See advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CSE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 2 16 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 205: Object-Oriented Programming and Data Structures (CS)	3	C	<ul style="list-style-type: none"> General Elective cannot include CSE, MAT, PHY, BIO, CHM or other Science course.
 MAT 266: Calculus for Engineers II (MA)	3	C	
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG)	4		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Elective	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 32 - 47 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 120: Digital Design Fundamentals	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 8 critical courses by end of term 3.
 MAT 243: Discrete Mathematical Structures	3	C	
 MAT 267: Calculus for Engineers III (MA)	3	C	
Lab Science Requirement	4		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 4 48 - 63 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 230: Computer Organization and Assembly Language Programming	3	C	
 CSE 240: Introduction to Programming Languages	3	C	
MAT 343: Applied Linear Algebra	3		
Lab Science Requirement	4		

Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR
 Social and Behavioral Sciences (SB) AND Global Awareness (G) OR
 Social and Behavioral Sciences (SB) AND Historical Awareness (H)

Term hours subtotal: 16

Term 5 64 - 76 Credit Hours	Hours	Minimum Grade	Notes
CSE 301: Computing Ethics	1	C	
CSE 310: Data Structures and Algorithms	3	C	
CSE 360: Introduction to Software Engineering	3	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	13		

Term 6 77 - 91 Credit Hours	Hours	Minimum Grade	Notes
CSE 340: Principles of Programming Languages	3	C	
CSE 355: Introduction to Theoretical Computer Science	3	C	
CSE 465: Information Assurance	3	C	
Upper Division Technical Elective	3	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

• See Advisor or
<http://engineering.asu.edu/cidse>
 for list of Technical Electives.

Term 7 92 - 105 Credit Hours	Hours	Minimum Grade	Notes
CSE 430: Operating Systems	3	C	
CSE 466: Computer Systems Security	3	C	
CSE 467: Data and Information Security	3	C	
CSE 485: Computer Science Capstone Project I (L)	3	C	
Elective	2		
Term hours subtotal:	14		

• General Elective cannot include
 CSE, MAT, PHY, BIO, CHM or
 other Science course.

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
CSE 412: Database Management OR CSE 434: Computer Networks OR CSE 460: Software Analysis and Design OR CSE 463: Introduction to Human Computer Interaction OR CSE 471: Introduction to Artificial Intelligence	3	C	
CSE 468: Computer Network Security	3	C	
CSE 486: Computer Science Capstone Project II (L)	3	C	
Upper Division Technical Elective	3	C	
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

• See Advisor or
<http://engineering.asu.edu/cidse>
 for list of Technical Electives.

Lab Science Requirements

PHY 121: University Physics I: Mechanics
 (SQ)AND PHY 122: University Physics
 Laboratory I (SQ)

PHY 131: University Physics II: Electricity
 and Magnetism (SQ)AND PHY 132:
 University Physics Laboratory II (SQ)

CHM 113: General Chemistry I (SQ)AND
 CHM 116: General Chemistry II (SQ)

GLG 101: Introduction to Geology I
 (Physical) (SQ & G)AND GLG 103:
 Introduction to Geology I-Laboratory (SQ)

GLG 102: Introduction to Geology II
(Historical) (SG & H)AND GLG 104:
Introduction to Geology II-Laboratory (SG)

AST 321: Introduction to Planetary and
Stellar Astrophysics (SQ)AND AST 113:
Astronomy Laboratory I (SQ)

AST 322: Introduction to Galactic and
Extragalactic Astrophysics (SQ)AND AST
114: Astronomy Laboratory II (SQ)

Notes:

- Major GPA calculation includes FSE 100, IEE 380, MAT 343, and all CSE courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for
Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition



















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Computer Science (Software Engineering), BS

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCSEBS

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 110: Principles of Programming with Java (CS)	3	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101-CSE should be taken first semester. If ENG 105 is taken, a 3 credit hour applicable elective must also be taken prior to graduation. See advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CSE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 2 16 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 205: Object-Oriented Programming and Data Structures (CS)	3	C	<ul style="list-style-type: none"> General Elective cannot include CSE, MAT, PHY, BIO, CHM or other Science course.
 MAT 266: Calculus for Engineers II (MA)	3	C	
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG)	4		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
General Elective	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 32 - 47 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 120: Digital Design Fundamentals	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 8 critical courses by end of term 3.
 MAT 243: Discrete Mathematical Structures	3	C	
 MAT 267: Calculus for Engineers III (MA)	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Lab Science Requirement	4		
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 4 48 - 63 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 230: Computer Organization and Assembly Language Programming	3	C	
 CSE 240: Introduction to Programming Languages	3	C	
Lab Science Requirement	4		
MAT 343: Applied Linear Algebra	3	C	

Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR
 Social and Behavioral Sciences (SB) AND Global Awareness (G) OR
 Social and Behavioral Sciences (SB) AND Historical Awareness (H)

Term hours subtotal: 16

Term 5 64 - 76 Credit Hours	Hours	Minimum Grade	Notes
CSE 301: Computing Ethics	1	C	
CSE 310: Data Structures and Algorithms	3	C	
CSE 360: Introduction to Software Engineering	3	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	13		

Term 6 77 - 91 Credit Hours	Hours	Minimum Grade	Notes
CSE 340: Principles of Programming Languages	3	C	
CSE 355: Introduction to Theoretical Computer Science	3	C	
CSE 445: Distributed Software Development	3	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Upper Division Technical Elective	3	C	
Term hours subtotal:	15		

• See Advisor or
<http://engineering.asu.edu/cidse>
 for list of Technical Electives.

Term 7 92 - 105 Credit Hours	Hours	Minimum Grade	Notes
CSE 430: Operating Systems	3	C	
CSE 460: Software Analysis and Design	3	C	
CSE 461: Software Engineering Project I (L)	3	C	
CSE 485: Computer Science Capstone Project I (L)	3	C	
General Elective	2		
Term hours subtotal:	14		

• General Elective cannot include
 CSE, MAT, PHY, BIO, CHM or
 other Science course.

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
CSE 462: Software Engineering Project II (L)	3	C	
CSE 463: Introduction to Human Computer Interaction OR CSE 465: Information Assurance OR CSE 466: Computer Systems Security OR CSE 467: Data and Information Security OR CSE 468: Computer Network Security	3	C	
CSE 486: Computer Science Capstone Project II (L)	3	C	
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
Upper Division Technical Elective	3	C	
Term hours subtotal:	15		

• See Advisor or
<http://engineering.asu.edu/cidse>
 for list of Technical Electives.

Lab Science Requirements

PHY 121: University Physics I: Mechanics
 (SQ)AND PHY 122: University Physics
 Laboratory I (SQ)

PHY 131: University Physics II: Electricity
 and Magnetism (SQ)AND PHY 132:
 University Physics Laboratory II (SQ)

CHM 113: General Chemistry I (SQ)AND
 CHM 116: General Chemistry II (SQ)

GLG 101: Introduction to Geology I
 (Physical) (SQ & G)AND GLG 103:
 Introduction to Geology I-Laboratory (SQ)

GLG 102: Introduction to Geology II
(Historical) (SG & H)AND GLG 104:
Introduction to Geology II-Laboratory (SG)

AST 321: Introduction to Planetary and
Stellar Astrophysics (SQ)AND AST 113:
Astronomy Laboratory I (SQ)

AST 322: Introduction to Galactic and
Extragalactic Astrophysics (SQ)AND AST
114: Astronomy Laboratory II (SQ)

Notes:

- Major GPA calculation includes FSE 100, IEE 380, MAT 343, and all CSE courses

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:



















- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Computer Systems Engineering, BSE

Ira A. Fulton Schools of Engineering
Campus: Tempe
ESCSEBSE

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 110: Principles of Programming with Java (CS)	3	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester • If ENG 105 is taken, a 3 hour applicable elective must also be taken prior to graduation. See Advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CSE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 2 16 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 205: Object-Oriented Programming and Data Structures (CS)	3	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG)	4		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 32 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 120: Digital Design Fundamentals	3	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 8 critical courses by end of term 3
 MAT 243: Discrete Mathematical Structures	3	C	
 MAT 267: Calculus for Engineers III (MA)	3	C	
PHY 121: University Physics I: Mechanics (SQ)	3	C	
PHY 122: University Physics Laboratory I (SQ)	1	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	13		
Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 220: Programming for Computer Engineering	3	C	
 CSE 230: Computer Organization and Assembly Language Programming	3	C	
MAT 275: Modern Differential Equations (MA)	3		
PHY 131: University Physics II: Electricity and Magnetism (SQ)	3		

PHY 132: University Physics Laboratory II (SQ)	1
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3
Term hours subtotal:	16

Term 5 61 - 74 Credit Hours	Hours	Minimum Grade	Notes
CSE 301: Computing Ethics	1	C	
CSE 310: Data Structures and Algorithms	3	C	
CSE 360: Introduction to Software Engineering	3	C	
EEE 202: Circuits I	4		
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Term hours subtotal:	14		

Term 6 75 - 90 Credit Hours	Hours	Minimum Grade	Notes
CSE 320: Design and Synthesis of Digital Hardware	3	C	
CSE 325: Embedded Microprocessor Systems	3	C	
EEE 334: Circuits II	4		
MAT 343: Applied Linear Algebra	3		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	16		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
CSE 423: Systems Capstone Project I (L)	3	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/cidse for list of CSE Technical Electives.
CSE 430: Operating Systems	3	C	
Complete 2 courses: Upper Division CSE Technical Elective	6	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
CSE 420: Computer Architecture I	3	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/cidse for list of CSE Technical Electives.
CSE 424: Systems Capstone Project II (L)	3	C	
CSE 434: Computer Networks	3	C	
Complete 2 courses: Upper Division CSE Technical Elective	6	C	
Term hours subtotal:	15		

Notes:

- Major GPA calculation includes EEE 202, EEE 334, FSE 100, IEE 380, MAT 343, and all CSE courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend
 General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

 First-Year Composition



















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Computer Systems Engineering (Information Assurance), BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCSEIBSE

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 110: Principles of Programming with Java (CS)	3	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101-CSE should be completed first semester. • If ENG 105 is taken, a 3 hour applicable elective must also be taken prior to graduation. See Advisor.
 FSE 100: Introduction to Engineering	2	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CSE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 2 16 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 205: Object-Oriented Programming and Data Structures (CS)	3	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG)	4		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 32 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 120: Digital Design Fundamentals	3	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 8 critical courses by end of term 3
 MAT 243: Discrete Mathematical Structures	3	C	
 MAT 267: Calculus for Engineers III (MA)	3	C	
PHY 121: University Physics I: Mechanics (SQ)	3	C	
PHY 122: University Physics Laboratory I (SQ)	1	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	13		
Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 220: Programming for Computer Engineering	3	C	
 CSE 230: Computer Organization and Assembly Language Programming	3	C	
MAT 275: Modern Differential Equations (MA)	3		
PHY 131: University Physics II: Electricity and Magnetism (SQ)	3		
PHY 132: University Physics Laboratory II (SQ)	1		

Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR
 Social and Behavioral Sciences (SB) AND Global Awareness (G) OR
 Social and Behavioral Sciences (SB) AND Historical Awareness (H)

3

Term hours subtotal: 16

Term 5 61 - 74 Credit Hours	Hours	Minimum Grade	Notes
CSE 301: Computing Ethics	1	C	
CSE 310: Data Structures and Algorithms	3	C	
CSE 360: Introduction to Software Engineering	3	C	
EEE 202: Circuits I	4		
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
Term hours subtotal:	14		

Term 6 75 - 90 Credit Hours	Hours	Minimum Grade	Notes
CSE 320: Design and Synthesis of Digital Hardware	3	C	
CSE 325: Embedded Microprocessor Systems	3	C	
EEE 334: Circuits II	4		
MAT 343: Applied Linear Algebra	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	16		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
CSE 423: Systems Capstone Project I (L)	3	C	
CSE 430: Operating Systems	3	C	
CSE 465: Information Assurance	3	C	
CSE 466: Computer Systems Security	3	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
CSE 420: Computer Architecture I	3	C	
CSE 424: Systems Capstone Project II (L)	3	C	
CSE 434: Computer Networks	3	C	
CSE 467: Data and Information Security	3	C	
CSE 468: Computer Network Security	3	C	
Term hours subtotal:	15		

Notes:

- Major GPA calculation includes EEE 202, EEE 334, FSE 100, IEE 380, MAT 343, and all CSE courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

- Natural Science - General (SG)




















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Construction Engineering, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCONBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 FSE 100: Introduction to Engineering	2	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101-CON should be completed the first semester. CHM 113 is a prerequisite for CHM 116 and does not apply toward degree credit. If ENG 105 is taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CON: The ASU Experience	1		
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 242: Elementary Linear Algebra	2	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
CON 101: Construction and Culture: a Built Environment (HU & H & G)	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 3 32 - 47 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 210: Engineering Mechanics I: Statics	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 10 critical courses by end of term 3.
 MAT 267: Calculus for Engineers III (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB) OR ECN 201: Economic Issues and Analysis (SB)	3		
MAT 275: Modern Differential Equations (MA)	3	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 4 48 - 63 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CEE 212: Engineering Mechanics II: Dynamics	3	C	

CEE 213: Introduction to Deformable Solids	3	C
CON 243: Heavy Construction Equipment, Methods, and Materials	3	C
CON 271: Construction Safety	3	
EEE 202: Circuits I OR MAE 240: Thermofluids I	4	
Term hours subtotal:	16	

Term 5 64 - 79 Credit Hours	Hours	Minimum Grade	Notes
CEE 321: Structural Analysis and Design	4	C	
CEE 353: Civil Engineering Materials	3	C	
CON 389: Construction Cost Accounting and Control (CS)	3	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG) OR BME 111: Engineering Perspectives on Biological Systems OR CHM 231: Elementary Organic Chemistry (SQ) OR GLG 101: Introduction to Geology I (Physical) (SQ & G)	3-4		
Term hours subtotal:	16-17		

Term 6 80 - 93 Credit Hours	Hours	Minimum Grade	Notes
CEE 351: Geotechnical Engineering	4	C	
CON 241: Surveying	3	C	
CON 383: Construction Estimating	4	C	
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	14		

Summer 6 94 - 94 Credit Hours	Hours	Minimum Grade	Notes
CON 484: Internship	1		
Term hours subtotal:	1		

Term 7 95 - 107 Credit Hours	Hours	Minimum Grade	Notes
CON 453: Construction Project Management I	3	C	<ul style="list-style-type: none"> Technical Elective and Design Elective requirements: Complete a total of 2 design electives.
CON 495: Construction Planning and Scheduling (CS)	3	C	
Technical Elective	1	C	
Upper Division Technical Elective	3	C	
Upper Division Design Elective	3	C	
Term hours subtotal:	13		

Term 8 108 - 120 Credit Hours	Hours	Minimum Grade	Notes
CEE 400: Earth Systems Engineering and Management ((L or HU)& H)	3	C	<ul style="list-style-type: none"> Technical Elective and Design Elective requirements: Complete a total of 2 design electives.
CEE 486: Integrated Civil Engineering Design (L)	4	C	
CON 496: Construction Contract Administration (L)	3	C	
Upper Division Design Elective	3	C	
Term hours subtotal:	13		

