

Major Map: Aerospace Engineering (Aeronautics) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATP | | Completed AGEC: Yes No |
|---|------|-------------------|--------------------------|------------------------------|--|
| 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 | | | | T** *** | , A |
| | 1 | | | | • Complete CHM 114 or 116 or 115; MAT 265 |
| +ASU 101-FSE: The ASU Experience CHM 114: General Chemistry for Engineers (SQ) OR | 1 | | | | each with a minimum grade of "C" |
| CHM 115: General Chemistry with Qualitative Analysis (SQ) OR | | | | | + ASU 101-FSE and MAE 100 required for freshmen and should be completed first semester. |
| CHM 116: General Chemistry II * (SQ) | 4 | | | Grade of C | Non-freshmen see advisor for petitioning |
| +MAE 100: Introduction to Mechanical and Aerospace Engineering (or | | | | Grade of C in | replacement electives. |
| Department Approved Elective) | 2 | | | MAE 100 | An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year |
| | | | | | composition courses |
| | | | | | ASU Math Placement Exam score determines |
| MAT 265: Calculus for Engineers I (MA) | 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 | | | | | towards degree credit |
| ENG 105: Advanced First-Year Composition** OR | | | | | **If ENG 105 a 3 hr applicable elective must also |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | be taken prior to graduation. See Advisor. |
| TERM TWO: 16 30 CREDIT HOURS | 2 | | | G 1 6G | Complete MAT 266; PHY 121, 122 each |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | with a minimum grade of "C" |
| PHY 121/122: University Physics I/ Laboratory I (SQ) | 3/1 | | | Grade of C | ð |
| BME 111: Engineering Perspectives on Biological Systems ENG 101 or 102: First-Year Composition OR | 3 | | | | |
| ENG 105: Advanced First-Year Composition** OR | | | | | |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | |
| TERM THREE: 31 45 CREDIT HOURS | 3 | | | | |
| | 4 | | | G 1 6G | • Complete ENG 102 or 108 or 105; MAE 212; |
| MAE 212: Engineering Mechanics | 4 | | | Grade of C | MAT 275; PHY 131, 132 with a minimum |
| MAT 275: Modern Differential Equations | 3 | | | Grade of C | grade of "C" |
| PHY 131/132: University Physics II Electricity and Magnetism/University Physics Laboratory II(SQ) | 3/1 | | | Grade of C | Complete First Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | 105 |
| TERM FOUR: 46 60 CREDIT HOURS | 3 | | | Glade of C | |
| MAE 213: Solid Mechanics | 3 | | | Grade of C | Complete MAE 213, 240 each with a |
| MAE 240: Thermofluids I | 4 | | | Grade of C | minimum grade of "C". |
| MAE 214: Computer-Aided Engineering I | 1 | | | Grade of C | |
| EEE 202: Circuits I | 4 | | | Grade of C | |
| MAT 343: Applied Linear Algebra | 3 | ⊠ | | Grade of C | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | |
| MAE 318: Sensors and Controls | 5 | ⊠ | | Grade of C | MAE 360 and 362 must be completed for L |
| MAE 322: Structural Mechanics | 4 | | | Grade of C | credit. |
| MAE 360: Aerodynamics (L) | 4 | \boxtimes | | Grade of C | |
| MAE 384: Numerical Methods for Engineers (CS) | 3 | \boxtimes | | Grade of C | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | |
| MAE 313: Aircraft Dynamics and Control | 3 | \boxtimes | | Grade of C | MAE 360 and 362 must be completed for L |
| MAE 344: Fundamentals of Aerospace Design | 3 | \boxtimes | | Grade of C | credit. |
| MAE 362: High-Speed Aerodynamics (L) | 4 | \boxtimes | | Grade of C | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), | | | | | |
| Global Awareness (G), or Historical Awareness (H) Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US | 3 | | | | |
| (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | |
| MAE 415: Vibration Analysis | 3 | \boxtimes | | Grade of C | |
| MAE 462: Space Vehicle Dynamics and Control | 3 | \boxtimes | | Grade of C | |
| MAE 463: Propulsion | 3 | \boxtimes | | Grade of C | |
| Upper division Humanities, Fine Arts & Design (HU) OR Social & | | | | | |
| Behavioral Science (SB) | 3 | | | 0.1.66 | |
| Technical Elective | 3 | | | Grade of C | |
| TERM EIGHT: 106 120 CREDIT HOURS MAE 400: Engineering Profession (L) | 3 | | | Grade of C | • Con advisor for approved aleatives |
| · · · · · · · · · · · · · · · · · · · | 3 | | | | See advisor for approved electives. |
| MAE 468: Aerospace Systems Design (L) | | | | Grade of C | |
| Upper division technical elective | 3 | | | Grade of C | |
| General Elective Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 | | | | |
| US (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | |



Major Map: Aerospace Engineering (Aeronautics) – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

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



Major Map: Aerospace Engineering (Astronautics) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATP. | | Completed AGEC: Yes No |
|---|--------|-------------------|--------------------------|----------------------------------|--|
| Course Subject and Title | Hrs. | Upper Division | Transfer Course/Grade | Minimum Grade if Required | Additional Critical Decorporant Notes |
| (courses in bold/shading are critical) TERM ONE: 0 15 CREDIT HOURS | HIS. | Division | Course/Grade | Required | Additional Critical Requirement Notes |
| TERM ONE. V 13 CREDIT HOURS | | | | | Complete CHM 114 or 116 or 115; MAT 265 |
| +ASU 101-FSE: The ASU Experience | 1 | | | | each with a minimum grade of "C" |
| CHM 114: General Chemistry for Engineers(SQ) OR CHM 115: General Chemistry with Qualitative Analysis (SQ) OR | | | | | + ASU 101-FSE and SES 100 required for freshmen |
| CHM 116: General Chemistry II* (SQ) | 4 | | | Grade of C | and should be completed first semester. Non- freshmen see advisor for approved electives. |
| | | | | | An SAT, ACT, Accuplacer, or TOEFL score |
| +SES 100: Introduction to Exploration (3) or MAE 100: Introduction to Mechanical Engineering, (2) OR Elective | 3 or 2 | | | Grade of C in SES 100/MAE 100 | determines placement into first-year composition |
| to Mechanical Engineering, (2) OK Elective | 2 | | | 100/MAE 100 | COURSES |
| | | | | | ASU Math Placement Exam score determines placement in Mathematics course |
| MAT 265: Calculus for Engineers I (MA) | 3 | | | Grade of C | *CHM 113 is a prerequisite and does not apply |
| ENG 101 or 102: First-Year Composition OR | | | | | towards degree credit |
| ENG 105: Advanced First-Year Composition** OR 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. |
| TERM TWO: 16 30 CREDIT HOURS | 3 | | | Grade of C | taken prior to graduation, see ravisor. |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | • Complete MAT 266; PHY 121, 122; each with a |
| PHY 121/122: University Physics I/Laboratory I (SQ) | 3/1 | | | Grade of C | minimum grade of "C" |
| ENG 101 or 102: First-Year Composition OR | 3,1 | | | Grade of C | |
| ENG 105: Advanced First-Year Composition** OR | | _ | | | |
| ENG 107 or 108: English for Foreign Students Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 | | | Grade of C | |
| US (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US | | | | | |
| (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | |
| TERM THREE: 31 45 CREDIT HOURS | | | | | |
| MAE 212: Engineering Mechanics | 4 | | | Grade of C | Complete ENG 102 or 108 or 105; MAE 212; MAT 275: PHY 131/132 each with a minimum. |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | MAT 275; PHY 131/132 each with a minimum grade of "C" |
| | | | | | Complete First-Year Composition requirement: |
| MAT 275: Modern Differential Equations | 3 | | | Grade of C | 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 | |
| TERM FOUR: 46 60 CREDIT HOURS | 3/1 | | | Grade of C | |
| MAE 213: Solid Mechanics | 3 | | | Grade of C | Complete MAE 213, 240 each with a minimum |
| MAE 214: Computer-Aided Engineering I | 1 | | | Grade of C | grade of "C". |
| MAE 240: Thermofluids I | 4 | | | Grade of C | |
| EEE 202: Circuits I | 4 | | | Grade of C | |
| MAT 343: Applied Linear Algebra | 3 | | | Grade of C | |
| TERM FIVE: 61 75 CREDIT HOURS | 3 | | | Grade of C | |
| MAE 318: Sensors and Controls | 5 | \boxtimes | | Grade of C | |
| MAE 345: Structures in a Space Environment | 4 | | | Grade of C | |
| MAE 384: Numerical Methods for Engineers (CS) | 3 | | | Grade of C | |
| EEE 203: Signals & Systems I or SES 210: Engineering Systems & | , | <u> </u> | | 5.44c 01 C | |
| Experimental Design | 3 | | | Grade of C | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | |
| MAE 362: High-Speed Aerodynamics (L) | 4 | ⊠ | | Grade of C | |
| MAE 462: Space Vehicle Dynamics and Control | 3 | ⊠ | | Grade of C | |
| Literacy and Critical Inquiry (L) | 3 | | | | |
| SES 311: Essentials of Astrobiology, Life in the Universe or | | | | | |
| BIO 187 or 188: General Biology I or II (4) or BIO 201: Human Anatomy and Physiology (4) or | | | | | |
| BME 111: Engineering Perspectives on Biological Systems (3) | 3 | | | | |
| 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 | | | | | |
| EEE 304: Signals & Systems II | 4 | | | Grade of C | |
| MAE 400: Engineering Profession (L | 3 | | | Grade of C | |
| MAE 465: Rocket Propulsion | 3 | | | Grade of C | |
| Technical Elective | 3 | | | Grade of C | |
| Humanities, Fine Arts & Design (HU) | 3 | | | | |



