

## Major Map: Aerospace Engineering (Aeronautics) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				Completed General Education:	
	Upper	Transfer	Minimum Grade if		
Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes	
				+ ASU 101-FSE and MAE 100 required for	
1				freshmen and should be completed first semester.	
				Non-freshmen see advisor for petitioning replacement electives.	
4			Grade of C	<ul> <li>An SAT, ACT, Accuplacer, or TOEFL score</li> </ul>	
			Grade of C in	determines placement into first-year	
2			MAE 100	<ul><li>composition courses</li><li>ASU Math Placement Exam score determines</li></ul>	
				placement in Mathematics course	
				*CHM 113 is a prerequisite and does not apply	
3			Grade of C	towards degree credit **If ENG 105 a 3 hr applicable elective must also	
				be taken prior to graduation. See Advisor.	
			Crude of C	Maintain minimum ASU cumulative GPA     of 2.0	
3			Glade of C	01 2.0	
3			Grade of C	Maintain minimum ASU cumulative GPA	
-				of 2.0	
				1	
			Crude of C		
3			Grade of C	-	
3					
	_				
4			Grade of C	• Complete 10 critical courses by end of term	
3			Grade of C	<ul> <li>3.</li> <li>Maintain minimum ASU cumulative GPA</li> </ul>	
<u> </u>				of 2.0	
3/1			Grade of C	Complete First-Year Composition	
3			Grade of C	requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105	
		1			
3			Grade of C		
4			Grade of C	7	
1			Grade of C		
4			Grade of C		
3	$\boxtimes$		Grade of C		
	1	T			
5			Grade of C	MAE 360 and 362 must be completed for L credit.	
			Grade of C		
				-	
3			Grade of C		
				• MAE 360 and 362 must be completed for L	
3				credit.	
3			Grade of C	-	
4			Grada of C		
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3 3 3			Grade of C Grade of C		
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3 3 3 3 3 3 3 3 3			Grade of C Grade of C Grade of C Grade of C Grade of C Grade of C		
3 3 3 3 3 3 3 3 3 3			Grade of C Grade of C Grade of C Grade of C Grade of C Grade of C	See advisor for approved electives.	
3 3 3 3 3 3 3 3 3 3 3 3			Grade of C Grade of C	See advisor for approved electives.	
3 3 3 3 3 3 3 3 3 3			Grade of C Grade of C Grade of C Grade of C Grade of C Grade of C	See advisor for approved electives.	
	$ \begin{array}{c} 4 \\ 2 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 4 \\ 3 \\ 4 \\ 3 \\ 4 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3$	Hrs.       Division         1	$\begin{tabular}{ c c c c } \hline  c c c c c c c c c c c c c c c c c c $	Hrs.       Upper Division       Transfer Course/Grade       Minimum Grade if Required         1	



Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

## General University Requirements: Legend

- General Studies Core Requirements: ٠
  - Literacy and Critical Inquiry (L) 0
  - Mathematical Studies (MA) 0
  - Computer/Statistics/Quantitative applications (CS) Humanities, Fine Arts, and Design (HU) 0
  - 0
  - Social and Behavioral Sciences (SB) Natural Science-Quantitative (SQ) 0
  - 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C) 0
  - Global Awareness (G) 0
  - Historical Awareness (H) 0
- First-Year Composition



## Major Map: Aerospace Engineering (Astronautics) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Tale (course in bold/shading are critical)       Hrs.       Upper Course/Grade       Minimum Grade if Course/Grade       Additional Critical Requirement Notes         TERM IONE& 0-15 CREDIT HOURS       + ASU 101-FSE: The ASU Experience       1       -       + ASU 101-FSE and SES 100 or MAE 100 require for freshmen and should be completed first semester. Non-freshmen see advisor for approved electives.         CHM 115: General Chemistry with Qualitative Analysis (SQ) OR CHM 116: General Chemistry uit Qualitative Analysis (SQ) OR       -       <				Competed Tran	nsfer Pathway: TAG □ATP □None	Completed General Education:
IPEN ONVALE ACCEPTION INVES       -				Transfer	Minimum Grade if	
		Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
CHM 116: General Chamistry & Lugitscript Support         Chm 116: General Chamistry & Lugitscript Support         Chm 200         Chm 200 <thchm 200<="" th=""> <thchm 200<="" th=""></thchm></thchm>						+ ASU 101-FSE and SES 100 or MAE 100 required
CHM 116 General Chemistry with Qualitative Analysis (SQ) OR         4         Conde of C         Conde of C           -5S5: 000, Introduction DE Exploration (C) or MAE 100, Introduction Machanean Emproved victory         3 or 0         Grade of C         AM AF ACT. Acception C in UDEFL score demonstration (C) or MAE 100, Introduction Machanean Emproved victory         -         Grade of C         -         AM AF ACT. Acception C in UDEFL score demonstration (C) or MAE 100, Introduction Pacternia (C) or MAE 100, Pacternia (C) or MAE 100, Introduction Pacternia (C) or MAE 100, Pacternia (C) or MAE 100, Introduction Pacternia (C) or MAE 100, Pacternia (C) or MAE 100,		1				
SS: 101: Linedacion in Exploration (1) or MAE 100: Infinited in the State of t	CHM 115: General Chemistry with Qualitative Analysis (SQ) OR		_			
effS100       Immediation in Cylination (1) or MAT 100 Immediation       1       Immediation (2) or MAT 100 Immediation       1       Immediation (2) or MAT 100 Immediation       1       Immediation       NAT 100 Immediation <td>CHM 116: General Chemistry II* (SQ)</td> <td>4</td> <td></td> <td></td> <td>Grade of C</td> <td></td>	CHM 116: General Chemistry II* (SQ)	4			Grade of C	
uin Machael Engineering (2), or School approved elective         2          1000000000000000000000000000000000000	+SES 100: Introduction to Exploration (3) or MAE 100: Introduction	3 or			Grade of C in SES	
MAT 266: Calculat for Engineers I (MA)         3         C         Grade of C         "Citik Agree could does not apply lower by lowe		2			100/MAE 100	
MAT 26S (clauble for Engineer 1 (MA)       3						
EVEC. UID or 102: First-Ver Composition *0. EXX. UP: Advanced First Ver Composition *0. EXX. UP: EXX. UP: Advanced First Ver Composition *0. EXX. UP: Advancomposit Methover First Ver Composition *0. EXX. UP: Advanced Fi	MAT 265: Calculus for Engineers I (MA)	3			Grade of C	
ENC 1963, Advanced Jirsk-Yara Composition* 08 products       1       0       Conde of C       2.0         TRNAT 1964, Call Call Call Direction National Science S						**If ENG 105 a 3 hr applicable elective must also
CNC.100 are 108: registion for Provigin Students         3         C         Grade of C         All and one of C           MAT 266: Calculate for Program Students         3         C         Grade of C         Maintain minimum ASI (cannulative GPA of 2000)           PN12 10122: University Physic Mathematory 11.800         3         C         Grade of C         Maintain minimum ASI (cannulative GPA of 2000)           FNG.100 r 102: First-Vere Composition 'OR         3         C         Grade of C         Second R behaveral Second ON ADC Calcural Diversity in the US         C         Grade of C         Second R behaveral Second ON ADC Calcural Diversity in the US         C         Grade of C         Maintain minimum ASI cannulative GPA of 2000)           Second R behaveral Second ON ADC Calcural Diversity in the US         3         C         Grade of C         Maintain minimum ASI cannulative GPA of 2000)           Alva 22: Calculate of fragments         3         C         Grade of C         Maintain minimum ASI cannulative GPA of 2000)           MAT 22: Second K fragments         3         C         Grade of C         Maintain minimum ASI cannulative GPA of 160 is 102 or ENG if 7 & 108 or ENG if 7 &						
NAT2 62: Calculas for Engineers II         3		3			Grade of C	
INV 1212: University Physics II Lateratory 1160)       3/1	TERM TWO: 16-30 CREDIT HOURS					
HN 1212: 0urverity Physics IL Aboratory 14(0)       31	MAT 266: Calculus for Engineers II	3			Grade of C	
ENC 107         Carde of C         Crade of C           Humanies, Fine Aris & Design (HI) AND Cluttar Diversity in the USC, (Ciolad Auraness (G), efficient Auraness (H) in the US         3         -         -         -           SUE, C. Michal Auraness (G), efficient Auraness (H) in the US         3         -         -         -           VCC, Ciolad Auraness (G), efficient Auraness (H) in the US         3         -         -         -           MAE 212: Engineering Mechanics         4         -         -         Grade of C         -		3/1			Grade of C	2.0
ENC 107 at 108: English for Toreign Students         3         C         Grade of C           Humanities, Face MS, Bobgin (HV), ADD Cultural Diversity in the US (C), clickal Avaraness (B)         3         C         C           Scall & Beharons Science (SI), NO Cultural Diversity in the US (C), clickal Avaraness (B)         3         C         C           City, Clockal Avaraness (C), or Historical Avaraness (B)         3         C         Grade of C         *           City, Clockal Strem, CSI, NO, Clurkal Diversity in the US (C), clickal Strem, CSI, NO, Clurkal Diversity in the US (C), clickal Strem, CSI, NO, Clurkal Diversity and Magnetism)         3         C         Grade of C         *         Matriatin minimum ASU cannulative GPA of 20.           AVA 225: Checkal Strem, Clurkal Diversity MSI (C), Clurkal Diversity MSI (C), Clurkal Strem, Clurkal Diversity MSI (C), Clurkal Strem, Clurkal Diversity MSI (C), Clurkal Diversity MSI (C), Clurkal Strem, Clurkal Diversity MSI (C), CRIDIT HOL RS         Grade of C         *         Complete Field Composition requirement: US (D) 10.01 & 10.02 m ENG (C), Clurkal Diversity MSI (C), CRIDIT HOL RS         Grade of C         Grade of C           HERM TODURS defined Linear Algebra         3         C         Grade of C         Grade of C           HERM TODURS defined Linear Algebra         3         C         Grade of C         Grade of C           HERM TODURS defined Linear Algebra         3         C         Grade of C         Grade						
LS (C), Global Avareness (G), or Historical Avareness (H)         3	ENG 107 or 108: English for Foreign Students	3			Grade of C	
Social & Behavioral Science (SD) AND Cultural Diversity in the US (C), Global Avancess (T)         Social & Behavioral Science (SD) AND Cultural Diversity in the US (C), Global Avancess (T)         Complete 10 critical courses by end of term 3.           MAE 212: Engineering Mechanics         4         Grade of C         Miniatian ininiuma ASI counsitative CPA of 2.0           MAI 220: Cultural Science Till         3         Grade of C         Miniatian ininiuma ASI counsitative CPA of 2.0           MAI 220: Cultural Science Till         3         Grade of C         Complete First-Year Composition requirement: FNG 101 & 102 or FNG 107 & 108 or FNG 108           HWI 3D1/D2: University Physical Electricity and Magnetism/ Laboratory. II (SO)         3/1         Grade of C           TERM FOLR: do CORDITI HOLKS         Grade of C         First-Year Composition requirement: FNG 101 & 102 or FNG 107 & 108 or FNG 103           MAE 214: Completer. Aided Engineering 1         4         Grade of C           MAE 214: Completer. Aided Ingineering 1         4         Grade of C           MAE 240: Thormatinia 1         4         Grade of C           TERM FOUR: do CORDITI HOURS         Grade of C           MAE 345: Structures in a Space Environment         4         Grade of C           TERM FOUR: do Control         3         Grade of C           MAE 345: Structures in a Space Environment         4         Grade of C <t< td=""><td></td><td>2</td><td></td><td></td><td></td><td></td></t<>		2				
(c), Giolal Awarenes (G), o' Historical Awarenes (H)'       3       0       0         ITEMN THREES 14-5 (CREDIT HOURS       -       -       Conde of C       3.         MAT 267: Calculus for Engineers III       3       0       0       Grade of C       -       Matiatian initianua MSU cumulative CPA of D2.0         MAT 267: Calculus for Engineers III       3       0       0       Grade of C       -       Matiatian initianua MSU cumulative CPA of D2.0       -       Complete First Year Composition requirement EXCI 101 & 10 & 10 & 10 & 20 & 10 & 10 & 10		3			+	4
MAE 212: Engineering Mechanics         4         -         -         Grade of C         -         Complet I de tritted courses by end of terms           MAT 267: Calculus for Engineers III         3         -         -         Grade of C         -         Matitatian infinimum ASU canualstice (CPA of 20)         -         -         Matitatian infinimum ASU canualstice (CPA of 20)         -         -         Matitatian infinimum ASU canualstice (CPA of 20)         -		3				
MAY 247: Calculation for Engineers III       3	TERM THREE: 31-45 CREDIT HOURS					
MAT 267: Calculus for Engineers III       3	MAE 212: Engineering Mechanics	4			Grade of C	
MAT 275: Modern Differential Equations       3       Grade of C       • Complete First-Year Composition requirement:         PHV 13/132: University Physics II Electricity and Magnetism/       3/1       Grade of C       • ENS 101 & 102 or ENG 107 & 108 or ENG 105         MAE 213: Solid Mechanics       3       Grade of C       • Grade of C       • Grade of C         MAE 213: Solid Mechanics       3       Grade of C       • Grade of C       • Grade of C         MAE 243: Applied Linear Algebra       3       Grade of C       • Grade of C       • Grade of C         MAE 243: Thermofluids I       4       Grade of C       • Grade of C       • Grade of C         MAE 243: Thermofluids I       4       Grade of C       • Grade of C       • Grade of C         MAE 343: Applied Linear Algebra       3       Grade of C       • Grade of C       • Grade of C         MAE 345: Strends of Acodynamics (L)       4       Grade of C       • Grade of C       • Grade of C         MAE 453: Grade Strends is of Acothology, Life in the Universe or       3       Grade of C       • Grade of C       • Grade of C         MAE 450: Grade of C (C indeal Methods for Engineers (CS)       3       Grade of C       • Grade of C       • Grade of C       • Grade of C         MAE 450: Algoe Numerical Methods for Engineers (CS)       3       Grade of	MAT 267: Calculus for Engineers III	3			Grade of C	
PIIL 131/32: University Physics II Electricity and Magnetism/ Laboratory II (SQ)       3/1       Grade of C         TERM FOURS 46-60 CREDIT HOURS       Grade of C         MAE 213: Solid Mechanics       3       Grade of C         MAE 214: Computer-Aided Engineering I       1       Grade of C         MAE 214: Computer-Aided Engineering I       4       Grade of C         MAE 214: Computer-Aided Engineering I       4       Grade of C         MAE 214: Computer-Aided Engineering I       4       Grade of C         MAE 314: Solid Mechanics       3       Grade of C         MAE 345: Structures in a Space Environment       4       Grade of C         MAE 345: Structures in a Space Environment       4       Grade of C         MAE 345: Structures in a Space Environment       4       Grade of C         TERM SINE 76-50 CREDIT HOURS       Grade of C       MAE 362 (High-Speed Acrodynamics (L)         MAE 345: Structures in a Space Environment       4       Grade of C         TERM SINE 76-50 CREDIT HOURS       Grade of C       MAE 362 (High-Speed Acrodynamics (L)         MAE 342: Check Structures in a Space Environment       4       Grade of C         TERM SINE 76-50 CREDIT HOURS       Grade of C       MAE 362 (High Speed Acrodynamics (L)         MAE 462 (Space Vehicle Dynaminis and Chourtoperity in the Us	MAT 275: Modern Differential Equations	3			Grade of C	
PHY 13/132: University Physics II Electricity and Magnetism?TIIIILaboratory II (SQ)3130Grade of CMAE 213: Solid Mechanics3330Grade of CMAE 213: Solid Mechanics30Grade of CMAE 213: Solid Mechanics40Grade of CMAE 201: Thermofinids I40Grade of CMAE 202: Circuits I440Grade of CMAT 343: Applied Linear Algebra32Grade of CMAE 345: Thermofinids I52Grade of CMAE 345: Sensors and Controls52Grade of CMAE 345: Sensors and Controls32Grade of CMAE 345: Sensors and Controls32Grade of CMAE 345: Sensors and Controls32Grade of CMAE 345: Applied Linear Algebra32Grade of CMAE 345: Chechologic (Linear Algebra)32Grade	Mar 270. Modern Differential Equations	5				
Laboratory II (SQ)Grade of CFERM FOLRS 460 CREDIT HOURSGrade of CMAE 213: Solid Mechanics3Grade of CMAE 214: Computer-Aided Engineering IIGrade of CEEE 202: Circuits I4Grade of CMAE 313: Sensors and Controls4Grade of CMAE 314: Computer-Aided Engineering I4Grade of CTERM FUE: CircUits I.4Grade of CMAE 318: Sensors and Controls5Grade of CMAE 318: Sensors and Controls5Grade of CMAE 343: Numerical Methods for Engineers (CS)3Grade of CEEE 203: Signals & Systems I3Grade of CTERM FUE: Sheeped Acodynamics (L)4Grade of CTERM Stre: Abge Acodynamics (L)4Grade of CFES 311: Essentials of Astrobiology, Life in the Universo orGrade of CBIO 181 r182: General Biology 1 or II (4) or3Grade of CBIO 181 r182: General Biology 1 or II (4) or3Grade of CBIO 181 r182: General Biology 1 or II (4) orGrade of CBIO 181 r182: General Biology 1 or II (4) orGrade of CBIO 181 r182: General Biology 1 or II (4) orGrade of CBIO 201: Human Androny and Physiology (3) aGrade of CTERM Stre: STI- Steerifiel SN AND Cultural Diversity in the USGrade of CBIO 201: Human Androny and Physiology (3) aGrade of CTEM Stre: STI- Steerifiel SN AND Cultural Diversity in the USGrade of CTEM Stre: STI- Steerifiel SN AND Cultural Diversity in the USGrade of CMAE 404:						
TERM POUR: 46-60 CREDIT HOURS       3		2/1			Crada of C	
MAE 213: Solid Mechanics33CGrade of CMAE 214: Computer-Alded Engineering I4CGrade of CIEEE 202: Circuits I4CGrade of CIEEE 202: Circuits I4CGrade of CMAT 343: Applied Linear Algebra3CGrade of CMAT 343: Applied Linear Algebra5SGrade of CMAE 345: Knuerical Methods for Engineers (S)3GGrade of CMAE 345: Structures in a Space Environment4SGrade of CMAE 345: Structures in a Space Environment3GGrade of CMAE 345: Structures in a Space Environment3GGrade of CMAE 345: Structures in a Space Environment3SGrade of CTERN INC: Folge Systems I3GGrade of CIteracy and Critcolal Inguint (I)3SGrade of CIteracy and Critcolal Inguint (I)3GGrade of CBit 311: Essentials of Astrobiology (I) orIGrade of CBit 311: Essentials of Astrobiology (I) orGGrade of CBit 311: Essentials of Astrobiology (I) orGGrade of CBit 311: Essential Inguint (I)3GGrade of CBit 111: Engineering Profession (I)GGrade of CBit 311: Essential Inguint (I)GGrade of CBit 311: Ess		3/1			Grade of C	
MAE 214: Computer-Aided Engineering I       1		3			Grade of C	
EEE 202: Circuits 1       4       Image: Concurs 1       Grade of C         MAT 343: Applied Linear Algebra       3       Image: Concurs 1       Grade of C         MAE 318: Sensors and Controls       5       Image: Concurs 1       Grade of C         MAE 318: Sensors and Controls       5       Image: Concurs 2       Grade of C         MAE 345: Structures in a Space Environment       4       Image: Concurs 2       Grade of C         MAE 345: Signals & Systems 1       3       Image: Concurs 2       Grade of C         TERM TIVES       3       Image: Concurs 2       Grade of C         MAE 362: High-Speed Aerodynamics (L)       4       Image: Concurs 2       Grade of C         MAE 402: Spead Vehicle Dynamics and Control       3       Image: Concurs 2       Grade of C         Star 11: Exage Vehicle Dynamics and Control       3       Image: Concurs 2       Grade of C         Star 11: Exage Vehicle Dynamics and Control       3       Image: Concurs 2       Grade of C         Star 11: Exage Vehicle Dynamics and Control       3       Image: Concurs 2       Grade of C         Star 11: Exage Vehicle Dynamics and Control       3       Image: Concurs 2       Grade of C         Star 11: Exage Vehicle Dynamics and Control       3       Image: Concurs 2       Grade of C	MAE 214: Computer-Aided Engineering I	1			Grade of C	
MAT 343: Applied Linear Algebra       3       3       Grade of C         TERM IVE: 61-75 CREDIT HOURS         MAE 318: Sensors and Controls       5       Grade of C         MAE 345: Structures in a Space Environment       4       Grade of C         MAE 345: Structures in a Space Environment       4       Grade of C         MAE 345: Sensor And Controls       3       Grade of C         MAE 362: High-Speed Aerodynamics (L)       4       Grade of C         MAE 362: High-Speed Aerodynamics (L)       4       Grade of C         MAE 362: High-Speed Aerodynamics (L)       3       Grade of C         Literacy and Critical Inquiry (L)       3       Grade of C         Stanct Urical Inquiry (L)       3       Grade of C         B10 181 or 182: General Biology 1 or 11 (4) or       B10 181 or 182: General Biology 1 or 11 (4) or       Grade of C         B10 201: Human Anatomy and Physiology (4) or       Grade of C       Fee 304: Signals & Systems I       Grade of C         EEE 304: Signals & Systems I       4       Grade of C       Grade of C       Fee 304: Signals & System SI         EEE 304: Signals & Systems I       4       Grade of C       Grade of C       Fee 304: Signals & System SI       Grade of C         MAE 400: Engineering Profession (L)       3       Grade of C	MAE 240: Thermofluids I	4			Grade of C	
TERM FIVE: 61-75 CREDIT HOURS       Grade of C         MAE 318: Sensors and Controls       5       S       Grade of C         MAE 345: Structures in a Space Environment       4       Z       Grade of C         MAE 345: Munerical Methods for Engineers (CS)       3       Grade of C         EEE 203: Signals & Systems 1       3       Grade of C         TERM SIX: 76-90 CREDIT HOURS	EEE 202: Circuits I	4			Grade of C	
MAE 318: Sensors and Controls       5       ⊠       Grade of C         MAE 345: Structures in a Space Environment       4       ⊠       Grade of C         MAE 345: Structures in a Space Environment       3       ⊠       Grade of C         MAE 384: Numerical Methods for Engineers (CS)       3       ⊠       Grade of C         TERM SIX: 76-90 GREDIT HOURS       3       □       Grade of C         MAE 462: Space Acrodynamics (L)       4       ⊠       Grade of C         MAE 462: Space Vehicle Dynamics and Control       3       ⊠       Grade of C         Iteracy and Critical Inquiry (L)       3       ⊠       Grade of C         Stes 311: Essentials of Astrobiology, Life in the Universe or BIO 180 of 182: General Biological Systems (3)       3       □       receive L credit         BIO 181 or 182: General Biological Systems (1)       3       □       Image: Control System C       receive L credit         Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H)       3       □       Image: Control System C         FERM SDEV: SI-105 CREDIT HOURS       Image: Control System Sin CL)       3       ⊠       Grade of C         MAE 460: Engineering Profession (L)       3       ⊠       Grade of C       Image: Control System Sin C	MAT 343: Applied Linear Algebra	3	$\boxtimes$		Grade of C	
MAE 345: Structures in a Space Environment4XGrade of CMAE 345: Numerical Methods for Engineers (CS)3XGrade of CEEE 203: Signals & Systems 13CGrade of CTERM SIX-6-9OC REDTI HOURS4XGrade of CMAE 362: High-Speed Aerodynamics (L)4XGrade of CMAE 362: Space Vehicle Dynamics and Control3XGrade of CLiteracy and Critical Inquiry (L)3CGrade of CBIO 181 or 182: General Biology 1 or 11 (4) or3CGrade of CBO 181 or 182: General Biology (4) orSCGrade of CBME 111: Engineering Perspectives on Biological Systems (3)3CGrade of CSocial & Behavioral Science (SB) AND Cultural Diversity in the USGrade of CGrade of CTERM SIX-EN-19LOS CREDIT HOURSSGrade of CGrade of CMAE 400: Engineering Profession (L)3XGrade of CUpper division Technical Elective3XGrade of CUpper division Technical Elective3XGrade of CUpper division Aeronautics Elective3XGrade of CUpper division Technical Elective3XGrade of CUpper division Aeronautics Elective3XGrade of CUpper division Aeronautics						I
MAE 384: Numerical Methods for Engineers (CS)33QGrade of CEEE 203: Signals & Systems I30Grade of CTHEM SIX: 76-90 CREDIT HOURS4QGrade of CMAE 362: High-Speed Aerodynamics (L)4QGrade of CLiteracy and Critical Inquiry (L)30Grade of CSES 311: Essentials of Astrobiology, Life in the Universe or3QGrade of CB10 181 or 182: General Biology I or 11(4) or30Grade of CB02 101: Human Anatomy and Physiology (4) orBME 111: Engineering Perspectives on Biological Systems (3)3BME 112: Engineering Perspectives on Biological Systems (3)3BME 112: Engineering Perspectives on Biological Systems (3)3-Grade of CTHEM SEVEN: 91-105 CREDIT HOURSMAE 405: Rocket Propulsion3QGrade of CMAE 405: Rocket Propulsion3QGrade of CMAE 405: Space Systems Design (HU)3QGrade of CMAE 405: Space System Design3QGrade of CUpper division Aeronautics Elective3QGrade of C<						-
EEE 203: Signals & Systems 1       3       Grade of C         TERM SIX: 76-90 CREDIT HOURS       Grade of C       MAE 362: High-Speed Aerodynamics (L)       4       Grade of C       receive L credit         MAE 462: Space Vehicle Dynamics and Control       3       Grade of C       receive L credit       receive L credit         Literacy and Critical Inquiry (L)       3       Grade of C       receive L credit       receive L credit         SES 311: Essentials of Astrobiology, Life in the Universe or BIO 181 or 182: General Biological Systems (3)       3       Grade of C       receive L credit         Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H)       3       Grade of C         MAE 405: Engect Representations (L)       3       Grade of C       Grade of C         MAE 406: Engineering Profession (L)       3       Grade of C         MAE 406: Engineering Profession (L)       3       Grade of C         MAE 406: Engineering Profession (L)       3       Grade of C         MAE 406: Space Systems Design (HU)       3       Grade of C         MAE 406: Space System Design       3       Grade of C         Upper division Technical Elective       3       Grade of C         MAE 405: Space Systems Design       3       Grade of C         Uppe	•	-				-
TERM SIX: 76-90 CREDIT HOURS         MAE 362: High-Speed Aerodynamics (L)       4       ⊠       Grade of C       MAE 360 and MAE 362 must be completed to receive L credit         MAE 462: Space Vehicle Dynamics and Control       3       ☑       Grade of C       receive L credit         Literacy and Critical Inquiry (L)       3       ☑       Grade of C       receive L credit         BIO 181 or 182: General Biology 1 or II (4) or       I       Image: Completed to receive L credit       receive L credit         Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H)       3       □       Image: Completed to Grade of C         MAE 465: Rocket Propulsion       3       ☑       Image: Completed to Grade of C       Image: Completed to Grade of C         MAE 400: Engineering Profession (L)       3       ☑       Image: Completed to Grade of C       Image: Completed to Grade of C         MAE 465: Rocket Propulsion       3       ☑       Image: Completed to Grade of C       Image: Completed to Grade of C         Humanities, Fine Arts & Design (HU)       3       ☑       Image: Completed to Grade of C       Image: Completed to Grade of C         MAE 480: Space Systems Design       3       ☑       Image: Completed to Grade of C       Image: Completed to Grade of C         Upper division Technical Electiv		-				-
MAE 362: High-Speed Aerodynamics (L)4AAGrade of CMAE 360 and MAE 362 must be completed to receive L creditMAE 462: Space Vehicle Dynamics and Control3AGrade of Creceive L creditLiteracy and Critical Inquiry (L)3AAGrade of CBSS 311: Essentials of Astrobiology, Life in the Universe or BIO 181 or 182: General Biology 1 or II (4) or BIO 201: Human Anatomy and Physiology (4) or BIO 201: Human Human Bio 201: Human Huma		3			Grade of C	
MAE 462: Space Vehicle Dynamics and Control3Image: Control of the control of		4			Grade of C	MAE 360 and MAE 362 must be completed to
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BIO 181 or 182: General Biology T or II (4) or BIO 201: Human Anatomy and Physiology (4) or BME 111: Engineering Perspectives on Biological Systems (3)3	· · · · · · · · · · · · · · · · · · ·					1
BIO 201: Human Anatomy and Physiology (4) or BME 111: Engineering Perspectives on Biological Systems (3)3	SES 311: Essentials of Astrobiology, Life in the Universe or					
BME 111: Engineering Perspectives on Biological Systems (3)       3		1				
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TERM SEVEN: 91-105 CREDIT HOURSEEE 304: Signals & Systems II4⊠Grade of CMAE 400: Engineering Profession (L)3⊠Grade of CMAE 465: Rocket Propulsion3⊠Grade of CUpper division Technical Elective3⊠Grade of CHumanities, Fine Arts & Design (HU)3□Grade of CMAE 480: Space Systems Design3⊠Grade of CUpper division Aeronautics Elective3⊠Grade of CUpper division Aeronautics Elective3⊠Grade of CUpper division Technical Elective3⊠Grade of CUpper division Aeronautics Elective3⊠Grade of CUpper division Technical Elective3⊠Grade of CUpper division Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)Grade of C		2				
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Humanities, Fine Arts & Design (HU)3Image: Constraint of the second secon	MAE 465: Rocket Propulsion	3			Grade of C	
TERM EIGHT: 106-120 CREDIT HOURS         MAE 480: Space Systems Design       3       Image: Colspan="2">Grade of C         Upper division Aeronautics Elective       3       Image: Colspan="2">Grade of C         Upper division Technical Elective       3       Image: Colspan="2">Grade of C         Upper division Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)       Image: Colspan="2">Grade of C	Upper division Technical Elective	3			Grade of C	
MAE 480: Space Systems Design3Image: Space Systems Design3Image: Space Systems DesignUpper division Aeronautics Elective3Image: Space Systems DesignGrade of CUpper division Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)3Image: Space Systems Design		3				
Upper division Aeronautics Elective     3     Image: Constraint of the second s			_			
Upper division Technical Elective     3     Image: Constraint of the constraint of th						4
Upper division Humanities, Fine Arts & Design (HU) OR Social & 3 🛛	**					4
Behavioral Science (SB) 3 🛛		3			Grade of C	4
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Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min cum GPA.)	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