Technical Elective	Design Elective
CEE 462: Unit Operations in Environmental Engineering	CEE 421: Concrete Structures
CEE 467: Environmental Microbiology	CEE 420: Steel Structures
CEE 452: Foundations	CEE 452: Foundations
CEE 420: Steel Structures	
CEE 421: Concrete Structures	

CEE 423: Structural Design

CEE 432: Developing Software for
Engineering Applications

CEE 412: Pavement Analysis and Design

CEE 474: Transportation Systems Planning

CEE 475: Highway Geometric Design

CEE 481: Civil Engineering Project
Management

CEE 483: Highway Materials, Construction,
and Quality

CEE 440: Hydrology

CEE 441: Water Resources Engineering

CEE 466: Urban Water System Design

CON 296: Field Internship

CON 310: Testing of Materials for
Construction

CON 345: Mechanical Systems

Notes:

- Major GPA calculation includes all upper division CON and CIM courses.
- 2.00 GPA required in all upper division CON and approved technical elective courses combined. A maximum of 2 "D" grades allowed in this calculation.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition





















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Construction Management (Concrete Industry Management),BS

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCONIMBS

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CIM 105: Introduction to the Concrete Industry	2	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course. • ASU 101-CON should be completed first semester. • If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
ASU 101-CON: The ASU Experience	1		
CON 101: Construction and Culture: a Built Environment (HU & H & G)	3	C	
MAT 265: Calculus for Engineers I (MA)	3	C	
PHY 111: General Physics (SQ)	3	C	
PHY 113: General Physics Laboratory (SQ)	1	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 34 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CIM 106: Fundamentals of Concrete: Properties and Testing	4	C	<ul style="list-style-type: none"> • If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 STP 226: Elements of Statistics (CS)	3		
CON 243: Heavy Construction Equipment, Methods, and Materials	3	C	
CON 244: Working Drawing Analysis	2	C	
CON 252: Building Construction Methods, Materials, and Equipment	3	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	18		
Term 3 35 - 49 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CIM 205: Concrete Construction Methods	3	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 8 critical courses by end of term 3. ENG 102 & 108 are not part of the this course count.
 COM 225: Public Speaking (L)	3		
 CON 221: Applied Statics	3	C	
 ECN 211: Macroeconomic Principles (SB)	3		
CON 251: Microcomputer Applications for Construction	3	C	
 Complete First-Year Composition requirement.			
 Complete Mathematics (MA) requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 4 50 - 64 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CIM 206: Application of Concrete in Construction	3	C	
 CON 271: Construction Safety	3	C	
 ECN 212: Microeconomic Principles (SB)	3		
CON 223: Strength of Materials	3	C	

Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		
Term hours subtotal:	15		
Summer 4 65 - 65 Credit Hours	Hours	Minimum Grade	Notes
CON 296: Field Internship	1	C	
Term hours subtotal:	1		
Term 5 66 - 82 Credit Hours	Hours	Minimum Grade	Notes
CIM 305: Management of Concrete Products: Ordering and Delivering	3		
CON 241: Surveying	3	C	
CON 383: Construction Estimating	4		
Natural Science - Quantitative (SQ) OR Natural Science - General (SG)	4		
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	17		
Term 6 83 - 94 Credit Hours	Hours	Minimum Grade	Notes
CIM 306: Management of Concrete Products: Production Facilities	3		
CON 389: Construction Cost Accounting and Control (CS)	3		
CON 450: Geotechnical Applications for Construction	3		
LES 305: Legal, Ethical, and Regulatory Issues in Business	3		
Term hours subtotal:	12		
Summer 6 95 - 95 Credit Hours	Hours	Minimum Grade	Notes
CON 484: Internship	1		
Term hours subtotal:	1		
Term 7 96 - 107 Credit Hours	Hours	Minimum Grade	Notes
CIM 405: Concrete Problems: Diagnosis, Prevention, and Dispute	3		
CON 453: Construction Project Management I	3		
CON 495: Construction Planning and Scheduling (CS)	3		
CIM Upper Division Elective	3		
Term hours subtotal:	12		
Term 8 108 - 120 Credit Hours	Hours	Minimum Grade	Notes
CIM 406: Concrete Industry Management Capstone	4		
CON 424: Structural Design	3		
CON 455: Construction Project Management II	3		
CON 496: Construction Contract Administration (L)	3		
Term hours subtotal:	13		

Notes:

- Major GPA calculation includes all upper division CON and CIM courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition
























Hrs Resident Credit for
Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Construction Management (General Building Construction),BS

Ira A. Fulton Schools of Engineering
Campus: Tempe
ESCONGBS

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 100: Introduction to Construction	2	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course. • ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester. • If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
 PHY 111: General Physics (SQ)	3	C	
 PHY 113: General Physics Laboratory (SQ)	1	C	
ASU 101-CON: The ASU Experience	1		
CON 101: Construction and Culture: a Built Environment (HU & H & G)	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 30 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 243: Heavy Construction Equipment, Methods, and Materials	3	C	
 CON 244: Working Drawing Analysis	2	C	
 CON 252: Building Construction Methods, Materials, and Equipment	3	C	
ECN 211: Macroeconomic Principles (SB)	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	14		
Term 3 31 - 45 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 COM 225: Public Speaking (L)	3		<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 13 critical courses by end of term 3
 CON 221: Applied Statics	3	C	
 CON 251: Microcomputer Applications for Construction	3	C	
 ECN 212: Microeconomic Principles (SB)	3		
 STP 226: Elements of Statistics (CS)	3		
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 4 46 - 61 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 223: Strength of Materials	3	C	
 CON 271: Construction Safety	3	C	
CON 241: Surveying	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		

Natural Science - Quantitative (SQ) OR Natural Science - General (SG)	4		
Term hours subtotal:	16		
Summer 4 62 - 62 Credit Hours	Hours	Minimum Grade	Notes
CON 296: Field Internship	1	C	
Term hours subtotal:	1		
Term 5 63 - 80 Credit Hours	Hours	Minimum Grade	Notes
CON 273: Electrical Construction Fundamentals and Project Management	3	C	
CON 310: Testing of Materials for Construction	4		
CON 345: Mechanical Systems	4		
CON 383: Construction Estimating	4		
CON 472: Development Feasibility Reports (L) OR CON 483: Advanced Building Estimating OR REA 380: Real Estate Fundamentals OR Upper Division Elective	3		
Term hours subtotal:	18		
Term 6 81 - 95 Credit Hours	Hours	Minimum Grade	Notes
CON 389: Construction Cost Accounting and Control (CS)	3		
CON 472: Development Feasibility Reports (L) OR CON 483: Advanced Building Estimating OR REA 380: Real Estate Fundamentals OR Upper Division Elective	3		
LES 305: Legal, Ethical, and Regulatory Issues in Business	3		
Upper Division Elective	3		
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		
Summer 6 96 - 96 Credit Hours	Hours	Minimum Grade	Notes
CON 484: Internship	1		
Term hours subtotal:	1		
Term 7 97 - 108 Credit Hours	Hours	Minimum Grade	Notes
CON 450: Geotechnical Applications for Construction	3		
CON 453: Construction Project Management I	3		
CON 495: Construction Planning and Scheduling (CS)	3		
CON 472: Development Feasibility Reports (L) OR CON 483: Advanced Building Estimating OR REA 380: Real Estate Fundamentals OR Upper Division Elective	3		
Term hours subtotal:	12		
Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
CON 424: Structural Design	3		
CON 455: Construction Project Management II	3		
CON 496: Construction Contract Administration (L)	3		
CON 472: Development Feasibility Reports (L) OR CON 483: Advanced Building Estimating OR REA 380: Real Estate Fundamentals OR Upper Division Elective	3		
Term hours subtotal:	12		

Notes:

- Major GPA calculation includes all upper division CON and CIM courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for
Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition
























General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Construction Management (Heavy Construction), BS

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCONHBS

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 100: Introduction to Construction	2	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course. ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
 PHY 111: General Physics (SQ)	3	C	
 PHY 113: General Physics Laboratory (SQ)	1	C	
ASU 101-CON: The ASU Experience	1		
CON 101: Construction and Culture: a Built Environment (HU & H & G)	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 30 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 243: Heavy Construction Equipment, Methods, and Materials	3	C	
 CON 244: Working Drawing Analysis	2	C	
 CON 252: Building Construction Methods, Materials, and Equipment	3	C	
ECN 211: Macroeconomic Principles (SB)	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	14		
Term 3 31 - 45 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 COM 225: Public Speaking (L)	3		<ul style="list-style-type: none"> CRITICAL REQUIREMENTS: Complete 13 critical courses by end of term 3.
 CON 221: Applied Statics	3	C	
 CON 251: Microcomputer Applications for Construction	3	C	
 ECN 212: Microeconomic Principles (SB)	3		
 STP 226: Elements of Statistics (CS)	3		
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 4 46 - 61 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 223: Strength of Materials	3	C	
 CON 271: Construction Safety	3	C	
CON 241: Surveying	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		

Natural Science - Quantitative (SQ) OR Natural Science - General (SG)	4		
Term hours subtotal:	16		
Summer 4 62 - 62 Credit Hours	Hours	Minimum Grade	Notes
CON 296: Field Internship	1	C	
Term hours subtotal:	1		
Term 5 63 - 80 Credit Hours	Hours	Minimum Grade	Notes
CON 273: Electrical Construction Fundamentals and Project Management	3	C	
CON 310: Testing of Materials for Construction	4		
CON 345: Mechanical Systems	4		
CON 383: Construction Estimating	4		
CON 394: Advanced Heavy Equipment Operations OR CON 394: Environmental Aspects of Heavy Construction OR CON 486: Heavy Construction Estimating OR CON 494: Heavy Construction Project Management OR CON 494: Heavy Construction Earthworks	3		
Term hours subtotal:	18		
Term 6 81 - 95 Credit Hours	Hours	Minimum Grade	Notes
CON 389: Construction Cost Accounting and Control (CS)	3		
<i>Complete 2 courses:</i> CON 394: Advanced Heavy Equipment Operations OR CON 394: Environmental Aspects of Heavy Construction OR CON 486: Heavy Construction Estimating OR CON 494: Heavy Construction Project Management OR CON 494: Heavy Construction Earthworks	6		
LES 305: Legal, Ethical, and Regulatory Issues in Business	3		
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		
Summer 6 96 - 96 Credit Hours	Hours	Minimum Grade	Notes
CON 484: Internship	1		
Term hours subtotal:	1		
Term 7 97 - 108 Credit Hours	Hours	Minimum Grade	Notes
CON 450: Geotechnical Applications for Construction	3		
CON 453: Construction Project Management I	3		
CON 495: Construction Planning and Scheduling (CS)	3		
CON 394: Advanced Heavy Equipment Operations OR CON 394: Environmental Aspects of Heavy Construction OR CON 486: Heavy Construction Estimating OR CON 494: Heavy Construction Project Management OR CON 494: Heavy Construction Earthworks	3		
Term hours subtotal:	12		
Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
CON 424: Structural Design	3		
CON 455: Construction Project Management II	3		
CON 496: Construction Contract Administration (L)	3		
CON 394: Advanced Heavy Equipment Operations OR CON 394: Environmental Aspects of Heavy Construction OR CON 486: Heavy Construction Estimating OR CON 494: Heavy Construction Project Management OR CON 494: Heavy Construction Earthworks	3		
Term hours subtotal:	12		

Notes:

- Major GPA calculation includes all upper division CON and CIM courses.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition
























General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Construction Management (Residential Construction), BS

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCONRBS

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 100: Introduction to Construction	2	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course. ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
 PHY 113: General Physics Laboratory (SQ)	1	C	
 PHY 111: General Physics (SQ)	3	C	
ASU 101-CON: The ASU Experience	1		
CON 101: Construction and Culture: a Built Environment (HU & H & G)	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 30 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 243: Heavy Construction Equipment, Methods, and Materials	3	C	
 CON 244: Working Drawing Analysis	2	C	
 CON 252: Building Construction Methods, Materials, and Equipment	3	C	
ECN 211: Macroeconomic Principles (SB)	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	14		
Term 3 31 - 45 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 COM 225: Public Speaking (L)	3		<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 13 critical courses by end of term 3.
 CON 221: Applied Statics	3	C	
 CON 251: Microcomputer Applications for Construction	3	C	
 ECN 212: Microeconomic Principles (SB)	3		
 STP 226: Elements of Statistics (CS)	3		
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 4 46 - 61 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 223: Strength of Materials	3	C	
 CON 271: Construction Safety	3	C	
CON 241: Surveying	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		

Natural Science - Quantitative (SQ) OR Natural Science - General (SG)	4		
Term hours subtotal:	16		
Summer 4 62 - 62 Credit Hours	Hours	Minimum Grade	Notes
CON 296: Field Internship	1	C	
Term hours subtotal:	1		
Term 5 63 - 80 Credit Hours	Hours	Minimum Grade	Notes
CON 273: Electrical Construction Fundamentals and Project Management	3	C	
CON 310: Testing of Materials for Construction	4		
CON 345: Mechanical Systems	4		
CON 383: Construction Estimating	4		
CON 377: Residential Construction Production Procedures OR CON 477: Residential Construction Business Practices OR REA 380: Real Estate Fundamentals OR Upper Division Elective	3		
Term hours subtotal:	18		
Term 6 81 - 95 Credit Hours	Hours	Minimum Grade	Notes
CON 389: Construction Cost Accounting and Control (CS)	3		
CON 377: Residential Construction Production Procedures OR CON 477: Residential Construction Business Practices OR REA 380: Real Estate Fundamentals OR Upper Division Elective	3		
LES 305: Legal, Ethical, and Regulatory Issues in Business	3		
Upper Division Elective	3		
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		
Summer 6 96 - 96 Credit Hours	Hours	Minimum Grade	Notes
CON 484: Internship	1		
Term hours subtotal:	1		
Term 7 97 - 108 Credit Hours	Hours	Minimum Grade	Notes
CON 450: Geotechnical Applications for Construction	3		
CON 453: Construction Project Management I	3		
CON 495: Construction Planning and Scheduling (CS)	3		
CON 377: Residential Construction Production Procedures OR CON 477: Residential Construction Business Practices OR REA 380: Real Estate Fundamentals OR Upper Division Elective	3		
Term hours subtotal:	12		
Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
CON 424: Structural Design	3		
CON 455: Construction Project Management II	3		
CON 496: Construction Contract Administration (L)	3		
CON 377: Residential Construction Production Procedures OR CON 477: Residential Construction Business Practices OR REA 380: Real Estate Fundamentals OR Upper Division Elective	3		
Term hours subtotal:	12		

Notes:

- Major GPA calculation includes all upper division CON and CIM courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for
Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition
























General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Construction Management (Specialty Construction), BS