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Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| 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 | | | | | |
| MAE 480: Space Systems Design | 3 | | | Grade of C | |
| Aeronautics Elective | 3 | | | Grade of C | |
| Technical Elective | 3 | \boxtimes | | Grade of C | |
| UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) | 3 | | | | |
| Elective | 3 | | | | |

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



Major Map: Bioengineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | 1 | Completed ATI | | Completed AGEC: ☐ Yes ☐ No |
|---|-----------------------|-------------------|--------------------------|------------------------------|---|
| 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 | | | o and o | | A TORKY |
| | | | | | Complete MAT 265 with a minimum grade of |
| ASU 101-FSE: The ASU Experience | 1 | | | | "C" • Complete 2 of: RME 111& 112 OR BIO 188: |
| BME 100: Introduction to Bioengineering OR | | | | | Complete 2 of: BME 111& 112 OR BIO 188; CHM 114 or 116, each with a minimum grade |
| BME 111/112: Engineering Perspectives on Biological Systems/Laboratory or BIO 188: General Biology II (SQ) | 2 or 4 | | | Grade of C in BME 111/112 | of "C"; BME 100 |
| Systems/ Laboratory of Bro 166. General Blology II (5Q) | | | | DIVIL 111/112 | An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition |
| CHM 114: General Chemistry for Engineers (SQ) OR | | | | | courses |
| CHM 116: General Chemistry II * | 4 | | | Grade of C | ASU Math Placement Exam score determines |
| MAT 265: Calculus for Engineers I (MA) | 3 | | | Grade of C | placement in Mathematics course |
| ENG 101 or 102: First-Year Composition OR | 3 | | | Grade of C | * CHM 113 is a prerequisite and does not apply towards degree credit |
| 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. |
| TERM TWO: 16 30 CREDIT HOURS | | | ı | | C LA ACUANA ECE |
| BME 100: Introduction to Bioengineering OR BME 111/112: Engineering Perspectives on Biological | 2 or | | | Grade of C in BME | Complete ASU101-FSE Complete BME 100 |
| Systems/Laboratory or BIO 188: General Biology II (SQ) | 4 | | | 111/112 | Complete BME 111& 112 with a minimum |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | grade of "C" or BIO 188 |
| PHY 121/122: University Physics I/Laboratory I (SQ) | 3/1 | | | | Complete CHM 114 or 116 with a minimum grade of "C" |
| ENG 101 or 102: First-Year Composition OR | | | | | Complete MAT 266 with a minimum grade of |
| ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | "C" • Complete PHV 121/122 |
| | 3 | | | Grade of C | Complete PHY 121/122 |
| TERM THREE: 31 45 CREDIT HOURS | 4 | | | Condo of C | Complete MAT 267; PHY 131, 132, each with |
| BME 235: Physiology for Engineers | 3 | | | Grade of C | a minimum grade of "C" |
| MAT 267: Calculus for Engineers III PHY 131/132: University Physics Electricity and Magnetism II/ | 3 | | | Grade of C | Complete First-Year Composition requirement: The following Production of the composition of the composition requirement: The following Production of the composition of the composition of the composition requirement: The following Production of the composition |
| Laboratory II (SQ) | 3/1 | | | Grade of C | ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| CHM 231/235: Elementary Organic Chemistry/Laboratory or CHM | | | | | |
| 233/237: General Organic Chemistry I/Laboratory I | 3/1 | | | | |
| CSE 100: Principles of Programming with C++ (CS) | 3 | | | | |
| TERM FOUR: 46 60 CREDIT HOURS | 2 | | | 0 1 60 | Complete BME 200, 235 each with a |
| BME 200: Conservation Principles of Bioengineering | 3 | | | Grade of C | minimum 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) Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US | 3 | | | Grade of C | 1 |
| (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | |
| # BME 318: Biomaterials | 4 | \boxtimes | | | # Designates Major Course: A minimum cumulative |
| # BME 350: Signals and Systems for Bioengineering | 3 | \boxtimes | | | GPA of 2.0 required. |
| # CHM 341: Elementary Physical Chemistry | 3 | \boxtimes | | Grade of C | |
| # MAT 343: Applied Linear Algebra | 3 | ⊠ | | | |
| # IEE 380: Probability and Statistics for Engineering Problem Solving | 3 | \boxtimes | | | |
| (CS) TERM SIX: 76 90 CREDIT HOURS | 1 3 | Ľ | 1 | 1 | |
| TERM SIA: 70 90 CREDIT HOURS | | | | | |
| # RME 300: Ricangingaring Product Design | | M | | Grade of C | # Designates Major Course: A minimum cumulative |
| # BME 300: Bioengineering Product Design | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative GPA of 2.0 required. |
| # BME 331: Bioengineering Transport Phenomena | 3 3 | ⊠ | | Grade of C | |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering | 3 | | | Grade of C | |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H) | 3 3 | ⊠ | | Grade of C | |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering 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 (C), | 3 3 4 3 | ⊠ ⊠ □ | | Grade of C | |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering 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 (C), Global Awareness (G) or Historical Awareness (H) | 3 3 4 | ⊠ ⊠ | | Grade of C | |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering 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 (C), Global Awareness (G) or Historical Awareness (H) TERM SEVEN: 91 105 CREDIT HOURS | 3 3 4 3 3 | | | Grade of C | GPA of 2.0 required. |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering 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 (C), Global Awareness (G) or Historical Awareness (H) TERM SEVEN: 91 105 CREDIT HOURS # BME 413: Biomedical Instrumentation(BME 413 & 423 = L) | 3 3 4 3 3 | | | | |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering 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 (C), Global Awareness (G) or Historical Awareness (H) TERM SEVEN: 91 105 CREDIT HOURS # BME 413: Biomedical Instrumentation(BME 413 & 423 = L) # BME 417: Biomedical Engineering Capstone Design I (L) | 3 3 4 3 3 | | | Grade of C Grade of C | GPA of 2.0 required. # Designates Major Course: A minimum cumulative |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering 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 (C), Global Awareness (G) or Historical Awareness (H) TERM SEVEN: 91 105 CREDIT HOURS # BME 413: Biomedical Instrumentation(BME 413 & 423 = L) # BME 417: Biomedical Engineering Capstone Design I (L) # BME 423: Biomedical Instrumentation Laboratory | 3 3 4 3 3 | | | | GPA of 2.0 required. # Designates Major Course: A minimum cumulative |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering 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 (C), Global Awareness (G) or Historical Awareness (H) TERM SEVEN: 91 105 CREDIT HOURS # BME 413: Biomedical Instrumentation(BME 413 & 423 = L) # BME 417: Biomedical Engineering Capstone Design I (L) | 3 3 4 3 3 | | | | GPA of 2.0 required. # Designates Major Course: A minimum cumulative |
| # BME 331: Bioengineering Transport Phenomena # BME 370: Microcomputer Applications in Bioengineering 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 (C), Global Awareness (G) or Historical Awareness (H) TERM SEVEN: 91 105 CREDIT HOURS # BME 413: Biomedical Instrumentation(BME 413 & 423 = L) # BME 417: Biomedical Engineering Capstone Design I (L) # BME 423: Biomedical Instrumentation Laboratory # BME 434: Applications of Bioengineering OR | 3 3 4 3 3 | | | | GPA of 2.0 required. # Designates Major Course: A minimum cumulative |