## 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 US (C)
  - Global Awareness (G)
  - o Historical Awareness (H)
  - First-Year Composition

#### **Additional Notes:**



## Major Map: Bioengineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

			Competed Tran		Completed General Education:	
Course Subject and Title		Upper	□ MAPP □' Transfer	TAG ATP None Minimum Grade if	AGEC   IGETC/CSUGE   None	
(courses in <b>bold/shading</b> are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS		1			An SAT, ACT, Accuplacer, or TOEFL score	
ASU 101-FSE: The ASU Experience BME 100: Introduction to Bioengineering OR	1				determines placement into first-year	
BME 100: Introduction to Bioengineering OR BME 111/112: Engineering Perspectives on Biological	2 or			Grade of C in BME	<ul> <li>composition courses</li> <li>ASU Math Placement Exam score determines</li> </ul>	
Systems/Laboratory or BIO 181: General Biology II (SQ)	4			111/112 or BIO 181	ASU Math Placement Exam score determines     placement in Mathematics course	
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II *	4			Grade of C	* CHM 113 is a prerequisite and does not apply	
	3				towards degree credit ** If ENG 105 a 3 hr applicable elective must also	
MAT 265: Calculus for Engineers I (MA) ENG 101 or 102: First-Year Composition OR	3			Grade of C	be taken prior to graduation. See Advisor.	
ENG 105: Advanced First-Year Composition** OR		_			Maintain minimum ASU cumulative GPA     of 2.0	
ENG 107 or 108: English for Foreign Students	3			Grade of C	01 2.0	
TERM TWO: 16-30 CREDIT HOURS BME 100: Introduction to Bioengineering OR					Maintain minimum ASU cumulative GPA	
BME 111/112: Engineering Perspectives on Biological	2 or	_		Grade of C in BME	of 2.0	
Systems/Laboratory or BIO 181: General Biology II (SQ)	4			111/112 or BIO 181	4	
MAT 266: Calculus for Engineers II	3			Grade of C	4	
PHY 121/122: University Physics I/Laboratory I (SQ) ENG 101 or 102: First-Year Composition OR	3/1			Grade of C	4	
ENG 105: Advanced First-Year Composition** OR						
ENG 107 or 108: English for Foreign Students	3			Grade of C		
TERM THREE: 31-45 CREDIT HOURS					• Complete 11 12 entral comments in a l	
BME 235: Physiology for Engineers	4			Grade of C	• Complete 11-12 critical courses by end of term 3.	
MAT 267: Calculus for Engineers III PHY 131/132: University Physics Electricity and Magnetism II/	3			Grade of C	Maintain minimum ASU cumulative GPA	
Laboratory II (SQ)	3/1			Grade of C	• Complete First-Year Composition	
CHM 231/235: Elementary Organic Chemistry/Laboratory or CHM	2/1			Cards of C	requirement: ENG 101 & 102 or ENG 107 &	
233/237: General Organic Chemistry I/Laboratory I	3/1			Grade of C	108 or ENG 105	
CSE 100: Principles of Programming with C++ (CS) TERM FOUR: 46-60 CREDIT HOURS	3					
BME 200: Conservation Principles of Bioengineering	3			Grade of C		
EEE 202: Circuits I	4			Grade of C		
MAE 212: Engineering Mechanics	4			Grade of C		
MAT 275: Modern Differential Equations (MA)	3			Grade of C		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US	2					
(C), Global Awareness (G) or Historical Awareness (H)	3					
<b>TERM FIVE: 61-75 CREDIT HOURS</b> # BME 318: Biomaterials	4				# Designates Major Course: A minimum	
# BME 350: Signals and Systems for Bioengineering	3		1		cumulative GPA of 2.0 required.	
# CHM 341: Elementary Physical Chemistry	3			Grade of C	1	
# MAT 343: Applied Linear Algebra	3				1	
# IEE 380: Probability and Statistics for Engineering Problem Solving					1	
(CS)	3	$\square$				
TERM SIX: 76-90 CREDIT HOURS	3			Grada of C	# Designates Major Course: A minimum	
# BME 300: Bioengineering Product Design # BME 331: Bioengineering Transport Phenomena	3			Grade of C	cumulative GPA of 2.0 required.	
# BME 351: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering	4				1	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US	-		1		1	
(C), Global Awareness (G) or Historical Awareness (H)	3				4	
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3					
TERM SEVEN: 91-105 CREDIT HOURS	5			 		
# BME 413: Biomedical Instrumentation(BME 413 & 423 = L)	3				# Designates Major Course: A minimum	
# BME 417: Biomedical Engineering Capstone Design I (L)	4			Grade of C	cumulative GPA of 2.0 required.	
# BME 423: Biomedical Instrumentation Laboratory	1				]	
# BME 434: Applications of Bioengineering OR					]	
# BME 416: Biomechanics OR	Ι.					
# BME 419: Biocontrol Systems	3	IXI				
# BME 419: Biocontrol Systems Social & Behavioral Science (SB) AND Cultural Diversity in the US (C),	3				-	



Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM EIGHT: 106-120 CREDIT HOURS					
# BME 490: Biomedical Engineering Capstone Design II	4	$\boxtimes$			# Designates Major Course: A minimum cumulative
# Technical Elective	3	$\boxtimes$			GPA of 2.0 required.
# Technical Elective	2	$\boxtimes$			
UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral					
Science (SB) AND Cultural Diversity in the US (C), Global		57			
Awareness (G) or Historical Awareness (H)	- 3	$\boxtimes$			

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

#### **General University Requirements: Legend** •

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - Mathematical Studies (MA) 0
  - Computer/Statistics/Quantitative applications (CS) Humanities, Fine Arts, and Design (HU) 0
  - 0
  - Social and Behavioral Sciences (SB) 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C) 0
  - 0 Global Awareness (G)
  - Historical Awareness (H) 0
- First-Year Composition



## Major Map: Chemical Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				nsfer Pathway: TAG □ATP □None	Completed General Education: □AGEC □IGETC/CSUGE □None	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	1115.	Division	eouise orade	Required	Running Chilean Requirement Notes	
ASU 101-FSE: The ASU Experience	1				• ASU 101-FSE should be completed first semester.	
#CHE 100: Introduction to Chemical Engineering	2			Grade of C	<ul> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition</li> </ul>	
	4			Glade of C	courses	
CHM 113: General Chemistry I (SQ) ENG 101 or 102: First-Year Composition OR	4				ASU Math Placement Exam score determines     placement in Mathematics course	
ENG 105: Advanced First-Year Composition** OR					**If ENG 105 a 3 hr applicable elective must also be	
ENG 107 or 108: English for Foreign Students	3			Grade of C	taken prior to graduation. See Advisor. # Designates Major Course: A minimum ASU	
MAT 265: Calculus for Engineers I	3			Grade of C	cumulative GPA of 2.0 required in major courses.	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3				Maintain minimum ASU cumulative GPA of     2.0	
TERM TWO: 16-30 CREDIT HOURS	5				2.0	
ENG 101 or 102: First-Year Composition OR					Maintain minimum ASU cumulative GPA of	
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	2.0	
CHM 116: General Chemistry II (SQ)	4			Grade of C	-	
MAT 266: Calculus for Engineers II	3			Grade of C		
PHY 121/122: University Physics I/ Laboratory I	3/1					
TERM THREE: 31-45 CREDIT HOURS		1	ì			
#CHE 211: Introduction to Chemical Processing	3			Grade of C	<ul> <li>Complete 10 critical courses by end of term 3.</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>	
MAT 242: Elementary Linear Algebra	2				Maintain minimum ASU cumulative GPA of 2.0	
MAT 275: Modern Differential Equations (MA)	3			Grade of C	Complete First-Year Composition requirement:     DVG 101 0 102 0 107 0 107 0 107	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the	5				ENG 101 & 102 or ENG 107 & 108 or ENG 105 # Designates Major Course: A minimum ASU	
US (C), Global Awareness (G) or Historical Awareness (H)	3				cumulative GPA of 2.0 required in major courses.	
Bioscience Elective	3					
TERM FOUR: 46-60 CREDIT HOURS	3			Grade of C	# Designates Major Course: A minimum ASU	
#CHE 231: Introduction to Transport I: Fluids MAT 267: Calculus for Engineers III	3			Grade of C Grade of C	cumulative GPA of 2.0 required n major courses.	
# MAE 384: Numerical Methods for Engineers (CS)	3			Grade of C	—	
PHY 131: University Physics II: Electricity and Magnetism	3					
Social Behavioral Science (SB) AND Cultural Diversity in the US						
(C), Global Awareness (G) or Historical Awareness (H)	3					
<b>TERM FIVE: 61-75 CREDIT HOURS</b> # CHE 334: Introduction to Transport Phenomena II: Heat and Mass	3			Grade of C	# Designates Major Course: A minimum ASU	
# CHE 334: Introduction to Applied Chemical Thermodynamics	3			Grade of C	cumulative GPA of 2.0 required in major courses.	
CHM 233: General Organic Chemistry I	3					
CHM 237: General Organic Chemistry Laboratory I	1					
200 Level Engineering Elective	3					
# Chemistry Content Technical Elective	3	$\boxtimes$				
TERM SIX: 76-90 CREDIT HOURS					# Designates Major Courses A minimum ASU	
# CHE 352: Transport Laboratories (L)	3			Grade of C	# Designates Major Course: A minimum ASU cumulative GPA of 2.0 required in major courses.	
# CHE 433: Modern Separations # CHE 442: Introduction to Chemical Reactor Design	3			Grade of C Grade of C		
CHE 442. Introduction to Chemical Reactor Design CHM 234: General Organic Chemistry II	3				-	
IEE 220: Business Industrial Engineering	3				-	
TERM SEVEN: 91-105 CREDIT HOURS	-					
# CHE 432: Principles of Chemical Engineering Design	3			Grade of C	# Designates Major Course: A minimum ASU	
# CHE 451: Chemical Engineering Laboratory	3				cumulative GPA of 2.0 required in major courses.	
# CHE 461: Process Dynamic Control	3				4	
# Chemistry Content Technical Elective Social & Behavioral Science (SB) AND Cultural Diversity in the US	3				_	
(C), Global Awareness (G) or Historical Awareness (H)	3					
TERM EIGHT: 106-120 CREDIT HOURS			·	·		
# CHE 462: Process Design (L)	3				# Designates Major Course: A minimum ASU	
# CHE Technical Elective	3	$\boxtimes$			cumulative GPA of 2.0 required in major courses.	
# CHE Technical Elective	3					
UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3					
#Natural Science or MSE Technical Elective	3				-	
		الالكار	i	1		



## Major Map: Chemical Engineering -Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

### Graduation Requirements Summary:

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

## **General University Requirements: Legend**

General Studies Core Requirements:

- Literacy and Critical Inquiry (L) 0
- 0
- Mathematical Studies (MA) Computer/Statistics/Quantitative applications (CS) 0
- Humanities, Fine Arts, and Design (HU) Social and Behavioral Sciences (SB) 0
- 0
- Natural Science-Quantitative (SQ) 0
- Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C) 0
  - Global Awareness (G) 0
  - Historical Awareness (H) 0
- First-Year Composition .

**Additional Notes:** 



## Major Map: Civil Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering \ Catalog Year: 2010-2011

			Competed Tran	nsfer Pathway: TAG □ATP □None	Completed General Education: □AGEC □IGETC/CSUGE □None	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	1113.	Division	Course/Grade	Required	Additional Critical Requirement Notes	
ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first	
CEE 100: Intro to Civil and Environmental Engineering OR ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB)	2 or 3			Grade of C in CEE 100	<ul> <li>semester.</li> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses</li> </ul>	
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II* (SQ)	4				ASU Math Placement Exam score determines	
MAT 265: Calculus for Engineers I	3			Grade of C	placement in Mathematics course	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	<ul> <li>*CHM 113 is a prerequisite and does not apply toward degree credit.</li> <li>**If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.</li> <li>Maintain minimum ASU cumulative GPA of 2.0</li> </ul>	
TERM TWO: 16-30 CREDIT HOURS	1	1				
CEE 100: Intro to Civil and Environmental Engineering OR ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB)	2 or 3			Grade of C in CEE 100	Maintain minimum ASU cumulative GPA of 2.0	
MAT 242: Elementary Linear Algebra	2			Grade of C		
MAT 266: Calculus for Engineers II	3		1	Grade of C	1	
PHY 121/122: University Physics I/ Laboratory I (SQ)	3/1		1	Grade of C	1	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR						
ENG 107 or 108: English for Foreign Students	3			Grade of C		
TERM THREE: 31-45 CREDIT HOURS	2				• Complete 12 critical courses by end of term 3.	
CEE 210: Engineering Mechanics: Statics	3			Grade of C	<ul> <li>Complete 12 critical courses by end of term 5.</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>	
MAT 267: Calculus for Engineers III	3			Grade of C	2.0	
MAT 275: Modern Differential Equations (MA) PHY 131/132: University Physics II: Electricity and Magnetism/	3			Grade of C	Complete First-Year Composition requirement:     ENG 101 & 102 or ENG 107 & 108 or ENG 105	
Laboratory II (SQ)	3/1			Grade of C	ENG 101 & 102 or ENG 107 & 108 or ENG 105	
TERM FOUR: 46-60 CREDIT HOURS						
CEE 212: Engineering Mechanics: Dynamics	3			Grade of C		
CEE 213: Introduction to Deformable Solids	3			Grade of C		
EEE 202: Circuits I OR						
MAE 240: Thermofluids I	4				-	
Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global Awareness (G):	3					
Basic Science Elective:	3					
TERM FIVE: 61-75 CREDIT HOURS						
#CEE 384: Numerical Methods for Engineers (CS)	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum	
Select 3 # CEE 300: Engineering Business Practice (L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs) # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) # CEE 351: Geotechnical Engineering (4 hrs) # CEE 353: Civil Engineering Materials (3 hrs) # CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs)	10- 12	$\boxtimes$		Grade of C in each	cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.	
IEE 380: Probability and Statistics for Engineering Problem Solving	3	$\boxtimes$				
<b>TERM SIX: 76-90 CREDIT HOURS</b> Select remaining 4 # CEE 300: Engineering Business Practice(L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs) # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) # CEE 351: Geotechnical Engineering (4 hrs) # CEE 351: Civil Engineering Materials (3 hrs) # CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs)	14 - 16			Grade of C in each	# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.	
TERM SEVEN: 91-105 CREDIT HOURS						
#CEE 400 Earth Systems Engineering and Management (HU, H) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global Awareness (G) # Technical Elective	3			Grade of C in CEE 400 Grade of C	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 relations.	
# Technical Elective	3	$\boxtimes$		Grade of C	selection. # Designates Major Course: A minimum	
# Design Elective or # Technical Elective	3			Grade of C	cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A	
	2	<b>N</b> 7		Condex 60	maximum of two "D" grades are allowed in all	
# Design Elective or # Technical Elective	3	$\boxtimes$		Grade of C	3XX and 4XX courses combined.	



### Major Map: Civil Engineering -Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering \ Catalog Year: 2010-2011

Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM EIGHT: 106-120 CREDIT HOURS					
# CEE 400: Earth Systems Engineering and Management (HU, H) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global Awareness (G) if CEE 400 completed	3			Grade of C in CEE 400	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.
# CEE 486: Integrated Civil Engineering Design (L)	4	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# Technical Elective or # Design Elective	3	$\boxtimes$		Grade of C	GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE
# Technical Elective or # Design Elective	3	$\boxtimes$		Grade of C	4XX courses. NOTE: A maximum of two "D" grades
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C) or Global Awareness (G)	3				are allowed in all 3XX and 4XX courses combined.

#### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.30 Min. CUM GPA in CEE 3XX, 2.30 min CUM GPA in CEE 4XX))	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

#### **General University Requirements: Legend** •

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - 0 Mathematical Studies (MA)
  - Computer/Statistics/Quantitative applications (CS) Humanities, Fine Arts, and Design (HU) 0
  - 0
  - Social and Behavioral Sciences (SB) 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C) 0
  - 0 Global Awareness (G)
  - Historical Awareness (H) 0

#### First-Year Composition •



## Major Map: Civil Engineering (Construction Engineering) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering \ Catalog Year: 2010-2011

				ansfer Pathway: □TAG □ATP □None	Completed General Education:	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	1113.	Division	Course/Grade	Minimum Grade II Required	Reditional Critical Requirement Proces	
ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first	
CEE 100: Intro to Civil and Environmental Engineering OR					semester.     An SAT. ACT. Accuplacer. or TOEFL	
ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic	2 or			Grade of C in	<ul> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year</li> </ul>	
Principles or ECN 201: Economic Issues & Analysis (SB) CHM 114: General Chemistry for Engineers (SQ) OR	3			CEE 100	composition courses	
CHM 116: General Chemistry II* (SQ)	4				ASU Math Placement Exam score determines placement in Mathematics	
MAT 265: Calculus for Engineers I	3			Grade of C	course	
					*CHM 113 is a prerequisite and does not apply toward degree credit. **If ENG 105 a 3 hr applicable elective must	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					<ul> <li>also be taken prior to graduation. See Advisor.</li> <li>Maintain minimum ASU cumulative</li> </ul>	
ENG 105. Advanced First- Fear Composition * OK ENG 107 or 108: English for Foreign Students	3			Grade of C	• Maintain minimum ASO cumulative GPA of 2.0	
TERM TWO: 16-30 CREDIT HOURS						
CEE 100: Intro to Civil and Environmental Engineering OR					Maintain minimum ASU cumulative	
ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic	2 or			Grade of C in CEE 100	GPA of 2.0	
Principles or ECN 201: Economic Issues & Analysis (SB)	3				-	
MAT 242: Elementary Linear Algebra	2			Grade of C	4	
MAT 266: Calculus for Engineers II PUV 121/122, University Physics I/Laboratory, L (SQ)	3			Grade of C	4	
PHY 121/122: University Physics I/Laboratory I (SQ) ENG 101 or 102: First-Year Composition OR	3/1			Grade of C	4	
ENG 105: Advanced First-Year Composition** OR						
ENG 107 or 108: English for Foreign Students	3			Grade of C		
TERM THREE: 31-45 CREDIT HOURS			Ĩ	1		
CEE 210: Engineering Mechanics: Statics	3			Grade of C	• Complete 12 critical courses by end of term 3.	
MAT 267: Calculus for Engineers III	3			Grade of C	<ul> <li>Maintain minimum ASU cumulative</li> </ul>	
MAT 275: Modern Differential Equations (MA)	3			Grade of C	GPA of 2.0	
PHY 131/132: University Physics II: Electricity and Magnetism/ Laboratory II (SQ)	3/1			Grade of C	Complete First-Year Composition requirement: ENG 101 & 102 or ENG 10 & 108 or ENG 105	
TERM FOUR: 46-60 CREDIT HOURS			l.			
CEE 212: Engineering Mechanics: Dynamics	3			Grade of C		
CEE 213: Introduction to Deformable Solids	3			Grade of C		
EEE 202: Circuits I	4					
Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science						
(SB), AND Cultural Diversity in the US (C) or Global Awareness (G):	3				-	
Basic Science Elective:	3					
TERM FIVE: 61-75 CREDIT HOURS	-	_				
# CEE 384: Numerical Methods for Engineers (CS) Select 3	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE	
<ul> <li># CEE 300: Engineering Business Practice (L) (3 hrs)</li> <li># CEE 321: Structural Analysis and Design (4 hrs)</li> <li># CEE 341: Fluid Mechanics for Civil Engineers (4 hrs)</li> <li># CEE 351: Geotechnical Engineering (4 hrs)</li> <li># CEE 353: Civil Engineering Materials (3 hrs)</li> </ul>	10				3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.	
# CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs)	10- 12			Grade of C in each		
IEE 380: Probability and Statistics for Engineering Problem Solving	3		1		1	
TERM SIX: 76-90 CREDIT HOURS	-		·			
Select remaining 4 # CEE 300: Engineering Business Practice(L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs) # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) # CEE 351: Geotechnical Engineering (4 hrs) # CEE 353: Civil Engineering Materials (3 hrs)	14				# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.	
# CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs)	14- 16			Grade of C in each		
TERM SEVEN: 91-105 CREDIT HOURS		<u>ت</u> ع		Stade of C in each		
Select 4 # CEE 281: Surveying (3 hrs) # CEE 412: Pavement Analysis and Design (3 hrs) OR # CEE 483: Highway Materials, Construction and Quality (3 hrs) # CEE 420: Steel Structures (3 hrs) OR # CEE 421: Concrete Structures (3 hrs) # CEE 452: Foundation (3 hrs) # CEE 452: Foundation (3 hrs) # CEE 481: Civil Engineering Project (3 hrs)					# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.	
# Approved technical elective (3 hrs)	12		ļ	Grade of C in each	4	
#CEE 400: Earth Systems Engineering and Management (HU, H) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global Awareness (G)	3			Grade of C in CEE 400		
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Course Subject and Title		Upper	Transfer	Minimum Grade if	
(courses in <b>bold/shading</b> are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
TERM EIGHT: 106-120 CREDIT HOURS					
Select remaining 2					# Designates Major Course: A minimum cumulative
# CEE 281: Surveying (3 hrs)					GPA of 2.30 required in all CEE 3XX courses, a
# CEE 412: Pavement Analysis and Design (3 hrs) OR # CEE 483:					minimum cumulative GPA of 2.30 required in all CEE
Highway Materials, Construction and Quality (3 hrs)					4XX courses. NOTE: A maximum of two "D" grades
# CEE 420: Steel Structures (3 hrs) OR # CEE 421: Concrete					are allowed in all 3XX and 4XX courses combined.
Structures (3 hrs)					
# CEE 452: Foundation (3 hrs)					
# CEE 481: Civil Engineering Project (3 hrs)					
# Approved technical elective (3 hrs)	6	$\boxtimes$		Grade of C in each	
#CEE 400: Earth Systems Engineering and Management (HU, H) OR					
Social & Behavioral Science (SB) AND Cultural Diversity in the US				Grade of C in CEE	
(C) or Global Awareness (G) if CEE 400 completed	3			400	
# CEE 486: Integrated Civil Engineering Design (L)	4	$\boxtimes$		Grade of C	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					
US (C) or Global Awareness (G)	3				

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.30 Min. CUM GPA in CEE 3XX, 2.30 min CUM GPA in CEE 4XX))	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

## General University Requirements: Legend

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - Mathematical Studies (MA) 0
  - Computer/Statistics/Quantitative applications (CS) 0
  - Humanities, Fine Arts, and Design (HU) Social and Behavioral Sciences (SB) 0
  - 0
  - Natural Science-Quantitative (SQ) 0
  - 0 Natural Science-General (SG)
- General Studies Awareness Requirements
  - 0 Cultural Diversity in the US (C)
  - Global Awareness (G) 0
  - 0 Historical Awareness (H)
- First-Year Composition .