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCONSBS

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 100: Introduction to Construction	2	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course. ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
 PHY 111: General Physics (SQ)	3	C	
 PHY 113: General Physics Laboratory (SQ)	1	C	
ASU 101-CON: The ASU Experience	1		
CON 101: Construction and Culture: a Built Environment (HU & H & G)	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 30 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 243: Heavy Construction Equipment, Methods, and Materials	3	C	
 CON 244: Working Drawing Analysis	2	C	
 CON 252: Building Construction Methods, Materials, and Equipment	3	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
ECN 211: Macroeconomic Principles (SB)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	14		
Term 3 31 - 45 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 221: Applied Statics	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 13 critical courses by end of term 3.
 CON 251: Microcomputer Applications for Construction	3	C	
 COM 225: Public Speaking (L)	3		
 ECN 212: Microeconomic Principles (SB)	3		
 STP 226: Elements of Statistics (CS)	3		
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 4 46 - 61 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CON 223: Strength of Materials	3	C	
 CON 271: Construction Safety	3	C	
CON 241: Surveying	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		

Natural Science - Quantitative (SQ) OR Natural Science - General (SG)	4		
Term hours subtotal:	16		
Summer 4 62 - 62 Credit Hours	Hours	Minimum Grade	Notes
CON 296: Field Internship	1	C	
Term hours subtotal:	1		
Term 5 63 - 80 Credit Hours	Hours	Minimum Grade	Notes
CON 273: Electrical Construction Fundamentals and Project Management	3	C	
CON 310: Testing of Materials for Construction	4		
CON 345: Mechanical Systems	4		
CON 383: Construction Estimating	4		
CON 468: Mechanical and Electrical Estimating OR CON 471: Mechanical and Electrical Project Management OR CON 494: Cleanroom Construction OR Upper Division Elective	3		
Term hours subtotal:	18		
Term 6 81 - 95 Credit Hours	Hours	Minimum Grade	Notes
CON 389: Construction Cost Accounting and Control (CS)	3		
CON 468: Mechanical and Electrical Estimating OR CON 471: Mechanical and Electrical Project Management OR CON 494: Cleanroom Construction OR Upper Division Elective	3		
LES 305: Legal, Ethical, and Regulatory Issues in Business	3		
Upper Division Elective	3		
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		
Summer 6 96 - 96 Credit Hours	Hours	Minimum Grade	Notes
CON 484: Internship	1		
Term hours subtotal:	1		
Term 7 97 - 108 Credit Hours	Hours	Minimum Grade	Notes
CON 450: Geotechnical Applications for Construction	3		
CON 453: Construction Project Management I	3		
CON 495: Construction Planning and Scheduling (CS)	3		
CON 468: Mechanical and Electrical Estimating OR CON 471: Mechanical and Electrical Project Management OR CON 494: Cleanroom Construction OR Upper Division Elective	3		
Term hours subtotal:	12		
Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
CON 424: Structural Design	3		
CON 455: Construction Project Management II	3		
CON 496: Construction Contract Administration (L)	3		
CON 468: Mechanical and Electrical Estimating OR CON 471: Mechanical and Electrical Project Management OR CON 494: Cleanroom Construction OR Upper Division Elective	3		
Term hours subtotal:	12		

Notes:

- Major GPA calculation includes all upper division CON and CIM courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for
Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition



















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Electrical Engineering, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESEEBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 FSE 100: Introduction to Engineering	2		<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course. ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester. CHM 113 is a prerequisite for CHM 116 and does not apply towards degree credit. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-EEE: The ASU Experience	1		
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		
CSE 100: Principles of Programming with C++ (CS)	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 32 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
EEE 120: Digital Design Fundamentals	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 33 - 46 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 EEE 202: Circuits I	4		<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 10 critical courses by end of term 3.
 MAT 267: Calculus for Engineers III (MA)	3	C	
 MAT 274: Elementary Differential Equations (MA) OR MAT 275: Modern Differential Equations (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	14		
Term 4 47 - 61 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes

EEE 203: Signals and Systems I	3	
EEE 241: Fundamentals of Electromagnetics	3	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3	
MAT 342: Linear Algebra OR MAT 343: Applied Linear Algebra	3	C
PHY 241: University Physics III	3	C
Term hours subtotal:	15	

Term 5 62 - 75 Credit Hours	Hours	Minimum Grade	Notes
EEE 230: Computer Organization and Assembly Language Programming	3		<ul style="list-style-type: none"> Area Pathway courses are prerequisites for Technical Electives. See Advisor for guidance in selection.
EEE 334: Circuits II	4		
EEE 350: Random Signal Analysis	3		
Upper Division Area Pathway Course	4		
Term hours subtotal:	14		

Term 6 76 - 90 Credit Hours	Hours	Minimum Grade	Notes
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB) OR ECN 201: Economic Issues and Analysis (SB)	3		<ul style="list-style-type: none"> Area Pathway courses are prerequisites for Technical Electives. See Advisor for guidance in selection.
Complete 3 courses: Upper Division Area Pathway Course	12		
Term hours subtotal:	15		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
BIO OR CHM OR PHY OR MAT Upper Division Elective OR Upper Division Technical Elective	3		
EEE 488: Senior Design Laboratory I (L)	3		
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Complete 2 courses: Upper Division Technical Elective	6		
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
EEE 489: Senior Design Laboratory II (L)	3		<ul style="list-style-type: none"> Major courses include: CSE, EEE, Area Pathway Course, and Technical Electives.
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Complete 3 courses: Upper Division Technical Elective	9		
Term hours subtotal:	15		

Technical Electives	Area Pathway Course
EEE 460: Nuclear Power Engineering	EEE 304: Signals and Systems II
EEE 463: Electrical Power Plants	EEE 333: Hardware Design Languages and Programmable Logic
EEE 470: Electric Power Devices	EEE 335: Analog and Digital Circuits
EEE 471: Power System Analysis	EEE 341: Engineering Electromagnetics
EEE 472: Power Electronics and Power Management	EEE 352: Properties of Electronic Materials
EEE 473: Electrical Machinery	EEE 360: Energy Systems and Power Electronics
EEE 498: Power Electronics, Power Electronics Lab, Solar Energy	
EEE 404: Real-Time DSP Systems	
EEE 407: Digital Signal Processing	

EEE 455: Communication Systems
EEE 459: Communication Networks
EEE 480: Feedback Systems
EEE 481: Computer-Controlled Systems
EEE 425: Digital Systems and Circuits
EEE 433: Analog Integrated Circuits
EEE 443: Antennas for Wireless Communications
EEE 445: Microwaves
EEE 448: Fiber Optics
EEE 434: Quantum Mechanics for Engineers
EEE 435: Fundamentals of CMOS and MEMS
EEE 436: Fundamentals of Solid-State Devices
EEE 437: Optoelectronics
EEE 439: Semiconductor Facilities and Cleanroom Practices
EEE 460: Nuclear Power Engineering
EEE 463: Electrical Power Plants
EEE 470: Electric Power Devices
EEE 471: Power System Analysis
EEE 472: Power Electronics and Power Management
EEE 473: Electrical Machinery
CSE 420: Computer Architecture I

Notes:

- Major GPA calculation includes FSE 100, CSE, EEE, Area Pathway, and Technical Elective courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition




















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Electrical Engineering (Electric Power and Energy Systems),BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESEEEPBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 FSE 100: Introduction to Engineering	2		<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course. ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester. CHM 113 is a prerequisite for CHM 116 and does not apply towards degree credit. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-EEE: The ASU Experience	1		
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		
CSE 100: Principles of Programming with C++ (CS)	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 32 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
EEE 120: Digital Design Fundamentals	3		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 33 - 46 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 EEE 202: Circuits I	4		<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 10 critical courses by end of term 3.
 MAT 267: Calculus for Engineers III (MA)	3	C	
 MAT 274: Elementary Differential Equations (MA) OR MAT 275: Modern Differential Equations (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	14		
Term 4 47 - 61 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 EEE 203: Signals and Systems I	3		

 EEE 241: Fundamentals of Electromagnetics	3	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3	
MAT 342: Linear Algebra OR MAT 343: Applied Linear Algebra	3	C
PHY 241: University Physics III	3	C
Term hours subtotal:	15	

Term 5 62 - 75 Credit Hours	Hours	Minimum Grade	Notes
EEE 230: Computer Organization and Assembly Language Programming	3		
EEE 334: Circuits II	4		
EEE 350: Random Signal Analysis	3		
EEE 360: Energy Systems and Power Electronics	4		
Term hours subtotal:	14		

Term 6 76 - 90 Credit Hours	Hours	Minimum Grade	Notes
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB) OR ECN 201: Economic Issues and Analysis (SB)	3		• Area Pathway courses are prerequisites for Technical Electives. See Advisor for guidance in selection.
Complete 3 courses: Upper Division Area Pathway Course	12		
Term hours subtotal:	15		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
BIO OR CHM OR PHY OR MAT Upper Division Elective AND Upper Division Technical Elective	3		
EEE 488: Senior Design Laboratory I (L)	3		
Complete 2 courses: EEE 460: Nuclear Power Engineering OR EEE 463: Electrical Power Plants OR EEE 470: Electric Power Devices OR EEE 471: Power System Analysis OR EEE 473: Electrical Machinery OR EEE 498: Power Electronics OR EEE 498: Solar Energy	6		
GCU 364: Energy in the Global Arena (SB & G)	3		
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
EEE 489: Senior Design Laboratory II (L)	3		
Complete 2 courses: Upper Division Technical Elective	6		
EEE 460: Nuclear Power Engineering OR EEE 463: Electrical Power Plants OR EEE 470: Electric Power Devices OR EEE 471: Power System Analysis OR EEE 473: Electrical Machinery OR EEE 498: Power Electronics OR EEE 498: Solar Energy	3		
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

Technical Electives	Area Pathway Course
EEE 460: Nuclear Power Engineering	EEE 304: Signals and Systems II
EEE 463: Electrical Power Plants	EEE 333: Hardware Design Languages and Programmable Logic
EEE 470: Electric Power Devices	EEE 335: Analog and Digital Circuits
EEE 471: Power System Analysis	EEE 341: Engineering Electromagnetics
EEE 472: Power Electronics and Power Management	EEE 352: Properties of Electronic Materials
EEE 473: Electrical Machinery	

EEE 498: Power Electronics, Power
Electronics Lab, Solar Energy

EEE 360: Energy Systems and Power
Electronics

EEE 404: Real-Time DSP Systems

EEE 407: Digital Signal Processing

EEE 455: Communication Systems

EEE 459: Communication Networks

EEE 480: Feedback Systems

EEE 481: Computer-Controlled Systems

EEE 425: Digital Systems and Circuits

EEE 433: Analog Integrated Circuits

EEE 443: Antennas for Wireless
Communications

EEE 445: Microwaves

EEE 448: Fiber Optics

EEE 434: Quantum Mechanics for Engineers

EEE 435: Fundamentals of CMOS and
MEMS

EEE 436: Fundamentals of Solid-State
Devices

EEE 437: Optoelectronics

EEE 439: Semiconductor Facilities and
Cleanroom Practices

EEE 460: Nuclear Power Engineering

EEE 463: Electrical Power Plants

EEE 470: Electric Power Devices

EEE 471: Power System Analysis

EEE 472: Power Electronics and Power
Management

EEE 473: Electrical Machinery

CSE 420: Computer Architecture I

Notes:

- Major GPA calculation includes FSE 100, CSE, EEE, Area Pathway, and Technical Elective courses.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Engineering Management, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESEMGBSE

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 265: Calculus for Engineers I (MA)	3	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101-IEE should be taken first semester. If ENG 105 is taken, a 3 credit hour applicable elective must also be taken prior to graduation. See advisor.
ASU 101-IEE: The ASU Experience	1		
FSE 100: Introduction to Engineering	2	C	
ENG 101: First-Year Composition OR ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107: English for Foreign Students OR ENG 108: English for Foreign Students	3	C	
PGS 101: Introduction to Psychology (SB)	3		
Basic Science Elective	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 2 16 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 110: Principles of Programming with Java (CS)	3	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
ECN 211: Macroeconomic Principles (SB)	3		
ENG 101: First-Year Composition OR ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107: English for Foreign Students OR ENG 108: English for Foreign Students	3	C	
PHY 121: University Physics I: Mechanics (SQ)	3	C	
PHY 122: University Physics Laboratory I (SQ)	1	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 32 - 47 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ACC 231: Uses of Accounting Information I	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 4 critical courses by end of term 3. CHM 113 is a prerequisite to CHM 116. The sustainability electives should be chosen from advisor approved SOS courses and the global engineering electives should be chosen from advisor approved special topics. The entrepreneurship electives include FSE 301 Entrepreneurship for Engineers and other advisor approved topics.
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4		
CSE 205: Object-Oriented Programming and Data Structures (CS)	3	C	
MAT 267: Calculus for Engineers III (MA)	3	C	
Global Engineering or Sustainability or Entrepreneurship Elective	3		
 Minimum 2.00 GPA ASU Cumulative.			
 Complete First-Year Composition requirement.			
Term hours subtotal:	16		
Term 4 48 - 62 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ACC 241: Uses of Accounting Information II	3	C	
 MAT 242: Elementary Linear Algebra	2	C	

COM 263: Elements of Intercultural Communication (SB & C & G)	3
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3
IEE 382: Probability and Statistics Lab	1
Math or Science Elective	3
Term hours subtotal:	15

Term 5 63 - 78 Credit Hours	Hours	Minimum Grade	Notes
IEE 431: Engineering Administration	3		
IEE 475: Simulating Stochastic Systems (CS)	4		
IEE 381: Six Sigma Methodology OR IEE 305: Information Systems Engineering (CS)	3		
Industry Focus Area Elective	3		
Upper Division Math or Science Elective	3		
Term hours subtotal:	16		

Term 6 79 - 93 Credit Hours	Hours	Minimum Grade	Notes
IEE 300: Economic Analysis for Engineers OR FIN 300: Fundamentals of Finance	3		
IEE 458: Project Management	3		
IEE 369: Work Analysis and Design (L) OR IEE 461: Production Control	3		
Complete 2 courses: Industry Focus Area Elective	6		
Term hours subtotal:	15		

Term 7 94 - 108 Credit Hours	Hours	Minimum Grade	Notes
FSE 494: Multidisciplinary Capstone I AND Literacy and Critical Inquiry (L)	3		
IEE 456: Intro to Systems Engineering	3		
MGT 300: Organization and Management Leadership	3		
Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Upper Division Industry Focus Area Elective	3		
Term hours subtotal:	15		

Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
FSE 494: Multidisciplinary Capstone II AND Literacy and Critical Inquiry (L)	3		
IEE 454: Risk Management	3		
Upper Division Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Upper Division Industry Focus Area Elective	3		
Term hours subtotal:	12		

Basic Science Elective	Industry Focus Area Electives
BIO 181: General Biology I (SQ)	Software Industry / Computer Science foundation area
BIO 182: General Biology II (SG)	Mechanical Products Industry / Mechanical Engineering foundation area
BME 111: Engineering Perspectives on Biological Systems	Environmentally-benign Industry / School of Sustainability foundation area
GLG 101: Introduction to Geology I (Physical) (SQ & G)	Electronics and Semiconductor Industry / Electrical Engineering foundation area
GLG 102: Introduction to Geology II (Historical) (SG & H)	Communication and Networks Industry / Electrical Engineering foundation area
GLG 110: Dangerous World (SG & G)	Power Systems Industry / Electrical Engineering foundation area
	Distribution Industry / Supply Chain Management foundation area

Notes:

- Major GPA calculation includes: ACC 231, ACC 241, CSE 205, ECN 211, FIN 300, FSE 100, FSE 494 Capstone I, FSE 494 Capstone II, MGT 300, and all IEE courses.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition



















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Engineering Special Studies (Premedical Engineering), BSE

Ira A. Fulton Schools of Engineering




Campus: Tempe

ESESPBSE

Term 1 0 - 17 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 BIO 181: General Biology I (SQ) OR CHM 114: General Chemistry for Engineers (SQ)	4	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101-BME and Intro to Biomedical Engineering I, II, III are required for freshmen and sophomores and should be completed first semester. Non-freshmen and sophomores should complete applicable elective. See Advisor. If ENG 105 is taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 BME 194: Introduction to Biomedical Engineering I OR Elective	1	C	
 BME 194: Introduction to Biomedical Engineering II OR Elective	1	C	
 BME 194: Introduction to Biomedical Engineering III OR Elective	1	C	
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-BME: Course not found	1		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	17		
Term 2 18 - 33 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 BIO 181: General Biology I (SQ) OR CHM 114: General Chemistry for Engineers (SQ)	4	C	<ul style="list-style-type: none"> Computation in Biomedical Engineering, MATLAB/Mathcad in BME, and Computational Biostatistics must all be completed to receive (CS) credit.
 BME 194: Applications of Math & Science to BME I	1	C	
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
 Minimum 2.00 GPA ASU Cumulative.			
BME 194: Computation in Biomedical Engineering AND Computer/Statistics/Quantitative Applications (CS)	1	C	
Term hours subtotal:	16		
Term 3 34 - 50 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 267: Calculus for Engineers III (MA)	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 15 critical courses each with a minimum grade of "C" (14 courses if ENG 105 taken)
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
BME 294: Cell Tissue Physiology	1	C	
BME 294: Anatomy & Physiology: Systems	1	C	
BME 294: Anatomy & Physiology: Tissues	1	C	
CHM 233: General Organic Chemistry I AND CHM 237: General Organic Chemistry Laboratory I	4	C	
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB) OR ECN 201: Economic Issues and Analysis (SB)	3		
 Complete First-Year Composition requirement.			