Major Map: Bioengineering – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus

| Catalog | Year: | 2009-2010 |
|---------|-------|-----------|
|---------|-------|-----------|

| 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 | | | | | |
| # BME 490: Biomedical Engineering Capstone Design II | 4 | \boxtimes | | | # Designates Major Course: A minimum cumulative |
| # Technical Elective | 3 | | | | GPA of 2.0 required. |
| # Technical Elective | 2 | | | | |
| UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral | | | | | |
| Science (SB) AND Cultural Diversity in the US (C), Global | | | | | |
| Awareness (G) or Historical Awareness (H) | 3 | \square | | | |

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



Major Map: Biomedical Informatics -Bachelor of Science (B.S.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| Г | 1 | | Completed ATF | | Completed AGEC: Yes No | |
|---|-------|-------------------|--------------------------|------------------------------|--|--|
| 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 | recuired | Traditional Circum Requirement Protes | |
| ASU 101-FSE: The ASU Experience | 1 | | | | Complete BMI 101 with a minimum grade of | |
| @BMI 101: Introduction to Bioinformatics | 3 | | | Grade of B- | "B-" | |
| CHM 113: General Chemistry I (SQ) | 4 | | | | ASU 101-FSE should be completed first semester. An SAT, ACT, Accuplacer, or TOEFL score | |
| ENG 101 or 102: First-Year Composition OR | | | | | determines placement into first-year composition | |
| ENG 105: Advanced First-Year Composition** OR | 2 | | | G 1 60 | courses | |
| 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. | |
| | | | | | Designates Lower Division Major Course: A | |
| | | _ | | | minimum cumulative GPA of 3.0 required in lower | |
| Social & Behavioral Science (SB) | 3 | | | | division major courses | |
| TERM TWO: 16 30 CREDIT HOURS | | | | İ | G 1 GGT 440 PVC 400 I PVV 400 I | |
| ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR | | | | | Complete CSE 110, BIO 188 and BMI 102 each with a minimum grade of "B-" | |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | with a minimum grade of B- | |
| @BMI 102: Introduction to Public Health/Imaging Informatics | 3 | | | Grade of B- | | |
| BIO 188: General Biology II (SQ) | 4 | | | Grade of B- | @ Designates Lower Division Major Course: A | |
| CSE 110: Principles of Programming with Java (CS) | 3 | | | Grade of B- | minimum cumulative GPA of 3.0 required in lower | |
| CPI 200: Mathematical Foundations of Informatics (MA) | 3 | | | | division major courses | |
| TERM THREE: 31 45 CREDIT HOURS | | | | | | |
| STP 226: Elements of Statistics | 3 | | | | Complete CSE 205, BIO 187, and BMI 201 each | |
| BIO 187: General Biology I (SG) | 4 | | | Grade of B- | with a minimum grade of "B-" • Complete First-Year Composition Requirement: | |
| @BMI 201: Introduction to Clinical Informatics | 3 | | | Grade of B- | ENG 101 & 102 or ENG 107 & 108 or ENG 105. | |
| CSE 205: Object Oriented Programming and Data Structures | 3 | | | Grade of B- | | |
| | | | | | | |
| | | | | | @ Designates Lower Division Major Course: A minimum cumulative GPA of 3.0 required in lower | |
| HSM 220: Health Care Organizations (H) | 3 | | | | division major courses | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | , and the second | |
| BIO 340: General Genetics | 4 | \boxtimes | | Grade of B- | Complete CSE 240, BIO 340, BMI 211 and BMI | |
| @BMI 211: Modeling Biomedical Decisions | 3 | | | Grade of B- | 221 each with a minimum grade of "B-" | |
| @BMI 221: Knowledge Representation for Biomedical | | _ | | |] | |
| Informatics | 3 | | | Grade of B- | | |
| CSE 240: Introduction to Programming Languages | 3 | | | Grade of B- | @ Designates Lower Division Major Course:: A | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) OR Global Awareness (G) | 3 | | | | minimum cumulative GPA of 3.0 required in lower division major courses | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | | |
| #BMI 301: Clinical Environments | 3 | \boxtimes | | Grade of C | | |
| #BMI 311: Modeling Biomedical Knowledge | 3 | ⊠ | | Grade of C | | |
| #BMI 332: Team Dynamics for Healthcare IT Projects | 3 | ⊠ | | Grade of C | # Designates Upper Division Major Course: A | |
| CSE 310: Data Structures and Algorithms | 3 | ⊠ | | Grade of C | minimum cumulative GPA of 2.0 required in upper | |
| Humanities, Fine Arts & Design (HU) | 3 | | | | division major courses | |
| TERM SIX: 76 90 CREDIT HOURS | · | | | | | |
| #BMI 330: Topics in Translational Bioinformatics | 3 | \boxtimes | | Grade of C | | |
| #BMI 312: Modeling Biomedical Data | 3 | | | Grade of C | | |
| CSE 360: Introduction to Software Engineering | 3 | ⊠ | | Grade of C | #B | |
| CSE 412: Database Management | 3 | ⊠ | | Grade of C | # Designates Upper Division Major Course: A minimum cumulative GPA of 2.0 required in upper | |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | , | | | Grade or C | division major courses | |
| US (C) OR Global Awareness (G) | 3 | | | | , | |
| TERM SEVEN: 91 105 CREDIT HOURS | , | | | | | |
| #BMI 461: Advanced Topics in Biomedical Informatics I | 3 | | | Grade of C | See Advisor for approved list of BMI Technical Electives | |
| #BMI 482: Capstone I (proposed Literacy) | 3 | \boxtimes | | Grade of C | Electives | |
| BMI 484: Internship | 3 | \boxtimes | | | # Designates Upper Division Major Course: A | |
| #Technical Elective | 3 | | | Grade of C | minimum cumulative GPA of 2.0 required in upper | |
| UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral | _ | | | | division major courses | |
| Science (SB) | 3 | \boxtimes | | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | - | | | | See Advisor for approved list of BMI Technical | |
| #BMI 462: Advanced Topics in Biomedical Informatics II | 3 | | | Grade of C | Electives | |
| #BMI 483: Capstone II (proposed Literacy) | 3 | | | Grade of C | | |
| #Technical Elective | 1 | | | Grade of C | #Designates Hansa Division Movie Co. | |
| #Technical Elective | 3 | | | Grade of C | # Designates Upper Division Major Course: A minimum cumulative GPA of 2.0 required in upper | |
| #Technical Elective | 3 | | | Grade of C | division major courses | |



Major Map: Biomedical Informatics – Bachelor of Science (B.S.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