## **Additional Notes:**



## Major Map: Civil Engineering (Environmental Engineering) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				nsfer Pathway:	Completed General Education:
Course Subject and Title		Upper	Transfer	Minimum Grade if	
(courses in bold/shading are critical) TERM ONE: 0-15 CREDIT HOURS	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first
CEE 100: Intro to Civil and Environmental Engineering OR ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB)	2 or 3			Grade of C in CEE 100	<ul> <li>semester.</li> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition</li> </ul>
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II* (SQ)	4				<ul><li>courses</li><li>ASU Math Placement Exam score determines</li></ul>
MAT 265: Calculus for Engineers I	3			Grade of C	placement in Mathematics course *CHM 113 is a prerequisite and does not apply
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	<ul> <li>toward degree credit.</li> <li>**If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.</li> <li>Maintain minimum ASU cumulative GPA of 2.0</li> </ul>
TERM TWO: 16-30 CREDIT HOURS CEE 100: Intro to Civil and Environmental Engineering OR					Maintain minimum ASU cumulative GPA of
ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB)	2 or 3			Grade of C in CEE 100	2.0
MAT 242: Elementary Linear Algebra	2			Grade of C	
MAT 266: Calculus for Engineers II	3			Grade of C	
PHY 121/122: University Physics I/ Laboratory I (SQ)	3/1			Grade of C	4
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	
TERM THREE: 31-45 CREDIT HOURS					
CEE 210: Engineering Mechanics: Statics	3			Grade of C	<ul> <li>Complete 12 critical courses by end of term 3.</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>
MAT 267: Calculus for Engineers III	3			Grade of C	- 2.0
MAT 275: Modern Differential Equations (MA) PHY 131/132: University Physics II: Electricity and Magnetism/ Laboratory II	3/1			Grade of C Grade of C	Complete First-Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105
TERM FOUR: 46-60 CREDIT HOURS	5/1			Glade of C	
CEE 212: Engineering Mechanics: Dynamics	3			Grade of C	
CEE 213: Introduction to Deformable Solids	3			Grade of C	
MAE 240: Thermofluids I	4				-
Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB), AND Cultural Diversity in the US (C) or Global Awareness (G):	3				
Basic Science Elective	3				
TERM FIVE: 61-75 CREDIT HOURS					
# CEE 384: Numerical Methods for Engineers (CS)	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a
Select 3 # CEE 300: Engineering Business Practice (L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs) # CEE 321: Fluid Mechanics for Civil Engineers (4 hrs) # CEE 351: Geotechnical Engineering (4 hrs) # CEE 353: Civil Engineering Materials (3 hrs) # CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs) IEE 380: Probability and Statistics for Engineering Problem Solving	10 - 12 3			Grade of C in each	minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.
TERM SIX: 76-90 CREDIT HOURS					
Select remaining 4 # CEE 300: Engineering Business Practice(L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs) # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) # CEE 351: Geotechnical Engineering (4 hrs) # CEE 353: Civil Engineering Materials (3 hrs) # CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs)	14 - 16	X		Grade of C in each	# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.
TERM SEVEN: 91-105 CREDIT HOURS					
Select 4 Design/Technical Electives # CEE 440: Engineering Hydrology (3 hrs) # CEE 441: Water Resource Hydrology (3 hrs) # CEE 462: Unit Ops in Environmental Engineering (3 hrs) # CEE 466: San System Design (3 hrs) # CEE 467: Environmental Microbiology (3 hrs) # Approved Technical Elective (3 hrs) # CEE 400: Earth Systems Engineering and Management (HU, H)	12			Grade of C in each	# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.
<ul> <li># CEE 400: Earth Systems Engineering and Management (HU, H)</li> <li>OR</li> <li>Social &amp; Behavioral Science (SB) AND Cultural Diversity in the US</li> <li>(C) or Global Awareness (G)</li> </ul>	3			Grade of C in CEE 400	
(C) of Oloval Awareness (U)	Э		1	Grade OFC III CEE 400	



## Major Map: Civil Engineering (Environmental Engineering) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Title		Upper	Transfer	Minimum Grade if	
(courses in <b>bold/shading</b> are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
TERM EIGHT: 106-120 CREDIT HOURS					
Select remaining 2 Design/Technical Electives					# Designates Major Course: A minimum cumulative
# CEE 440: Engineering Hydrology (3 hrs)					GPA of 2.30 required in all CEE 3XX courses, a
# CEE 441: Water Resource Hydrology (3 hrs)					minimum cumulative GPA of 2.30 required in all CEE
# CEE 462: Unit Ops in Environmental Engineering (3 hrs)					4XX courses. NOTE: A maximum of two "D" grades
# CEE 466: San System Design (3 hrs)					are allowed in all 3XX and 4XX courses combined.
# CEE 467: Environmental Microbiology (3 hrs)					
# Approved Technical Elective (3 hrs)	6	$\boxtimes$		Grade of C in each	
# CEE 400: Earth Systems Engineering and Management (HU, H)					
OR					
Social & Behavioral Science (SB) AND Cultural Diversity in the US				Grade of C in CEE	
(C) or Global Awareness (G) if CEE 400 completed	3			400	
# CEE 486: Integrated Civil Engineering Design (L)	4	$\boxtimes$		Grade of C	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					
US (C) or Global Awareness (G)	3				

#### Graduation Requirements Summary:

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.30 Min. CUM GPA in CEE 3XX, 2.30 min CUM GPA in CEE 4XX))	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

## 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 US (C) Clabel Awareness (C)
  - Global Awareness (G)
     Historical Awareness (H)
- First-Year Composition

#### **Additional Notes:**

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## Major Map: Computer Science – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

	Competed Transfer Pathway:			Completed General Education:		
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	1113.	Division	Course/Grade	Willing of the state of the second	Additional Chical Requirement Potes	
ASU 101-FSE: The ASU Experience	1				<ul> <li>ASU 101-FSE should be completed first</li> </ul>	
# CSE 100: Principles of Programming with C++ (CS) OR					semester.	
# CSE 110: Principles of Programming with Java (CS)	3			Grade of C	An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year	
#CSE 101: Introduction to Computer Science & Engineering	2			Grade of C	composition courses	
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	ASU Math Placement Exam score determines	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					placement in Mathematics course **If ENG 105 a 3 hr applicable elective must also	
ENG 105: Advanced First-Fear Composition * OK ENG 107 or 108: English for Foreign Students	3			Grade of C	be taken prior to graduation. See Advisor.	
					# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.	
Social & Behavioral Science (SB) AND Cultural Diversity in the US					<ul> <li>Maintain minimum ASU cumulative GPA</li> </ul>	
(C), Global Awareness (G) or Historical Awareness (H)	3				of 2.0	
TERM TWO: 16-30 CREDIT HOURS						
# CSE 120: Digital Design Fundamentals	3			Grade of C	Maintain minimum ASU cumulative GPA of	
# CSE 205:Object-Oriented Programming & Data Structures (CS)	3			Grade of C	<b>2.0</b> # Designates Major Course: A minimum	
MAT 266: Calculus for Engineers II	3			Grade of C	cumulative GPA of 2.0 required in major courses.	
BIO 187: General Biology I (SQ) or BIO 188: General Biology II (SQ)	4					
ENG 101 or 102: First-Year Composition OR	4					
ENG 105: Advanced First-Year Composition** OR		_				
ENG 107 or 108: English for Foreign Students	3			Grade of C		
TERM THREE: 31-45 CREDIT HOURS # CSE 230: Computer Organization and Assembly Language					• Complete 9 critical courses by end of term 3	
Programming	3			Grade of C	<ul> <li>Maintain minimum ASU cumulative GPA of</li> </ul>	
MAT 243: Discrete Mathematical Structures	3			Grade of C	2.0	
MAT 267: Calculus for Engineers III	3			Grade of C	<ul> <li>Complete First-Year Composition requirement ENG 101 &amp; 102 or ENG 107 &amp; 108 or ENG 105</li> </ul>	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the						
US (C), Global Awareness (G), or Historical Awareness (H)	3				See Advisor for approved Laboratory Science	
					sequence courses # Designates Major Course: A minimum	
					cumulative GPA of 2.0 required in major courses.	
Laboratory Science I (SQ)	4					
TERM FOUR: 46-60 CREDIT HOURS		1	1			
#CSE 240: Introduction to Programming Languages	3			Grade of C	See Advisor for approved Laboratory Science sequence courses	
# MAT 343: Applied Linear Algebra	3				General Elective: cannot include CSE, MAT,	
Laboratory Science II (SQ)	4				PHY, BIO, CHM or other Science course	
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H)	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.	
General Elective	3				cumulative of required in major courses.	
TERM FIVE: 61-75 CREDIT HOURS			·			
# IEE 380: Probability and Statistics for Engineering Problem Solving	3	$\boxtimes$			# Designates Major Course: A minimum	
# CSE 301: Computing Ethics	1			Grade of C	cumulative GPA of 2.0 required in major courses.	
# CSE 310: Data Structures and Algorithms	3	$\boxtimes$		Grade of C		
# CSE 360: Introduction to Software Engineering	3	$\boxtimes$		Grade of C		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the		[				
US (C), Global Awareness (G), or Historical Awareness (H)	3					
TERM SIX: 76-90 CREDIT HOURS	2			Crada af C	See Advisor for approved list of Technical	
# CSE 340: Principles of Programming Languages	3			Grade of C	Electives	
# CSE 355: Introduction to Theoretical Computer Science # CSE 4** Computer Science Elective	3			Grade of C Grade of C	# Designates Major Course: A minimum	
▲	3				cumulative GPA of 2.0 required in major courses.	
Computer Science Technical Elective UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral	3			Grade of C	1	
Science (SB)	3	$\boxtimes$				
TERM SEVEN: 91-105 CREDIT HOURS						
# CSE 430: Operating Systems	3	$\boxtimes$		Grade of C	See Advisor for approved list of Computer     Saianaa Elastiwaa	
# CSE 485: Computer Science Capstone Project I (L)	3			Grade of C	<ul><li>Science Electives</li><li>General Elective: cannot include CSE, MAT,</li></ul>	
# CSE 4** Computer Science Elective	3			Grade of C	PHY, BIO, CHM or other Science course	
# CSE 4** Computer Science Elective	3			Grade of C	# Designates Major Course: A minimum	
General Elective	2			1	cumulative GPA of 2.0 required in major courses.	



#### Major Map: Computer Science -Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM EIGHT: 106-120 CREDIT HOURS					
# CSE 486: Computer Science Capstone Project II (L)	3	$\boxtimes$		Grade of C	See Advisor for approved list of Technical
# CSE 4** Computer Science Elective	3	$\boxtimes$		Grade of C	Electives # Designates Major Course: A minimum cumulative
# CSE 4** Computer Science Elective	3	$\boxtimes$		Grade of C	GPA of 2.0 required in major courses.
# Computer Science Technical Elective	3	$\boxtimes$		Grade of C	
Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3				

#### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

## **General University Requirements: Legend**

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - Mathematical Studies (MA) 0
  - Computer/Statistics/Quantitative applications (CS) 0
  - Humanities, Fine Arts, and Design (HU) 0
  - Social and Behavioral Sciences (SB) 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C) 0
    - Global Awareness (G) 0 Historical Awareness (H)
  - 0
- First-Year Composition

### **Additional Notes:**



## Major Map: Computer Systems Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

			Competed Tran	nsfer Pathway: TAG □ATP □None	Completed General Education:			
Course Subject and Title		Upper	Transfer	Minimum Grade if				
(courses in <b>bold/shading</b> are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes			
TERM ONE: 0-15 CREDIT HOURS					• Complete CSE 100 or 110, 101; MAT 265			
ASU 101-FSE: The ASU Experience # CSE 100: Principles of Programming with C++ (CS) OR	1				each with a minimum grade of "C"			
# CSE 110: Principles of Programming with Java (CS)	3			Grade of C	<ul> <li>ASU 101-FSE should be completed first</li> </ul>			
# CSE 101: Introduction to Computer Science & Engineering	2			Grade of C	<ul> <li>semester.</li> <li>An SAT, ACT, Accuplacer, or TOEFL score</li> </ul>			
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	determines placement into first-year composition			
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					<ul> <li>courses</li> <li>ASU Math Placement Exam score determines</li> </ul>			
ENG 105: Advanced First-real Composition * OK ENG 107 or 108: English for Foreign Students	3			Grade of C	<ul> <li>ASO Main Placement Exam score determines</li> <li>placement in Mathematics course</li> </ul>			
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H) TERM TWO: 16-30 CREDIT HOURS	3				<ul> <li>**If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.</li> <li># Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.</li> <li>Maintain minimum ASU cumulative GPA of 2.0</li> </ul>			
# CSE 120: Digital Design Fundamentals	3			Grade of C	Maintain minimum ASU cumulative GPA of			
# CSE 205:Object-Oriented Programming & Data Structures (CS)	3			Grade of C	2.0 # Designates Major Course: A minimum			
MAT 266: Calculus for Engineers II	3			Grade of C	cumulative GPA of 2.0 required in major courses.			
BIO 187: General Biology I (SQ) OR BIO 188: General Biology Laboratory II (SQ) ENG 101 or 102: First-Year Composition OR	4				-			
ENG 105: Advanced First-Year Composition** OR								
ENG 107 or 108: English for Foreign Students	3			Grade of C				
TERM THREE: 31-45 CREDIT HOURS			1		• Complete 0 softies los some has and offeren 2			
# CSE 230: Computer Organization and Assembly Language Programming	3			Grade of C	<ul> <li>Complete 9 critical courses by end of term 3</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>			
MAT 243: Discrete Mathematical Structures	3			Grade of C	2.0			
MAT 267: Calculus for Engineers III	3			Grade of C	Complete First-Year Composition requirement     Discrete First-Year Composition requirement     Discrete First-Year Composition requirement			
Shiri 2011 Cureatas for Engineero III					<ul> <li>ENG 101 &amp; 102 or ENG 107 &amp; 108 or ENG 105</li> <li># Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.</li> </ul>			
PHY 121/122: University Physics I/Laboratory I (SQ)	3/1							
TERM FOUR: 46-60 CREDIT HOURS								
# CSE 220: Programming for Computer Engineering	3			Grade of C	# Designates Major Course: A minimum			
MAT 275: Modern Differential Equations	3				cumulative GPA of 2.0 required in major courses.			
PHY 131/132: University Physics II Electricity and Magnetism/Laboratory II (SQ)	3/1				-			
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H) Social & Behavioral Science (SB) AND Cultural Diversity in the US	3				_			
(C), Global Awareness (G) or Historical Awareness (H)	3							
TERM FIVE: 61-75 CREDIT HOURS								
# EEE 202: Circuits I	4				# Designates Major Course: A minimum			
# IEE 380: Probability and Statistics for Engineering Problem Solving	3	$\boxtimes$			cumulative GPA of 2.0 required in major courses.			
# CSE 301: Computing Ethics	1	$\boxtimes$		Grade of C				
# CSE 310: Data Structures and Algorithms	3			Grade of C				
# CSE 360: Introduction to Software Engineering	3	$\boxtimes$		Grade of C				
TERM SIX: 76-90 CREDIT HOURS	1	1						
# EEE 334: Circuits II	4							
# CSE 320: Design and Synthesis of Digital Hardware	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.			
# CSE 325: Embedded Micro Systems	3			Grade of C	cumulative of A of 2.0 required in major courses.			
# MAT 343: Applied Linear Algebra	3							
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3							
TERM SEVEN: 91-105 CREDIT HOURS				, 	·			
# CSE 423: Systems Capstone Project I (L)	3	$\boxtimes$		Grade of C	See Advisor for approved list of CSE Technical			
# CSE 430: Operating Systems	3			Grade of C	Electives			
# CSE Technical Elective	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.			
# CSE Technical Elective	3			Grade of C				
UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3				]			
TERM EIGHT: 106-120 CREDIT HOURS								
# CSE 420: Computer Architecture I	3	$\boxtimes$		Grade of C	See Advisor for approved list of CSE Technical			
# CSE 424: Systems Capstone Project II (L)	3	$\boxtimes$		Grade of C	Electives # Designates Major Course: A minimum			
# CSE 434: Computer Networks	3			Grade of C	cumulative GPA of 2.0 required in major courses.			
# CSE Technical Elective	3			Grade of C				
# CSE Technical Elective	3	$\boxtimes$		Grade of C				
				2 2011 100F				



Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

#### 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 US (C)
    - Global Awareness (G)
  - Historical Awareness (H)
- First-Year Composition



## Major Map: Construction (Concrete Industry Management) – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				ansfer Pathway: □TAG □ATP □None	Completed General Education: AGEC IGETC/CSUGE None	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	1115.	Division	Course/Grade	Minimum Grade in Required	Additional Critical Acquirement Poles	
# ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first	
# CIM 105: Intro to Concrete Industry	2			Grade of C	<ul> <li>semester.</li> <li>An SAT, ACT, Accuplacer, or TOEFL score</li> </ul>	
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	determines placement into first-year	
PHY 111/113: General Physics I/ Laboratory I (SQ)	3/1			Grade of C	composition courses	
# CON 101: Construction and Culture: A Built Environment (HU, G, H) ENG 101 or 102: First-Year Composition OR	3				<ul> <li>ASU Math Placement Exam score determines placement in Mathematics course</li> <li>**If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.</li> </ul>	
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	<ul> <li># Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.</li> <li>Must maintain minimum ASU cumulative GPA of 2.0</li> </ul>	
TERM TWO: 16-30 CREDIT HOURS						
# CIM 106: Concrete Fundamentals	4			Grade of C	Must maintain minimum ASU cumulative GPA	
# CON 243: Heavy Construction Equipment, Methods, Materials	3				of 2.0 # Designates Major Course: A minimum	
# CON 244: Working Drawing Analysis	1				cumulative GPA of 2.0 required in major courses.	
# CON 252: Building Construction Methods, Materials, Equipment	3				-	
STP 226: Elements of Statistics (CS)	3				-	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C		
TERM THREE: 31-45 CREDIT HOURS		1	I			
# CIM 205: Concrete Construction Methods	3			Grade of C	Complete 8 critical courses by end of term     3	
# CON 221 Applied Statics	3				<ul> <li>Must maintain minimum ASU cumulativ</li> </ul>	
# CON 251: Microcomputer Applications for Construction	3				GPA of 2.0	
					Complete First-Year Composition     requirement: ENG 101 & 102 or ENG 107 &	
COM 225: Public Speaking (L)	3				108 or ENG 105	
		_			# Designates Major Course: A minimum	
ECN 211: Macroeconomic Principles (SB)	3				cumulative GPA of 2.0 required in major courses.	
TERM FOUR: 46-60 CREDIT HOURS					# Designates Major Course: A minimum	
# CIM 206: Application of Concrete in Construction	3			Grade of C	cumulative GPA of 2.0 required in major courses.	
# CON 223: Strength of Materials	3					
# CON 271: Construction Safety	3				-	
ECN 212: Microeconomic Principles (SB) Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C)	3					
TERM SUMMER 2 <sup>nd</sup> Year: 1 CREDIT HOUR	-					
# CON 296: Field Internship	1					
TERM FIVE: 61-75 CREDIT HOURS		1	1			
# CIM 305: Management of Concrete Products: Ordering and Delivering	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.	
# CON 383: Construction Estimating	4			Grade of C	Note: maximum of two "D" grades are allowed in	
# CON 241: Surveying	3				all 3XX and 4XX courses combined.	
Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB)	3	$\boxtimes$				
Natural Science: Quantitative (SQ) or General (SG)	4					
TERM SIX: 76-90 CREDIT HOURS			1			
# CIM 306: Management of Concrete Products: Production Facilities	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum	
# CON 389: Construction Cost Accounting and Control (CS)	3			Grade of C	cumulative GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in	
# CON 450: Geotechnical Applications for Construction	3			Grade of C	all 3XX and 4XX courses combined.	
LES 305: Legal, Ethical, Regulatory Issues in Business	3					
TERM SUMMER 3 <sup>rd</sup> Year: 1 CREDIT HOUR						
# CON 484: Internship	1	$\boxtimes$		Grade of C		
TERM SEVEN: 91-105 CREDIT HOURS						
# CIM 405: Concrete Problems: Diagnosis, Prevention, Dispute	3			Grade of C	# Designates Major Course: A minimum	
Upper division CIM Elective	3			Grade of C	cumulative GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in	
# CON 453: Construction Project Management I	4			Grade of C	all 3XX and 4XX courses combined.	
# CON 405, Construction Diaming and Schoduling (CS)		$\boxtimes$		Grade of C		
# CON 495: Construction Planning and Scheduling (CS)	3					
TERM EIGHT: 106-120 CREDIT HOURS	3					
	3			Grade of C	# Designates Major Course: A minimum	
TERM EIGHT: 106-120 CREDIT HOURS				Grade of C Grade of C	cumulative GPA of 2.0 required in major courses.	
TERM EIGHT: 106-120 CREDIT HOURS # CIM 406: Concrete Industry Management	4					

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Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min. CUM GPA )	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

## 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 US (C)
  - o Global Awareness (G)
  - Historical Awareness (H)
- First-Year Composition