 Minimum 2.00 GPA ASU Cumulative.

Term hours subtotal: 17

Term 4 51 - 65 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 BME 294: Applications of Math & Science to BME II	1	C	<ul style="list-style-type: none"> • Computation in Biomedical Engineering, MATLAB/Mathcad in BME, and Computational Biostatistics must all be completed to receive (CS) credit.
 MAT 275: Modern Differential Equations (MA)	3	C	
BME 294: Conservation Principles	1	C	
BME 294: BME Professional Development I	1	C	
BME 294: MATLAB/Mathcad in BME AND Computer/Statistics/Quantitative Applications (CS)	1	C	
EEE 202: Circuits I	4	C	
MAE 212: Engineering Mechanics	4	C	
Term hours subtotal:	15		

Term 5 66 - 81 Credit Hours	Hours	Minimum Grade	Notes
BME 394: Numerical Analysis	1	C	<ul style="list-style-type: none"> • Computation in Biomedical Engineering, MATLAB/Mathcad in BME, and Computational Biostatistics must all be completed to receive (CS) credit.
BME 394: Biomaterial/ Physicochemical Properties	1	C	
BME 394: Biomaterial Implants & Devices	1	C	
BME 394: Basic Concepts for Biological Signals and Systems	1	C	
BME 394: Transforms for BME Applications	1	C	
BME 394: Microcomputing & Embedded Systems for BME	1	C	
BME 394: Statistics for Biomedical Engineers	1	C	
BME 394: Computational Biostatistics AND Upper Division Computer/Statistics/Quantitative Applications (CS)	1	C	
BME 394: Probability for Biomedical Engineers	1	C	
BME 394: Circuits for BME Instrumentation	1	C	
MAT 343: Applied Linear Algebra	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	16		

Term 6 82 - 94 Credit Hours	Hours	Minimum Grade	Notes
CHM 234: General Organic Chemistry II AND CHM 238: General Organic Chemistry Laboratory II	4		
BME 394: Engineering Design Methods	1	C	
BME 394: 3D Spatial & Graphic Design/ Modeling	1	C	
BME 394: BME Professional Development II	1	C	
BME 394: Mass Transport	1	C	
BME 394: Momentum Transport	1	C	
BME 394: Heat/ Energy Transport	1	C	
BME 394: Filters & Stochastic Process	1	C	
BME 394: Design of Experiments & Clinical Trials	1	C	
BME 394: Applications of Math & Science to BME III	1	C	
Term hours subtotal:	13		

Term 7 95 - 106 Credit Hours	Hours	Minimum Grade	Notes
BME 494: Capstone I AND Upper Division Literacy and Critical Inquiry (L)	1	C	<ul style="list-style-type: none"> • 6 hrs of Professional Electives required. 5 hrs of General Electives required. See Advisor for approved courses. • BME Capstone I, II, and III must all be completed to receive (L) credit.
BME 494: Capstone II AND Upper Division Literacy and Critical Inquiry (L)	1	C	
BME 494: Capstone III AND Upper Division Literacy and Critical Inquiry (L)	1	C	
BME 494: Instrumentation I	1	C	
BME 494: Instrumentation II	1	C	
BME 494: Instrumentation III	1	C	
Upper Division Professional Elective	3		

Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3
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Term hours subtotal:	12
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Term 8 107 - 120 Credit Hours	Hours	Minimum Grade	Notes
BME 494: Capstone IV AND Upper Division Literacy and Critical Inquiry (L)	1	C	<ul style="list-style-type: none"> • 6 hrs of Professional Electives required. 5 hrs of General Electives required. See Advisor for approved courses. • BME Capstone IV, V, and VI must all be completed to receive (L) credit.
BME 494: Capstone V AND Upper Division Literacy and Critical Inquiry (L)	1	C	
BME 494: Capstone VI AND Literacy and Critical Inquiry (L)	1	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Upper Division Professional Elective	3		
Complete 2 courses: Upper Division General Elective	5		
Term hours subtotal:	14		

Notes:

- Major GPA calculation includes all BME courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.25 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition



















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Industrial Engineering, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESIEEBSE

Term 1 0 - 15 Credit Hours Critical course signified by 		Hours	Minimum Grade	Notes
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students		3	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course. ASU 101 or College specific equivalent First Year Seminar required of all freshman student and should be taken the first semester. If ENG 105 is taken, a 3 hour applicable elective must also be taken prior to graduation. See Advisor.
 FSE 100: Introduction to Engineering OR CSE 110: Principles of Programming with Java (CS)		2-3	C	
 MAT 265: Calculus for Engineers I (MA)		3	C	
ASU 101-IEE: The ASU Experience		1		
Basic Science Elective		3		
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)		3		
 Minimum 2.00 GPA ASU Cumulative.				
Term hours subtotal:		15-16		
Term 2 16 - 28 Credit Hours Critical course signified by 		Hours	Minimum Grade	Notes
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students		3	C	
 FSE 100: Introduction to Engineering OR CSE 110: Principles of Programming with Java (CS)		3-2	C	
 MAT 266: Calculus for Engineers II (MA)		3	C	
 PHY 121: University Physics I: Mechanics (SQ)		3	C	
 PHY 122: University Physics Laboratory I (SQ)		1	C	
 Minimum 2.00 GPA ASU Cumulative.				
Term hours subtotal:		13-12		
Term 3 29 - 44 Credit Hours Critical course signified by 		Hours	Minimum Grade	Notes
 ECN 211: Macroeconomic Principles (SB)		3		<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 9 critical courses by end of term 3. ENG 102 & 108 are not part of the this course count.
CSE 205: Object-Oriented Programming and Data Structures (CS)		3		
IEE 210: Introduction to Industrial Engineering		3	C	
MAT 267: Calculus for Engineers III (MA)		3		
PHY 131: University Physics II: Electricity and Magnetism (SQ)		3		
PHY 132: University Physics Laboratory II (SQ)		1		
 Minimum 2.00 GPA ASU Cumulative.				
 Complete First-Year Composition requirement.				
Term hours subtotal:		16		
Term 4 45 - 59 Credit Hours Critical course signified by 		Hours	Minimum Grade	Notes
 IEE 220: Business/Industrial Engr		3	C	<ul style="list-style-type: none"> CHM 113 is a prerequisite for CHM 116 and does not apply towards degree credit.
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)		4		
MAT 242: Elementary Linear Algebra		2		
MAT 275: Modern Differential Equations (MA)		3		

Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR
 Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR
 Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)

3

Term hours subtotal: 15

Term 5 60 - 75 Credit Hours	Hours	Minimum Grade	Notes
IEE 300: Economic Analysis for Engineers	3	C	
IEE 305: Information Systems Engineering (CS)	3	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3	C	
IEE 382: Probability and Statistics Lab	1	C	
EEE 202: Circuits I OR MAE 212: Engineering Mechanics OR MSE 250: Structure and Properties of Materials	3-4		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	16-17		

Term 6 76 - 89 Credit Hours	Hours	Minimum Grade	Notes
IEE 369: Work Analysis and Design (L)	3	C	
IEE 376: Operations Research Deterministic Techniques/Applications	3	C	
Complete 2 courses: EEE 202: Circuits I OR MAE 212: Engineering Mechanics OR MSE 250: Structure and Properties of Materials	8-7		
Term hours subtotal:	14-13		

Term 7 90 - 105 Credit Hours	Hours	Minimum Grade	Notes
IEE 470: Stochastic Operations Research	3	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/cidse for list of IEE Technical Elective and Career Focused Electives.
IEE 474: Quality Control	3	C	
IEE 475: Simulating Stochastic Systems (CS)	4	C	
Upper Division Career Focus Elective	3		
Upper Division Humanities, Fine Arts and Design (HU) AND Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	16		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
IEE 461: Production Control	3	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/cidse for list of IEE Technical Elective and Career Focused Electives.
IEE 490: Project in Design and Development (L)	3	C	
Upper Division IEE Technical Elective	3	C	
Complete 2 courses: Upper Division Career Focus Elective	6		
Term hours subtotal:	15		

Basic Science Elective List

BIO 181: General Biology I (SQ)

BIO 182: General Biology II (SG)

BME 111: Engineering Perspectives on Biological Systems

GLG 101: Introduction to Geology I (Physical) (SQ & G)

GLG 102: Introduction to Geology II (Historical) (SG & H)

GLG 110: Dangerous World (SG & G)

Total Hours: 120

Upper Division Hours: 45 minimum

General University Requirements Legend

General Studies Core Requirements:

Academic Catalog Archive 2011-2012 1105

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)

Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for
Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

- Global Awareness (G)
 - Historical Awareness (H)
- First-Year Composition













General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Informatics, BS

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESCPBS

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CPI 101: Introduction to Informatics (CS)	3	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101 or College specific equivalent First Year Seminar (ASU 101-CPI or ASU 101-CSE) required of all freshman student and should be taken the first semester. If ENG 105 is taken, a 3 credit hour applicable elective must also be taken prior to graduation. See advisor.
 CSE 110: Principles of Programming with Java (CS)	3	C	
 MAT 210: Brief Calculus (MA) OR MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-CSE: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Term hours subtotal:	16		
Term 2 17 - 30 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 205: Object-Oriented Programming and Data Structures (CS)	3	C	
 MAT 242: Elementary Linear Algebra	2	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Literacy and Critical Inquiry (L)	3		
Term hours subtotal:	14		
Term 3 31 - 46 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 243: Discrete Mathematical Structures	3	C	<ul style="list-style-type: none"> CRITICAL REQUIREMENT: Complete 6 critical courses by end of term three.
IEE 305: Information Systems Engineering (CS)	3	C	
Lower Division Informatics Elective or Focus Area Required Course	3	C	
Natural Science - General (SG)	4		
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Complete First-Year Composition requirement.			
Term hours subtotal:	16		
Term 4 47 - 62 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CPI 200: Mathematical Foundations of Informatics (MA)	3	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/undergraduate/informatics for list of Informatics Electives or Focus Area Required Course.
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Complete 2 courses: Lower Division Informatics Elective or Focus Area Required Course	6	C	
Natural Science - Quantitative (SQ)	4		

Term hours subtotal: 16

Term 5 63 - 77 Credit Hours	Hours	Minimum Grade	Notes
CPI 310: Information and Data Management	3	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/undergraduate/informatics for list of Informatics Electives or Focus Area Required Course.
CPI 360: Decision Making and Problem Solving	3	C	
Complete 2 courses: Lower Division Informatics Elective or Focus Area Required Course	6	C	
STP 420: Introductory Applied Statistics (CS) OR STP 231: Statistics for Life Science (CS) OR GCU 495: Quantitative Methods in Geography (CS) OR IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3	C	
Term hours subtotal:	15		

Term 6 78 - 92 Credit Hours	Hours	Minimum Grade	Notes
CPI 350: Evaluation of Informatics Systems	3	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/undergraduate/informatics for list of Informatics Electives or Focus Area Required Course.
CSE 463: Introduction to Human Computer Interaction	3	C	
Complete 2 courses: Lower Division Informatics Elective or Focus Area Required Course	6	C	
Upper Division Humanities, Fine Arts and Design (HU) AND Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

Term 7 93 - 107 Credit Hours	Hours	Minimum Grade	Notes
CPI 485: Informatics Capstone I AND Upper Division Literacy and Critical Inquiry (L)	3	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/undergraduate/informatics for list of Informatics Electives or Focus Area Required Course.
Complete 4 courses: Upper Division Informatics Elective or Focus Area Required Course	12	C	
Term hours subtotal:	15		

Term 8 108 - 120 Credit Hours	Hours	Minimum Grade	Notes
CPI 486: Informatics Capstone II AND Upper Division Literacy and Critical Inquiry (L)	4	C	<ul style="list-style-type: none"> See Advisor or http://engineering.asu.edu/undergraduate/informatics for list of Informatics Electives or Focus Area Required Course.
Complete 3 courses: Upper Division Informatics Elective or Focus Area Required Course	9	C	
Term hours subtotal:	13		

Notes:

- 2.5 GPA required in Informatics Electives and Focus Area Required Courses.
- 2.5 GPA required in core courses: CPI 101, 200, 310, 350, 360 485, 486; CSE 110, 205 463; MAT 210 or MAT 265, MAT 242, 243; and STP 420 or STP 231 or GCU 495 or IEE 380; IEE 305.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition


















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.