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



Major Map: Chemical Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATF | | Completed AGEC: \(\sum \) Yes \(\sum \) No |
|--|------|-------------|---------------|------------------|---|
| Course Subject and Title | TT | Upper | Transfer | Minimum Grade if | Additional Calcinal Descriptions of Nation |
| (courses in bold/shading are critical) | Hrs. | Division | Course/Grade | Required | Additional Critical Requirement Notes |
| TERM ONE: 0 15 CREDIT HOURS | | | | | • Complete MAT 265 with a min grade of "C" |
| ASU 101-FSE: The ASU Experience | 1 | | | | Complete CHM 113 |
| #CHE 100: Introduction to Chemical Engineering | 2 | | | Grade of C | • 2.0 ASU Cumulative GPA required |
| CHM 113: General Chemistry I (SQ) | 4 | Ιп | | | ASU 101-FSE should be completed first semester. An SAT, ACT, Accuplacer, or TOEFL score |
| ENG 101 or 102: First-Year Composition OR | | _ | | | determines placement into first-year composition |
| ENG 105: Advanced First-Year Composition** OR | | | | | courses |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | ASU Math Placement Exam score determines placement in Mathematics course |
| MAT 265: Calculus for Engineers I | 3 | | | Grade of C | **If ENG 105 a 3 hr applicable elective must also be |
| | | | | | taken prior to graduation. See Advisor. |
| Humanities, Fine Arts & Design (HU) 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. |
| TERM TWO: 16 30 CREDIT HOURS | 3 | | | | GITT OF 2.0 required. |
| ENG 101 or 102: First-Year Composition OR | | | | | Complete CHE 100; CHM 116; ENG 101 or 107 |
| ENG 105: Advanced First-Year Composition** OR | | l _ | | | or 105; MAT 266 each with a minimum grade of |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | "C" |
| CHM 116: General Chemistry II (SQ) | 4 | | | Grade of C | • 2.0 ASU Cumulative GPA required |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | |
| PHY 121/122: University PhysicsI/ Laboratory I | 3/1 | | | | |
| TERM THREE: 31 45 CREDIT HOURS | | | | | C 14 CHE 211 ENG 102 109 1 11 |
| # CHE 211: Introduction to Chemical Processing | 3 | | | Grade of C | Complete CHE 211; ENG 102 or 108 each with a minimum grade of "C" |
| MAT 242: Elementary Linear Algebra | 2 | | | | • Complete PHY 121 & 122 |
| MAT 275: Modern Differential Equations (MA) | 3 | | | Grada of C | • 2.0 ASU Cumulative GPA required |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 | | | Grade of C | # Designates Major Course: A minimum aumulative |
| US (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | # Designates Major Course: A minimum cumulative GPA of 2.0 required. |
| 200 Level Engineering Elective | 3 | | | | or required. |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | |
| #CHE 231: Introduction to Transport I: Fluids | 3 | | | Grade of C | Complete CHE 231; MAE 384; MAT 267 each a |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | minimum grade of "C" |
| # MAE 384: Numerical Methods for Engineers (CS) | 3 | | | Grade of C | Complete PHY 131 2.0 ASU Cumulative GPA required |
| PHY 131: University Physics II: Electricity and Magnetism | 3 | | | | # Designates Major Course: A minimum cumulative |
| Social Behavioral Science (SB) AND Cultural Diversity in the US | | _ | | | GPA of 2.0 required. |
| (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | | 1 | ı | |
| # CHE 334: Introduction to Transport Phenomena II: Heat and Mass | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative GPA of 2.0 required. |
| # CHE 342: Introduction to Applied Chemical Thermodynamics | 3 | | | Grade of C | Gr 71 or 2.0 required. |
| CHM 233: General Organic Chemistry I | 3 | | | | |
| CHM 237: General Organic Chemistry Laboratory I | 1 | | | | |
| Bioscience Elective | 3 | | | | |
| # Chemistry Content Technical Elective | 3 | | | | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | |
| # CHE 352: Transport Laboratories (L) | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative GPA of 2.0 required. |
| # CHE 433: Modern Separations | 3 | | | Grade of C | GFA 01 2.0 required. |
| # CHE 442: Introduction to Chemical Reactor Design | 3 | \boxtimes | | Grade of C | |
| 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 | \boxtimes | | Grade of C | # Designates Major Course: A minimum cumulative |
| # CHE 451: Chemical Engineering Laboratory | 3 | \boxtimes | | | GPA of 2.0 required. |
| # CHE 461: Process Dynamic Control | 3 | \boxtimes | | | |
| # Chemistry Content Technical Elective | 3 | \boxtimes | | | |
| 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 | | | | | # Designates Major Course: A minimum cumulative |
| # CHE 462: Process Design (L) | 3 | | | | GPA of 2.0 required. |
| # CHE Technical Elective | 3 | | | | - |
| # CHE Technical Elective | 3 | | | | 4 |
| UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) | 3 | | | | |
| #Natural Science or MSE Technical Elective | 3 | | | | 1 |
| | | | 1 | 1 | ı |



Major Map: Chemical Engineering – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus

Catalog Year: 2009-2010

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) | |
|---|-----------------------|---------------------------|-------------------------------------|------------------------------------|---|--------------------------------------|---|
| | | | | | | | l |

General University Requirements: Legend

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



Major Map: Civil Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATP | | Completed AGEC: Yes No |
|--|--------|-------------------|--------------------------|------------------------------|--|
| 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 Profes |
| | 1 | | | | Complete CHM 114 or 116; MAT 265 with a |
| ASU 101-FSE: The ASU Experience CEE 100: Intro to Civil and Environmental Engineering OR | 1 | | | | minimum grade of "C" |
| ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic | | | | Grade of C in | ASU 101-FSE should be completed first semester. |
| Principles or ECN 201: Economic Issues & Analysis (SB) | 2 or 3 | | | CEE 100 | An SAT, ACT, Accuplacer, or TOEFL score |
| CHM 114: General Chemistry for Engineers (SQ) OR | | | | | determines placement into first-year composition courses |
| 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 |
| | | | | | *CHM 113 is a prerequisite and does not apply toward |
| ENG 101 or 102: First-Year Composition OR | | | | | degree credit. **If ENG 105 a 3 hr applicable elective must also be |
| ENG 105: Advanced First-Year Composition** OR | | | | | taken prior to graduation. See Advisor. |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | 1 0 |
| TERM TWO: 16 30 CREDIT HOURS | | | | | |
| CEE 100: Intro to Civil and Environmental Engineering OR | | | | | • Complete CEE 100; MAT 242, 266; PHY 121 & |
| ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic | 2 2 | _ | | Grade of C in | 122 each with a minimum grade of "C" |
| Principles or ECN 201: Economic Issues & Analysis (SB) | 2 or 3 | | | CEE 100 | |
| MAT 242: Elementary Linear Algebra | 2 | | | Grade of C | |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | |
| PHY 121/122: University PhysicsI/ Laboratory I (SQ) | 3/1 | | | Grade of C | |
| ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR | | | | | |
| ENG 103. Advanced Prist-Teal Composition ** OK 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 | Complete CEE 210; MAT 267, 275, PHY 131 & |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | 132 each with a minimum grade of "C" |
| | 3 | | | | Complete First-Year Composition requirement: DNG 102 DNG 105 DNG 105 |
| MAT 275: Modern Differential Equations (MA) PHY 131/132: University Physics II: Electricity and Magnetism/ | 3 | | | Grade of C | ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| Laboratory II (SQ) | 3/1 | | | Grade of C | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | |
| CEE 212: Engineering Mechanics: Dynamics | 3 | | | Grade of C | Complete CEE 212, CEE 213 each with a |
| CEE 213: Introduction to Deformable Solids | 3 | | | Grade of C | minimum grade of "C" |
| EEE 202: Circuits I OR | 3 | | | Grade or 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 | | | | |
| | 3 | | | | • |
| Basic Science Elective: | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | 2 | | | G 1 6G | # Designates Major Course: A minimum cumulative |
| #CEE 384: Numerical Methods for Engineers (CS) Select 3 | 3 | \boxtimes | | Grade of C | GPA of 2.30 required in all CEE 3XX courses, a |
| # CEE 300: Engineering Business Practice (L) (3 hrs) | | | | | minimum cumulative GPA of 2.30 required in all CEE |
| # CEE 321: Structural Analysis and Design (4 hrs) | | | | | 4XX courses. NOTE: A maximum of two "D" grades |
| # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) | | | | | are allowed in all 3XX and 4XX courses combined. |
| # CEE 351: Geotechnical Engineering (4 hrs) | | | | | |
| # CEE 353: Civil Engineering Materials (3 hrs) # CEE 361: Introduction to Environmental Engineering (4 hrs) | 10- | | | | |
| # CEE 372: Transportation Engineering (4 hrs) | 12 | \boxtimes | | Grade of C in each | |
| IEE 380: Probability and Statistics for Engineering Problem Solving | 3 | \boxtimes | | | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | |
| Select remaining 4 | | | | | # Designates Major Course: A minimum cumulative |
| # CEE 300: Engineering Business Practice(L) (3 hrs) | | | | | GPA of 2.30 required in all CEE 3XX courses, a |
| # CEE 321: Structural Analysis and Design (4 hrs) | | | | | minimum cumulative GPA of 2.30 required in all CEE |
| # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) # CEE 351: Geotechnical Engineering (4 hrs) | | | | | 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined. |
| # CEE 353: Civil Engineering Materials (3 hrs) | | | | | are anowed in an 3777 and 4777 courses combined. |
| # CEE 361: Introduction to Environmental Engineering (4 hrs) | 14 - | | | | |
| # CEE 372: Transportation Engineering (4 hrs) | 16 | \boxtimes | | Grade of C in each | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | |
| #CEE 400 Earth Systems Engineering and Management (HU, H) OR | | | | C-1-+C: CEE | Technical Elective and Design Elective Technical Elective and Design Elective Technical Elective and Design Elective |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global Awareness (G) | 3 | | | Grade of C in CEE 400 | requirements: Complete a total of 2 design electives and 4 technical electives during Term 7 and Term 8. |
| # Technical Elective | 3 | ⊠ | | Grade of C | See Advisor for guidance in selection. |
| | | | | | # Designates Major Course: A minimum cumulative |
| # Technical Elective | 3 | | | Grade of C | GPA of 2.30 required in all CEE 3XX courses, a |
| # Design Elective or # Technical Elective | 3 | \boxtimes | | Grade of C | minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades |
| # Design Elective or # Technical Elective | 3 | \boxtimes | | Grade of C | are allowed in all 3XX and 4XX courses combined. |