## Major Map: Construction (Concrete Industry Management) – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Schicatered Trite			Competed Transfer Pathway:		Completed General Education: AGEC IGETC/CSUGE None	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS						
# ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first	
# CIM 105: Intro to Concrete Industry	2			Grade of C	<ul> <li>semester.</li> <li>An SAT, ACT, Accuplacer, or TOEFL score</li> </ul>	
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	determines placement into first-year	
PHY 111/113: General Physics I/ Laboratory I (SQ)	3/1			Grade of C	composition courses	
# CON 101: Construction and Culture: A Built Environment (HU, G, H)	3				<ul> <li>ASU Math Placement Exam score determines placement in Mathematics course</li> </ul>	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	<ul> <li>**If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.</li> <li># Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.</li> <li>Must maintain minimum ASU cumulative GPA of 2.0</li> </ul>	
TERM TWO: 16-30 CREDIT HOURS						
# CIM 106: Concrete Fundamentals	4			Grade of C	Must maintain minimum ASU cumulative GPA	
# CON 243: Heavy Construction Equipment, Methods, Materials	3				of 2.0 # Designates Major Course: A minimum	
# CON 244: Working Drawing Analysis	1				cumulative GPA of 2.0 required in major courses.	
# CON 252: Building Construction Methods, Materials, Equipment	3				-	
STP 226: Elements of Statistics (CS) ENG 101 or 102: First-Year Composition OR	3				4	
ENG 101 of 102. First-Year Composition 'OK ENG 105: Advanced First-Year Composition** OR						
ENG 107 or 108: English for Foreign Students	3			Grade of C		
TERM THREE: 31-45 CREDIT HOURS				1		
# CIM 205: Concrete Construction Methods	3			Grade of C	Complete 8 critical courses by end of term     3	
# CON 221 Applied Statics	3				Must maintain minimum ASU cumulative	
# CON 251: Microcomputer Applications for Construction	3				<ul> <li>GPA of 2.0</li> <li>Complete First-Year Composition</li> </ul>	
COM 225: Public Speaking (L)	3				<ul> <li>Complete First-Year Composition requirement: ENG 101 &amp; 102 or ENG 107 &amp;</li> </ul>	
					108 or ENG 105	
ECN 211: Macroeconomic Principles (SB)	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.	
TERM FOUR: 46-60 CREDIT HOURS	5				cumulative of 11 of 2.0 required in high courses.	
# CIM 206: Application of Concrete in Construction	3			Grade of C	# Designates Major Course: A minimum	
# CON 223: Strength of Materials	3				cumulative GPA of 2.0 required in major courses.	
# CON 271: Construction Safety	3					
ECN 212: Microeconomic Principles (SB)	3					
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C)	3					
TERM SUMMER 2 <sup>nd</sup> Year: 1 CREDIT HOUR	5					
# CON 296: Field Internship	1					
TERM FIVE: 61-75 CREDIT HOURS			ł			
# CIM 305: Management of Concrete Products: Ordering and Delivering	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum	
# CON 383: Construction Estimating	4			Grade of C	cumulative GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in	
# CON 241: Surveying	3				all 3XX and 4XX courses combined.	
Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB)	3					
Natural Science: Quantitative (SQ) or General (SG)	4					
TERM SIX: 76-90 CREDIT HOURS						
# CIM 306: Management of Concrete Products: Production Facilities	3			Grade of C	# Designates Major Course: A minimum	
# CON 389: Construction Cost Accounting and Control (CS)	3			Grade of C	cumulative GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in	
# CON 450: Geotechnical Applications for Construction	3			Grade of C	all 3XX and 4XX courses combined.	
LES 305: Legal, Ethical, Regulatory Issues in Business	3					
TERM SUMMER 3 <sup>rd</sup> Year: 1 CREDIT HOUR						
# CON 484: Internship	1	$\square$		Grade of C		
TERM SEVEN: 91-105 CREDIT HOURS # CIM 405: Concrete Problems: Diagnosis, Prevention, Dispute	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum	
Upper division CIM Elective	3			Grade of C	cumulative GPA of 2.0 required in major courses.	
# CON 453: Construction Project Management I	4			Grade of C	Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.	
# CON 455: Construction Planning and Scheduling (CS)	3			Grade of C	an srive and treve courses comonica.	
TERM EIGHT: 106-120 CREDIT HOURS			·		·	
# CIM 406: Concrete Industry Management	4	$\boxtimes$		Grade of C	# Designates Major Course: A minimum	
# CON 424: Structural Design	3			Grade of C	cumulative GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in	
# CON 455: Construction Project Management II	3		1	Grade of C	all 3XX and 4XX courses combined.	
# CON 496: Construction Contract Administration (L)	3			Grade of C	]	
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Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min. CUM GPA )	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

## 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 US (C)
  - o Global Awareness (G)
  - Historical Awareness (H)
- First-Year Composition



# Major Map: Construction (General Building Construction) – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

			Competed Trans	sfer Pathway: AG	Completed General Education:
Course Subject and Title		Upper	Transfer	Minimum Grade if	
(courses in <b>bold/shading</b> are critical) TERM ONE: 0-15 CREDIT HOURS	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
# ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	semester.
PHY 111/113: General Physics I/ Laboratory I (SQ)	3/1			Grade of C	An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition
# CON 101: Construction & Culture: A Built Environment (HU, G,					courses
H)	3				ASU Math Placement Exam score determines
# CON 100: Introduction to Construction	2				<ul> <li>placement in Mathematics course</li> <li>**If ENG 105 a 3 hr applicable elective must also</li> </ul>
					be taken prior to graduation. See Advisor.
ENC 101 or 102 Einst View Communities OD					# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					<ul> <li>Maintain minimum ASU cumulative GPA of</li> </ul>
ENG 107 or 108: English for Foreign Students	3			Grade of C	2.0
TERM TWO: 16-30 CREDIT HOURS		1			
# CON 243: Heavy Construction Equipment, Methods, Materials	3			Grade of C	Maintain minimum ASU cumulative GPA of     2.0
# CON 244 : Working Drawing Analysis # CON 252: Building Construction Methods, Materials,	1				# Designates Major Course: A minimum
# CON 252: Building Construction Methods, Materials, Equipment	3				cumulative GPA of 2.0 requiref in major courses
ECN 211: Macroeconomic Principles (SB)	3				]
ENG 101 or 102: First-Year Composition OR					
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	
TERM THREE: 31-45 CREDIT HOURS			•		
# CON 221: Applied Statics	3			Grade of C	• Complete 13 critical courses by end of term 3.
# CON 251: Microcomputer Applications for Construction	3				Maintain minimum ASU cumulative GPA of     2.0
					Complete First-Year Composition requirement:
COM 225: Public Speaking (L)	3				ENG 101 & 102 or ENG 107 & 108 or ENG 105
ECN 212: Microeconomic Principles (SB)	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses
STP 226: Elements of Statistics (CS)	3				of from 2.0 required in major courses
TERM FOUR: 46-60 CREDIT HOURS		ī	i i i i i i i i i i i i i i i i i i i		
# CON 223: Strength of Materials	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required.
# CON 271: Construction Safety	3				Griffor 2.0 required.
# CON 241: Surveying Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the	3				4
US (C)	3				
Science Orgentitation (SO) on Science Constal (SO)	4				]
Science Quantitative (SQ) or Science General (SG)	4				
TERM SUMMER 2 <sup>nd</sup> Year: 1 CREDIT HOUR # CON 296: Field Internship	1				
TERM FIVE: 61-75 CREDIT HOURS	1				
# CON 310: Testing and Materials for Construction	4	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# CON 345: Mechanical Systems	4			Grade of C	GPA of 2.0 required. Note: maximum of two "D"
# CON 273: Electrical Construction Fundamental and Project	-				grades are allowed in all 3XX and 4XX courses combined.
Management	3			Carde of C	4
# CON 383: Construction Estimating Select 1	4			Grade of C	4
# CON 472: Development Feasibility Reports (3 hrs)					
# CON 483: Advanced Building Estimating (3 hrs) REA 380: Real Estate Fundamentals (3 hrs)				Grade of C in CON	
Upper division Elective	3	$\boxtimes$		courses	
TERM SIX: 76-90 CREDIT HOURS			·	·	
# CON 389: Construction Cost Accounting and Control (CS)	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
LES 305: Legal, Ethical, Regulatory Issues in Business	3				GPA of 2.0 required. Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses
Jpper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB)	3				combined.
Upper division Elective	3				1
Select 1 additional course from:					1
# CON 472: Development Feasibility Reports (3 hrs)					
# CON 483: Advanced Building Estimating (3 hrs) REA 380: Real Estate Fundamentals (3 hrs)				Grade of C in CON	
Upper division Elective: (3 hrs)	3	$\boxtimes$		courses	
TERM SUMMER 3 <sup>rd</sup> Year: 1 CREDIT HOUR			· · · · · · · · · · · · · · · · · · ·		
# CON 484: Internship	1	$\boxtimes$		Grade of C	



### Major Map: Construction (General Building Construction) -Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM SEVEN: 91-105 CREDIT HOURS	1115.	Division	courses on de	rtequined	Additional Critical Regulation roles
# CON 450: Geotechnical Applications for Construction	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# CON 453: Construction Project Management I	4	$\square$		Grade of C	GPA of 2.0 required. Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses
# CON 495: Construction Planning and Scheduling (L)	3	$\square$		Grade of C	combined.
Select 1 additional course from: # CON 472: Development Feasibility Reports (3 hrs) # CON 483: Advanced Building Estimating (3 hrs) REA 380: Real Estate Fundamentals (3 hrs) Upper division Elective (3 hrs)	3			Grade of C in CON courses	
TERM EIGHT: 106-120 CREDIT HOURS					
# CON 424: Structural Design	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# CON 455: Construction Project Management II	3	$\boxtimes$		Grade of C	GPA of 2.0 required. Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses
# CON 496: Construction Contract Administration (L)	3	$\boxtimes$		Grade of C	combined.
Select remaining course from: # CON 472: Development Feasibility Reports (3 hrs) # CON 483: Advanced Building Estimating (3 hrs) REA 380: Real Estate Fundamentals (3 hrs) UD Elective (3 hrs)	3			Grade of C in CON courses	

#### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min. CUM GPA )	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

## General University Requirements: Legend

- General Studies Core Requirements:
  - 0
  - Literacy and Critical Inquiry (L) Mathematical Studies (MA) 0
  - Computer/Statistics/Quantitative applications (CS) 0
  - Humanities, Fine Arts, and Design (HU) 0
  - Social and Behavioral Sciences (SB) 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C) 0 Global Awareness (G) 0
  - Historical Awareness (H) 0
- First-Year Composition

#### **Additional Notes:**

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## Major Map: Construction (Heavy Construction) – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				ansfer Pathway: □TAG □ATP □None	Completed General Education: and Comple	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS					· · · · · · · · · · · · · · · · · · ·	
# ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first	
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	<ul> <li>semester.</li> <li>An SAT. ACT. Accuplacer. or TOEFL score</li> </ul>	
PHY 111/113: General Physics I/ Laboratory I (SQ)	3/1			Grade of C	An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year	
# CON 101: Construction and Culture: A Built Environment (HU, G, H)	3				composition courses	
# CON 100: Introduction to Construction	2				<ul> <li>ASU Math Placement Exam score determines placement in Mathematics course</li> </ul>	
	2				<ul> <li>**If ENG 105 a 3 hr applicable elective must</li> </ul>	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students TERM TWO: 16-30 CREDIT HOURS	3			Grade of C	<ul> <li>also be taken prior to graduation. See Advisor.</li> <li># Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses</li> <li>Maintain minimum ASU cumulative GPA of 2.0</li> </ul>	
# CON 243: Heavy Construction Equipment, Methods, Materials	3			Grade of C	Maintain minimum ASU cumulative GPA	
# CON 244: Working Drawing Analysis	1			Shude of C	of 2.0	
# CON 252: Building Construction Methods, Materials, Equipment	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses	
ECN 211: Macroeconomic Principles (SB)	3				cumulative of A of 2.0 required in major courses	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C		
TERM THREE: 31-45 CREDIT HOURS	2				Complete 14 (including labs) critical	
# CON 221: Applied Statics	3			Grade of C	courses by end of term 3.	
# CON 251: Microcomputer Applications for Construction	3				Maintain minimum ASU cumulative GPA     of 2.0	
COM 225: Public Speaking (L)	3				Complete First-Year Composition	
ECN 212: Microeconomic Principles (SB)	3				requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105	
STP 226: Elements of Statistics (CS)	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses	
TERM FOUR: 46-60 CREDIT HOURS	5				Cumumite of it of 2.5 required in major courses	
# CON 223: Strength of Materials	3			Grade of C	# Designates Major Course: A minimum	
# CON 271: Construction Safety	3				cumulative GPA of 2.0 required in major courses	
# CON 241: Surveying	3					
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C)	3					
Science: Quantitative (SQ) or Science General (SG)	4					
TERM SUMMER 2 <sup>nd</sup> Year: 1 CREDIT HOUR		_				
# CON 296: Field Internship	1					
TERM FIVE: 61-75 CREDIT HOURS	r	1		1		
# CON 310: Testing and Materials for Construction	4			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.	
# CON 345: Mechanical Systems # CON 273: Electrical Construction Fundamental and Project	4			Grade of C	Note: maximum of two "D" grades are allowed in	
# CON 275: Electrical Construction Fundamental and Project Management	3				all 3XX and 4XX courses combined.	
# CON 383: Construction Estimating	4			Grade of C		
Select 1: # CON 394: Special Topics: Advanced Heavy Equipment Operations (3 hrs) # CON 394: Special Topics: Environmental Aspects of Heavy Construction (3 hrs) # CON 486: Heavy Construction Estimating (3 hrs) # CON 494: Special Topics: Heavy Construction Earthworks (3 hrs) # CON 494: Special Topics: Heavy Construction Project Management						
(3 hrs):	3	$\boxtimes$		Grade of C	<u> </u>	
TERM SIX: 76-90 CREDIT HOURS						
# CON 389: Construction Cost Accounting and Control (CS)	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.	
LES 305: Legal, Ethical, Regulatory Issues in Business Upper division Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3			Grade of C	Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.	
Select 2 additional: # CON 394: Special Topics: Advanced Heavy Equipment Operations (3 hrs) # CON 394: Special Topics: Environmental Aspects of Heavy Construction (3 hrs) # CON 486: Heavy Construction Estimating (3 hrs) # CON 494: Special Topics: Heavy Construction Earthworks (3 hrs) # CON 494: Special Topics: Heavy Construction Project Management	3			Grade of C		
(3 hrs):	3	$\boxtimes$	I	Grade of C	l	



## Major Map: Construction (Heavy Construction) -Bachelor of Science (B.S.)

Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Title		Upper	Transfer	Minimum Grade if	
(courses in <b>bold/shading</b> are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
TERM SUMMER 3 <sup>rd</sup> Year: 1 CREDIT HOUR		_			
# CON 484: Internship	1	$\boxtimes$		Grade of C	
TERM SEVEN: 91-105 CREDIT HOURS			1	i	
# CON 450: Geotechnical Applications for Construction	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses. Note: maximum
# CON 453: Construction Project Management I	4	$\boxtimes$		Grade of C	of two "D" grades are allowed in all 3XX and 4XX
# CON 495: Construction Planning and Scheduling	3	$\boxtimes$		Grade of C	courses combined.
Select 1 additional: # CON 394: Special Topics: Advanced Heavy Equipment Operations (3 hrs) # CON 394: Special Topics: Environmental Aspects of Heavy Construction (3 hrs) # CON 486: Heavy Construction Estimating (3 hrs) # CON 494: Special Topics: Heavy Construction Earthworks (3 hrs) # CON 494: Special Topics: Heavy Construction Project Management (3 hrs):	3			Grade of C	
TERM EIGHT: 106-120 CREDIT HOURS					
# CON 424: Structural Design	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# CON 455: Construction Project Management II	3			Grade of C	GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in all 3XX and 4XX
# CON 496: Construction Contract Administration (L)	3			Grade of C	courses combined.
Select remaining course: # CON 394: Special Topics: Advanced Heavy Equipment Operations (3 hrs) # CON 394: Special Topics: Environmental Aspects of Heavy Construction (3 hrs) # CON 486: Heavy Construction Estimating (3 hrs) # CON 494: Special Topics: Heavy Construction Earthworks (3 hrs) # CON 494: Special Topics: Heavy Construction Project Management (3 hrs):	3			Grade of C	

#### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min. CUM GPA )	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

#### **General University Requirements: Legend** ٠

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - Mathematical Studies (MA) 0
  - Computer/Statistics/Quantitative applications (CS) Humanities, Fine Arts, and Design (HU) 0
  - 0
  - Social and Behavioral Sciences (SB) 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C) 0
  - 0 Global Awareness (G)
  - Historical Awareness (H) 0
- First-Year Composition ٠



# Major Map: Construction (Residential Construction) – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

			Competed Transf		Completed General Education:
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM ONE: 0-15 CREDIT HOURS	nis.	Division	Course/Grade	Required	Additional Critical Requirement Notes
# ASU 101-FSE: The ASU Experience	1				<ul> <li>ASU 101-FSE should be completed first</li> </ul>
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	semester.
PHY 111/113: General Physics I/Laboratory I (SQ)	3/1			Grade of C	An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year
# CON 101: Construction & Culture: A Built Environment (HU, G,					composition courses
H)	3				ASU Math Placement Exam score determines
# CON 100: Introduction to Construction	2				<ul> <li>placement in Mathematics course</li> <li>**If ENG 105 a 3 hr applicable elective must</li> </ul>
					also be taken prior to graduation. See Advisor. # Designates Major Course: A minimum
ENG 101 or 102: First-Year Composition OR					cumulative GPA of 2.0 required in major courses.
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	Maintain minimum ASU cumulative GPA     of 2.0
TERM TWO: 16-30 CREDIT HOURS	5			Shude of C	
# CON 243: Heavy Construction Equipment, Methods, Materials	3			Grade of C	Maintain minimum ASU cumulative GPA of
# CON 244: Working drawing Analysis	1				
# CON 252: Building Construction Methods, Materials, Equipment	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.
ECN 211: Macroeconomic Principles (SB)	3				
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					
ENG 107 or 108: English for Foreign Students	3			Grade of C	
TERM THREE: 31-45 CREDIT HOURS					• Complete 14 emitiaal countries by and of tour
# CON 221: Applied Statics	3			Grade of C	• Complete 14 critical courses by end of term 3.
# CON 251: Microcomputer Applications for Construction	3				Maintain minimum ASU cumulative GPA
COM 225: Public Speaking (L)	3				<ul><li>of 2.0</li><li>Complete First-Year Composition</li></ul>
	3				requirement: ENG 101 & 102 or ENG 107 &
ECN 212: Microeconomic Principles (SB)	3				108 or ENG 105
STP 226: Elements of Statistics (CS)	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.
TERM FOUR: 46-60 CREDIT HOURS					
# CON 223: Strength of Materials	3			Grade of C	# Designates Major Course: A minimum
# CON 271: Construction Safety	3				cumulative GPA of 2.0 required in major courses.
# CON 241: Surveying	3				
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C)	3				
Science Quantitative (SQ) or Science General (SG)	4				
TERM SUMMER 2 <sup>nd</sup> Year: 1 CREDIT HOUR	4				
# CON 296: Field Internship	1				
TERM FIVE: 61-75 CREDIT HOURS					l.
# CON 310: Testing and Materials for Construction	4	$\boxtimes$		Grade of C	# Designates Major Course: A minimum
# CON 345: Mechanical Systems	4			Grade of C	cumulative GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in
# CON 273: Electrical Construction Fundamental and Project		_			all 3XX and 4XX courses combined.
Management	3			C 1 50	4
# CON 383: Construction Estimating Select 1	4			Grade of C	-
# CON 377: Residential Construction Production Procedures (3 hrs) # CON 477: Residential Construction Business Practices (3 hrs)					
REA 380: Real Estate Fundamentals (3 hrs)		E.		Grade of C in CON	
Upper division elective (3 hrs)	3	$\square$	 	courses	
TERM SIX: 76-90 CREDIT HOURS	2			Crada of C	# Designates Major Course: A minimum
# CON 389: Construction Cost Accounting and Control (CS) LES 305: Legal, Ethical, Regulatory Issues in Business	3			Grade of C	cumulative GPA of 2.0 required in major courses.
LES 305: Legal, Ethical, Regulatory Issues in Business Select 1 additional course from: # CON 377: Residential Construction Production Procedures (3 hrs)	3				Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.
# CON 477: Residential Construction Business Practices (3 hrs)	1				
REA 380: Real Estate Fundamentals (3 hrs)	2			Grade of C in CON	
Upper division elective (3 hrs) Upper division Humanities, Fine Arts & Design (HU) OR	3			courses	1
Social & Behavioral Science (SB)	3				1
Upper division Elective	3	$\boxtimes$			
TERM SUMMER 3 <sup>rd</sup> Year: 1 CREDIT HOUR			1		
# CON 484: Internship	1	$\boxtimes$		Grade of C	



### Major Map: Construction (Residential Construction) -**Bachelor of Science (B.S.)** Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM SEVEN: 91-105 CREDIT HOURS					
# CON 450: Geotechnical Applications for Construction	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# CON 453: Construction Project Management I	4			Grade of C	GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in all 3XX
# CON 495: Construction Planning and Scheduling	3			Grade of C	and 4XX courses combined.
Select 1 additional course from: # CON 377: Residential Construction Production Procedures (3 hrs) # CON 477: Residential Construction Business Practices (3 hrs) REA 380: Real Estate Fundamentals (3 hrs) Upper division elective (3 hrs)	3			Grade of C in CON courses	
TERM EIGHT: 106-120 CREDIT HOURS					
# CON 424: Structural Design	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# CON 455: Construction Project Management II	3	$\boxtimes$		Grade of C	GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in all 3XX
# CON 496: Construction Contract Administration (L)	3	$\boxtimes$		Grade of C	and 4XX courses combined.
Select remaining course from: # CON 377: Residential Construction Production Procedures (3 hrs) # CON 477: Residential Construction Business Practices (3 hrs) REA 380: Real Estate Fundamentals (3 hrs)				Grade of C in	
Upper division elective (3 hrs)	3			CON courses	

### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min. CUM GPA )	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

#### General University Requirements: Legend ٠

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - Mathematical Studies (MA) 0
  - Computer/Statistics/Quantitative applications (CS) 0
  - Humanities, Fine Arts, and Design (HU) 0
  - Social and Behavioral Sciences (SB) 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements Cultural Diversity in the US (C)
  - 0
  - Global Awareness (G) 0
  - 0 Historical Awareness (H)
- First-Year Composition .