2011 - 2012 Major Map Materials Science & Engineering, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESMSEBSE

Term 1 0 - 16 Credit Hours Critical course signified by 		Hours	Minimum Grade	Notes
 CHM 114: General Chemistry for Engineers (SQ) OR CHM 113: General Chemistry I (SQ) AND CHM 116: General Chemistry II (SQ)		4	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses. • ASU Math Placement Exam score determines placement in Mathematics course. • ASU 101-MSE and MSE 100 should be completed first semester. • CHM 113 is a prerequisite to CHM 116 and can be apply as a Math Science Elective. • If student takes ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 MAT 265: Calculus for Engineers I (MA)		3	C	
 MSE 100: Introduction of Materials Engineering		2		
ASU 101-MSE: The ASU Experience		1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students		3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)		3		
 Minimum 2.00 GPA ASU Cumulative.				
Term hours subtotal:		16		
Term 2 17 - 32 Credit Hours Critical course signified by 		Hours	Minimum Grade	Notes
 MAT 266: Calculus for Engineers II (MA)		3	C	
 MSE 250: Structure and Properties of Materials		3	C	
 PHY 121: University Physics I: Mechanics (SQ)		3	C	
 PHY 122: University Physics Laboratory I (SQ)		1	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students		3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)		3		
 Minimum 2.00 GPA ASU Cumulative.				
Term hours subtotal:		16		
Term 3 33 - 48 Credit Hours Critical course signified by 		Hours	Minimum Grade	Notes
 MAT 267: Calculus for Engineers III (MA)		3	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 10 critical courses by end of term 3.
 PHY 131: University Physics II: Electricity and Magnetism (SQ)		3	C	
 PHY 132: University Physics Laboratory II (SQ)		1	C	
BME 111: Engineering Perspectives on Biological Systems OR BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG)		3-4		
MSE 215: Materials Synthesis		3		
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)		3		
 Complete First-Year Composition requirement.				
 Minimum 2.00 GPA ASU Cumulative.				
Term hours subtotal:		16-17		
				Minimum

Term 4 49 - 63 Credit Hours Critical course signified by 	Hours	Grade	Notes
 MSE 211: Introduction to Mechanics of Materials	3		
MAT 275: Modern Differential Equations (MA)	3		
MAT 343: Applied Linear Algebra	3		
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3		
PHY 241: University Physics III	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		

Term 5 64 - 79 Credit Hours	Hours	Minimum Grade	Notes
Math or Science Elective	3-4		
MSE 315: Mathematical and Computer Methods in Materials (CS)	3		
MSE 330: Thermodynamics of Materials	3		
MSE 355: Materials Structure and Microstructure	3		
MSE 356: Materials Structure and Microstructure Lab	1		
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	16-17		

Term 6 80 - 93 Credit Hours	Hours	Minimum Grade	Notes
MSE 335: Materials Kinetics and Processing	3		
MSE 420: Physical Metallurgy	3		
MSE 421: Physical Metallurgy Laboratory	1		
MSE 450: Introduction to Materials Characterization	3		
MSE 451: Introduction to Materials Characterization Lab	1		
MSE 458: Introduction to Electronic, Magnetic, and Optical Properties	3		
Term hours subtotal:	14		

Term 7 94 - 108 Credit Hours	Hours	Minimum Grade	Notes
MSE 440: Mechanical Properties of Solids	3		
MSE 470: Polymers and Composites	3		
MSE 471: Introduction to Ceramics	3		
MSE 482: Materials Engineering Design (L)	3		
Advanced Science Elective	3		
Term hours subtotal:	15		

Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
MSE 490: Capstone Design Project (L)	3		
Complete 2 courses: Technical Elective	6		
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	12		

Advanced Science Elective	Math or Science Elective	Technical Electives
The Advanced Science Elective includes most 200-level and above math/science (BIO, CHM, MAT, PHY) courses. See Advisor for approved advanced science electives.	CHM 113: General Chemistry I (SQ) GLG 101: Introduction to Geology I (Physical) (SQ & G) BIO 2** Elective	BME 318: Biomaterials BME 412: Biomedical Engineering II BME 416: Biomechanics CHE 458: Semiconductor Material Processing CHM 333: Organic Chemistry for Majors I CHM 334: Organic Chemistry for Majors II

CHM 471: Solid-State Chemistry

EEE 435: Fundamentals of CMOS and MEMS

EEE 436: Fundamentals of Solid-State Devices

IEE 300: Economic Analysis for Engineers

IEE 369: Work Analysis and Design (L)

IEE 431: Engineering Administration

IEE 437: Human Factors Engineering

IEE 463: Computer-Aided Manufacturing and Control (CS)

MAE 322: Structural Mechanics

MAE 342: Principles of Mechanical Design

MAE 351: Manufacturing Processes

MAE 442: Mechanical Systems Design

The technical electives include most 300-level and above engineering, math, and science courses. See Advisor for approved list.

With Advisor approval MSE 441, 475, 476 and select MSE 494's can apply as Technical Electives but cannot also be used toward a minor.

Notes:

- Major GPA calculation includes PHY 241, Advanced Science Elective, Technical Electives, and all MSE courses.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition




















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map Mechanical Engineering, BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESMAEMBSE

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses. • ASU Math Placement Exam score determines placement in Mathematics course. • ASU 101-MAE and FSE 100 required for freshmen and should be completed first semester. Non-freshmen see Advisor for petitioning replacement electives. • CHM 113 is a prerequisite for CHM 116 and does not apply towards degree credit. • If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-MAE: The ASU Experience	1		
FSE 100: Introduction to Engineering OR School approved elective	2	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 2 17 - 29 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	13		
Term 3 30 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAE 212: Engineering Mechanics	4	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 10 critical courses by end of term 3. ENG 101 & 107 are not part of the this course count.
 MAT 275: Modern Differential Equations (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
MAE 214: Computer-Aided Engineering I	1	C	
MAT 267: Calculus for Engineers III (MA)	3	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 4 45 - 61 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes

MAE 213: Solid Mechanics	3	C
MAE 240: Thermofluids I	4	C
EEE 202: Circuits I	4	C
MAT 343: Applied Linear Algebra	3	C
MSE 250: Structure and Properties of Materials	3	C
Term hours subtotal:	17	

Term 5 62 - 77 Credit Hours	Hours	Minimum Grade	Notes
BME 111: Engineering Perspectives on Biological Systems OR BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG) OR BIO 201: Human Anatomy and Physiology I (SG)	3-4		
MAE 322: Structural Mechanics	4	C	
MAE 340: Thermofluids II	3	C	
MAE 384: Numerical Methods for Engineers (CS)	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	16-17		

Term 6 78 - 90 Credit Hours	Hours	Minimum Grade	Notes
MAE 318: Sensors and Controls	5	C	
MAE 323: Computer-Aided Engineering II	2	C	
MAE 342: Principles of Mechanical Design	3	C	
Upper Division Thermo-Fluids Technical Elective	3	C	
Term hours subtotal:	13		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
MAE 488: Mechanical Engineering Design I	3	C	
MAE 491: Experimental Mechanical Engineering (L)	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Upper Division Technical Elective	6	C	
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
Elective	3		
MAE 400: Engineering Profession (L)	3	C	
MAE 489: Mechanical Engineering Design II	3	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Upper Division Technical Elective	3	C	
Term hours subtotal:	15		

Thermo-Fluids Technical Electives	Non-Thermo-Fluids Technical Electives
MAE 360: Aerodynamics (L)	IEE 300: Economic Analysis for Engineers
MAE 362: High-Speed Aerodynamics (L)	MAE 3** Elective
MAE 434: Internal Combustion Engines	MAE 4** Elective
MAE 446: Energy Systems Design	
MAE 471: Computational Fluid Dynamics	
MAE 482: Thermodynamics	

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for
Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition



















General Studies designations listed on the major map are current for the 2011 - 2012 academic year.




2011 - 2012 Major Map Mechanical Engineering (Computational and Mathematical Mechanics), BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESMAECBSE

Term 1 0 - 13 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses. • ASU Math Placement Exam score determines placement in Mathematics course. • ASU 101-MAE and FSE 100 required for freshmen and should be completed first semester. Non-freshmen see Advisor for petitioning replacement electives. • CHM 113 is a prerequisite for CHM 116 and does not apply towards degree credit. • If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 265: Calculus for Engineers I (MA)	3	C	
ASU 101-MAE: The ASU Experience	1		
FSE 100: Intro to Engineering OR School approved elective	2	C	
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	13		
Term 2 14 - 29 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 MAT 266: Calculus for Engineers II (MA)	3	C	
 PHY 121: University Physics I: Mechanics (SQ)	3	C	
 PHY 122: University Physics Laboratory I (SQ)	1	C	
CSE 100: Principles of Programming with C++ (CS) OR CSE 110: Principles of Programming with Java (CS)	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 30 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAE 212: Engineering Mechanics	4	C	<ul style="list-style-type: none"> • CRITICAL REQUIREMENT: Complete 10 critical courses by end of term 3. ENG 101 & 107 are not part of the this course count.
 MAT 275: Modern Differential Equations (MA)	3	C	
 PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
 PHY 132: University Physics Laboratory II (SQ)	1	C	
MAE 214: Computer-Aided Engineering I	1	C	
MAT 267: Calculus for Engineers III (MA)	3	C	
 Complete First-Year Composition requirement.			
 Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	15		

Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAE 213: Solid Mechanics	3	C	
 MAE 240: Thermofluids I	4	C	
MAT 343: Applied Linear Algebra	3	C	
MSE 250: Structure and Properties of Materials	3	C	
PHI 103: Principles of Sound Reasoning (L or HU)	3		
Term hours subtotal:	16		

Term 5 61 - 77 Credit Hours	Hours	Minimum Grade	Notes
BME 111: Engineering Perspectives on Biological Systems OR BIO 181: General Biology I (SQ) OR BIO 201: Human Anatomy and Physiology I	3-4		
EEE 202: Circuits I	4	C	
MAE 322: Structural Mechanics	4	C	
MAE 340: Thermofluids II	3	C	
MAE 384: Numerical Methods for Engineers (CS)	3	C	
Term hours subtotal:	17-18		

Term 6 78 - 90 Credit Hours	Hours	Minimum Grade	Notes
MAE 318: Sensors and Controls	5	C	
MAE 323: Computer-Aided Engineering II	2	C	
MAE 342: Principles of Mechanical Design	3	C	
MAE 471: Computational Fluid Dynamics	3	C	
Term hours subtotal:	13		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
MAE 488: Mechanical Engineering Design I	3	C	
MAE 491: Experimental Mechanical Engineering (L)	3	C	
Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Complete 2 courses: Upper Division Technical Elective	6	C	
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
MAE 400: Engineering Profession (L)	3	C	
MAE 489: Mechanical Engineering Design II	3	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Upper Division Technical Elective	3	C	
Term hours subtotal:	15		

Upper Division Technical Electives
IEE 300: Economic Analysis for Engineers
MAE 3**
MAE 4**

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum

General University Requirements Legend
General Studies Core Requirements:

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)

Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
**Hrs Resident Credit for
Academic Recognition:** 56 minimum
Total Community College Hrs: 64 maximum

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

- Historical Awareness (H)
- First-Year Composition

General Studies designations listed on the major map are current for the 2011 - 2012 academic year.




2011 - 2012 Major Map Mechanical Engineering (Energy & Environment), BSE

Ira A. Fulton Schools of Engineering

Campus: Tempe

ESMAEEBSE

Term 1		0 - 13 Credit Hours	Critical course signified by	Hours	Minimum Grade	Notes
						<ul style="list-style-type: none">• An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses.• ASU Math Placement Exam score determines placement in Mathematics course.• ASU 101-MAE and FSE 100 required for freshmen and should be completed first semester. Non-freshmen see Advisor for petitioning replacement electives.• CHM 113 is a prerequisite for CHM 116 and does not apply towards degree credit.• If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.

Term 4 45 - 60 Credit Hours Critical course signified by 	Hours	Grade	Notes
 MAE 213: Solid Mechanics	3	C	
 MAE 240: Thermofluids I	4	C	
CHM 231: Elementary Organic Chemistry (SQ)	3	C	
MAT 343: Applied Linear Algebra	3	C	
MSE 250: Structure and Properties of Materials	3	C	
Term hours subtotal:	16		

Term 5 61 - 77 Credit Hours	Hours	Minimum Grade	Notes
BIO 319: Environmental Science (Nonmajor) (G) OR BIO 320: Fundamentals of Ecology OR BIO 181: General Biology I (SQ) OR BIO 182: General Biology II (SG) OR BME 111: Engineering Perspectives on Biological Systems	3-4	C	
EEE 202: Circuits I	4	C	
MAE 322: Structural Mechanics	4	C	
MAE 340: Thermofluids II	3	C	
MAE 384: Numerical Methods for Engineers (CS)	3	C	
Term hours subtotal:	17-18		

Term 6 78 - 90 Credit Hours	Hours	Minimum Grade	Notes
MAE 318: Sensors and Controls	5	C	• 6hrs minimum in both SB and HU required overall.
MAE 323: Computer-Aided Engineering II	2	C	
MAE 342: Principles of Mechanical Design	3	C	
Humanities, Fine Arts and Design (HU) OR Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	13		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
GCU 364: Energy in the Global Arena (SB & G) OR PUP 190: Sustainable Cities ((HU or SB) & G)	3		
MAE 482: Thermodynamics	3	C	
MAE 491: Experimental Mechanical Engineering (L)	3	C	
Complete 2 courses: Upper Division Technical Elective	6	C	
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
GPH 314: Global Change (HU & G) OR PHI 310: Environmental Ethics (HU)	3		
MAE 400: Engineering Profession (L)	3	C	
MAE 446: Energy Systems Design	3	C	
Complete 2 courses: Upper Division Technical Elective	6	C	
Term hours subtotal:	15		

Upper Division Technical Electives

IEE 300: Economic Analysis for Engineers

MAE 3**

MAE 4**

Two technical electives must be in the "Energy and Environment" area and the other two chosen from the approved listed of MAE technical electives. MAE 484 is not permitted.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

Barrett Academic Course Requirements

Honors students must maintain high standards of academic performance and show progress toward completion of graduation requirements in their disciplinary majors and in Barrett. In order to graduate from Barrett, students must complete the following, which includes a total of 36 credit hours of honors course work:

1. HON 171 and HON 272/273/274, *The Human Event*, must be completed in sequence during a student's first two semesters in the college.
2. Thirty additional credit hours of honors course work must be earned with a letter grade of "C" (2.00) or higher. This may include HON prefix classes, honors sections of classes, honors enrichment contracts or any automatic honors courses such as ENG 105 (in-person sections), CHM 117, CHM 118, PHY 333, or graduate-level courses.
3. Included in the 36 credit hours of honors course work are at least 18 hours of upper-division or graduate-level honors credits for an earned letter grade of "C" (2.00) or higher, including six credit-hours of honors course work outside the academic major. Students should investigate specialized honors, upper-division tracks within their majors.
4. Those admitted as upper-division transfer students (defined as 48 post-high school university credits completed by the time of planned enrollment in Barrett) must complete a three-credit, 300-level HON special topics course in addition to the 18 required hours of upper-division honors course work. Six of the 21 honors credits must be outside the academic major. A total of 21 hours of upper-division honors course work are required for these upper division transfers because they do not have time to complete all 36 honors hours.
5. Students are required to complete an honors thesis or creative project for at least three credit-hours, though students are encouraged to complete six credit-hours of thesis or creative project work. These credit hours may be included in the 18 required hours of upper-division, honors course work. The honors thesis or creative project is launched with a prospectus due one academic year before the defense. The final copy of the honors thesis or creative project **must be filed by the posted deadline during the student's graduation semester.**
6. ASU graduation requirements in an academic major must be met.
7. Students must maintain a cumulative ASU GPA of 3.25 or higher.

Barrett course requirements may be met in a variety of ways. There are two specific required courses for first-year students. **Only courses in which a student receives a grade of "C" (2.00) or higher** may be used to meet Barrett requirements.

Those entering the college as lower-division students may take as many as 18 lower-division honors credits, which include HON 171 and 272/273/274 *The Human Event*, and at least 18 upper-division credits (total honors credits must be 36). HON 171, 271, 272, 273 are cross-disciplinary seminars that acquaint students with ideas that form the foundation of a university education and emphasize critical thinking, discussion and writing.