Major Map: Civil Engineering – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| 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 | | | | | |
| # 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 elective and 4 technical electives during Term 7 and Term See Advisor for guidance in selection. |
| # CEE 486: Integrated Civil Engineering Design (L) | 4 | | | Grade of C | # Designates Major Course: A minimum cumulative |
| # Technical Elective or # Design Elective | 3 | | | 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)
 - o Mathematical Studies (MA)
 - o 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
 - o Cultural Diversity in the US (C)
 - o Global Awareness (G)
 - o Historical Awareness (H)
- First-Year Composition



Major Map: Civil Engineering (Construction Engineering) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed AT | | Completed AGEC: Yes No | |
|--|-----------|-------------|--------------|--------------------|---|--|
| Course Subject and Title (courses in bold/shading are critical) | Hrs. | Upper | Transfer | Minimum Grade if | Additional Critical Deguinement Notes | |
| | nis. | Division | Course/Grade | Required | Additional Critical Requirement Notes | |
| TERM ONE: 0 15 CREDIT HOURS | 1 | | | | G 1 CONTAIN AND MARKET IN | |
| ASU 101-FSE: The ASU Experience | 1 | | | | Complete CHM 114 or 116; MAT 265 with a minimum grade of "C" | |
| CEE 100: Intro to Civil and Environmental Engineering OR | _ | | | | minimum grade of "C" ASU 101-FSE should be completed first | |
| ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic | 2 or | _ | | Grade of C in | semester. | |
| Principles or ECN 201: Economic Issues & Analysis (SB) | 3 | | | CEE 100 | An SAT, ACT, Accuplacer, or TOEFL score | |
| CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II* (SQ) | 4 | | | | determines placement into first-year composition | |
| | | | | 0 1 60 | courses | |
| MAT 265: Calculus for Engineers I | 3 | | | Grade of C | ASU Math Placement Exam score determines | |
| | | | | | placement in Mathematics course | |
| | | | | | *CHM 113 is a prerequisite and does not apply | |
| ENG 101 or 102: First-Year Composition OR | | | | | toward degree credit. | |
| ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students | 3 | Ιп | | Condo of C | **If ENG 105 a 3 hr applicable elective must also be | |
| 0 | 3 | | | Grade of C | taken prior to graduation. See Advisor. | |
| TERM TWO: 16 30 CREDIT HOURS | | | 1 | | C I CET 100 MATERIA ACC PHY 101 | |
| CEE 100: Intro to Civil and Environmental Engineering OR | 2 | | | Grade of C in | • Complete CEE 100; MAT 242, 266; PHY 121 | |
| ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic | 2 or 3 | | | CEE 100 | & 122 each with a minimum grade of "C" | |
| Principles or ECN 201: Economic Issues & Analysis (SB) | | | | | 1 | |
| 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 | | |
| 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 | Complete CEE 210; MAT 267, 275, PHY 131 | |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | & 132 each with a minimum grade of "C" | |
| | | | | | 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 | |
| PHY 131/132: University Physics II: Electricity and Magnetism/ | 2/1 | | | Crada of C | | |
| Laboratory II (SQ) | 3/1 | | | Grade of C | | |
| TERM FOUR: 46 60 CREDIT HOURS | | | 1 | | | |
| CEE 212: Engineering Mechanics: Dynamics | 3 | | | Grade of C | Complete CEE 212, CEE 213 each with a | |
| CEE 213: Introduction to Deformable Solids | 3 | | | Grade of C | minimum 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 | | | | | | |
| | 2 | M | | Condo of C | # Designates Major Course: A minimum cumulative | |
| # CEE 384: Numerical Methods for Engineers (CS) Select 3 | 3 | | | Grade of C | GPA of 2.30 required in all CEE 3XX courses, a | |
| # CEE 300: Engineering Business Practice (L) (3 hrs) | | | | | minimum cumulative GPA of 2.30 required in all | |
| # CEE 321: Structural Analysis and Design (4 hrs) | | | | | CEE 4XX courses. NOTE: A maximum of two "D" | |
| # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) | | | | | grades are allowed in all 3XX and 4XX courses | |
| # CEE 351: Geotechnical Engineering (4 hrs) | | | | | combined. | |
| # CEE 353: Civil Engineering Materials (3 hrs) | | | | | | |
| # CEE 361: Introduction to Environmental Engineering (4 hrs) | 10- | | | | | |
| # CEE 372: Transportation Engineering (4 hrs) | 12 | \square | | Grade of C in each | | |
| IEE 380: Probability and Statistics for Engineering Problem Solving | 3 | \boxtimes | | | | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | | |
| Select remaining 4 | | | | | # Designates Major Course: A minimum cumulative | |
| # CEE 300: Engineering Business Practice(L) (3 hrs) | | | | | GPA of 2.30 required in all CEE 3XX courses, a | |
| # CEE 321: Structural Analysis and Design (4 hrs) | | | | | minimum cumulative GPA of 2.30 required in all | |
| # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) | | | | | CEE 4XX courses. NOTE: A maximum of two "D" | |
| # CEE 351: Geotechnical Engineering (4 hrs) | | | | | grades are allowed in all 3XX and 4XX courses | |
| # CEE 353: Civil Engineering Materials (3 hrs) | | | | | combined. | |
| # CEE 361: Introduction to Environmental Engineering (4 hrs) | 14- | | | a | | |
| # CEE 372: Transportation Engineering (4 hrs) | 16 | | | Grade of C in each | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | | |
| Select 4 | | | | | # 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 | |
| Highway Materials, Construction and Quality (3 hrs) # CEE 420: Steel Structures (3 hrs) OR # CEE 421: Concrete | | | | | CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses | |
| Structures (3 hrs) | | | | | combined. | |
| # CEE 452: Foundation (3 hrs) | | 1 | | | | |
| # CEE 481: Civil Engineering Project (3 hrs) | | | | | | |
| # Approved technical elective (3 hrs) | 12 | \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) | 3 | \square | | 400 | | |