## Major Map: Construction (Specialty Construction) – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				nsfer Pathway: TAG □ATP □None	Completed General Education:	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	1115.	Biviolon	Courses on add	Itequileu	Additional Critical Requirement Proces	
# ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first	
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	semester.	
PHY 111/113: General Physics I/ Laboratory I (SQ)	3/1			Grade of C	An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year	
# CON 101: Construction and Culture: A Built Environment (HU, G,					composition courses	
	3				<ul> <li>ASU Math Placement Exam score determines placement in Mathematics course</li> </ul>	
# CON 100: Introduction to Construction	2				**If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					<ul> <li># Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>	
ENG 107 or 108: English for Foreign Students	3			Grade of C	2.0	
TERM TWO: 16-30 CREDIT HOURS			<u>.</u>			
# CON 243: Heavy Construction Equipment, Methods, Materials	3			Grade of C	Maintain minimum ASU cumulative GPA of	
# CON 244: Working Drawing Analysis # CON 252: Building Construction Methods, Materials, Equipment					2.0 # Designates Major Course: A minimum	
					cumulative GPA of 2.0 required in major courses.	
ECN 211: Macroeconomic Principles (SB)	3				_	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C		
TERM THREE: 31-45 CREDIT HOURS	5			Glade of C		
	2			Crude of C	• Complete 13 critical courses by end of term 3	
# CON 221: Applied Statics	3			Grade of C	Maintain minimum ASU cumulative GPA of	
# CON 251: Microcomputer Applications for Construction	3				2.0     Complete First-Year Composition requirement:	
COM 225: Public Speaking (L)	3				ENG 101 & 102 or ENG 107 & 108 or ENG	
ECN 212: Microeconomic Principles (SB)	3				105 # Designates Major Course: A minimum	
STP 226: Elements of Statistics (CS)	3				cumulative GPA of 2.0 required in major courses.	
TERM FOUR: 46-60 CREDIT HOURS			<u>.</u>			
# CON 223: Strength of Materials	3			Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses	
# CON 271: Construction Safety	3				cumulative of A of 2.0 required in major courses.	
# CON 241: Surveying Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C)	3				-	
Science Quantitative (SQ) or Science General (SG)	4				-	
TERM SUMMER 2 <sup>nd</sup> Year: 1 CREDIT HOUR	4		Į.			
# CON 296: Field Internship	1					
TERM FIVE: 61-75 CREDIT HOURS			I.			
# CON 310: Testing and Materials for Construction	4	$\boxtimes$		Grade of C	# Designates Major Course: A minimum	
# CON 345: Mechanical Systems	4	$\boxtimes$		Grade of C	cumulative GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in	
# CON 273: Electrical Construction Fundamental and Project Management	3				all 3XX and 4XX courses combined.	
# CON 383: Construction Estimating	4			Grade of C	_	
Select 1 # CON 468: Mechanical and Electrical Estimating (3 hrs) # CON 471: Mechanical and Electrical Project (3 hrs)						
# CON 494: Special Topics: Cleanroom Construction (3 hrs) Upper division elective (3 hrs)	3			Grade of C in CON Courses		
TERM SIX: 76-90 CREDIT HOURS		تت ا	'			
# CON 389: Construction Cost Accounting and Control (CS)	3			Grade of C	# Designates Major Course: A minimum	
LES 305: Legal, Ethical, Regulatory Issues in Business	3				cumulative GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in	
Select 1 additional course from: # CON 468: Mechanical and Electrical Estimating (3 hrs) # CON 471: Mechanical and Electrical Project (3 hrs)					all 3XX and 4XX courses combined.	
# CON 494: Special Topics: Cleanroom Construction (3 hrs) Upper division elective (3 hrs)	3			Grade of C in CON Courses		
Upper division Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3					
Upper division elective	3				1	
TERM SUMMER 3 <sup>rd</sup> Year: 1 CREDIT HOUR						
# CON 484: Internship	1	$\boxtimes$		Grade of C		



### Major Map: Construction (Specialty Construction) -Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM SEVEN: 91-105 CREDIT HOURS					
# CON 450: Geotechnical Applications for Construction	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# CON 453: Construction Project Management I	4	$\boxtimes$		Grade of C	GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in all 3XX and 4XX
# CON 495: Construction Planning and Scheduling	3	$\boxtimes$		Grade of C	courses combined.
Select 1 additional course from: # CON 468: Mechanical and Electrical Estimating (3 hrs) # CON 471: Mechanical and Electrical Project (3 hrs) # CON 494: Special Topics: Cleanroom Construction (3 hrs) Upper division elective (3 hrs)	3	$\boxtimes$		Grade of C in CON Courses	
TERM EIGHT: 106-120 CREDIT HOURS					
# CON 424: Structural Design	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative
# CON 455: Construction Project Management II	3	$\boxtimes$		Grade of C	GPA of 2.0 required in major courses. Note: maximum of two "D" grades are allowed in all 3XX and 4XX
# CON 496: Construction Contract Administration	3	$\boxtimes$		Grade of C	courses combined.
Select remaining course from: # CON 468: Mechanical and Electrical Estimating (3 hrs) # CON 471: Mechanical and Electrical Project (3 hrs) # CON 494: Special Topics: Cleanroom Construction (3 hrs) Upper division elective (3 hrs)	3			Grade of C in CON Courses	

## Graduation Requirements Summary:

Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min. CUM GPA )	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

## General University Requirements: Legend

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - 0
  - Mathematical Studies (MA) Computer/Statistics/Quantitative applications (CS) 0
  - Humanities, Fine Arts, and Design (HU) Social and Behavioral Sciences (SB) 0
  - 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements Cultural Diversity in the US (C)
  - 0 Global Awareness (G)
  - 0 0 Historical Awareness (H)
  - First-Year Composition

#### **Additional Notes:**

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## Major Map: Electrical Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				nsfer Pathway: TAG □ATP □None	Completed General Education:
Course Subject and Title	Hea	Upper	Transfer	Minimum Grade if Required	Additional Critical Requirement Notes
(courses in bold/shading are critical) TERM ONE: 0-15 CREDIT HOURS	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
ASU 101-FSE: The ASU Experience	1				Complete MAT 265 with a minimum grade of
CHM 114: General Chemistry for Engineers (SQ) OR					- "C".
CHM 116: General Chemistry II * (SQ)	4				<ul> <li>ASU 101-FSE should be completed first semester.</li> <li>An SAT, ACT, Accuplacer, or TOEFL score</li> </ul>
# CSE 100: Principles of Programming with C++ (CS) OR # EEE 120: Digital Design Fundamentals	3				determines placement into first-year composition
# EEE 101: Introduction to Engineering Design OR	2 or				<ul> <li>courses</li> <li>ASU Math Placement Exam score determines</li> </ul>
BME 111: Engineering Perspectives on Biological Systems	3				placement in Mathematics course
MAT 265: Calculus for Engineers I	3			Grade of C	* CHM 113 is a prerequisite and does not apply
					towards degree credit **If ENG 105 a 3 hr applicable elective must also be
ENG 101 and 102: First-Year Composition OR					taken prior to graduation. See Advisor. # Designates Major Course: A minimum cumulative
ENG 107 and 108: English for Foreign Students OR		_			GPA of 2.0 required in major courses.
ENG 105: Advanced First-Year Composition **	3			Grade of C	• Maintain minimum ASU cumulative GPA of 2.0
<b>TERM TWO: 16-30 CREDIT HOURS</b> # CSE 100: Principles of Programming with C++ (CS) OR		1			Ministry AGU LAS ODA 644
# EEE 120: Digital Design Fundamentals	3				Maintain minimum ASU cumulative GPA of 2.0     # Designates Major Course: A minimum cumulative
# EEE 101: Introduction to Engineering Design OR	2 or				GPA of 2.0 required in major courses.
BME 111: Engineering Perspectives on Biological Systems	3				-
MAT 266: Calculus for Engineers II	3			Grade of C	4
PHY 121/122: University Physics I/Laboratory I (SQ) ENG 101 and 102: First-Year Composition OR	3/1			Grade of C	4
ENG 107 and 102: First-Fear Composition OK ENG 107 and 108: English for Foreign Students OR					
ENG 105: Advanced First-Year Composition **	3			Grade of C	
TERM THREE: 31-45 CREDIT HOURS					
# EEE 202: Circuits I	4				<ul> <li>Complete 10 critical courses by end of term 3</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>
MAT 267: Calculus for Engineers III	3			Grade of C	
MAT 274: Elementary Differential Equations (MA) OR					Complete First-Year Composition requirement:
MAT 275: Modern Differential Equations (MA)	3			Grade of C	ENG 101 & 102 or ENG 107 & 108 or ENG 105 # Designates Major Course: A minimum cumulative
PHY 131/132: University Physics II Electricity and Magnetism/					GPA of 2.0 required in major courses.
Laboratory II (SQ)	3/1			Grade of C	
TERM FOUR: 46-60 CREDIT HOURS					# Designates Major Course: A minimum cumulative
# EEE 203: Signals and Systems I	3				GPA of 2.0 required in major courses.
# EEE 241: Fundamentals of Electromagnetics MAT 342: Linear Algebra (MA) OR	3				-
MAT 343: Applied Linear Algebra	3	$\boxtimes$		Grade of C	
PHY 241: University Physics III	3			Grade of C	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					
US (C), Global Awareness (G) or Historical Awareness (H)	3				
TERM FIVE: 61-75 CREDIT HOURS # EEE 334: Circuits II	4				• Area Pathway Courses: (choose 4) EEE 304,
# EEE 354. Circuits II # EEE 350: Random Signal Analysis	3				333, 335, 341, 352, 360. Area Pathway courses
# EEE 230: Computer Organization and Assembly Language	5				are prerequisites for Technical Electives. See
Programming	3				Advisor for guidance in selection. # Designates Major Course: A minimum cumulative
# Area Pathway Course	4	$\boxtimes$			GPA of 2.0 required in major courses.
TERM SIX: 76-90 CREDIT HOURS			<u>.</u>		
ECN 211/212 (SB): Macroeconomic Principles/Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB)	3				• Area Pathway Courses: (choose 4) EEE 304,
# Area Pathway Course	4				333, 335, 341, 352, 360. Area Pathway courses are prerequisites for Technical Electives. See
# Area Pathway Course	4				Advisor for guidance in selection.
# Area Pathway Course # Area Pathway Course	4		1	1	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.
# Area Pathway Course TERM SEVEN: 91-105 CREDIT HOURS	4				Gi / OI 2.0 requirea in major courses.
# EEE 488: Senior Design Laboratory I (L)	3	$\boxtimes$			See Degree Audit Reporting System (DARS) for
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the			1		approved list of Technical Electives
US (C), Global Awareness (G) or Historical Awareness (H)	3			-	# Designates Major Course: A minimum cumulative GPA of 2.0 required in major courses.
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3				GIA 01 2.0 required in major coulses.
# Technical Elective			1	1	1
	3	I XI	1	-	1
	3				
# Technical Elective	3				
# Technical Elective TERM EIGHT: 106-120 CREDIT HOURS	3				See Degree Audit Reporting System (DARS) for
# Technical Elective <b>TERM EIGHT: 106-120 CREDIT HOURS</b> # EEE 489: Senior Design Laboratory II (L)	3				approved list of Technical Electives
# Technical Elective <b>TERM EIGHT: 106-120 CREDIT HOURS</b> # EEE 489: Senior Design Laboratory II (L) # Technical Elective	3 3 3				approved list of Technical Electives # Designates Major Course: A minimum cumulative
# Technical Elective <b>TERM EIGHT: 106-120 CREDIT HOURS</b> # EEE 489: Senior Design Laboratory II (L) # Technical Elective # Technical Elective	3 3 3 3 3				approved list of Technical Electives
<ul> <li># Technical Elective</li> <li>TERM EIGHT: 106-120 CREDIT HOURS</li> <li># EEE 489: Senior Design Laboratory II (L)</li> <li># Technical Elective</li> <li># Technical Elective</li> <li># Technical Elective</li> <li>UD Humanities, Fine Arts &amp; Design (HU) OR Social Behavioral &amp;</li> </ul>	3 3 3 3 3			0-2011 1019	approved list of Technical Electives # Designates Major Course: A minimum cumulative



Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

### **General University Requirements: Legend**

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - Mathematical Studies (MA) 0
  - Computer/Statistics/Quantitative applications (CS) 0
  - Humanities, Fine Arts, and Design (HU) Social and Behavioral Sciences (SB) 0
  - 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
  - General Studies Awareness Requirements
    - Cultural Diversity in the US (C) 0
    - Global Awareness (G) 0
    - 0 Historical Awareness (H)
  - First-Year Composition

#### **Additional Notes:**

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## Major Map: Electrical Engineering (Electric Power and Energy Systems) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

			Competed Tran	nsfer Pathway: TAG □ATP □None	Completed General Education:
Course Subject and Title		Upper	Transfer	Minimum Grade if	
(courses in bold/shading are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
TERM ONE: 0-15 CREDIT HOURS ASU 101-FSE: The ASU Experience	1				• ASU 101-FSE should be completed first semester.
CHM 114: General Chemistry for Engineers OR	1				<ul> <li>An SAT, ACT, Accuplacer, or TOEFL score</li> </ul>
CHM 116: General Chemistry II *	4				determines placement into first-year composition courses
# CSE 100: Principles of Programming with C++ (CS) OR # EEE 120: Digital Design Fundamentals	3				<ul> <li>ASU Math Placement Exam score determines</li> </ul>
# EEE 101: Introduction to Engineering Design OR	2 or				placement in Mathematics course
BME 111: Engineering Perspectives on Biological Systems	3				* CHM 113 is a prerequisite and does not apply towards degree credit
MAT 265: Calculus for Engineers I	3			Grade of C	**If ENG 105 a 3 hr applicable elective must also be
ENC 101 of 102 First Very Commentitien, OD					taken prior to graduation. See Advisor. # Designates Major course: A minimum cumulative
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					GPA of 2.0 required in major courses.
ENG 107 or 108: English for Foreign Students	3			Grade of C	Maintain minimum ASU cumulative GPA of 2.0
TERM TWO: 16-30 CREDIT HOURS		1	I	T	
# CSE 100: Principles of Programming with C++ (CS) OR # EEE 120: Digital Design Fundamentals	3				Maintain minimum ASU cumulative GPA of 2.0     # Designates Major course: A minimum cumulative
# EEE 101: Introduction to Engineering Design OR	2 or				GPA of 2.0 required in major courses.
BME 111: Engineering Perspectives on Biological Systems	3				
MAT 266: Calculus for Engineers II	3			Grade of C	
PHY 121/122: University Physics I/ Laboratory I (SQ)	3/1			Grade of C	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					
ENG 107 or 108: English for Foreign Students	3			Grade of C	
TERM THREE: 31-45 CREDIT HOURS					
# EEE 202: Circuits I	4				Complete 10 critical courses (including labs) by
MAT 267: Calculus for Engineers III	3			Grade of C	end of term 3 • Maintain minimum ASU cumulative GPA of 2.0
MAT 274: Elementary Differential Equations (MA) OR MAT 275: Modern Differential Equations (MA)	3			Grade of C	Complete First-Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105
PHY 131/132: University Physics II Electricity and Magnetism/ Laboratory II (SQ)	3/1			Grade of C	# Designates Major course: A minimum cumulative GPA of 2.0 required in major courses.
TERM FOUR: 46-60 CREDIT HOURS		1	1	1	
# EEE 203: Signals and Systems I	3				# Designates Major course: A minimum cumulative GPA of 2.0 required in major courses.
# EEE 241: Fundamentals of Electromagnetics MAT 342: Linear Algebra OR	3				or recizio requirea in impor courses.
MAT 342. Elliear Algebra OK MAT 343: Applied Linear Algebra	3			Grade of C	
PHY 241: University Physics III	3			Grade of C	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					
US (C), or Historical Awareness (H)	3				
<b>TERM FIVE: 61-75 CREDIT HOURS</b> # EEE 230: Computer Organization and Assembly Language					# Designates Major course: A minimum cumulative
Programming	3				GPA of 2.0 required in major courses.
# EEE 334: Circuits II	4				
# EEE 350: Random Signal Analysis	3				
# EEE 360: Energy Systems and Power Electronics	4	$\boxtimes$			
TERM SIX: 76-90 CREDIT HOURS					
ECN 211/212 (SB): Macroeconomic Principles/Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB)	3				• Area Pathway Courses: (choose 3) EEE 304, 333, 335, 341, 352. Area Pathway courses are
# Area Pathway Course	4				prerequisites for Technical Electives. See Advisor
# Area Pathway Course	4				for guidance in selection. # Designates Major course: A minimum cumulative
# Area Pathway Course	4				GPA of 2.0 required in major courses.
TERM SEVEN: 91-105 CREDIT HOURS				•	
# EEE 488: Senior Design Laboratory I (L)	3	$\boxtimes$			# Designates Major course: A minimum cumulative
Select 2 # EEE 460: Nuclear Concepts for the 21 <sup>st</sup> Century (3 hrs) # EEE 463: Electrical Power Plant (3 hrs) # EEE 470: Electric Power Devices (3 hrs) # EEE 471: Power System Analysis (3 hrs) # EEE 473: Electrical Machinery (3 hrs) # EEE 498: Pro-Seminar (Power Elec.) (3 hrs)					GPA of 2.0 required in major courses.
# EEE 498: Pro-Seminar (Solar Energy) (3 hrs)	6				
GCU 364: Energy in the Global Arena (SB, G)	3				
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), or Historical Awareness (H)	3				
US (U), UI HISIUIICAI AWAICIICSS (II)	5		L	1	1



## Major Map: Electrical Engineering (Electric Power and Energy Systems) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Title (courses in bold/shading are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM EIGHT: 106-120 CREDIT HOURS						
# EEE 489: Senior Design Laboratory II (L)	3	$\boxtimes$			See Degree Audit Reporting System (DARS) for	
Select 1 not previously selected: # EEE 460: Nuclear Concepts for the 21 <sup>st</sup> Century (3 hrs) # EEE 463: Electrical Power Plant (3 hrs) # EEE 470: Electric Power Devices (3 hrs) # EEE 471: Power System Analysis (3 hrs) # EEE 473: Electrical Machinery (3 hrs) # EEE 498: Pro-Seminar (Power Elec.) (3 hrs) # EEE 498: Pro-Seminar (Solar Energy) (3 hrs)	3	$\boxtimes$			approved list of Technical Electives # Designates Major course: A minimum cumulative GPA of 2.0 required in major courses.	
# Technical Elective	3	$\boxtimes$				
# Technical Elective	3	$\boxtimes$				
Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3					

#### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

#### 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 US (C)
    - o Global Awareness (G)
  - Historical Awareness (H)
- First-Year Composition

#### Additional Notes:



## Major Map: Engineering Special Studies (Pre-medical Engineering) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				nsfer Pathway: TAG □ATP □None	Completed General Education:
Course Subject and Title	Hee	Upper Division	Transfer	Minimum Grade if	Additional Critical Requirement Notes
(courses in bold/shading are critical) TERM ONE: 0-15 CREDIT HOURS	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
ASU 101-FSE: The ASU Experience	1				An SAT, ACT, Accuplacer, or TOEFL score
BME 100: Introduction to Bioengineering OR	2 or				determines placement into first-year composition
BIO 181: General Biology II (CS)	4			Grade of C	<ul> <li>ASU Math Placement Exam score determines</li> </ul>
MAT 265: Calculus for Engineers I	3		-	Grade of C	placement in Mathematics course
CHM 113: General Chemistry I (SQ) ENG 101 or 102: First-Year Composition OR	4			Grade of C	** If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
ENG 101 of 102: First-Year Composition OK ENG 105: Advanced First-Year Composition** OR					Maintain minimum ASU cumulative GPA of
ENG 107 or 108: English for Foreign Students	3			Grade of C	2.0
TERM TWO: 16-30 CREDIT HOURS	-	1			
BME 100: Introduction to Bioengineering OR BIO 181: General Biology II (SQ)	2 or 4			Grade of C	Maintain minimum ASU cumulative GPA of 2.0
CHM 116: General Chemistry II (SQ)	4			Grade of C	2.0
MAT 266: Calculus for Engineers II	3			Grade of C	7
PHY 121/122: University Physics I/ Laboratory I (SQ)	3/1			Grade of C	
ENG 101 or 102: First-Year Composition OR	5/1				1
ENG 105: Advanced First-Year Composition** OR	2			0 1 60	
ENG 107 or 108: English for Foreign Students	3			Grade of C	
TERM THREE: 31-45 CREDIT HOURS	4			Grada of C	• Complete 11 critical courses by end of term 3
BME 235: Physiology for Engineers PHY 131/132: University Physics II Electricity and	4			Grade of C	<ul> <li>Complete IT critical courses by end of term 5</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>
Magnetism/Laboratory II (SQ)	3/1			Grade of C	<b>2.0</b>
CHM 233/237: General Organic Chemistry I/Laboratory I	3/1			Grade of C	Complete First-Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG
					105
CSE 100: Principles of Programming with C++ (CS)	3				
TERM FOUR: 46-60 CREDIT HOURS					
BME 200: Conservation Principles in Bioengineering	3			Grade of C	_
EEE 202: Circuits I	4			Grade of C	-
MAE 212: Engineering Mechanics	4			Grade of C	4
MAT 275: Modern Differential Equations (MA) CHM 234/238: General Organic Chemistry II/Laboratory II OR	3			Grade of C	-
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the	4 or			Grade of C in CHM	
US (C), Global Awareness (G) or Historical Awareness (H)	3			234/238	
TERM FIVE: 61-75 CREDIT HOURS	1				
# BME 318: Biomaterials	4		-		# Designates Major Course: A minimum cumulative GPA of 2.0 required.
# BME 350: Signals and Systems for Bioengineering	3				
# CHM 341: Elementary Physical Chemistry	3			Grade of C	-
# MAT 343: Applied Linear Algebra Social & Behavioral Science (SB) AND Cultural Diversity in the US	3				-
(C), Global Awareness (G) or Historical Awareness (H)	3				
TERM SIX: 76-90 CREDIT HOURS					
# BME 300: Bioengineering Product Design	3	$\boxtimes$		Grade of C	# Designates Major Course: A minimum
# BME 331: Bioengineering Transport Phenomena	3	$\boxtimes$			cumulative GPA of 2.0 required.
# BME 370: Microcomputer Applications in Bioengineering	3				
CHM 234/238: General Organic Chemistry II/Laboratory II OR Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					
US (C), Global Awareness (G) or Historical Awareness (H) if CHM	4 or			Grade of C in CHM	
234/238 completed	3			234/238	4
# IEE 380: Probability and Statistics for Engineering Problem Solving	3				l
TERM SEVEN: 91-105 CREDIT HOURS		_			# Designates Main Courses A
# BME 413: Biomedical Instrumentation (BME 413 + 423 = L)	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required.
# BME 417: Biomedical Engineering Capstone Design I (L)	4			Grade of C	
# BME 423: Biomedical Instrumentation Laboratory # BME 434: Applications of Bioengineering OR	1		1		4
# BME 434: Applications of Bioengineering OR # BME 416: Biomechanics OR	1				
# BME 419: Biocontrol Systems	3			-	4
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3				
TERM EIGHT: 106-120 CREDIT HOURS	3				
	4	$\boxtimes$			# Designates Major Course: A minimum
# BME 400: Biomedical Engineering Constant Design II	. 4		-	1	cumulative GPA of 2.0 required.
# BME 490: Biomedical Engineering Capstone Design II Humanities. Fine Arts & Design (HU) AND Cultural Diversity in the					culturative Of A of 2.0 required.
# BME 490: Biomedical Engineering Capstone Design II Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3				
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					



## Major Map: Engineering Special Studies (Pre-medical Engineering) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min. CUM GPA )	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

## 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 US (C)
    - o Global Awareness (G)
    - Historical Awareness (H)
  - First-Year Composition



# Major Map: Industrial Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				nsfer Pathway: TAG □ATP □None	Completed General Education:
Course Subject and Title (courses in bold/shading are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM ONE: 0-15 CREDIT HOURS	1115.	Division	Course/Grade	Required	Additional Critical Requirement Notes
ASU 101-FSE: The ASU Experience	1				ASU 101-FSE should be completed first
IEE 100: Intro to Engineering Design OR					<ul><li>semester.</li><li>An SAT, ACT, Accuplacer, or TOEFL score</li></ul>
CSE 110: Principles of Programming with Java (or CSE 100: Principles of Programming with C++ ) (CS)	2 or 3			Grade of C	determines placement into first-year composition
BME 111: Engineering Perspectives on Biological Systems	3			Glade of C	courses
MAT 265: Calculus for Engineers I	3			Grade of C	ASU Math Placement Exam score determines     placement in Mathematics course
ENG 101 or 102: First-Year Composition OR					** If ENG 105 a 3 hr applicable elective must also
ENG 105: Advanced First-Year Composition** OR				0 1 60	be taken prior to graduation. See Advisor.
ENG 107 or 108: English for Foreign Students Social & Behavioral Science (SB) AND Cultural Diversity in the US	3			Grade of C	Maintain minimum ASU cumulative GPA of 2.0
(C), Global Awareness (G) or Historical Awareness (H)	3				2.0
TERM TWO: 16-30 CREDIT HOURS					
IEE 100: Intro to Engineering Design OR					Maintain minimum ASU cumulative GPA of
CSE 110: Principles of Programming with Java (or CSE 100: Principles of Programming with C++) (CS)	2 or 3			Grade of C	2.0
MAT 266: Calculus for Engineers II	3			Grade of C	
PHY 121/122: University Physics I/ Laboratory I (SQ)	3/1			Grade of C	1
ENG 101 or 102: First-Year Composition OR				1	1
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	
TERM THREE: 31-45 CREDIT HOURS	, , , , , , , , , , , , , , , , , , ,		I		
ECN 211: Macroeconomic Principles (SB)	3				• Complete 9 critical courses by end of term 3
CSE 205: Object-Oriented Programming and Data Structures (CS)	3				Maintain minimum ASU cumulative GPA of
IEE 210: Introduction to Industrial Engineering	3			Grade of C	<ul> <li>2.0</li> <li>Complete First-Year Composition requirement:</li> </ul>
MAT 267: Calculus for Engineers III	3				ENG 101 & 102 or ENG 107 & 108 or ENG 105
PHY 131/132: University Physics II Electricity and Magnetism/					
Laboratory II (SQ)	3/1				
TERM FOUR: 46-60 CREDIT HOURS					*CIIM 112 is a mercanicity and does not apply
IEE 220: Business/Industrial Engineering CHM 114: General Chemistry for Engineers OR	3			Grade of C	*CHM 113 is a prerequisite and does not apply towards degree credit
CHM 114: General Chemistry II *	4				
MAT 242: Elementary Linear Algebra	2				
MAT 275: Modern Differential Equations (MA)	3				
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the	_	_			
US (C), Global Awareness (G) or Historical Awareness (H)	3				
TERM FIVE: 61-75 CREDIT HOURS	2	57			
IEE 300: Economic Analysis for Engineers IEE 305: Information Systems Engineering	3			Grade of C Grade of C	-
IEE 300: Probability and Statistics for Engineering Problem Solving	3			Grade of C	-
IEE 380: Probability and Statistics Tot Engineering Problem Solving	1			Grade of C	-
Complete 1 course from:	-				
EEE 202: Circuits I (4 hrs)					
MAE 212: Engineering Mechanics (4 hrs) MSE 250: Structure and Properties of Materials (3 hrs)	3 or 4				
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					1
US (C), Global Awareness (G) or Historical Awareness (H)	3			<u> </u>	
TERM SIX: 76-90 CREDIT HOURS	-			a 1	
IEE 376: Operations Research Deterministic Techniques/Applications	3			Grade of C	4
IEE 369: Work Analysis and Design (L) Complete remaining 2 courses from:	3			Grade of C	4
EEE 202: Circuits I (4 hrs)					
MAE 212: Engineering Mechanics (4 hrs)	7 or				
MSE 250: Structure and Properties of Materials (3 hrs)	8				 
TERM SEVEN: 91-105 CREDIT HOURS	2			Grada of C	
IEE 470: Stochastic Operations Research	3			Grade of C	4
IEE 474: Quality Control IEE 475: Simulating Stochastic Systems	3			Grade of C Grade of C	4
Career Focused Elective	3				1
UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral	,			1	1
Science (SB)	3				
TERM EIGHT: 106-120 CREDIT HOURS					
IEE 461: Production Control	3			Grade of C	1
IEE 490: Project in Design and Development (L)	3			Grade of C	1
IEE Technical Elective	3			Grade of C	1
Career Focused Elective	3				1
Career Focused Elective	3		Luin 2010		



Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

### 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 US (C)
  - Global Awareness (G)
  - Historical Awareness (H)
- First-Year Composition

#### **Additional Notes:**

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## Major Map: Informatics – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				ansfer Pathway: TAG □ATP □None	Completed General Education: AGEC IGETC/CSUGE None	
Course Subject and Title (courses in bold/shading are critical)	Hr	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	5.	Division	course orade	immun Grade ir Required	Additional Chical Requirement Potes	
ASU 101-FSE: The ASU Experience	1				<ul> <li>ASU 101-FSE should be completed first</li> </ul>	
# CPI 101: Intro to Informatics (CS)	3			Grade of C	semester.	
# CSE 110: Principles of Programming with Java (CS)	3			Grade of C	<ul> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year</li> </ul>	
ENG 101 or 102: First-Year Composition OR					composition courses	
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C	ASU Math Placement Exam score determines	
ENG 107 of 108. English for Foreign Students	3			Glade of C	placement in Mathematics course ** If ENG 105, a 3 hr applicable elective must	
					also be taken prior to graduation. See Advisor. #Designates Core Course: A minimum cumulative GPA of 2.50 required in core courses.	
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3				(NOTE: An additional HU/SB can be move up to Term 1, or any deficiency courses can be added)	
TERM TWO: 16-30 CREDIT HOURS	5		I.		Term 1, of any deficiency courses can be added)	
# CSE 205: Object Oriented Programming and Data Structures (CS)	3			Grade of C	#Designates Core Course: A minimum	
# MAT 210: Brief Introduction to Calculus (MA) or	5				cumulative GPA of 2.50 required in core courses.	
# MAT 265: Calculus for Engineers I (MA)	3			Grade of C		
# CPI 200: Mathematical Foundations of Informatics (MA)	3			Grade of C		
ENG 101 or 102: First-Year Composition OR						
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US			1		1	
(C), Global Awareness (G) or Historical Awareness (H)	3					
TERM THREE: 31-45 CREDIT HOURS						
# IEE 305: Information Systems Engineering (CS)	3	$\square$		Grade of C	Complete all 6 critical courses each with a minimum grade of C.	
# MAT 242: Linear Algebra (MA)	2			Grade of C	Complete First-Year Composition requirement:	
## Informatics Elective	3			Grade of C	ENG 101 & 102 or ENG 107 & 108 or ENG 105 • See advisor for approved list of Informatics Electives #Designates Core Course: A minimum	
Literacy & Critical Inquiry (L)	3					
Laboratory Science (SG)	4					
					cumulative GPA of 2.50 required in core courses.	
					##Designates Focal Area & Informatics Elective: A minimum cumulative GPA of 2.50 required in	
					focus area courses and informatics electives.	
TERM FOUR: 46-60 CREDIT HOURS						
# CPI 310: Information and Data Management	3	$\boxtimes$		Grade of C	<ul> <li>See advisor for approved list of Informatics</li> </ul>	
Laboratory Science (SQ)	4				Electives #Designates Core Course: A minimum	
# MAT 243: Discrete Mathematical Structures	3			Grade of C	cumulative GPA of 2.50 required in core courses.	
## Informatics Elective	3			Grade of C	##Designates Focal Area & Informatics Elective:	
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C),					A minimum cumulative GPA of 2.50 required in	
Global Awareness (G) or Historical Awareness (H)	3				focus area courses and informatics electives.	
TERM FIVE: 61-75 CREDIT HOURS						
# CPI 360: Decision Making and Problem Solving	3			Grade of C	<ul> <li>See advisor for approved list of Informatics Electives</li> </ul>	
# STP 420: Introductory Applied Statistics (CS) OR # STP 231: Statistics for the Life Sciences (CS) OR					#Designates Core Course: A minimum	
# GCU 495: Quantitative Methods in Geography (CS) OR					cumulative GPA of 2.50 required in core courses.	
# IEE 380: Probability & Statistics for Engineering Problem Solving (CS)	3			Grade of C	##Designates Focal Area & Informatics Elective: A minimum cumulative GPA of 2.50 required in	
## Informatics Elective	3			Grade of C	focus area courses and informatics electives.	
## Informatics Elective	3			Grade of C		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3					
	3					
TERM SIX: 76-90 CREDIT HOURS # CPI 350/394: Evaluation of Informatics Systems	3			Grade of C	#Designates Core Course: A minimum	
# CP1 530/394: Evaluation of Informatics Systems # CSE 463: Introduction to Human Computer Interaction	3		-	Grade of C	cumulative GPA of 2.50 required in core courses.	
•	3		-		##Designates Focal Area & Informatics Elective:	
## Informatics Elective ## Informatics Elective	3			Grade of C	A minimum cumulative GPA of 2.50 required in focus area courses and informatics electives.	
## Informatics Elective Upper Division Humanities, Fine Arts & Design (HU) OR Social &	5			Grade of C	issue and courses and mormatics electives.	
Behavioral Science (SB)	3	$\boxtimes$				
TERM SEVEN: 91-105 CREDIT HOURS						
# CPI 485/494: Informatics Capstone I (L)	3	$\boxtimes$		Grade of C	<ul> <li>See advisor for approved list of Informatics</li> </ul>	
## Focus Area Required Course	3		1	Grade of C	Electives	
## Focus Area Required Course	3			Grade of C	#Designates Core Course: A minimum cumulative GPA of 2.50 required in core courses.	
## Focus Area Required Course	3		1	Grade of C	##Designates Focal Area & Informatics Elective:	
•					A minimum cumulative GPA of 2.50 required in	
## Informatics Elective	3		I	Grade of C	focus area courses and informatics electives.	



#### Major Map: Informatics – Bachelor of Science (B.S.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

Course Subject and Title		Upper	Transfer	Minimum Grade if	
(courses in bold/shading are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
TERM EIGHT: 106-120 CREDIT HOURS					
## CPI 486/494: Informatics Capstone I (L)	4	$\boxtimes$		Grade of C	##Designates Focal Area & Informatics Elective:
## Focus Area Required Course	3	$\boxtimes$		Grade of C	A minimum cumulative GPA of 2.50 required in focus area courses and informatics electives.
## Focus Area Required Course	3	$\boxtimes$		Grade of C	
## Upper Division Informatics Elective	3	$\boxtimes$		Grade of C	
## Upper Division Informatics Elective	3	$\boxtimes$		Grade of C	

#### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

#### General University Requirements: Legend

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

Additional Notes:



# Major Map: Materials Science and Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

			Competed Tran	nsfer Pathway: TAG □ATP □None	Completed General Education:	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	1113.	Division	Course/Grade	Required	Additional Childen Requirement (Vices	
ASU 101-FSE: The ASU Experience	1				• ASU 101-FSE should be completed first semester.	
CHM 114: General Chemistry for Engineers (SQ) OR					<ul> <li>Minimum CUM ASU 2.0 GPA required</li> <li>An SAT, ACT, Accuplacer, or TOEFL score</li> </ul>	
CHM 113/116 : General Chemistry I/General Chemistry II (SQ)	4			0 1 60	determines placement into first-year composition	
MAT 265: Calculus for Engineers I	3			Grade of C	courses	
# MSE 100: Introduction of Materials Engineering ENG 101 or 102: First-Year Composition OR	2				<ul> <li>ASU Math Placement Exam score determines placement in Mathematics course</li> </ul>	
ENG 105: Advanced First-Year Composition** OR		_			**If ENG 105 a 3 hr applicable elective must also be	
ENG 107 or 108: English for Foreign Students	3			Grade of C	taken prior to graduation. See Advisor. # Designates Major Course: A minimum cumulative	
					GPA of 2.0 required in major courses	
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C),	2				Maintain minimum ASU cumulative GPA of	
Global Awareness (G) or Historical Awareness (H)	3				2.0	
TERM TWO: 16-30 CREDIT HOURS	3			Grade of C	Maintain minimum ASU cumulative GPA of	
MAT 266: Calculus for Engineers II (MA) # MSE 250: Structure and Properties of Materials	3			Grade of C	2.0	
PHY 121/122: University Physics I/Laboratory I (SQ)	3/1				# Designates Major Course: A minimum cumulative	
ENG 101 or 102: First-Year Composition OR	J/ 1				GPA of 2.0 required in major courses	
ENG 105: Advanced First-Year Composition** OR	2					
ENG 107 or 108: English for Foreign Students Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US	3			Grade of C	-	
(C), Global Awareness (G) or Historical Awareness (H)	3					
TERM THREE: 31-45 CREDIT HOURS						
MAT 267: Calculus for Engineers III (MA)	3			Grade of C	Complete 10 critical courses (includes labs) by	
PHY 131/132: University Physics II Electricity and	2/1				end of term 3 • Maintain minimum ASU cumulative GPA of	
Magnetism/Laboratory II (SQ) BME 111: Engineering Perspectives on Biological Systems	3/1					
#MSE 215: Materials Synthesis	3				Complete First-Year Composition requirement:     ENG 101 8, 102 OD ENG 107 8, 100 ENG 105	
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C),					ENG 101 & 102 OR ENG 107 & 108 or ENG 105 # Designates Major Course: A minimum cumulative	
Global Awareness (G) or Historical Awareness (H)	3				GPA of 2.0 required in major courses	
TERM FOUR: 46-60 CREDIT HOURS		1				
MAT 275: Modern Differential Equations (MA)	3				<ul> <li>Minimum CUM ASU 2.0 GPA required</li> <li>MSE 250 must be completed with a minimum</li> </ul>	
MAT 343: Applied Linear Algebra	3				<ul> <li>MSE 250 must be completed with a minimum grade of "C".</li> </ul>	
# MSE 211: Introduction to Mechanics of Materials	3				# Designates Major Course: A minimum cumulative	
IEE 220: Business/Industrial Engineering	3				GPA of 2.0 required in major courses • The advanced science elective includes most 200-	
					<ul> <li>The advanced science elective includes most 200- level and above math/science courses. See Advisor</li> </ul>	
# Advanced Science Elective	3	$\boxtimes$			for approved advanced science electives.	
TERM FIVE: 61-75 CREDIT HOURS	-				#Designates Maior Courses A minimum annulation	
Math or Science Elective	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required.	
# 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 Laboratory Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US	1				-	
(C), Global Awareness (G) or Historical Awareness (H)	3					
TERM SIX: 76-90 CREDIT HOURS	_	1	l			
# MSE 335: Materials Kinetics and Processing	3				# Designates Major Course: A minimum cumulative GPA of 2.0 required.	
# MSE 358: Introduction to Electronic, Magnetic, & Optical Properties	3					
# MSE 420: Physical Metallurgy	3				-	
# MSE 421: Physical Metallurgy Laboratory	1				4	
# MSE 450: Introduction to Materials Characterization	3				4	
# MSE 451: Introduction to Materials Characterization Laboratory	1	$\square$				
TERM SEVEN: 91-105 CREDIT HOURS # MSE 440: Mechanical Properties of Solids	3				# Designates Major Course: A minimum cumulative	
# MSE 440: Mechanical Properties of Solids # MSE 470: Polymers and Composites	3				GPA of 2.0 required.	
# MSE 470: Polymers and Composites # MSE 471: Introduction to Ceramics	3				The advanced science elective includes most     200 lovel and above meth/aginne gourses. See	
# MSE 4/1. Infoduction to Ceramics # MSE 482: Materials Engineering Design (L)	3				200-level and above math/science courses. See Advisor for approved advanced science electives.	
# Advanced Science Elective	3	$\square$				
TERM EIGHT: 106-120 CREDIT HOURS	2				# Designates Major Course: A minimum cumulative	
# MSE 490: Capstone Design Project (L)	3				GPA of 2.0 required.	
# MSE Technical Elective	3				• The technical electives include most 300-level	
# MSE Technical Elective UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science	3				and above engineering/math/science courses. See Advisor for approved technical electives.	
(SB)	3	$\boxtimes$			211 112 112 113 approved teenned electros.	



Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

### 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 US (C)
    - Global Awareness (G)
    - Historical Awareness (H)
  - First-Year Composition

#### **Additional Notes:**



## Major Map: Mechanical Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

				nsfer Pathway:  TAG □ATP □None	Completed General Education:	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	1115.	Division	Course/Orade	Minimum Grade II Required	Additional Chrical Requirement Notes	
+ASU 101-FSE: The ASU Experience	1				+ ASU 101-FSE and MAE 100 required for	
CHM 114: General Chemistry for Engineers (SQ) OR					freshmen and should be completed first semester. Non-freshmen see advisor for petitioning	
CHM 115: General Chemistry with Qualitative Analysis (SQ) OR CHM 116: General Chemistry II* (SQ)	4			Grade of C	<ul><li>replacement electives.</li><li>An SAT, ACT, Accuplacer, or TOEFL score</li></ul>	
+MAE 100: Intro to Mechanical and Aerospace Engineering (or	4			Grade of C in		
Department Approved Elective)	2			MAE 100	determines placement into first-year composition courses	
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	<ul> <li>ASU Math Placement Exam score determines</li> </ul>	
ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR					placement in Mathematics course	
ENG 107 or 108: English for Foreign Students	3			Grade of C	*CHM 113 is a prerequisite and does not apply towards degree credit	
					**If ENG 105 a 3 hr applicable elective must also	
Social & Behavioral Science (SB) AND Cultural Diversity in the US					<ul> <li>be taken prior to graduation. See Advisor.</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>	
(C), Global Awareness (G), or Historical Awareness (H)	3				• Maintain minimum ASC cumulative GFA of 2.0	
TERM TWO: 16-30 CREDIT HOURS						
MAT 266: Calculus for Engineers II	3			Grade of C	Maintain minimum ASU cumulative GPA of	
PHY 121/122: University Physics I/ Laboratory I (SQ)	3/1			Grade of C	2.0	
ENG 101 or 102: First-Year Composition OR						
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the						
US (C), Global Awareness (G), or Historical Awareness (H)	3					
TERM THREE: 31-45 CREDIT HOURS					• Complete 10 critical courses by end of term	
MAE 212: Engineering Mechanics	4			Grade of C	3	
MAT 275: Modern Differential Equations	3			Grade of C	• Maintain minimum ASU cumulative GPA	
PHY 131/132: University Physics II Electricity and Magnetism/		_			<ul><li>of 2.0</li><li>Complete First-Year Composition</li></ul>	
Laboratory II	3/1			Grade of C	requirement: ENG 101 & 102 or ENG 107 &	
MAE 214: Computer-Aided Engineering I	1			Grade of C	108 or ENG 105	
MAT 267: Calculus for Engineers III	3			Grade of C		
TERM FOUR: 46-60 CREDIT HOURS	3			Crude of C		
MAE 213: Solid Mechanics MAE 240: Thermofluids I	4			Grade of C Grade of C		
EEE 202: Circuits I	4			Grade of C	-	
MAT 343: Applied Linear Algebra	3			Grade of C		
MSE 250: Structure and Properties of Materials	3			Grade of C		
TERM FIVE: 61-75 CREDIT HOURS	ţ					
BME 111: Engineering Perspectives on Biological Systems (or dept		_				
approved BIO)	3				4	
MAE 322: Structural Mechanics	4			Grade of C		
MAE 340 Thermofluids II	3			Grade of C	-	
MAE 384: Numerical Methods for Engineers (CS) Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the	3			Grade of C		
US (C), Global Awareness (G), or Historical Awareness (H)	3	$\boxtimes$				
TERM SIX: 76-90 CREDIT HOURS	1					
MAE 323: Computer-Aided Engineering II	2			Grade of C	• At least one technical elective is required to be in the thermo-fluids area. See Advisor for	
MAE 318: Sensors and Controls	5			Grade of C	approved list.	
MAE 342: Principles of Mechanical Design	3			Grade of C		
Technical Elective	3	$\boxtimes$		Grade of C		
TERM SEVEN: 91-105 CREDIT HOURS					• At least one technical elective is required to be	
	1				• At least one technical elective is required to be in the thermo-fluids area. See Advisor for	
				1	in the thermo-fluids area. See Advisor for approved list.	
MAE 488: Mechanical Engineering Design I	3	$\boxtimes$		Grade of C	approved list.	
	3			Grade of C Grade of C	approved list.	
MAE 488: Mechanical Engineering Design I MAE 491: Experimental Mechanical Engineering (L) Technical Elective					approved list.	
MAE 488: Mechanical Engineering Design I MAE 491: Experimental Mechanical Engineering (L) Technical Elective Social & Behavioral Science (SB) AND Cultural Diversity in the US	3			Grade of C	approved list.	
MAE 488: Mechanical Engineering Design I MAE 491: Experimental Mechanical Engineering (L) Technical Elective	3			Grade of C	approved list.	
MAE 488: Mechanical Engineering Design I MAE 491: Experimental Mechanical Engineering (L) Technical Elective Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H)	3			Grade of C	approved list.	
MAE 488: Mechanical Engineering Design I MAE 491: Experimental Mechanical Engineering (L) Technical Elective Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H) UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral	3 3 3			Grade of C		
MAE 488: Mechanical Engineering Design I MAE 491: Experimental Mechanical Engineering (L) Technical Elective Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H) UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3 3 3			Grade of C	<ul> <li>See advisor for approved General Electives.</li> </ul>	
MAE 488: Mechanical Engineering Design I MAE 491: Experimental Mechanical Engineering (L) Technical Elective Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H) UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) TERM EIGHT: 106-120 CREDIT HOURS	3 3 3 3			Grade of C Grade of C		
MAE 488: Mechanical Engineering Design I MAE 491: Experimental Mechanical Engineering (L) Technical Elective Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H) UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) TERM EIGHT: 106-120 CREDIT HOURS MAE 400: Engineering Profession (L)	3 3 3 3 3			Grade of C Grade of C Grade of C	<ul> <li>See advisor for approved General Electives.</li> <li>At least one technical elective is required to be</li> </ul>	



Total Hours Regular Curriculum (120)	Total Hrs at ASU (30 min)	Hrs Resident Credit for Academic Recognition (56 min)	Major GPA (2.000 Min. CUM GPA )	Total UD Hrs (45 min)	Total Comm. College Hrs. (64 Max)

#### 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 US (C)
    - Global Awareness (G)
  - Historical Awareness (H) First-Year Composition

Additional Notes:

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## Major Map: Mechanical Engineering (Computational and Mathematical Mechanics) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

			Competed Tran	nsfer Pathway: TAG □ATP □None	Completed General Education: □AGEC □IGETC/CSUGE □None	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS						
ACU 101 ESE: The ACU Experience	1				+ ASU 101-FSE and MAE 100 required for freshmen and should be completed first semester.	
+ASU 101-FSE: The ASU Experience	1				Non-freshmen see advisor for petitioning	
CHM 114: General Chemistry for Engineers (SQ) OR CHM 115: General Chemistry with Qualitative Analysis (SQ) OR					• An SAT ACT Accupiacer or TOFFL score	
CHM 115: General Chemistry II* (SQ)	4			Grade of C	<ul> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year compositior</li> </ul>	
					<ul><li>courses</li><li>ASU Math Placement Exam score determines</li></ul>	
+MAE 100: Introduction to Mechanical and Aerospace Engineering (or Department Approved Elective)	2			Grade of C in MAE 100	<ul> <li>Aso Main Flacement Exam score determines placement in Mathematics course</li> </ul>	
	2			WIAL 100	*CHM 113 is a prerequisite and does not apply	
MAT 265: Calculus for Engineers I (MA)	3			Grade of C	towards degree credit **If ENG 105 a 3 hr applicable elective must also	
ENG 101 or 102: First-Year Composition OR					be taken prior to graduation. See Advisor.	
ENG 105: Advanced First-Year Composition** OR	3			Grade of C	Maintain minimum ASU cumulative GPA of 2.0	
ENG 107 or 108: English for Foreign Students TERM TWO: 16-30 CREDIT HOURS	3			Glade of C		
CSE 100: Principles of Programming with C++(CS) OR					Maintain minimum ASU cumulative GPA of	
CSE 110: Principles of Programming with Java (CS)	3			Grade of C	2.0	
MAT 266: Calculus for Engineers II PHY 121/122: University Physics I/ Laboratory I (SO)	3			Grade of C Grade of C	4	
ENG 101 or 102: First-Year Composition OR	3/1				1	
ENG 105: Advanced First-Year Composition** OR	_					
ENG 107 or 108: English for Foreign Students Social & Behavioral Science (SB) AND Cultural Diversity in the US	3			Grade of C	-	
(C), Global Awareness (G), or Historical Awareness (H)	3					
TERM THREE: 31-45 CREDIT HOURS	4					
MAE 212: Engineering Mechanics	4			Grade of C	<ul> <li>Complete 10 critical courses by end of term 3</li> <li>Maintain minimum ASU cumulative GPA of</li> </ul>	
MAT 275: Modern Differential Equations	3			Grade of C	2.0	
PHY 131/132: University Physics II Electricity and Magnetism/ Laboratory II (SQ)	3/1			Grade of C	<ul> <li>Complete First-Year Composition requirement: ENG 101 &amp; 102 or ENG 107 &amp; 108 or ENG 105</li> </ul>	
MAE 214: Computer-Aided Engineering I	1			Grade of C		
MAT 267: Calculus for Engineers III	3			Grade of C		
TERM FOUR: 46-60 CREDIT HOURS						
MAE 213: Solid Mechanics	3			Grade of C	-	
MAE 240: Thermofluids I	4			Grade of C	-	
PHI 103: Principles of Sound Reasoning (HU)	3				4	
MAT 343: Applied Linear Algebra	3			Grade of C Grade of C	-	
MSE 250: Structure and Properties of Materials TERM FIVE: 61-75 CREDIT HOURS	3			Glade of C		
MAE 340: Thermofluids II	3	$\boxtimes$		Grade of C		
EEE 202: Circuits I	4			Grade of C		
MAE 322: Structural Mechanics	4	$\boxtimes$		Grade of C	]	
MAE 384: Numerical Methods for Engineers (CS)	3	$\boxtimes$		Grade of C		
TERM SIX: 76-90 CREDIT HOURS						
BME 111: Engineering Perspectives on Biological Systems (or dept approved BIO)	3					
MAE 318: Sensors and Controls	5			Grade of C		
MAE 323 Computer-Aided Engineering II	2			Grade of C	]	
MAE 342: Principles of Mechanical Design	3			Grade of C	1	
Technical Elective	3	$\boxtimes$		Grade of C		
TERM SEVEN: 91-105 CREDIT HOURS						
MAE 491: Experimental Mechanical Engineering (L)	3			Grade of C	4	
MAE 488: Mechanical Engineering Design I	3			Grade of C	4	
Technical Elective Technical Elective	3			Grade of C Grade of C	1	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					1	
US (C), Global Awareness, (G), or Historical Awareness (H)	3					
TERM EIGHT: 106-120 CREDIT HOURS						
MAE 400: Engineering Profession (L)	3			Grade of C	4	
MAE 489: Mechanical Engineering Design II	3			Grade of C	4	
MAE 471 Computational Fluid Dynamics Social & Behavioral Science (SB) AND Cultural Diversity in the US	3			Grade of C	4	
(C), Global Awareness (G), or Historical Awareness (H)	3					
UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral						
Science (SB)	$\frac{3}{100}$		$\frac{1}{2010}$	-2011 1033		



Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

### 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 US (C)
    - Global Awareness (G)
  - Historical Awareness (H) First-Year Composition

#### **Additional Notes:**

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Technical Elective

Technical Elective

Technical Elective

Technical Elective

MAE 382: Thermodynamics

MAE 342: Principles of Mechanical Design

**TERM SEVEN: 91-105 CREDIT HOURS** 

MAE 491: Experimental Mechanical Engineering (L)

Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science

GCU 364: Energy in the Global Arena (SB,G) or PUP 190: Sustainable Cities (HU, G or SB,G)