Those who enter as upper-division students must take 21 upper-division honors credits, including a required 300-level honors course. Junior-level seminar courses introduce students to critical thinking, discussion and writing in a

topical area chosen by the instructor. All students are expected to complete this course no later than the first or second semester after transferring.

Departmental honors-only courses are limited to honors students and others who receive special permission from the instructor to enroll. Enrollment in these courses is limited. Compared to their non-honors equivalents, these courses are designed to offer a richer, more complex intellectual experience appropriate to the discipline and the level of the course for all students enrolled. Other disciplinary honors courses group honors students in small cohorts to work on research projects of common interest.

Honors enrichment contracts are available in many departmental courses allowing honors students to contract with the instructor of designated non-honors courses to earn honors credit by pursuing enrichment activities, which include supplemental sessions with the instructor. Honors enrichment contracts must be filed by the student during the first four weeks of class and completed during the semester in which the course is offered. The enrichment contract form offers guidelines to aid students and faculty in developing appropriate contracts.

Course numbers listed in the online ASU schedule of classes as 298/492 Honors Directed Study, 493 Honors Thesis, 497 Honors Colloquium, all classes with the HON prefix, and those with departmental prefix that carry the honors designation as a notation are reserved for students in Barrett and always count for honors credit. Students may receive credit for more than one of each of these courses in a given department.

The departmental course with the number 493 is reserved for honors students completing their honors thesis or creative project. A student may enroll for this course only with the approval of the sponsoring academic department **and of the faculty member who serves as the student's thesis** or creative project director. Course numbers listed in **the online ASU schedule of classes as 493 fulfill the student's upper**-division literacy and critical inquiry (L) General Studies requirement.
















There are certain courses that carry automatic honors credit. These include ENG 105 (any in-person section), CHM 117, CHM 118, and PHY 333. Graduate level courses automatically earn honors credit.

2011 - 2012 Major Map Journalism & Mass Communication, BA

Walter Cronkite School of Journalism & Mass Comm

Campus: Downtown Phoenix

CSJMCBA

Term 1 0 - 15 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determined placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101 or College specific equivalent First Year Seminar required of all freshman students • Students other than first-time freshmen may take the English Grammar Exam one time to attempt to test out of JMC 101 Grammar for Journalists.
 JMC 101: Grammar for Journalists	1	Y	
 JMC 110: Principles and History of Journalism (SB)	3	C	
ASU 101: The ASU Experience	1	C	
MAT 142: College Mathematics (MA)	3		
Second Language	4	C	
 Minimum 2.50 GPA ASU Cumulative.			
Term hours subtotal:	15		
Term 2 16 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
 JMC 201: News Reporting and Writing (L)	3	C	
HST 109: United States to 1865 ((HU or SB) & H) OR HST 110: United States Since 1865 (SB & H)	3		
Computer/Statistics/Quantitative Applications (CS)	3		
Second Language	4	C	
 Minimum 2.50 GPA ASU Cumulative.			
Term hours subtotal:	16		
Term 3 32 - 48 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 JMC 301: Intermediate Reporting and Writing (Print) (L) OR JMC 315: Intermediate Reporting and Writing (Broadcast) (L) AND JMC 366: Journalism Ethics and Diversity	3	C	
JMC 305: Online Media	3	C	
SOC 101: Introductory Sociology (SB)	3		
Natural Science - Quantitative (SQ)	4		
Second Language	4	C	
 Minimum 2.50 GPA ASU Cumulative.			
 Complete First-Year Composition requirement.			
 Complete Mathematics (MA) requirement.			
Term hours subtotal:	17		
Term 4 49 - 64 Credit Hours	Hours	Minimum Grade	Notes
 JMC 301: Intermediate Reporting and Writing (Print) (L) OR JMC 315: Intermediate Reporting and Writing (Broadcast) (L) AND JMC 366: Journalism Ethics and Diversity	3	C	<ul style="list-style-type: none"> • Must complete JMC 366 and 301 or JMC (depending on track) by end of term 4 with a grade of "C" or better
POS 110: Government and Politics (SB) OR POS 310: American National Government (SB)	3		
ENG course (HU)	3		

HST Elective	3	
Second Language AND Global Awareness (G)	4	C
Minimum 2.50 GPA ASU Cumulative.		
Term hours subtotal:	16	

Term 5 65 - 80 Credit Hours	Hours	Minimum Grade	Notes
JMC 313: Introduction to Editing OR JMC 345: Videography	3	C	• Advanced Skills course should be selected in consultation with academic advisor
JMC 484: Internship	3	Y	
PHI course (HU)	3		
Upper Division Advanced Skills Course	3	C	
Natural Science - General (SG) OR Natural Science - Quantitative (SQ)	4		
Minimum 2.50 GPA ASU Cumulative.			
Term hours subtotal:	16		

Term 6 81 - 93 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Advanced Skills Course	3	C	• Advanced Skills course should be selected in consultation with academic advisor
ECN 211: Macroeconomic Principles (SB) OR ECN 212: Microeconomic Principles (SB)	3		
JMC 402: Mass Communication Law	3	C	
Related Area Course	3	C	
Elective	1		
Minimum 2.50 GPA ASU Cumulative.			
Term hours subtotal:	13		

Term 7 94 - 108 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Advanced Skills Course	3	C	• Advanced Skills course should be selected in consultation with academic advisor
PGS 101: Introduction to Psychology (SB)	3		
Cultural Diversity in the U.S. (C) OR Elective	3		
Upper Division Related Area Course	6	C	
Minimum 2.50 GPA ASU Cumulative.			
Term hours subtotal:	15		

Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
JMC 473: The Business and Future of Journalism OR JMC 494: Public Relations Research	3	C	
JMC OR MCO Upper Division Elective	3	C	
Upper Division Elective	3		
Upper Division Related Area Course	3	C	
Minimum 2.50 GPA ASU Cumulative.			
Term hours subtotal:	12		

Core Values	Basic Skills	Statistics
JMC 110: Principles and History of Journalism (SB)	JMC 101: Grammar for Journalists	STP 220: Conceptual Statistics
MCO 110: Principles and History of Journalism (SB)	JMC 194: Grammar for Journalists	STP 226: Elements of Statistics (CS)
MCO 120: Media and Society (SB)	JMC 201: News Reporting and Writing (L)	SOC 390: Social Statistics I (CS)
JMC 366: Journalism Ethics and Diversity	JMC 301: Intermediate Reporting and Writing (Print) (L)	POS 401: Political Statistics (CS)
JMC 473: The Business and Future of Journalism	JMC 315: Intermediate Reporting and Writing (Broadcast) (L)	JUS 302: Basic Statistical Analysis in Justice Studies (CS)
JMC 494: Business of Journalism	JMC 313: Introduction to Editing	SWU 321: Statistics for Social Workers (CS)
	JMC 345: Videography	

JMC 494: Public Relations Research		
JMC 402: Mass Communication Law		
MCO 402: Mass Communication Law		
U.S. History	English Literature	Multimedia
HST 109: United States to 1865 ((HU or SB) & H)	ENG 201: World Literature (HU & H & G)	JMC 305: Online Media
HST 110: United States Since 1865 (SB & H)	ENG 202: World Literature (HU & H)	JMC 425: Online Media
HST 313: American Cultural History to 1865 (SB & H)	ENG 204: Introduction to Contemporary Literature (HU)	
HST 314: American Cultural History Since 1865 ((HU or SB) & H)	ENG 221: Survey of English Literature (HU)	
HST 319: U.S. Urban History to 1850 (SB & H)	ENG 222: Survey of English Literature (HU & H)	
HST 320: U.S. Urban History since 1850 (SB & H)	ENG 241: Literatures of the United States to 1860 (HU)	
HST 325: Immigration and Ethnicity in the United States (SB & H & C)	ENG 242: Literatures of the United States, 1860 to Present (HU)	
HST 327: Women in US History 1600 to 1880 ((HU or SB) & C & H)	ENG 303: Classical Backgrounds of English Literature (HU)	
HST 328: Women in US History, 1880-1980 ((HU or SB) & C & H)	ENG 321: Shakespeare (L or HU)	
HST 329: Women in 20th-Century US West (H & C)	ENG 326: English Drama 1660-1800 (HU)	
HST 331: Mexican American History to 1900 (SB & H & C)	ENG 328: The Novel to Jane Austen (HU & H)	
HST 332: Mexican American History Since 1900 (SB & H & C)	ENG 329: 19th-Century British Fiction (L or HU)	
HST 333: African American History to 1865 (SB & H & C)	ENG 331: American Drama (L or HU)	
HST 334: African American History Since 1865 ((HU or SB) & C & H)	ENG 333: American Ethnic Literature ((L or HU) & C)	
HST 337: American Indian History to 1900 ((HU or SB) & C & H)	ENG 337: Major American Novels (L or HU)	
HST 338: American Indian History since 1900 ((HU or SB) & C & H)	ENG 342: 20th-Century British and Irish Literature (HU)	
HST 341: U.S. West 19th Century (SB & H)	ENG 352: Short Story (L or HU)	
HST 342: US West 20th Century (SB & H)	ENG 353: African American Literature: Beginnings through the Harlem Renaissance ((L or HU) & C)	
HST 343: American Southwest ((L or SB) & H)	ENG 354: African American Literature: Harlem Renaissance to the Present ((L or HU) & C)	
HST 405: Colonial American History to 1763 (SB & H)	ENG 355: European Dramatic Traditions (L or HU)	
HST 406: American Revolution/1763-1789 (SB & H)	ENG 356: The Bible as Literature (HU)	
HST 407: Early U.S. Republic/1789-1850 ((L or SB) & H)	ENG 359: American Indian Literature ((L or HU) & C)	
HST 408: Civil War and Reconstruction ((L or SB) & H)	ENG 360: Western American Literature (L or HU)	
HST 409: Emergence Modern U.S. 1877-1918 (SB & H)	ENG 363: Transborder Mexican and Chicano/a Literature of Southwest North America ((L or HU) & C)	
HST 410: Modern U.S., 1918 to 1945 (SB & H)	ENG 364: Women and Literature (HU)	
HST 411: Postwar U.S., 1945-1973 (SB & H)	ENG 476: Oral Traditions ((L or HU or SB) & C)	
HST 412: Contemporary U.S./1973- Present (SB & H)	HON 172: The Human Event: Humanities Focus ((L or HU) & H)	
HST 414: The Modern U.S. Economy (SB & H)		
HST 415: Unequal Sisters/Women-Pol/Cult ((L or SB) & H & C)		

HST 417: Topics in Mexican American History (SB & H & C)

HST 456: The Vietnam War (SB & G & H)

Philosophy	Advanced Skills Course	Related Area Courses
HON 171: The Human Event ((L or HU)& H)	JMC 310: Public Relations	ASB Elective
PHI 101: Introduction to Philosophy (HU)	JMC 320: Newscast Producing	ASM Elective
PHI 103: Principles of Sound Reasoning (L or HU)	JMC 325: Multimedia Reporting	ACC Elective
PHI 105: Intro to Ethics (HU)	JMC 330: Television Reporting	ECN Elective
PHI 305: Ethical Theory (HU)	JMC 351: Photojournalism I	FIN Elective
PHI 306: Applied Ethics (HU)	JMC 413: Advanced Editing	LES Elective
PHI 309: Social and Political Philosophy (HU)	JMC 414: Graphic Design for Print and Web	MGT Elective
	JMC 415: Writing for Public Relations	MKT Elective
	JMC 417: Public Relations Campaigns	REA Elective
	JMC 437: Documentary Production	ENG Elective
	JMC 440: Magazine Writing	FAS Elective
	JMC 445: Science and Medical Writing	GPH Elective
	JMC 451: Photojournalism II	GCU Elective
	JMC 460: Advanced Online Media	HST Elective
	JMC 465: Precision Journalism	COM Elective
	JMC 470: Depth Reporting	JUS Elective
	JMC 475: Television Newscast Production	POS Elective
	JMC 478: Cronkite News Service	REL Elective
	JMC 494: Advanced Digital Media Entrepreneurship	SOC Elective
	JMC 494: Digital Media Entrepreneurship	THE Elective
	JMC 494: Issues in Coverage of Business and the Economy	THP Elective
	JMC 494: New Media Innovation Lab	WSH Elective
	JMC 494: Public Relations Lab	WST Elective
	JMC 494: Reporting on Business and the Economy	
	JMC 498: Latino and Transnational Issues	

Notes:

- Majors must maintain at least a 2.50 ASU cumulative GPA and a 2.50 JMC cumulative GPA to take JMC courses beyond JMC 201.
- Students must complete at least 12 hours of upper-division coursework outside the major.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

Bachelor of Applied Science Degree

2011-2012 Curriculum Check Sheet

School of Letters and Sciences

Student Name _____	ID. Number _____
A.A.S. Degree _____	Date A.A.S. Degree Granted _____
A.A.S. Degree Granting Institution _____	ASU Catalog Year <u>2011-2012</u>
B.A.S. Academic Department Technical Communication	Advisor _____
Number of Upper Division Transfer Credits _____	Expected Graduation Date _____
Institution of Transfer Course Work (Upper Division Only) _____	

General Studies Sequence (19 Hours)

	ASU	Transfer	Transfer From	Grade
Numeracy - ASC 315	3			
Science - ASC 325	4			
Upper-division Literacy [L]	3			
Upper-division Humanities [HU] and [H] [C]	3			
Upper-division Social Science [SB]	3			
General Studies [HU or SB] and [G]	3			

Sub Total 19 Hrs.

**BAS Degree
Summary**

**Credit
Hours**

Degree Block Transfer	60
General Studies	
B.A.S. Area Core	
Technical Writing	
Assignable Credits	

Total (120 Hours Minimum) _____

B.A.S. Area Core (15 Hours)

	ASU	Transfer	Transfer From	Grade
TWC 301 General Principles of Multimedia Writing	3			
TWC 401 Principles of Technical Communication	3			
TWC 347 Written Communication for Managers	3			
STP 420 Introductory Applied Statistics	3			
TWC 421 Principles of Writing with Technology	3			

Sub Total 15 Hrs.

Advisor Comments

Technical Writing and Communication (20 Hours)

	ASU	Transfer	Transfer From	Grade
TWC 411 Principles of Visual Communication	3			
TWC 431 Principles of Technical Editing	3			
TWC 44X Genre Course	3			
TWC 45X Information Series Course	3			
TWC 499 Individual Instruction	2			
TWC 3/4XX Elective	3			
TWC 3/4XX Elective	3			

Sub Total 20 Hrs.

Assignable Credits (6 Hours)

	ASU	Transfer	Transfer From	Grade
	3			
	3			

Sub Total 6 Hrs.