Major Map: Civil Engineering (Construction Engineering) -Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| Course Subject and Title | Hrs. | Upper | Transfer | Minimum Grade if | Additional Critical Propringment Notes |
|---|------|----------|--------------|--------------------------|---|
| (courses in bold/shading are critical) | Hrs. | Division | Course/Grade | Required | Additional Critical Requirement Notes |
| TERM EIGHT: 106 120 CREDIT HOURS Select remaining 2 # 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 481: Civil Engineering Project (3 hrs) # Approved technical elective (3 hrs) | 6 | ⊠ | | 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. |
| #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 | |
| # CEE 486: Integrated Civil Engineering Design (L) | 4 | | | 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) 0

 - Natural Science-Quantitative (SQ) 0
 - 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: Civil Engineering (Environmental Engineering) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATF | | Completed AGEC: Yes No |
|--|------------|-------------------|--------------------------|------------------------------|---|
| 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 | 1113. | Division | Course/Grade | Кецинец | Additional Critical Requirement Protes |
| ASU 101-FSE: The ASU Experience | 1 | | | | Complete CHM 114 or 116; MAT 265 with a |
| CEE 100: Intro to Civil and Environmental Engineering OR | 1 | | | | minimum grade of "C" |
| ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic | 2 or | | | Grade of C in | ASU 101-FSE should be completed first semester. |
| Principles or ECN 201: Economic Issues & Analysis (SB) | 3 | | | CEE 100 | An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition |
| CHM 114: General Chemistry for Engineers (SQ) OR | | | | | courses |
| CHM 116: General Chemistry II* (SQ) | 4 | | | G 1 60 | 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 | | | | | *CHM 113 is a prerequisite and does not apply toward degree credit. |
| 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. |
| TERM TWO: 16 30 CREDIT HOURS | | | | | |
| CEE 100: Intro to Civil and Environmental Engineering OR | | | | | • Complete CEE 100; MAT 242, 266; PHY 121 & |
| ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB) | 2 or 3 | | | Grade of C in CEE 100 | 122 each with a minimum grade of "C" |
| • • • • | 2 | | | Grade of C | 1 |
| MAT 266. Colonius for Engineers H | 3 | | | | 1 |
| MAT 266: Calculus for Engineers II | | _ | | Grade of C | - |
| PHY 121/122: University Physics I/ Laboratory I (SQ) ENG 101 or 102: First-Year Composition OR | 3/1 | | | Grade of C | - |
| ENG 101 of 102. Prist-Teal 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 | Complete CEE 210; MAT 267, 275, PHY 131 & |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | 132 each with a minimum grade of "C" |
| MAT 275: Modern Differential Equations (MA) | 3 | П | | 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/ | | | | Crade or C | ENG 101 & 102 of ENG 107 & 100 of ENG 103 |
| Laboratory II | 3/1 | | | Grade of C | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | |
| CEE 212: Engineering Mechanics: Dynamics | 3 | | | Grade of C | Complete CEE 212, CEE 213 with a minimum |
| CEE 213: Introduction to Deformable Solids | 3 | | | Grade of C | 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 | 2 | _ | | | |
| Awareness (G): | 3 | | | | - |
| Basic Science Elective | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | 2 | | | 0 1 60 | # Designates Major Course: A minimum cumulative |
| # CEE 384: Numerical Methods for Engineers (CS) Select 3 | 3 | | | Grade of C | GPA of 2.30 required in all CEE 3XX courses, a |
| # CEE 300: Engineering Business Practice (L) (3 hrs) | | | | | minimum cumulative GPA of 2.30 required in all CEE |
| # CEE 321: Structural Analysis and Design (4 hrs) | | | | | 4XX courses. NOTE: A maximum of two "D" grades |
| # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) | | | | | are allowed in all 3XX and 4XX courses combined. |
| # CEE 351: Geotechnical Engineering (4 hrs) # CEE 353: Civil Engineering Materials (3 hrs) | | | | | |
| # CEE 353: CIVII Engineering Materials (5 lifs) # CEE 361: Introduction to Environmental Engineering (4 hrs) | 10 - | | | | |
| # CEE 372: Transportation Engineering (4 hrs) | 12 | \boxtimes | | Grade of C in each | |
| IEE 380: Probability and Statistics for Engineering Problem Solving | 3 | \boxtimes | | | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | |
| Select remaining 4 | | | | | # Designates Major Course: A minimum cumulative |
| # CEE 300: Engineering Business Practice(L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs) | | | | | GPA of 2.30 required in all CEE 3XX courses, a |
| # CEE 321: Structural Analysis and Design (4 hrs) # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) | | | | | minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades |
| # CEE 351: Geotechnical Engineering (4 hrs) | | | | | are allowed in all 3XX and 4XX courses combined. |
| # CEE 353: Civil Engineering Materials (3 hrs) | | | | | |
| # CEE 361: Introduction to Environmental Engineering (4 hrs) | 14 - 16 | \boxtimes | | Grade of C in analy | |
| # CEE 372: Transportation Engineering (4 hrs) | 10 | | | Grade of C in each | |
| TERM SEVEN: 91 105 CREDIT HOURS Select 4 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) # CEE 467: Environmental Microbiology (3 hrs) | | | | | are allowed in all 3XX and 4XX courses combined. |
| # Approved Technical Elective (3 hrs) | 12 | | | Grade of C in each | |
| | | | | | |
| # CEE 400: Earth Systems Engineering and Management (HU, H) | | | | |] |
| # CEE 400: Earth Systems Engineering and Management (HU, H) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US | 12 | | | Grade of C in CEE | |



Major Map: Civil Engineering (Environmental Engineering) – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