**TERM EIGHT: 106-120 CREDIT HOURS** MAE 400: Engineering Profession (L)

MAE 446: Energy Systems Design

GPH 314: Global Change (HU,G) or

PHI 310: Environmental Ethics (HU)

(SB) (6 hrs min in both SB & HU required)

#### Major Map: Mechanical Engineering (Energy and Environment) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton Schools of Engineering | Catalog Year: 2010-2011

			Competed Tra	insfer Pathway:	Completed General Education:	
				TAG ATP None	□AGEC □IGETC/CSUGE □None	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-15 CREDIT HOURS	ПIS.	DIVISION	Course/Grade	Required	Additional Critical Requirement Notes	
+ASU 101-FSE: The ASU Experience	1				+ ASU 101-FSE and MAE 100 required for	
CHM 114: General Chemistry for Engineers(SQ) OR	1				freshmen and should be completed first semester.	
CHM 115: General Chemistry with Qualitative Analysis (SQ) OR					Non-freshmen see advisor for petitioning	
CHM 116: General Chemistry II* (SQ)	4			Grade of C	replacement electives.	
+MAE 100: Introduction to Mechanical and Aerospace Engineering (or	2			Grade of C in	An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year	
Department Approved Elective)	2			MAE 100	composition courses	
MAT 265: Calculus for Engineers I	3			Grade of C	ASU Math Placement Exam score determines	
ENG 101 or 102: First-Year Composition OR					placement in Mathematics course *CHM 113 is a prerequisite and does not apply	
ENG 105: Advanced First-Year Composition ** OR					towards degree credit	
ENG 107 or 108: English for Foreign Students	3			Grade of C	**If ENG 105 a 3 hr applicable elective must also	
					be taken prior to graduation. See Advisor.	
Social & Behavioral Science (SB) AND Cultural Diversity in the US					Maintain minimum ASU cumulative GPA of 2.0	
(C), or Historical Awareness (H)	3				2.0	
TERM TWO: 16-30 CREDIT HOURS		T	- I			
MAT 266: Calculus for Engineers II	3			Grade of C	Maintain minimum ASU cumulative GPA of	
PHY 121/122: University Physics I/ Laboratory I (SQ)	3/1			Grade of C	2.0	
ENG 101 or 102: First-Year Composition OR						
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the	5			Glade of C	-	
US (C), or Historical Awareness (H)	3					
TERM THREE: 31-45 CREDIT HOURS						
MAE 212: Engineering Mechanics	4			Grade of C	Complete 10 critical courses by end of term	
MAT 275: Modern Differential Equations (MA)	3			Grade of C	3 • Maintain minimum ASU cumulative GPA	
PHY 131/132: University Physics II Electricity and Magnetism/	2/1				of 2.0	
Laboratory (SQ)	3/1			Grade of C	Complete First-Year Composition	
MAE 214: Computer-Aided Engineering I	1			Grade of C	requirement: ENG 101 & 102 or ENG 107 &	
MAT 267: Calculus for Engineers III	3			Grade of C	108 or ENG 105	
TERM FOUR: 46-60 CREDIT HOURS	5			Glude of C		
MAE 213: Solid Mechanics	3			Grade of C		
MAE 240: Thermofluids I	4			Grade of C	-	
CHM 231: Elementary Organic Chemistry	3			Grade of C	-	
MAT 343: Applied Linear Algebra	3			Grade of C	-	
MSE 250: Structure and Properties of Materials	3			Grade of C	-	
TERM FIVE: 61-75 CREDIT HOURS	3			Glade of C		
MAE 340: Thermofluids II	3			Grade of C		
	4			Grade of C	-	
EEE 202: Circuits I	4				-	
MAE 322: Structural Mechanics	-			Grade of C		
MAE 323: Computer-Aided Engineering II	2			Grade of C	_	
MAE 384: Numerical Methods for Engineers (CS)	3	$\boxtimes$		Grade of C		
TERM SIX: 76-90 CREDIT HOURS BIO 319 Environmental Science (G) or BIO 310: Fundamentals of						
Ecology (3) or BIO 181 or BIO 182: General Biology I or II (4), or						
BME 111: Engineering Perspectives on Biological Systems (3)	3-4					
MAE 318: Sensors and Controls	5	$\boxtimes$		Grade of C		
	2			0 1 60		

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Grade of C



Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.00 minimum GPA )	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

### **General University Requirements: Legend**

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L) 0
  - 0 Mathematical Studies (MA)
  - Computer/Statistics/Quantitative applications (CS) Humanities, Fine Arts, and Design (HU) 0
  - 0
  - Social and Behavioral Sciences (SB) 0
  - Natural Science-Quantitative (SQ) 0
  - Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C) 0
    - 0 Global Awareness (G)
  - Historical Awareness (H) 0
- First-Year Composition

#### **Additional Notes:**

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## **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.
- 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 contracts or any automatic honors course such as ENG 105 (in-person sections), CHM 117, CHM 118, PHY 333, or any graduate-level course.
- 3. Included in the 36 credit hours of honors course work are 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. Students 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 upper-division 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 transfers because transfers do not have time to complete all 36 honors hours.
- 5. Students are required to complete an honors thesis/creative project for at least three credit hours though students are encouraged to complete six thesis credit hours. The thesis credit hours may be included in the 18 required hours of upper-division honors course work. The honors thesis is launched with a prospectus form due one academic year before the defense. The final honors thesis copy 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. The student 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 must take 18 lower-division honors credits, which include HON 171 and 272/273/274 The Human Event. This cross-disciplinary seminar acquaints them with ideas that form the foundation of a university education and emphasizes critical thinking, discussion and writing.

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



topical area chosen by the instructor. It is expected that all students 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 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 may include supplemental sessions with the instructor. Honors contracts must be filed during the first four weeks of class and completed during the semester in which the course is offered. Each 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 and all classes with the HON prefix 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.

Departmental courses with the number 493 are reserved for honors students completing their honors theses and creative projects. A student may enroll for these courses only with the approval of the sponsoring academic department and of the faculty member who serves as the student's thesis 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.



## Major Map: Journalism and Mass Communication – Bachelor of Arts (B.A.) Walter Cronkite School of Journalism and Mass Communication | Catalog Year: 2010-2011

			Competed Trans	sfer Pathway: AG □ATP □None	Completed General Education:
Course Subject and Title (courses in bold/shading are critical)	Hrs	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Tracking Notes
TERM ONE: 0-15 CREDIT HOURS	nrs	Division	Course/Grade	Kequireu	Additional Critical Tracking Notes
ASU 101: The ASU Experience	1			Grade of C	• ASU 101 is for ASU freshman students only.
ENG 101 and 102: First-Year Composition OR		_			Not required of transfer students
ENG 107 and 108: English for Foreign Students OR	3			Grade of C	An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year
ENG 105: Advanced First-Year Composition MAT 142: College Mathematics (MA) or higher	3				composition courses
Second language	4			Grade of C	ASU Math Placement Exam score determines
JMC 101: Grammar for Journalists	1			Grade of Y	placement in mathematics course
JMC 110: Principles and History of Journalism (SB)	3			Grade of C	Minimum 2.50 ASU cumulative GPA
(includes English grammar exam) TERM TWO: 16-30 CREDIT HOURS					
ENG 101 and 102: First-Year Composition OR					Minimum 2.50 ASU cumulative GPA
ENG 107 and 108: English for Foreign Students OR	3			Grade of C	
ENG 105: Advanced First-Year Composition					
Statistics (CS) Second language	3			Grade of C	4
JMC 201: News Reporting and Writing (L)	3			Grade of C	-
HST 109: United States to 1865 [(HU or SB] & H) OR	3				
HST 110: United States Since 1865 (SB & H)	5				
TERM THREE: 31-45 CREDIT HOURS Complete at least one of the following:		1			Minimum 2.50 ASU cumulative GPA
JMC 366: Journalism Ethics and Diversity OR		<u> </u>		0 1 50	- winnihum 2.30 ASO cumulative GPA
JMC 301: Intermediate Reporting and Writing (L) OR	3	$\boxtimes$		Grade of C	
JMS 315: Intermediate Reporting and Writing (L)				a 1 4a	
JMC 305: Online Media Natural Sciences–Quantitative (SQ)	3			Grade of C	4
Second language	3			Grade of C	-
SOC 101: Introductory Sociology (SB)	3	- D		chuide of e	-
TERM FOUR: 46-60 CREDIT HOURS		-			
Complete at least one of the following:					Minimum 2.50 ASU cumulative GPA
JMC 366: Journalism Ethics and Diversity OR JMC 301: Intermediate Reporting and Writing (L) OR	3	$\square$		Grade of C	Must complete JMC 366 and 301 or JMC 315     (depending on track) by end of term 4 with
JMS 315: Intermediate Reporting and Writing (L)					grade of "C" or better
POS 110: Government and Politics (SB) OR	3				
POS 310: American National Government (SB) Second language (G)	4			Grade of C	-
English literature (HU)	3			Glade of C	-
HST elective:	3				
TERM FIVE: 61-75 CREDIT HOURS					
JMC 313: Introduction to Editing <b>OR</b> JMC 345: Videography	3	$\boxtimes$		Grade of C	<ul> <li>Minimum 2.50 ASU cumulative GPA</li> <li>Advanced Skills Course should be selected in</li> </ul>
Advanced Skills Course	3			Grade of C	consultation with academic advisor.
JMC 484: Internship	3			Grade of C	
PHI 101: Introduction to Philosophy (HU) OR					
PHI 103: Principles of Sound Reasoning (L or HU) OR PHI 105: Introduction to Ethics (HU) OR					
PHI 305: Ethical Theory (HU) OR	3				
PHI 306: Applied Ethics (HU) OR					
PHI 309: Social and Political Philosophy (HU)	4				4
Natural Sciences-Quantitative (SQ) or Natural Sciences-General (SG) TERM SIX: 76-90 CREDIT HOURS	4				
JMC 402: Mass Communication Law	3	$\boxtimes$		Grade of C	Minimum 2.50 ASU cumulative GPA
ECN 211: Macroeconomic Principles (SB) OR	3				Advanced Skills Course should be selected in
ECN 212: Microeconomic Principles (SB)				a 1 4a	consultation with academic advisor.
Advanced Skills Course	3		+	Grade of C	4
Related area Elective	3		+	Grade of C	1
TERM SEVEN: 91-105 CREDIT HOURS					
Advanced Skills Course	3	$\square$		Grade of C	Minimum 2.50 ASU cumulative GPA
PGS 101: Introduction to Psychology (SB)	3		1		Advanced Skills Course should be selected in
Upper-division related area	3		1	Grade of C	consultation with academic advisor.
Upper-division related area	3			Grade of C	1
Awareness area–Cultural Diversity (C) or elective if completed	3		+	Sidue of C	4
TERM EIGHT: 106-120 CREDIT HOURS	5				
	2			Grada of C	Minimum 2.50 ASU cumulative GPA
JMC 473: The Business and Future of Journalism	3			Grade of C	Minimum 2.50 ASO cumulative OF A
JMC/MCO upper-division elective	3		+	Grade of C	4
Upper-division related area	3			Grade of C	
Upper-division elective	3	$\boxtimes$			



#### Major Map: Journalism and Mass Communication – Bachelor of Arts (B.A.) Walter Cronkite School of Journalism and Mass Communication | Catalog Year: 2010-2011

Graduation Requirements Summary:

Total Hours	Total UD Hours	Cumulative GPA	Total Hrs at ASU	Resident Credit for Academic	Total Community College
(120 minimum)	(minimum 45)	(2.50 minimum required for major)	(minimum 30)	Recognition (minimum 56)	Hrs (maximum 64)

## 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 Sciences-Quantitative (SQ)
  - Natural Sciences-General (SG)
- General Studies Awareness Requirements
  - Cultural Diversity in the U.S. (C)
  - o Global Awareness (G)
  - Historical Awareness (H)
- First-Year Composition

#### **Additional Notes:**

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. 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.

Students must complete a minimum of 56 hours of ASU coursework to qualify for ASU honors at graduation.



## **Bachelor of Applied Science Degree**

## 2010-2011 Curriculum Check Sheet

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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 2010-2011
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			
Literacy [L]		3			
Humanities [HU] and [H] [C]		3			
Social Science [SB]		3			
General Studies [HU or SB] and [G]		3			
	Sub Total	19	Hrs.		

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## 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 Communic	ation	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

Sub Total	3 3 6	Hrs.		Total Upper Division Hours Total ASU Resident Hours	
Student Signature	Dat	te	 Dea	an Signature	Date

Academic Catalog Archive 2010-2011 1041



Major Map: General Studies –
Bachelor of General Studies (B.G.S.)
School of Letters and Sciences   Catalog Year: 2010-2011

I. First-Year Composition (3-6 hours)	Total Hours	UD Hours	Res Hours	Grade
ENG 101: First-Year Composition (3) and				
ENG 102: First-Year Composition (3) or, if eligible				
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 hou	rs)		
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		'		
Double counting is permissible between Awareness Areas graduation requirements, and within the Awareness Areas		courses	that fulf	ill
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	

## **Graduation Requirements**

Total Hours Required (120 hrs min)	Hours Required		required (2.00	ASU Resident Hours for Academic Recognition (56 hrs min)

## Please Note:

- 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
- 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: Department will be adding clusters for 2010. Students will choose four [4] clusters and at least

 III. BGS Clusters (36 hours)
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 Grade

 Cluster #1
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 Cluster #2
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Total UD

Res

## **IV. Electives**

three [3] classes within each one. Language and Culture; Values and Society; Healthcare; Society and Mass Media; Special Events Management; Nonprofit Management; Meeting Planning; The Urban Experience; Leadership; U.S. Social Welfare System and Social Services; Criminology and Criminal Justice; Law and Criminal Justice; Science and Society. See http://sls.asu.edu/gs/clusters.html.



## Major Map: History and Culture – Bachelor of Arts (B.A.) School of Letters and Sciences | Catalog Year: 2010-2011

			Competed Transfer I	Pathway:	Completed General Education:
Course Subject and Title		Upper	Transfer Min	nimum Grade if	
(courses in <b>bold/shading</b> are critical) TERM ONE: 0-16 CREDIT HOURS	Hrs.	Division	Course/Grade Rec	quired	Additional Critical Requirement Notes
ASU 101: The ASU Experience	1				ASU 101 is for ASU freshman students only
ENG 101 and 102: First-Year Composition OR	1				Not required of transfer students
ENG 107 and 108: English for Foreign Students OR				1 60	<ul> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition</li> </ul>
ENG 105: Advanced First-Year Composition	3		Gra	ade of C	courses
Humanities, Fine Arts & Design (HU)	3				ASU Math Placement Exam score determines
MA (MAT 142 or higher)	3				placement in Mathematics course
Elective	3				
TERM TWO: 17-32 CREDIT HOURS	5				
ENG 101 or 102: First-Year Composition ENG 105: Advanced First-Year Composition ENG 107 or 108: English for Foreign Students	3		Gra	ade of C	<ul> <li>Minimum C grade in first-year composition courses</li> <li>Math (MA) requirement must be completed by</li> </ul>
Humanities, Fine Arts & Design (HU)	3				the end of the second semester
Computer/Statistics/Quantitative applications (CS)	3		1		
Natural Science – Quantitative (SQ)	4				
Elective	3				
TERM THREE: 33-47 CREDIT HOURS					
Track specific focus area course (see list below)	3		Gra	ade of C	First-year composition requirement completed
Track specific focus area course (see list below)	3		Gra	ade of C	<ul><li>with a minimum "C" grade.</li><li>Academic Review: Students should choose a</li></ul>
Literacy & Critical Inquiry (L)	3				track within the degree
Natural Science – Quantitative (SQ) or General (G)	4				
Elective	2				
TERM FOUR: 48-62 CREDIT HOURS		1			
Track specific focus area course (see list below)	3		Gra	ade of C	• A minimum of 6 hours of Upper Division Coursework must be completed in this semester
Track specific elective area course (see list below)	3		Gra	ade of C	Coursework must be completed in this semester
HTY 300: Historical Inquiry (SB, H)	3		Gra	ade of C	
Elective	3				
Elective	3				
TERM FIVE: 63-76 CREDIT HOURS					A minimum of 9 hours of Upper Division
HST 343: American Southwest (SB, H)	3		1	ade of C	coursework must be completed in this semester.
HST 344: Arizona (SB, H)	3		Gra	ade of C	-
Elective	3				
Elective	2				
Elective TERM SIX: 77-91 CREDIT HOURS	3				
Track specific focus area course (see list below)	3		Gr	ade of C	<ul> <li>A minimum of 9 hours of Upper Division</li> </ul>
Track specific elective area course (see list below)	3			ade of C	coursework must be completed in this semester
Elective	3				
Elective	3				
Elective	3				
TERM SEVEN: 92-106 CREDIT HOURS Track specific elective area course (see list below)	3		G	-lfC	• A minimum of 9 hours of Upper Division
Cultural Diversity in the US (C), or if completed, Elective	3		Gra	ade of C	coursework must be completed in this semester
Upper Division Elective	3		ł ł		<ul> <li>C (cultural awareness) requirement may be</li> </ul>
Upper Division Elective	3				satisfied by track-specific course or other elective
Elective	3				
TERM EIGHT: 107-120 CREDIT HOURS					
HTY498: Pro-Seminar	3		Gra	ade of C	<ul> <li>A minimum of 9 hours of Upper Division</li> <li>coursework must be completed in this competer</li> </ul>
Global Awareness (G) or if completed, Elective	3				<ul> <li>coursework must be completed in this semester</li> <li>G (global awareness) requirement may be</li> </ul>
Elective	3				satisfied by track-specific course or other
Elective	3				elective
Elective	2				



General University Requirements: Legend

Total Hours	Total UD Hours	Cumulative GPA	Total Hrs at ASU	Resident Credit for Academic	Total Comm. College Hrs.
(120 minimum)	(minimum 45)	(2.00 minimum)	(minimum 30)	Recognition (minimum 56)	(maximum 64)
(120 minimum)	(inininum 13)	(2.00 mmmun)	( minimum 50)	Recognition (minimum 50)	

<ul> <li>General Studies Core Requirements:         <ul> <li>Literacy and Critical Inquiry (L)</li> <li>Mathematical Studies (MA)</li> <li>Computer/Statistics/Quantitative applications (CS)</li> <li>Humanities, Fine Arts, and Design (HU)</li> <li>Social and Behavioral Sciences (SB)</li> <li>Natural Science-Quantitative (SQ)</li> </ul> </li> <li>Additional Notes:         <ul> <li>Track 1: Environmental History and Culture has three tracks: The following are the following and Culture has three tracks: The following are the following a</li></ul></li></ul>	<ul> <li>Natural Science-General (SG)</li> <li>General Studies Awareness Requirements         <ul> <li>Cultural Diversity in the US (C)</li> <li>Global Awareness (G)</li> <li>Historical Awareness (H)</li> </ul> </li> <li>First-Year Composition</li> </ul>
HTY 374Western Rivers HTY 440The Pre-Modern City HTY 450History of Ecology and Conservation PHI 327 Environmental Philosophy	
Track 2: History and Culture of The American SouthwestFocus Area CoursesHST 293 Historical Themes in Latin AmericaHST 305 Studies in Latin American HistoryHST 329 Women in 20 <sup>th</sup> Century U.S. WestHST 330 Mexican Women in the U.S. Conquests and MigrationHST 331 Mexican-American History to 1900HST 332 Mexican-American History since 1900HST 337 American Indian History to 1900HST 338 American Indian History since 1900HST 341 U.S. West, 19 <sup>th</sup> CenturyHST 342 U.S. West, 20 <sup>th</sup> CenturyHST 417 Topics in Mexican American History	Track 2: History and Culture of the American Southwest <u>Track Specific Elective Courses</u> Any courses with an AIS, CCS, HST, or HTY prefix. Students may also take courses with an SPA or SPN prefix. Students are strongly encouraged to complete SPA 101 and SPA 102.
Track 3: History for Secondary TeachersFocus Area CoursesHST 101 Global HistoryHST 102 Western CivilizationHST 103 Western CivilizationHST 104 Western CivilizationHST 109 United States to 1865HST 110 United States since 1865HST 210 American Social HistoryHST 313 American Cultural History to 1865HST 325 Immigration and EthnicityHST 337 American Indian History to 1900HST 338 American Indian History since 1900HST 341 U.S. West, 19 <sup>th</sup> CenturyHST 342 U.S. West, 20 <sup>th</sup> CenturyREL 100 Religions of the World	Track 36: History for Secondary Teachers <u>Track Specific Elective Courses</u> In consultation with an advisor, students may use courses with the following prefixes: ASB, ECN, GCU, GPH, HST, HTY, PGV, POL, REL, SOC, WSH, or WST.



## ARIZONA STATE UNIVERSITY

I. First-Year Composition (3-6 hours) <sup>1</sup>	Total Hours	UD Hours	Res Hours	Grade
ENG 101: First-Year Composition (3) and				
ENG 102: First-Year Composition (3) or, if eligible				
ENG 105: Advanced First-Year Composition (3)				

## II. University General Studies (29-38 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:							
SG:							
Literacy and Critical Inquiry (6 hours)							
L: BIS 301: Foundations of Interdisciplinary Studies	Satisfied by major						
L: BIS 402: Senior Seminar	Sa	atisfied	by maj	or			
Mathematics & Statistics/Computer Applications	(6 hou	rs)					
MA:							
CS:							
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):

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

For more information about the BIS please go to: http://sls.asu.edu/

This check sheet is for reference only; please consult your ASU DARS report for official information about your requirements.

 $^{\scriptscriptstyle 1}$  Grades of "C" or better are required for all courses within these categories.

<sup>2</sup> There is no specific elective or minor requirement for the BIS degree. Students needing more than 15 hours of electives to meet the 120 hour requirement are encouraged to pursue a minor in addition to their BIS concentration. Students are encouraged to use these electives to fulfill prerequisite course requirements or gain knowledge and skills in preparation for required upper-division required courses.

## **Bachelor of Interdisciplinary Studies**

Catalog: 2010-2011

III. BIS Core (12 hours) <sup>1</sup>	Total Hours	UD Hours	Res Hours	Grade
BIS 301: Foundations of Interdisciplinary Studies (L)	3	3	3	
BIS 302: Interdisciplinary Inquiry	3	3	3	
BIS 401: Applied Interdisciplinary Studies	3	3	3	
BIS 402: Senior Seminar (L)	3	3	3	

## IV. Concentration I (18-30 hours)<sup>1</sup>

## V. Concentration II (18-30 hours)<sup>1</sup>

## VI. Electives (4-40 or more hours)<sup>2</sup>



## ARIZONA STATE UNIVERSITY

I. First Year Composition (3-6 hours) <sup>1</sup>	ASU Hours	Trans Hours	Grade	Upp Div
ENG 101: First Year Comp 1 (3) and				
ENG 102: First Year Comp 2 (3) or, if eligible				
ENG 105: Advance First Year Comp (3)				
Sub Total (I): 3.6				

Sub Total (I): 3-6

## II. University General Studies (35-37 hours)

Humanities/Fine Arts & Social/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.

Sa	atisfied	by maj	jor				
Sa	atisfied	by ma	jor				
(6 hou	rs)						
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.							
5	6 hou all 3 are s, other o	Satisfied (6 hours) all 3 areas) s, other courses	all 3 areas) s, other courses that fulf				

Sub Total (II): 35-37

Cultural Diversity (C):

Total Hours Required	Upper Division Hours Required	Resident Hours Required	Minimum GPA required	Hours Required for ASU Academic Recognition
120	45	30	2.0	56
Max Transfer Hours Max.2-yr Transfer Hours allowed with AGEC Completed? AA Completed?				
90	75	Y or N	Y□ or N□	

 For more information about the BIS degree in Organizational Studies, please go to: <u>http://sls.asu.edu/bis/org\_studies.html</u>

- Course pre-requisites are available online at: http://www.asu.edu/catalogs
- This check sheet is for reference only; please consult your DARS report for official information about your requirements.

## Bachelor of Interdisciplinary Studies (BIS) Organizational Studies Concentration

Catalog: 2010-2011

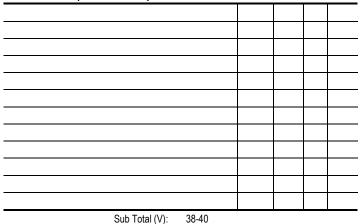
III. BIS Core (15 hours) <sup>1</sup>		Trans Hours	Upp Div
BIS 300: Theories & Applications of Org Studies	3		Х
BIS 301: Foundations of Interdis. Studies (L)	3		Х
BIS 302: Interdisciplinary Inquiry	3		Х
BIS 401: Applied Interdisciplinary Studies	3		Х
BIS 402: Senior Seminar (L)	3		Х
Sub Total (III): 15			

IV. Organizational Studies Concentration (30 hours)<sup>1</sup>

IV. Organizational Studies Concentration	1 (30 11	oursj	
Organizational & Management Theory (3 hours)			
TMC 346: Management Dynamics	3		Х
Social Processes & Human Interaction (3 hours)			
SOC 352: Social Change (SB, G, H)	3		Х
Information Management & Organizational Technology (3 hours)			
COM 394: Communication in the Electronic Age	3		Х
Diversity (3 hours)			
BIS 350: Diversity and Organizations (L, C)	3		Х
Organizational Contexts (9 hours)			
POS 360: World Politics	3		Х
SOC 321: Sociology of Work	3		Х
REL 320: American Religious Traditions (or) REL 321: Religion in America	3		х
Ethics (3 hours)			
PHI 306: Applied Ethics	3		Х
Quantitative Methods (3 hours)			
PAF 401: Statistics	3		Х
Organizational Tools/Skills (3 hours)			
ENG 301: Writing for the Professions (or)			
TWC 301: General Principles of Multimedia	3		Х

Sub Total IV: 30

## V. Electives (38-40 hours)<sup>2</sup>



<sup>1</sup> Grades of "C" or better are required for all courses within these categories.