Total Upper Division Hours _____


Total ASU Resident Hours _____

_____ Student Signature	_____ Date	_____ Dean Signature	_____ Date
_____ Advisor/Chair Signature	_____ Date	_____ University Signature	_____ Date

2011 - 2012 Major Map Communication, BA

School of Letters & Sciences
Campus: Downtown Phoenix, Polytechnic
LSCOMBA

Term 1 0 - 14 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 COM 100: Introduction to Human Communication (SB)	3	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101 or College specific equivalent First Year Seminar required of all freshman students
ASU 101: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
2** Second Language: Requirement satisfied through the following: * Completion of secondary education at a school in which the language of instruction is not English; * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV; * Completion of upper division course(s) taught in a foreign language, taken in the United States or the relevant country.	4		
Humanities, Fine Arts and Design (HU)	3		
Maintain 2.00 GPA in Critical Tracking Courses.			
Term hours subtotal:	14		
Term 2 15 - 30 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 COM 207: Introduction to Communication Inquiry	3	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
MAT 142: College Mathematics (MA)	3		
2** Second Language: Requirement satisfied through the following: * Completion of secondary education at a school in which the language of instruction is not English; * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV; * Completion of upper division course(s) taught in a foreign language, taken in the United States or the relevant country.	4		
Social and Behavioral Sciences (SB)	3		
Maintain 2.00 GPA in Critical Tracking Courses.			
Term hours subtotal:	16		
Term 3 31 - 47 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 COM 230: Small Group Communication (SB)	3	C	
2** Second Language: Requirement satisfied through the following: * Completion of secondary education at a school in which the language of instruction is not English; * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV; * Completion of upper division course(s) taught in a foreign language, taken in the United States or the relevant country.	4		
Computer/Statistics/Quantitative Applications (CS)	3		
Humanities, Fine Arts and Design (HU)	3		
Natural Science - General (SG) OR Natural Science - Quantitative (SQ)	4		
Maintain 2.00 GPA in Critical Tracking Courses.			
 Complete First-Year Composition requirement.			
 Complete Mathematics (MA) requirement.			
Term hours subtotal:	17		
Term 4 48 - 64 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes

 COM 225: Public Speaking (L)	3	C
2** Second Language: Requirement satisfied through the following:		
* Completion of secondary education at a school in which the language of instruction is not English;		
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV;	4	
* Completion of upper division course(s) taught in a foreign language,taken in the United States or the relevant country.		
Upper Division Concentration Course	3	C
Cultural Diversity in the U.S. (C)	3	
Natural Science - Quantitative (SQ)	4	
Maintain 2.00 GPA in Critical Tracking Courses.		
Term hours subtotal:	17	

- Complete all critical courses by end of term 4.
- Student must select one of three COM concentration options and take all COM concentration courses within the same concentration.

Term 5 65 - 78 Credit Hours	Hours	Minimum Grade	Notes
COM 308: Advanced Research Methods in Communication (L)	3	C	
COM Upper Division Elective	3	C	
Upper Division Social and Behavioral Sciences (SB) OR Upper Division Humanities, Fine Arts and Design (HU)	3		
Complete 2 courses: Elective	5		
Term hours subtotal:	14		

Term 6 79 - 93 Credit Hours	Hours	Minimum Grade	Notes
Complete 2 courses: Upper Division Concentration Course	6	C	
Global Awareness (G)	3		
Upper Division Elective	3		
Elective	3		
Term hours subtotal:	15		

Term 7 94 - 108 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Concentration Course	3	C	
COM Upper Division Elective	3	C	
Historical Awareness (H)	3		
Complete 2 courses: Upper Division Elective	6		
Term hours subtotal:	15		

Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
Complete 2 courses: Upper Division Concentration Course	6	C	
COM Upper Division Elective	3	C	
Upper Division Elective	3		
Term hours subtotal:	12		

- Interdisciplinary Concentrations (18 credit hours) - Students must select one of the following three interdisciplinary concentrations: Law and Community Advocacy, Communication and Culture, or Communication, Technology and Society. Within the selected interdisciplinary concentration, students must select nine credit hours of upper division communication courses, and nine credit hours of upper division non-communication courses.

Communication, Technology and Society	Law and Community Advocacy	Communication and Culture
COM 319: Persuasion and Social Influence (SB)	COM 312: Communication, Conflict, and Negotiation	COM 316: Gender and Communication (SB & C)
COM 394: Communication in the Electronic Age	COM 316: Gender and Communication (SB & C)	COM 323: Communication Approaches to Popular Culture (C)
COM 421: Rhetoric of Social Issues (HU)	COM 319: Persuasion and Social Influence (SB)	COM 371: Language, Culture, and Communication (SB & C & G)

COM 320: Communication and Consumerism (SB)	COM 320: Communication and Consumerism (SB)	COM 463: Intercultural Communication Theory and Research (SB & G)
COM 323: Communication Approaches to Popular Culture (C)	COM 323: Communication Approaches to Popular Culture (C)	ASB 463: Political Ecology of the Border (SB & G)
COM 422: Advanced Argumentation (L)	COM 326: Court Room Oratory	ASB 480: Principles of Linguistics (SB)
COM 450: Theory and Research in Organizational Communication (SB)	COM 341: Social Contexts for Performance	ASB 481: Language and Culture (SB)
COM 484: Internship	COM 421: Rhetoric of Social Issues (HU)	CRJ 305: Gender, Crime, and Criminal Justice (C)
ENG 374: Technical Editing	COM 422: Advanced Argumentation (L)	CRJ 306: Race, Ethnicity, Crime, and Criminal Justice (C)
ENG 465: Studies in Film	COM 426: Political Communication (SB)	PHI 306: Applied Ethics (HU)
FMS 312: Film, Media, and Politics Today	CRJ 305: Gender, Crime, and Criminal Justice (C)	POS 350: Comparative Politics (SB & G)
GIT 301: Website Development for Nonmajors	CRJ 306: Race, Ethnicity, Crime, and Criminal Justice (C)	POS 360: World Politics
JUS 435: Cinema and Justice	CRJ 350: Law and Social Control (SB)	POS 364: National Security, Intelligence, and Terrorism (SB)
PHI 306: Applied Ethics (HU)	JUS 303: Justice Theory	POS 435: Women and Politics (SB & C)
MCO 418: History of Mass Communication (SB & H)	JUS 305: Principles of Justice Studies (SB)	ENG 317: Cross-Cultural Writing ((L or HU) & G)
MCO 430: International Mass Communication (G)	NLM 310: Volunteer Management	HST 313: American Cultural History to 1865 (SB & H)
MCO 450: Visual Communication (HU)	POS 310: American National Government (SB)	HST 314: American Cultural History Since 1865 ((HU or SB) & H)
MCO 456: Political Communication (SB)	POS 336: Voters in America (SB)	JUS 432: Racial Justice (L)
MCO 460: Race, Gender, and Media (C)	POS 346: Problems of Democracy (HU)	FAS 370: Family Ethnic and Cultural Diversity (SB & C)
SOC 365: Sociology of Mass Communication (SB)	POS 370: Law and Society (SB)	MCO 460: Race, Gender, and Media (C)
SOC 366: Film and Society	POS 431: Campaigns and Elections (SB)	HST 323: Historical Studies in Race, Crime, and the Law
SOC 374: Cultures and Politics of the Internet (SB)	POS 435: Women and Politics (SB & C)	
STS 330: Information Technology and Globalization (SB & G)	POS 442: American Political Thought (HU)	
STS 425: Law, Values, Science, and Technology (SB)	HST 313: American Cultural History to 1865 (SB & H)	
STS 480: Technology, Ethics, and Society	HST 314: American Cultural History Since 1865 ((HU or SB) & H)	
TWC 301: General Principles of Multimedia Writing (L)	HST 315: Political History of the U S (SB & H)	
TWC 401: Principles of Technical Communication (L)	HST 323: Historical Studies in Race, Crime, and the Law	
TWC 411: Principles of Visual Communication (L)	MCO 456: Political Communication (SB)	
TWC 451: Copyright and Intellectual Property in the Electronic Age	WST 375: Women and Social Change (SB & C)	
TWC 452: Information in the Digital Age		
TWC 453: Information and Communications Technology in American History		

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition







General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

2011 - 2012 Major Map English, BA

School of Letters & Sciences

Campus: Polytechnic

LSENGBA

Term 1 0 - 13 Credit Hours	Hours	Minimum Grade	Notes
<div>  ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students </div>	3	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101 or College specific equivalent First Year Seminar required of all freshman students
ASU 101: The ASU Experience	1		
MAT 142: College Mathematics (MA)	3	C	
Humanities, Fine Arts and Design (HU)	3		
Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	13		
Term 2 14 - 29 Credit Hours	Hours	Minimum Grade	Notes
<div>  ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students </div>	3	C	
Computer/Statistics/Quantitative Applications (CS)	3		
Cultural Diversity in the U.S. (C)	3		
Humanities, Fine Arts and Design (HU)	3		
Natural Science - General (SG) OR Natural Science - Quantitative (SQ)	4		
Term hours subtotal:	16		
Term 3 30 - 45 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
<div>  ENG 200: Critical Reading and Writing About Literature (L or HU) </div>	3	C	<ul style="list-style-type: none"> • ENG 200-level literature course is a recommended pre-requisite to upper division ENG courses.
ENG Lower Division Elective	3	C	
Lower Division ENG Literature Course	3	C	
Natural Science - Quantitative (SQ)	4		
Social and Behavioral Sciences (SB)	3		
<div>  Complete First-Year Composition requirement. </div>			
<div>  Complete Mathematics (MA) requirement. </div>			
Maintain 2.00 GPA in Major Courses.			
Term hours subtotal:	16		
Term 4 46 - 60 Credit Hours	Hours	Minimum Grade	Notes
Literature and Culture Before 1800 Course	3	C	
Rhetoric, Writing and Linguistics Course	3	C	
Global Awareness (G)	3		
Historical Awareness (H)	3		
Lower Division Elective	3		
Maintain 2.00 GPA in Major Courses.			
Term hours subtotal:	15		
Term 5 61 - 75 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Ethnicity, Gender and Environment Course	3	C	
Upper Division Elective	3		

Lower Division Elective	3	
Complete 2 courses: ENG Lower Division Elective	6	C
Maintain 2.00 GPA in Major Courses.		
Term hours subtotal:	15	

Term 6 76 - 90 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Literature and Culture After 1800 Course	3	C	
ENG Lower Division Elective	3	C	
ENG Lower Division Elective	3	C	
Complete 2 courses: Upper Division Elective	6		
Maintain 2.00 GPA in Major Courses.			
Term hours subtotal:	15		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
ENG 498: Pro-Seminar	3	C	• Students in the Barrett Honors College may take ENG 493: Honors Thesis in place of ENG 498: Pro-Seminar.
Upper Division ENG course (L)	3	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Complete 2 courses: Upper Division Elective	6		
Maintain 2.00 GPA in Major Courses.			
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
Complete 2 courses: ENG Upper Division Elective	6	C	
Complete 3 courses: Upper Division Elective	9		
Maintain 2.00 GPA in Major Courses.			
Term hours subtotal:	15		

Lower Division ENG Literature Course	Literature and Culture After 1800	Literature and Culture Before 1800
ENG 204: Introduction to Contemporary Literature (HU)	ENG 320: Medievalism in Modern Culture	ENG 201: World Literature (HU & H & G)
ENG 222: Survey of English Literature (HU & H)	ENG 335: American Poetry	ENG 202: World Literature (HU & H)
ENG 242: Literatures of the United States, 1860 to Present (HU)	ENG 337: Major American Novels (L or HU)	ENG 221: Survey of English Literature (HU)
	ENG 352: Short Story (L or HU)	ENG 241: Literatures of the United States to 1860 (HU)
	ENG 354: African American Literature: Harlem Renaissance to the Present ((L or HU) & C)	ENG 303: Classical Backgrounds of English Literature (HU)
	ENG 359: American Indian Literature ((L or HU) & C)	ENG 321: Shakespeare (L or HU)
	ENG 363: Transborder Mexican and Chicano/a Literature of Southwest North America ((L or HU) & C)	ENG 328: The Novel to Jane Austen (HU & H)
	ENG 367: Environmental Issues in Literature and Film (L or HU)	
	ENG 366: Literature on Film	
	ENG 464: Great Directors (L or HU)	
	ENG 466: Studies in International Film ((L or HU) & G)	
	ENG 467: American Film Musicals (L or HU)	
	ENG 471: Literature for Young Adults (HU)	
	null null: null	

Ethnicity, Gender and Environment

Rhetoric, Writing and Linguistics

ENG 317: Cross-Cultural Writing ((L or HU) & G)	ENG 210: Introduction to Creative Writing
ENG 333: American Ethnic Literature	ENG 212: English Prose Style (L)
ENG 334: The American Southwest in Literature and Film. ((L or HU) & C)	ENG 214: English Grammar and Usage
ENG 354: African American Literature: Harlem Renaissance to the Present ((L or HU) & C)	ENG 215: Strategies of Academic Writing (L)
ENG 359: American Indian Literature ((L or HU) & C)	ENG 216: Persuasive Writing on Public Issues (L)
ENG 363: Transborder Mexican and Chicano/a Literature of Southwest North America ((L or HU) & C)	ENG 217: Writing Reflective Essays (L)
ENG 364: Women and Literature (HU)	ENG 218: Writing About Literature (L or HU)
ENG 367: Environmental Issues in Literature and Film (L or HU)	ENG 243: Introduction to Writing Family History (L)
ENG 378: Environmental Creative Nonfiction (L or HU)	ENG 287: Beginning Creative Writing Workshop in Poetry
ENG 468: Environmental Literary Criticism (L or HU)	ENG 288: Beginning Creative Writing Workshop in Fiction
	ENG 301: Writing for the Professions (L)
	ENG 310: Intermediate Creative Writing
	ENG 311: Persuasive Writing (L)
	ENG 314: Modern Grammar
	ENG 317: Cross-Cultural Writing ((L or HU) & G)
	ENG 376: Writing a Personal History (L)
	ENG 377: Editing Family History for Public Audiences (L)
	ENG 378: Environmental Creative Nonfiction (L or HU)
	ENG 379: Travel Writing (L)
	ENG 387: Intermediate Creative Writing Workshop in Poetry
	ENG 388: Intermediate Creative Writing Workshop in Fiction
	ENG 411: Advanced Creative Writing
	ENG 472: Rhetorical Studies (L)

Notes:

- Additional Notes:

1. Eighteen credit hours of upper division English (300-400) are required with at least twelve hours taken in the School of Letters and Sciences.
2. Up to four writing certificate courses can be used in both the major and the certificate.
3. PREPARING FOR GRADUATE SCHOOL: Take as many 400-level ENG courses as possible.
4. There is room in this degree to add a concurrent degree, minor, or certificate.

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

<i>I. First-Year Composition (3-6 hours)</i>	Total Hours	UD Hours	Res Hours	Grade
ENG 101: First-Year Composition (3) and				
ENG 102: First-Year Composition (3) <i>or, if eligible</i>				
ENG 105: Advanced First-Year Composition (3)				

II. University General Studies (35 hours)

Humanities, Fine Arts, and Design & Social and Behavioral Sciences (15 hours) Required: 15 hours combined; 6 hours in one area, 9 hrs in the other AND one course must be upper division.

HU:				
HU:				
SB:				
SB:				
HU or SB:				

Natural Sciences (8 hours)

SQ:				
SQ/SG:				

Mathematics & Statistics/Computer Applications (6 hours)

MA: MAT 142: College Mathematics (MA) or higher				
CS:				

Literacy & Critical Inquiry (6 hours)

L:				
Upper-division L:				

Awareness Areas (2 courses minimum and must fulfill all 3 areas)

Double counting is permissible between Awareness Areas, other courses that fulfill graduation requirements, and within the Awareness Areas.