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



Major Map: Computer Science – Bachelor of Science (B.S.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed AT | P: Yes No | Completed AGEC: Yes No | |
|---|-------|-------------------|--------------------------|------------------------------|--|--|
| 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 Profes | |
| ASU 101-FSE: The ASU Experience | 1 | | | | Complete CSE 100 or 110; MAT 265 each | |
| # CSE 100: Principles of Programming with C++ (CS) OR | - | J | | | with a minimum grade of "C" | |
| # CSE 110: Principles of Programming with Java (CS) | 3 | | | Grade of C | ASU 101-FSE should be completed first semester. | |
| #CSE 101: Introduction to Computer Science & Engineering | 2 | | | Grade of C | An SAT, ACT, Accuplacer, or TOEFL score | |
| MAT 265: Calculus for Engineers I (MA) | 3 | | | Grade of C | determines placement into first-year | |
| ENG 101 or 102: First-Year Composition OR | | | | | composition courses ASU Math Placement Exam score determines | |
| ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | placement in Mathematics course | |
| | |] | | | **If ENG 105 a 3 hr applicable elective must also be | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US | | | | | taken prior to graduation. See Advisor. # Designates Major Course: A minimum cumulative | |
| (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | GPA of 2.0 required. | |
| TERM TWO: 16 30 CREDIT HOURS | | | | | | |
| # CSE 120: Digital Design Fundamentals | 3 | | | Grade of C | • Complete CSE 120, 205; MAT 266 each with | |
| # CSE 205:Object-Oriented Programming & Data Structures (CS) | 3 | | | Grade of C | a minimum grade of "C" # Designates Major Course: A minimum cumulative | |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | GPA of 2.0 required. | |
| BIO 187: General Biology I (SQ) or BIO 188: General Biology II (SQ) | 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 # CSE 230: Computer Organization and Assembly Language | | | | | Complete CSE 230; MAT 243, 267 each with | |
| Programming | 3 | | | Grade of C | a minimum grade of "C" | |
| MAT 243: Discrete Mathematical Structures | 3 | | | Grade of C | Complete First-Year Composition requirement: | |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | ENG 101 & 102 or ENG 107 & 108 or ENG 105 • See Advisor for approved Laboratory Science | |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | | | | | | |
| US (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | sequence courses | |
| Laboratory Science I (SQ) | 4 | | | | # Designates Major Course: A minimum cumulative GPA of 2.0 required. | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | | |
| #CSE 240: Introduction to Programming Languages | 3 | | | Grade of C | Complete CSE 240 with a minimum grade of | |
| # MAT 343: Applied Linear Algebra | 3 | \boxtimes | | | "C" See Advisor for approved Laboratory Science | |
| Laboratory Science II (SQ) | 4 | | | | sequence courses | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US | _ | | | | General Elective: cannot include CSE, MAT, | |
| (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | PHY, BIO, CHM or other Science course # Designates Major Course: A minimum cumulative | |
| General Elective | 3 | | | | GPA of 2.0 required. | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | | |
| # IEE 380: Probability and Statistics for Engineering Problem Solving | 3 | | | | # Designates Major Course: A minimum cumulative GPA of 2.0 required. | |
| # CSE 301: Computing Ethics | 1 | | | Grade of C | GFA of 2.0 required. | |
| # CSE 310: Data Structures and Algorithms | 3 | | | 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 | 3 | | | | | |
| # CSE 340: Principles of Programming Languages | 3 | \boxtimes | | Grade of C | See Advisor for approved list of Technical | |
| # CSE 355: Introduction to Theoretical Computer Science | 3 | | | Grade of C | Electives | |
| # CSE 4** Computer Science Elective | 3 | ⊠ | | Grade of C | # Designates Major Course: A minimum cumulative GPA of 2.0 required. | |
| Computer Science Technical Elective | 3 | ⊠ | | Grade of C | of 11 of 2.0 required. | |
| UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral | | | | - | | |
| Science (SB) | 3 | \boxtimes | | | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | See Advisor for approved list of Computer | |
| # CSE 430: Operating Systems | 3 | | | Grade of C | See Advisor for approved list of Computer Science Electives | |
| # CSE 485: Computer Science Capstone Project I (L) | 3 | | | Grade of C | General Elective: cannot include CSE, MAT, | |
| # CSE 4** Computer Science Elective | 3 | | | Grade of C | PHY, BIO, CHM or other Science course # Designates Major Course: A minimum cumulative | |
| # CSE 4** Computer Science Elective | 3 2 | | | Grade of C | GPA of 2.0 required. | |
| General Elective | | | | | | |



Major Map: Computer Science – Bachelor of Science (B.S.)

Ira A. Fulton School of Engineering, Tempe Campus

Catalog Year: 2009-2010

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



Major Map: Computer Systems Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATF | | Completed AGEC: Yes No |
|---|-------|-------------------|--------------------------|------------------------------|---|
| 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. | Bivision | Course, Grade | rodulod | Additional Children requirement rotes |
| ASU 101-FSE: The ASU Experience | 1 | | | | Complete CSE 100 or 110, 101; MAT 265 each |
| # CSE 100: Principles of Programming with C++ (CS) OR | - | | | | with a minimum grade of "C" |
| # CSE 110: Principles of Programming with Java (CS) | 3 | | | Grade of C | ASU 101-FSE should be completed first semester. |
| # CSE 101: Introduction to Computer Science & Engineering | | | | Grade of C | An SAT, ACT, Accuplacer, or TOEFL score |
| 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 | | | | | courses ASU Math Placement Exam score determines |
| 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 placement in Mathematics course |
| , , , , , , , , , , , , , , , , , , , | | | | | **If ENG 105 a 3 hr applicable elective must also be |
| Control & Debourged Colored (CD) AND Colored Discouries in the UC | | | | | taken prior to graduation. See Advisor. |
| 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. |
| TERM TWO: 16 30 CREDIT HOURS | 3 | | | | GITI of 2.0 required. |
| # CSE 120: Digital Design Fundamentals | 3 | | | Grade of C | Complete CSE 120, 205; MAT 266 each with a |
| # CSE 205:Object-Oriented Programming & Data Structures (CS) | 3 | | | Grade of C | minimum grade of "C" |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative |
| BIO 187: General Biology I (SQ) OR | 3 | | | Grade of C | GPA of 2.0 required. |
| BIO 188: General Biology Laboratory II (SQ) | 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 | 3 | | | Grade of C | |
| # CSE 230: Computer Organization and Assembly Language | | | | | Complete CSE 230; MAT 243, 267 each with a |
| Programming | 3 | | | Grade of C | minimum grade of "C" |
| MAT 243: Discrete Mathematical Structures | 3 | | | Grade of C | Complete First-Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative |
| PHY 121/122: University Physics I/Laboratory I (SQ) | 3/1 | | | | GPA of 2.0 required. |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | |
| # CSE 220: Programming for Computer Engineering | 3 | | | Grade of C | Complete CSE 220 with a minimum grade of "C" |
| MAT 275: Modern Differential Equations | 3 | | | | # Designates Major Course: A minimum cumulative |
| PHY 131/132: University Physics II Electricity and | 3/1 | | | | GPA of 2.0 required. |
| Magnetism/Laboratory II (SQ) Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3/1 | | | | + |
| US (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US | _ | | | | |
| (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | 4 | | | | # Designates Major Course: A minimum cumulative |
| # EEE 202: Circuits I | 4 | | | | GPA of 2.0 required. |
| # IEE 380: Probability and Statistics for Engineering Problem Solving | 3 | ⊠ ⊠ | | G 1 6G | 1 |
| # CSE 301: Computing Ethics | 1 | ⊠ ⊠ | | 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 | 4 | N | | | 11. N. C. A |
| # EEE 334: Circuits II | 4 | | | 0 1 60 | # Designates Major Course: A minimum cumulative GPA of 2.0 required. |
| # CSE 320: Design and Synthesis of Digital Hardware | 3 | | | Grade of C | Gr A or 2.0 required. |
| # CSE 325: Embedded Micro Systems | 3 | | | Grade of C | - |
| # MAT 343: Applied Linear Algebra Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 | ⊠ | | | - |
| 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 # Designates Major Course: A minimum cumulative |
| # CSE Technical Elective | 3 | ⊠ | | Grade of C | GPA of 2.0 required. |
| # CSE Technical Elective | 3 | ⊠ | | Grade of C | |
| UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral | | | | | 1 |
| Science (SB) | 3 | \boxtimes | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | |
| # CSE 420: Computer Architecture I | 3 | ⊠ | 1 | Grade of C | See Advisor for approved list of CSE Technical Electives |
| # CSE 424: Systems Capstone Project II (L) | 3 | ⊠ | ļ | Grade of C | # Designates Major Course: A minimum cumulative |
| # CSE 434: Computer Networks | 3 | ⊠ | | Grade of C | GPA of 2.0 required. |
| # CSE Technical Elective | 3 | ⊠ | | Grade of C | _ |
| # CSE Technical Elective | 3 | \boxtimes | | Grade of C | |



Major Map: Computer Systems Engineering – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