<sup>2</sup> There is no specific elective or minor requirement for the BIS degree. Students needing more than 15 hours of electives to meet the 120 hour requirement are encouraged to pursue a minor in addition to their BIS concentration; however, minors are not required.



## ARIZONA STATE UNIVERSITY

I. First Year Composition (3-6 hours) <sup>1</sup>	Total Hours	UD Hours	Res Hours	Grade
ENG 101:First Year Comp 1 (3) and				
ENG 102:First Year Comp 2 (3) or, if eligible				
ENG 105: Advance First Year Comp (3)				

## II. ASU Experience: (3 hours)<sup>2</sup>

ASU 101: The ASU Experience	
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## III. University General Studies (29-38 hours)

Humanities/Fine Arts & Social/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: SG:

Х

## Literacy and Critical Inquiry (6 hours)

L:	Met by BIS 370						
L:	Met by BIS 470						
Mat	thematics & Statistics/Computer Applications	(6 hou	rs)				
MA	:						
CS:							
A	wareness Areas (2 courses minimum and must fulfill	all 3 are	eas)				
	Double counting is permissible between Awareness Areas, other courses that fulfill graduation requirements, and within the Awareness Areas.						

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

Global Awareness (G):

Total Hours Required	Upper Division Hours Required		Max. 2-yr Transfer Hours allowed		ASU Resident Hours for Academic Recognition
120	45	30	64	2.00	56

For more information about the BLS please go to: http://sls.asu.edu/ls/

This check sheet is for reference only; please consult your ASU DARS report for official information about your requirements.

<sup>1</sup> Grades of "C" or better are required for courses within this category.

<sup>2</sup> ASU 101 is required only of all freshmen.

<sup>3</sup> Please visit http://sls.asu.edu/ls/ for a list of courses offered each semester that fulfill this requirement. Grades of "C" or better are required.

<sup>4</sup> Please visit http://sls.asu.edu/ls/ for a list of courses offered each semester that fulfill this requirement. . Grades of "C" or better are required. .

## **Bachelor of Liberal Studies**

Catalog: 2010-2011

IV. BLS Core (6 hours) <sup>1</sup>	Total Hours	UD Hours	Res Hours	Grade
BIS 370: Dimensions of Liberal Studies	3	3	3	
BIS 470: Liberal Studies Seminar	3	3	3	

## V. Liberal Studies Humanities: (12 hours)<sup>3</sup>

	3	
	3	
	3	
	3	

## VI. Liberal Studies Social Sciences (12 hours)<sup>4</sup>

	3	
	3	
	3	
	3	

## VII. Electives (as needed for 120 total hours) 5

<sup>5</sup> There is no specific elective or minor requirement for the BLS degree. Students are encouraged to pursue a minor in addition to the BLS requirements. Students are encouraged to use these electives to fulfill prerequisite course requirements or gain knowledge and skills in preparation for required upper-division required courses.



Catalog: 2010-2011

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)



# Major Map: Literature, Writing and Film – Bachelor of Arts (B.A.) School of Letters and Sciences | Catalog Year: 2010-2011

			Competed Transfer Pathway:		Completed General Education:	
Course Subject and Title (courses in <b>bold/shading</b> are critical)	Hrs.	Upper	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes	
TERM ONE: 0-16 CREDIT HOURS	nis.	Division	Course/Grade	Kequiled	Additional Critical Requirement Notes	
ASU 101: The ASU Experience	1				• ASU 101 is for ASU freshman students only.	
ENG 101 and 102: First-Year Composition OR ENG 107 and 108: English for Foreign Students OR	1				<ul><li>Not required of transfer students</li><li>An SAT, ACT, Accuplacer, or TOEFL score</li></ul>	
ENG 105: Advanced First-Year Composition	3			Grade of C	determines placement into first-year composition courses	
MAT 142: College Mathematics (MA) or higher	3				ASU Math Placement Exam score determines	
Social & Behavioral Sciences (SB)	3				placement in Mathematics course	
Elective	3				-	
Elective	3					
TERM TWO: 17-32 CREDIT HOURS ENG 101 and 102: First-Year Composition OR ENG 107 and 108: English for Foreign Students OR					Complete Mathematical Studies (MA)	
ENG 105: Advanced First-Year Composition	3			Grade of C	_	
Computer Science course (CS)	3				-	
Natural Science-Quantitative (SQ)	4				-	
Elective	3				-	
Elective	3			 		
TERM THREE: 33-47 CREDIT HOURS Complete 2 courses from:					Complete First-Year Composition requirement:	
ENG 200: Critical Reading and Writing About Literature (HU) ENG 217: Writing Reflective Essays (L)	3			Grade of C	<ul> <li>ENG 101 &amp; 102 OR ENG 107 &amp; 108 or 105</li> <li>MILESTONE: Students must select a track</li> </ul>	
ENG 230: Introduction to Film Studies (L or HU) Natural Science- Quantitative (SQ) or General (SG)	3			Grade of C	-	
	3				-	
Elective	2				-	
TERM FOUR: 48-62 CREDIT HOURS	2					
Complete remaining course from: ENG 200: Critical Reading and Writing About Literature (HU) ENG 217: Writing Reflective Essays (L)					HU or SB requirement may be satisfied by track specific course or other elective	
ENG 230: Introduction to Film Studies (L or HU)	3			Grade of C	-	
Track specific focus area course (see list on page 2)	3			Grade of C	-	
Track specific focus area course (see list on page 2)	3			Grade of C		
Social & Behavioral Sciences (SB)	3					
	3					
TERM FIVE: 63-76 CREDIT HOURS	2				• A minimum of 9 hours of Upper Division	
Track specific focus area course (see list on page 2)	3			Grade of C Grade of C	coursework must be completed in this semester.	
Track specific focus area course (see list on page 2) Upper Division Literacy & Critical Inquiry (L)	3			Glade of C	• HU or SB requirement may be satisfied by	
Elective	2				track-specific course or other elective	
Upper Division Elective	3				-	
TERM SIX: 77-91 CREDIT HOURS	5					
Track specific elective course (see list below)	3			Grade of C	A minimum of 12 hours of Upper Division	
Track specific elective course (see list below)	3			Grade of C	coursework must be completed in this semester	
H, if completed take elective	3				H (historical awareness) requirement may be satisfied by track-specific course or other	
Upper Division HU or SB, if completed take elective	3				elective	
Elective	3				Upper Division HU or SB requirement may satisfied by track-specific course or other elective	
TERM SEVEN: 92-106 CREDIT HOURS	·	·	<u></u>	·		
Track specific elective course (see list below)	3			Grade of C	A minimum of 12 hours of Upper Division	
Cultural diversity in the U.S. (C) ( if completed, take elective	3				<ul> <li>coursework must be completed in this semester</li> <li>C (cultural awareness) requirement may be</li> </ul>	
Upper Division Elective	3				- satisfied by track-specific course or other	
Upper Division Elective Elective	3				elective	
	3					
TERM EIGHT: 107-120 CREDIT HOURS ENH498: Literature, Writing, and Film Capstone Project	3	$\boxtimes$		Grade of C	A minimum of 12 hours of Upper Division	
					coursework must be completed in this semester	
G (global awareness) if completed, take elective	3				G (global awareness) requirement may be     activities of the second secon	
Upper division Elective	3				satisfied by track-specific course or other elective	
Elective	3				-	
Elective	2				<u> </u>	



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First-Year Composition

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Natural Science-Quantitative (SQ)

Natural Science-General (SG)

Cultural Diversity in the US (C)

General Studies Awareness Requirements

Global Awareness (G)

Historical Awareness (H)

#### **Graduation Requirements Summary:**

Total Hours	Total UD Hours	Cumulative GPA	Total Hrs at ASU	Resident Credit for Academic	Total Comm. College Hrs.
(120 minimum)	(minimum 45)	(2.00 minimum)	(minimum 30)	Recognition (minimum 56)	(maximum 64)

#### **General University Requirements: Legend**

- General Studies Core Requirements: ٠
  - Literacy and Critical Inquiry (L) 0
  - 0 Mathematical Studies (MA)
  - 0
  - Computer/Statistics/Quantitative applications (CS)
  - 0 Humanities, Fine Arts, and Design (HU)
  - Social and Behavioral Sciences (SB) 0

#### **Additional Notes:**

#### The B.A. in Literature, Writing, and Film has six tracks. The following are the focus area & specific elective courses for each track:

Tracks	Track Specific Focus Area Courses	Track Specific Elective Courses
Literature and Film	Students choose from among the following:	Any ENG or FMS prefix courses
	ENG 230: Introduction to Film Studies (L or HU) ENG 366: Literature on Film ENG 378: Environmental Creative Nonfiction (L & HU) ENG 367: Environmental Issues in Literature (L & HU) ENG 367: Environmental Issues in Literature and Film (L & HU) ENG 320: Medievalism in Modern Culture ENG 466: Studies in International Film (L or HU, G) ENG 467: American Film Musicals (L or HU) ENG 464: Great Directors (L or HU) ENG 464: Great Directors (L or HU) ENG 468: Environmental Literaty Criticism ENG 221: Survey of English Literature (HU) ENG 222: Survey of English Literature (HU, H) ENG 241: Literatures of the United States to 1860 (HU) ENG 242: Literatures of the United States, 1860-Present (HU) ENG 311: Introduction to Shakespeare (L or HU) ENG 385: Career Development for English Majors (L)	
Writing	ENG 363: Career Development for English Majors (E)         Students choose from among the following:         ENG 243: Introduction to Writing Family History (L)         ENG 244: Introduction to Researching Family History         ENG 373: Publishing in Literary Magazines         ENG 376: Writing a Personal History (L)         ENG 377: Editing Family History for Public Audiences (L)         ENG 377: Editing Family History for Public Audiences (L)         ENG 389: Writing Creative Nonfiction for Publication         ENG 382: Digital Project Management for Humanities and Arts         ENG 382: Digital Project Management for Humanities and Arts         ENG 383: Digital Media in the Humanities and Arts         ENG 384: Introduction to Creative Writing         ENG 3068: Travel Writing (L)         ENG 3068: Travel Writing (L)         ENG 3061: Intermediate Creative Writing         ENG 310: Intermediate Creative Writing         ENG 411: Advanced Creative Writing         ENG 412: Creative Nonfiction         ENG 215 Strategies for Academic Writing         ENG 216 Persuasive Writing on Public Issues         ENG 385 Career Development for English Majors         ENG 385 Career Development for English Majors         ENG 472 Rhetorical Studies         TWC 301 General Principles of Multimedia Writing	<ul> <li>Any ENG Writing courses</li> <li>Any Upper Division ENG literature courses. Any of the following GIT courses:</li> <li>GIT 194: Introduction to Computer Documents</li> <li>GIT 294: Introduction to Digital Photography</li> <li>GIT 210: Creative Thinking and Design Visualization</li> <li>GIT 233 Digital Publishing</li> <li>GIT 333 Printing Technology</li> <li>GIT 414 Web Site Design and Internet/Web Technologies</li> <li>Any of the following TWC courses:</li> <li>TWC 401 Principles of Technical Communication</li> <li>TWC 403 Writing for Professional Publication</li> <li>TWC 421 Principles of Writing with Technology</li> </ul>
English for Secondary Teachers	Students choose from among the following:         ENG 366: Literature on Film         ENG 334: The American Southwest in Literature (L & HU)         ENG 320: Medievalism in Modern Culture (L & HU)         ENG 481: Methods of Teaching Secondary Writing         ENG 483: Methods of Teaching Secondary Literature and Language         ENG 221: Survey of English Literature (HU)         ENG 222: Survey of English Literature (HU, H)         ENG 241: Literatures of the United States to 1860 (HU)         ENG 242: Literatures of the United States, 1860-Present (HU)         ENG 314 Modern Grammar         ENG 321: Introduction to Shakespeare (L or HU)         ENG 333 American Ethnic Literature	Any courses with an ENG prefix



## Major Map: Science, Technology and Society – Bachelor of Science (B.S.) School of Letters and Sciences | Catalog Year: 2010-2011

				ansfer Pathway: TAG □ATP □None	Completed General Education:
Course Subject and Title	11	Upper	Transfer Course/Grade	Minimum Grade if Required	
(courses in <b>bold/shading</b> are critical) TERM ONE: 0-15 CREDIT HOURS	Hrs.	Div.	Course/Grade	Minimum Grade II Required	Additional Critical Requirement Notes
STS 101: Introduction to Science, Technology and Society (SB)	3			Grade of C	ASU 101 is for ASU freshman students only
ASU 101: The ASU Experience	1				<ul> <li>Not required of transfer students</li> <li>Transfer students with 64 credit hours or more</li> </ul>
ENG 101 and 102: First-Year Composition OR					<ul> <li>Transfer students with 64 credit hours or more transferred must take STS 304 instead of STS</li> </ul>
ENG 107 and 108: English for Foreign Students <b>OR</b> ENG 105: Advanced First-Year Composition	3			Grade of C	101.
Humanities, Fine Arts & Design (HU)	3			Grade of C	<ul> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year</li> </ul>
	-				composition courses
Mathematics (MA)	3				<ul> <li>ASU Math Placement Exam score determines placement in Mathematics course</li> </ul>
TERM TWO: 16-30 CREDIT HOURS	3				placement in Mathematics course
STS 110: Global Technology and Development (SB, G)	3			Grade of C	* It is highly recommended that STS students
ENG 101 and 102: First-Year Composition OR					take a statistics course for their (CS) general
ENG 107 and 108: English for Foreign Students <b>OR</b> ENG 105: Advanced First-Year Composition	3			Crada of C	<ul><li>studies requirement.</li><li>Transfer students with 64 credit hours or more</li></ul>
Computer/Statistics/Quantitative applications (CS)*	3			Grade of C	transferred must take STS 317 instead of STS
Social & Behavioral Sciences (SB)	3				110.
Global Awareness (G)	3				1
TERM THREE: 31-45 CREDIT HOURS					·
Historical Awareness (H)	3				First-year composition requirement completed
Literacy & Critical Inquiry (L)	3				
Natural Science-General (SG) OR		_			
Natural Science-Quantitative (SQ)	4				-
Cultural Diversity in the US (C) Elective	3				
TERM FOUR: 46-60 CREDIT HOURS	3				
Elective	3				• See your advisor for a list of courses that fulfill
Humanities, Fine Arts & Design (HU)	3				your chosen STS Track and to discuss the
Natural Science-Quantitative (SQ)	4				required Minor for the degree.
Approved upper division STS Track course	3			Grade of C	
Approved Minor course	3				
TERM FIVE: 61-75 CREDIT HOURS			_		
STS 301: Research in Science and Technology Studies (SB)	3			Grade of C	
STS 302: Philosophy of Science and Technology	3			Grade of C	
Approved upper division STS Track course	3	$\square$		Grade of C	
Approved upper division STS Track course	3			Grade of C	-
Approved Minor course	3				
TERM SIX: 76-90 CREDIT HOURS	2				
STS 303: History of Science and Technology (H) STS 305: Science and Social Theory (SB)	3			Grade of C Grade of C	1
Approved upper division STS Track course	3			Grade of C	1
Approved Upper division STS Track course	3				1
Historical Awareness (H)	3				1
TERM SEVEN: 91-105 CREDIT HOURS					·
STS 306: Social Effects of Science and Technology (SB)	3	$\boxtimes$		Grade of C	
Approved upper division STS Track course	3			Grade of C	
Approved Minor course	3				
Social & Behavioral Sciences (SB)	3				4
Upper Division Literacy & Critical Inquiry (L)	3	$\boxtimes$			
TERM EIGHT: 106-120 CREDIT HOURS					
STS 484: Internship	3			Grade of C	4
Approved STS Track course	3			Grade of C	4
Approved Minor course	3				4
Approved Minor course Upper division Humanities, Fine Arts & Design (HU) <b>OR</b>	3				4
Upper division Social & Behavioral Sciences (SB)	3	$\boxtimes$			



Total Hours	Total UD Hours	Cumulative GPA	Total Hrs at ASU	Resident Credit for Academic	Total Comm. College Hrs.
(120 minimum)	(minimum 45)	(2.00 minimum)	(minimum 30)	Recognition (minimum 56)	(maximum 64)

#### General University Requirements: Legend

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L)
  - Mathematical Studies (MA)
  - Computer/Statistics/Quantitative applications (CS)
  - o Humanities, Fine Arts, and Design (HU)
  - Social and Behavioral Sciences (SB)
  - o Natural Science-Quantitative (SQ)
  - Natural Science-General (SG)
- General Studies Awareness Requirements
  - Cultural Diversity in the US (C)
    - o Global Awareness (G)
    - Historical Awareness (H)
- First-Year Composition

#### Additional Notes:

Students who begin the STS program at ASUPOLY as freshmen will take STS 101 and 110. STS 304 and 317 are for transfer students with 64 units who need upper division credit.

It is highly recommended that STS students take a statistics course for their (CS) general studies requirement.

Students in the Science, Technology, and Governance Track will complete the following coursework or their equivalents:

- POS 310 American National Government
- STS 318 Science, Technology and Government
- STS 325 Science, Technology and Public Policy
- STS 331 Ethical Issues in Science and Technology
- STS 364 Science, Technology and National Security
- STS 425 Law, Values, and Science and Technology

Students in the Global Technology and Development Track will complete the following coursework or their equivalents:

- STS 328 Science, Technology and Culture
- STS 329 Cultivating Technology in Newly Industrializing Countries
- STS 330 Information Technology and Globalization
- STS 331 Ethical Issues in Science and Technology
- STS 332 Seminar: Global Issues in Science and Technology
- STS 364 Science, Technology and National Security

Students in the General STS Track must meet with an advisor to determine the coursework needed to fulfill this area of the degree.

- The General STS Track has been designed as the integrative component of the STS degree program. It can be used to design dual degrees and double majors with other programs. Students can utilize it in integrating other degree programs and courses available at ASU.
  - o For instance, the Track can be employed in establishing a pre-law degree program with more emphasis on a science and technology curriculum.
  - Students seeking secondary teaching certification can incorporate social science pedagogy courses.
  - In each instance when this Track is chosen by a student, the student will work in conjunction with faculty advisors within Social and Behavioral Sciences and other units to work out an appropriate program of study.
  - Students can utilize courses available at any unit within ASU for this purpose.

All STS students must take an approved Minor for STS Majors (18 Semester Hours)

- Each approved program of study in the STS program must include at least one minor in a substantive field.
- STS students are encouraged to take minors in career fields, e.g., business, technology, technical communication, education, etc.
- The minor is to help prepare the student for a career upon graduation.
- Before taking minor courses, students must meet with their advisor to determine which minor is best suited for their chosen career field.



#### Major Map: Technical Communication – Bachelor of Science (B.S.) School of Letters and Sciences | Catalog Year: 2010-2011

Competed Transfer Pathway: Completed General Education: □TAG □ATP □None □ MAPP □None □IGETC/CSUGE AGEC Course Subject and Title Upper Division Transfer Minimum Grade if Hrs Additional Critical Requirement Notes (courses in **bold/shading** are critical) Course/Grade Required **TERM ONE: 0-15 CREDIT HOURS** ASU 101: The ASU Experience ASU 101 is for ASU freshman students only. Π 1 Not required of transfer students ENG 101 and 102: First-Year Composition OR An SAT, ACT, Accuplacer, or TOEFL score ENG 107 and 108: English for Foreign Students OR determines placement into first-year ENG 105: Advanced First-Year Composition 3 Grade of C composition courses MA (MAT 142 College Mathematics or any MA equivalent) 3 Grade of C ASU Math Placement Exam score determines Humanities, Fine Arts, and Design (HU) 3 placement in mathematics course 4 Natural Science-Quantitative (SQ) **TERM TWO: 16-30 CREDIT HOURS** ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR 3 Grade of C ENG 107 or 108: English for Foreign Students Computer/Statistics/Quantitative applications (CS) 3 Grade of C Natural Science-General (SG) or Quantitative (SQ) 4 Social and Behavioral Sciences (SB) 3 Elective 3 **TERM THREE: 31-45 CREDIT HOURS** Humanities, Fine Arts, and Design (HU) 3 · First-year composition requirement completed Related area: In consultation with an advisor: • Cultural Diversity in the U.S. (C), if completed take elective 3 suggested courses use the following prefixes: Social and Behavioral Sciences (SB) 3 GIT, ENG, COM, or any other course related to **Related Area Course** 3 Grade of C the student's career path. 3 Elective **TERM FOUR: 46-60 CREDIT HOURS** TWC 301 General Principles of Multimedia Writing (L) 3 Grade of C  $\square$ Upper-division Humanities, Fine Arts, and Design (HU) or Social and 3  $\boxtimes$ Behavioral Sciences (SB) Global Awareness (G), if completed take elective 3 3 Elective Historical Awareness (H), if completed take elective 3 **TERM FIVE: 61-75 CREDIT HOURS**  $\boxtimes$ TWC 401 Principles of Technical Communication (L) 3 Grade of C Elective 3 Elective 3 Elective 3 3 Upper-division elective  $\boxtimes$ **TERM SIX: 76-90 CREDIT HOURS** Related area: In consultation with an advisor; TWC 411 Principles of Visual Communication (L), 421 Principles of Writing with Technology (L), or 431 Principles of Technical Editing 3  $\boxtimes$ Grade of C suggested courses use the following prefixes: GIT, ENG, COM, or any other course related to (L) the student's career path. TWC 44X 45X Genre or Information course  $\boxtimes$ Grade of C 3 TWC elective: Any TWC 300/400 course will Upper-division related area course  $\boxtimes$ Grade of C 3 fulfill this area, however an internship (TWC 3 Elective 484) or supervised work experience is strongly recommended.  $\boxtimes$ Upper-division TWC elective 3 Grade of C **TERM SEVEN: 91-105 CREDIT HOURS** TWC 411 Principles of Visual Communication (L), 421 Principles of Related area: In consultation with an advisor; Writing with Technology (L), or 431 Principles of Technical Editing 3  $\boxtimes$ Grade of C suggested courses use the following prefixes: (L) GIT, ENG, COM, or any other course related to the student's career path. TWC 44X 45X Genre or Information course  $\boxtimes$ Grade of C 3 TWC elective: Any TWC 300/400 course will Upper-division related area course 3 Grade of C  $\boxtimes$ fulfill this area, however an internship (TWC Upper-division TWC elective 3  $\boxtimes$ Grade of C 484) or supervised work experience is strongly  $\boxtimes$ recommended Upper-division elective 3 **TERM EIGHT: 106-120 CREDIT HOURS** TWC 411 Principles of Visual Communication (L), 421 Principles of Related area: In consultation with an advisor; Writing with Technology (L), or 431 Principles of Technical Editing 3  $\boxtimes$ Grade of C suggested courses use the following prefixes: (L) GIT, ENG, COM, or any other course related to the student's career path. 3  $\boxtimes$ TWC 490 Capstone Grade of C TWC elective: Any TWC 300/400 course will Upper-division related area course 3  $\boxtimes$ Grade of C fulfill this area, however an internship (TWC 3 Elective 484) or supervised work experience is strongly recommended. Upper-division TWC elective 3  $\boxtimes$ Grade of C



Total Hours	Total UD Hours	Cumulative GPA	Total Hrs at ASU	Resident Credit for Academic	Total Community College Hrs
(120 minimum)	(minimum 45)	(2.00 minimum)	(minimum 30)	Recognition (minimum 56)	(maximum 64)

#### **General University Requirements: Legend** ٠

General Studies Core Requirements:

- Literacy and Critical Inquiry (L) 0
- Mathematical Studies (MA) 0
- Computer/Statistics/Quantitative applications (CS) 0
- Humanities, Fine Arts, and Design (HU) Social and Behavioral Sciences (SB) 0
- 0
- Natural Science-Quantitative (SQ) 0
- Natural Science-General (SG) 0
- General Studies Awareness Requirements
  - Cultural Diversity in the U.S. (C) 0
    - Global Awareness (G) 0
  - Historical Awareness (H) 0
- First-Year Composition ٠

**Additional Notes:**