Global Awareness (G):				
Historical Awareness (H):				
Cultural Diversity (C):				

II. Major requirements

ASU 101: The ASU Experience (freshmen only)	1			
OR UNI 150 Major and Career Exploration				
COM 494: Society and the Individual	3	3		

Total Hours Required (120 hrs min)	Upper-Division Hours Required (45 hrs min)	ASU Resident Hours Required (30 hrs min)	Max. 2-yr Transfer Hours allowed (64 hrs max)	Minimum GPA required (2.00 min)	ASU Resident Hours for Academic Recognition (56 hrs min)

Please Note:

- An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses
- ASU Math Placement Exam score determines placement in Mathematics course
- ASU 101 or College specific equivalent First Year Seminar required of all freshman students
- A grade of C or better is required in all major courses
- Majors must maintain at least a 2.00 ASU cumulative GPA and 2.00 major GPA
- Complete First-Year Composition requirement by the end of term 3
- Complete Mathematics (MA) requirement by the end of term 3
- Twenty-one hours in the major must be upper division

- Cluster classes in the major cannot be used for minor classes or other clusters
- Consult the ASU catalog for more information about General Studies requirements
- Elective hours needed may change and are dependent on how other requirements are satisfied
- Evaluation of transfer courses for cluster requirements should be directed to the appropriate departmental advisor.
- Questions regarding cluster requirements, course prerequisites and class registration should be directed to an advisor in the department or college offering the cluster.
- See ASU catalog for information about repeating courses

- This assessment is supplemental to your DARS report. To obtain a copy of your DARS report, go to: <http://www.asu.edu/interactive>

Cluster Choices: For cluster choices, see <http://sls.asu.edu/gs/clusters.html>. Students will choose four [4] clusters and at least three [3] classes within each one.

III. BGS Clusters (36 hours)	Total Hours	UD Hours	Res Hours	Grade
Cluster #1				
1.				
2.				
3.				
Cluster #2				
1.				
2.				
3.				
Cluster #3				
1.				
2.				
3.				
Cluster #4				
1.				
2.				
3.				

IV. Electives











[illegible]

2011 - 2012 Major Map History, BA

School of Letters & Sciences

Campus: Polytechnic

LSHISBA

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 HST Lower Division Elective	3	C	<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course • ASU 101 or College specific equivalent First Year Seminar required of all freshman students
ASU 101: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
MAT 142: College Mathematics (MA)	3	C	
Humanities, Fine Arts and Design (HU)	3		
Lower Division Elective	3		
Term hours subtotal:	16		
Term 2 17 - 32 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 HST Lower Division Elective	3	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Computer/Statistics/Quantitative Applications (CS)	3		
Natural Science - General (SG) OR Natural Science - Quantitative (SQ)	4		
Lower Division Elective	3		
Term hours subtotal:	16		
Term 3 33 - 48 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 HST Lower Division Elective	3	C	
Global Awareness (G)	3		
Humanities, Fine Arts and Design (HU)	3		
Natural Science - Quantitative (SQ)	4		
Lower Division Elective	3		
 Complete First-Year Composition requirement.			
 Complete Mathematics (MA) requirement.			
Term hours subtotal:	16		
Term 4 49 - 63 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 Non-US Non-European HST Course	3	C	
Cultural Diversity in the U.S. (C)	3		
Historical Awareness (H)	3		
Social and Behavioral Sciences (SB)	3		
Lower Division Elective	3		
Term hours subtotal:	15		
Term 5 64 - 78 Credit Hours	Hours	Minimum Grade	Notes
HST 300: Historical Inquiry AND Upper Division Literacy and Critical Inquiry (L)	3	C	

Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3	
Upper Division Related Field	3	C
Lower Division Related Field	3	C
Upper Division Elective	3	
Term hours subtotal:	15	

Term 6 79 - 93 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Non-US Non-European HST Course	3	C	
HST Upper Division Elective	3	C	
Complete 2 courses: Upper Division Elective	6		
Lower Division Related Field	3	C	
Term hours subtotal:	15		

Term 7 94 - 108 Credit Hours	Hours	Minimum Grade	Notes
HST 498: Pro-Seminar AND Upper Division Literacy and Critical Inquiry (L)	3	C	<ul style="list-style-type: none"> Students in the Barrett Honors College may take HST 493: Honors Thesis in place of HST 498: Pro Seminar
HST Upper Division Elective	3	C	
Complete 2 courses: Upper Division Related Field	6	C	
Upper Division Elective	3		
Term hours subtotal:	15		

Term 8 109 - 120 Credit Hours	Hours	Minimum Grade	Notes
HST Upper Division Elective	3	C	
Upper Division Elective	3		
Complete 2 courses: Lower Division Elective	6		
Term hours subtotal:	12		

- Additional courses such as 294, 394 and 494 may be approved for use in the Non-US, Non-European area by the history academic advisor.

Non-US Non-European History Courses
HST 201: Historical Themes in Asia
HST 203: Historical Themes in Latin America (SB & H)
HST 240: Introduction to Southeast Asia ((HU or SB) & G)
HST 303: Studies in Asian History
HST 305: Studies in Latin American History
HST 307: Studies in African History
HST 375: Colonial Latin America (SB & H)
HST 376: Modern Latin America (SB & H)
HST 377: Women in Colonial Latin America (H)
HST 378: Latin American Women: The National Period (SB & G & H)
HST 379: Rebellion & Revolution/So Amer
HST 380: Cultural History of Latin America (SB & H)
HST 383: China (SB & H)
HST 384: China (SB & G & H)

HST 385: History of Chinese Medicine (HU & H & G)

HST 386: Interpreting China's Classics ((L or HU) & H)

HST 387: Japan ((L or SB) & H)

HST 388: Japan (SB & G & H)

HST 389: Japan Society and Values/Premod

HST 391: Modern Southeast Asia (SB & G & H)

HST 443: The United States & Latin America (SB & G & H)

HST 444: Latin American Independence ((L or HU) & G & H)

HST 445: 20th-Century Cuba (SB & G & H)

HST 446: Colonial Mexico (SB & H)

HST 447: Modern Mexico (SB & H)

HST 448: Mexican/U.S. Border

HST 449: Mexican Immigration to the U.S. ((L or SB) & H & C)

HST 450: Postmodern Mexico ((L or HU) & G & H)

HST 451: Chinese Cultural History ((HU or SB) & H)

HST 452: Chinese Cultural History (SB & G & H)

HST 453: The People's Republic of China (SB & G & H)

HST 455: The United States and Japan (SB & G & H)

HST 456: The Vietnam War (SB & G & H)

Notes:

- Additional Notes:
 1. Twelve hours of upper division HST credits must be taken in the School of Letters and Sciences
 2. Students will select a related field in consultation with a faculty mentor or School of Letters & Sciences history academic advisor. The related field is comprised of 15 credit hours; nine credit hours must be upper division.
 3. There is room in this degree to add a concurrent degree, a minor, or a certificate.

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

Upper division courses with the following prefixes will satisfy the Liberal Studies Humanities and Liberal Studies Social Sciences requirements, but this is not an exhaustive list. It represents qualifying prefixes for which ASU frequently offers online classes. Please consult with your Academic Success Specialist to determine whether other humanities and social science courses may also satisfy these major requirements.

Liberal Studies Humanities

- Art History/Auxiliary (ARS, ARA)
- Asian Pacific American Studies (APA)
- English (ENG, ENH)
- Film and Media Studies (FMS)
- History (HST, HTY, HIS)
- Mass Communication (MCO, MCN)
- Philosophy (PHI, PHL)
- Religious Studies (REL)
- Theatre (THE, THR)
- Women's Studies (WSH)








Liberal Studies Social Sciences

- Aging and Lifespan Development (ALD)
- Anthropology (ASB, ANT, ASM)
- Communication (COM, CMA, CMN)
- Criminal Justice (CRJ)
- Cultural Geography (GCU)
- Educational Psychology (EDP)
- Family Studies (FAS/CDE)
- Justice Studies (JUS)
- Parks and Recreation Management (PRM)
- Political Science (POL, POS, PLS)
- Psychology (PGS)
- Public Affairs (PAF)
- Public Policy and Government (PGV)
- Science, Technology, and Society (STS)
- Social and Behavioral Sciences (SBS)
- Social Justice and Human Rights (JHR)
- Social Work (SWU)
- Sociology (SOC, SCL)
- Transborder Chicana/o Latina/o Studies (TCL)
- Women's Studies (WST, WNS)

2011 - 2012 Major Map Science, Technology and Society, BS

School of Letters & Sciences

Campus: Polytechnic 
ECSTBS

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 STS 101: Introduction to Science, Technology, and Society (SB)	3	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101 or College specific equivalent First Year Seminar required of all freshman students Transfer students with 64 credit hours or more transferred must take STS 304 instead of STS 101.
ASU 101: The ASU Experience	1		
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Humanities, Fine Arts and Design (HU)	3		
Mathematics (MA)	3		
Elective	3		
Term hours subtotal:	16		
Term 2 17 - 31 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 STS 110: Global Technology and Development (SB & G)	3	C	<ul style="list-style-type: none"> It is highly recommended that STS students take a statistics course for their (CS) general studies requirement. Transfer students with 64 credit hours or more transferred must take STS 317 instead of STS 110.
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: English for Foreign Students	3	C	
Computer/Statistics/Quantitative Applications (CS)	3		
Global Awareness (G)	3		
Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		
Term 3 32 - 47 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
Cultural Diversity in the U.S. (C)	3		
Historical Awareness (H)	3		
Literacy and Critical Inquiry (L)	3		
Natural Science - Quantitative (SQ) OR Natural Science - General (SG)	4		
Elective	3		
 Complete First-Year Composition requirement.			
 Complete Mathematics (MA) requirement.			
Term hours subtotal:	16		
Term 4 48 - 60 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Track Focus Area Course	3	C	<ul style="list-style-type: none"> Discuss required Minor for the degree with your Academic Advisor.
Humanities, Fine Arts and Design (HU)	3		
Natural Science - Quantitative (SQ)	4		
Minor Course	3	C	
Term hours subtotal:	13		
Term 5 61 - 75 Credit Hours	Hours	Minimum Grade	Notes
STS 301: Research in Science and Technology Studies (SB)	3	C	

STS 302: Philosophy of Science and Technology (SB)	3	C
Complete 2 courses: Upper Division Track Focus Area Course	6	C
Minor Course	3	C
Term hours subtotal:	15	

Term 6 76 - 90 Credit Hours	Hours	Minimum Grade	Notes
STS 303: History of Technology (H)	3	C	
STS 305: Science and Social Theory (SB)	3	C	
Upper Division Track Focus Area Course	3	C	
Upper Division Minor Course	3	C	
Historical Awareness (H)	3		
Term hours subtotal:	15		

Term 7 91 - 105 Credit Hours	Hours	Minimum Grade	Notes
STS 306: Social Effects of Science and Technology (SB)	3	C	
Upper Division Track Focus Area Course	3	C	
Upper Division Minor Course	3	C	
Upper Division Literacy and Critical Inquiry (L)	3		
Elective	3		
Term hours subtotal:	15		

Term 8 106 - 120 Credit Hours	Hours	Minimum Grade	Notes
STS 484: Internship	3	C	
Upper Division Track Focus Area Course	3	C	
Complete 2 courses: Upper Division Minor Course	6	C	
Elective	3		
Term hours subtotal:	15		

- All track courses should be chosen in consultation with an STS advisor.

Science, Tecnology and Governance Track	Global Technology and Development Track	General Science, Technology, and Society Track
POS 310: American National Government (SB)	STS 328: Science, Technology, and Culture (SB)	ENG 301: Writing for the Professions (L)
STS 318: Science, Technology, and Government (SB)	STS 329: Cultivating Technology in Newly Industrializing Countries (SB & G)	SOC 360: Sociological Psychology (SB)
STS 325: Science, Technology, and Public Policy (SB)	STS 330: Information Technology and Globalization (SB & G)	SOC 429: Sociology of Law (SB)
STS 331: Ethical Issues in Science and Technology (SB)	STS 331: Ethical Issues in Science and Technology (SB)	PHI 307: Philosophy of Law (HU)
STS 364: Science, Technology, and National Security (SB)	STS 332: Global Issues in Science and Technology (SB & G)	PHI 333: Introduction to Symbolic Logic
STS 425: Law, Values, Science, and Technology (SB)	STS 364: Science, Technology, and National Security (SB)	POS 310: American National Government (SB)
		POS 315: The Supreme Court (SB)
		POS 333: Interest Groups (SB)
		POS 370: Law and Society (SB)
		POS 471: Constitutional Law I (SB)
		POS 472: Constitutional Law II (SB)

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum

General University Requirements Legend
 General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

Hrs Resident Credit for
Academic Recognition: 56 minimum
Total Community College Hrs: 64 maximum

- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

First-Year Composition

General Studies designations listed on the major map are current for the 2011 - 2012 academic year.

Bachelor of Applied Science Degree

2011-2012 Curriculum Check Sheet

School of Letters and Sciences

Student Name _____	ID. Number _____
A.A.S. Degree _____	Date A.A.S. Degree Granted _____
A.A.S. Degree Granting Institution _____	ASU Catalog Year <u>2011-2012</u>
B.A.S. Academic Department Technical Communication	Advisor _____
Number of Upper Division Transfer Credits _____	Expected Graduation Date _____
Institution of Transfer Course Work (Upper Division Only) _____	

General Studies Sequence (19 Hours)

	ASU	Transfer	Transfer From	Grade
Numeracy - ASC 315	3			
Science - ASC 325	4			
Upper-division Literacy [L]	3			
Upper-division Humanities [HU] and [H] [C]	3			
Upper-division Social Science [SB]	3			
General Studies [HU or SB] and [G]	3			

Sub Total 19 Hrs.

BAS Degree Summary

Credit Hours

Degree Block Transfer	60
General Studies	
B.A.S. Area Core	
Technical Writing	
Assignable Credits	

Total (120 Hours Minimum) _____

B.A.S. Area Core (15 Hours)

	ASU	Transfer	Transfer From	Grade
TWC 301 General Principles of Multimedia Writing	3			
TWC 401 Principles of Technical Communication	3			
TWC 347 Written Communication for Managers	3			
STP 420 Introductory Applied Statistics	3			
TWC 421 Principles of Writing with Technology	3			

Sub Total 15 Hrs.

Advisor Comments

Technical Writing and Communication (20 Hours)

	ASU	Transfer	Transfer From	Grade
TWC 411 Principles of Visual Communication	3			
TWC 431 Principles of Technical Editing	3			
TWC 44X Genre Course	3			
TWC 45X Information Series Course	3			
TWC 499 Individual Instruction	2			
TWC 3/4XX Elective	3			
TWC 3/4XX Elective	3			

Sub Total 20 Hrs.

Assignable Credits (6 Hours)

	ASU	Transfer	Transfer From	Grade
	3			
	3			

Sub Total 6 Hrs.

Total Upper Division Hours _____

Total ASU Resident Hours _____

_____ Student Signature	_____ Date	_____ Dean Signature	_____ Date
_____ Advisor/Chair Signature	_____ Date	_____ University Signature	_____ Date