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



Major Map: Construction (Concrete Industry Management) - Bachelor of Science (B.S.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | 1 | Completed AT | | Completed AGEC: Yes No |
|---|-------|-------------------|--|------------------------------|--|
| 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 | 1113. | Division | Course, Grade | Required | Additional Citical Requirement Proces |
| # ASU 101-FSE: The ASU Experience | 1 | | | | Complete CIM 105 with a minimum grade of |
| • | 2 | | | Grade of C | "C" |
| # CIM 105: Intro to Concrete Industry | | | | | 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 and Culture: A Built Environment (HU, G, H) | 3 | | | | determines placement into first-year composition courses |
| 11) | | | | | ASU Math Placement Exam score determines |
| | | | | | placement in Mathematics course |
| | | | | | **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 ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative gpa of 2.0 required. |
| | 3 | | | Grade of C | gpa or 2.0 required. |
| TERM TWO: 16 30 CREDIT HOURS | 1 | | | 0 1 60 | Complete CIM 106 with a minimum grade of |
| # CIM 106: Concrete Fundamentals | 4 | | | Grade of C | "C"; STP 226 |
| # CON 243: Heavy Construction Equipment, Methods, Materials | 3 | | | | # Designates Major Course: A minimum cumulative |
| # CON 244: Working Drawing Analysis | 1 | | | | gpa of 2.0 required. |
| # 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 | 3 | | | Grade of C | |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | |
| TERM THREE: 31 45 CREDIT HOURS | | | | | • Complete CIM 205; ENG 102 or 105 or 108 |
| # CIM 205: Concrete Construction Methods | 3 | | | Grade of C | with a minimum grade of "C"; COM 225; |
| # CON 221 Applied Statics | 3 | | | | CON 221, ECN 211 |
| # CON 251: Microcomputer Applications for Construction | 3 | | | | Complete First-Year Composition requirement: |
| # CON 251. Wherecomputer Applications for Construction | 3 | | | | ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| COM 225: Public Speaking (L) | 3 | | | | # Designates Major Course: A minimum cumulative gpa of 2.0 required. |
| ECN 211: Macroeconomic Principles (SB) | 3 | | | | gpa or 2.0 required. |
| TERM FOUR: 46 60 CREDIT HOURS | J | | | | |
| # CIM 206: Application of Concrete in Construction | 3 | | | Grade of C | Complete CIM 206 with a minimum grade of |
| ** | | | | Grade of C | "C"; CON 271; ECN 212 |
| # CON 223: Strength of Materials | 3 | | | | # Designates Major Course: A minimum cumulative |
| # CON 271: Construction Safety | 3 | | | | gpa of 2.0 required. |
| ECN 212: Microeconomic Principles (SB) | 3 | | | | |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C) | 3 | | | | |
| TERM SUMMER 2 nd Year: 1 CREDIT HOUR | 3 | | | | |
| | 1 | | | | |
| # CON 296: Field Internship | 1 | | | | |
| # CIM 305: Management of Concrete Products: Ordering and | 1 | | | | # Designates Major Course: A minimum cumulative |
| Delivering | 3 | | | Grade of C | gpa of 2.0 required. Note: maximum of two "D" |
| # CON 383: Construction Estimating | 4 | ⊠ | | Grade of C | grades are allowed in all 3XX and 4XX courses |
| # CON 241: Surveying | 3 | | | Grade of C | combined. |
| Upper division Humanities, Fine Arts & Design (HU) or | 3 | | | | |
| 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 cumulative |
| # CON 389: Construction Cost Accounting and Control (CS) | 3 | | | | gpa of 2.0 required. Note: maximum of two "D" |
| - | | | | Grade of C | grades are allowed in all 3XX and 4XX courses |
| # CON 450: Geotechnical Applications for Construction | 3 | | | Grade of C | combined. |
| LES 305: Legal, Ethical, Regulatory Issues in Business | 3 | | | | |
| TERM SUMMER 3 rd Year: 1 CREDIT HOUR | | | | 1 | |
| # 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 cumulative |
| Upper division CIM Elective | 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 453: Construction Project Management I | 4 | ⊠ | | Grade of C | combined. |
| # CON 495: Construction Planning and Scheduling | 3 | | | Grade of C | |
| TERM EIGHT: 106 120 CREDIT HOURS | ر | | | Stade of C | |
| | 4 | M | | Crede of C | # Designates Major Course: A minimum cumulative |
| # CIM 406: Concrete Industry Management | 4 | | 1 | Grade of C | gpa of 2.0 required. Note: maximum of two "D" |
| # CON 424: Structural Design | 3 | | | Grade of C | grades are allowed in all 3XX and 4XX courses |
| # CON 455: Construction Project Management II | 3 | | | Grade of C | combined. |
| # CON 496: Construction Contract Administration (L) | 3 | | I | Grade of C | |



Major Map: Construction (Concrete Industry Management)

- Bachelor of Science (B.S.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

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



Major Map: Construction (General Building Construction) – Bachelor of Science (B.S.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | 1 | Completed ATP: | Yes No | Completed AGEC: Yes No |
|--|------|-------------------|--------------------------|------------------------------|--|
| 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 | | | | | |
| # ASU 101-FSE: The ASU Experience | 1 | | | | • Complete MAT 265; PHY 111, 113 each with a |
| MAT 265: Calculus for Engineers I (MA) | 3 | | | Grade of C | minimum grade of "C" |
| PHY 111/113: General Physics I/ Laboratory I (SQ) | 3/1 | | | Grade of C | ASU 101-FSE should be completed first |
| # CON 101: Construction & Culture: A Built Environment (HU, G, | 5/1 | | | Grade or C | semester. An SAT, ACT, Accuplacer, or TOEFL score |
| H) | 3 | | | | determines placement into first-year composition |
| # CON 100: Introduction to Construction | 2 | | | | courses |
| # CON 100. Introduction to Construction | | | | | ASU Math Placement Exam score determines Placement in Mathematics accurate |
| | | | | | placement in Mathematics course **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 | | _ | | | # Designates Major Course: A minimum cumulative |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | gpa of 2.0 required. |
| TERM TWO: 16 30 CREDIT HOURS | | | ı | | Complete CON 242 with a minimum and a st |
| # CON 243: Heavy Construction Equipment, Methods, Materials | 3 | | | Grade of C | Complete CON 243 with a minimum grade of "C" |
| # CON 244 : Working Drawing Analysis | 1 | | | | • Complete CON 244, 252 |
| # CON 252: Building Construction Methods, Materials, Equipment | 3 | | | | # Designates Major Course: A minimum cumulative |
| ECN 211: Macroeconomic Principles (SB) | 3 | | | | gpa of 2.0 required. |
| 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 | | ı | |
| # CON 221: Applied Statics | 3 | | | Grade of C | Complete CON 221, ENG 102 or 108 or 105 each with a minimum grade of "C" |
| # CON 251: Microcomputer Applications for Construction | 3 | Ιп | | | • Complete COM 225; CON 251; ECN 212; |
| * | | | | | STP 226. |
| COM 225: Public Speaking (L) | 3 | | | | Complete First-Year Composition requirement: |
| ECN 212: Microeconomic Principles (SB) | 3 | | | | ENG 101 & 102 or ENG 107 & 108 or ENG 105 # Designates Major Course: A minimum cumulative |
| STP 226: Elements of Statistics (CS) | 3 | | | | gpa of 2.0 required. |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | |
| # CON 223: Strength of Materials | 3 | | | Grade of C | Complete CON 223 with a minimum grade of |
| # CON 271: Construction Safety | 3 | | | | "C"; CON 100, CON 271 |
| # CON 241: Surveying | 3 | | | | # Designates Major Course: A minimum cumulative gpa of 2.0 required. |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | | | | | gpa or 2.0 required. |
| US (C) | 3 | | | | |
| Science Quantitative (SQ) or Science General (SG) | 4 | | | | |
| TERM SUMMER 2 nd 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 | + | | | Grade of C | grades are allowed in all 3XX and 4XX courses |
| Management | 3 | | | | combined. |
| # CON 383: Construction Estimating | 4 | \boxtimes | | Grade of C | |
| Select 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 | \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 | \boxtimes | | | gpa of 2.0 required. Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses |
| Upper division Humanities, Fine Arts & Design (HU) or Social & | | | | | grades are allowed in all 3XX and 4XX courses combined. |
| Behavioral Science (SB) | 3 | | | | |
| Upper division Elective | 3 | | | | 4 |
| 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) | | _ | | Grade of C in CON | |
| Upper division Elective: (3 hrs) | 3 | \boxtimes | | courses | |
| TERM SUMMER 3 rd Year: 1 CREDIT HOUR | | | | | |
| # CON 484: Internship | 1 | \boxtimes | l | Grade of C | |



Major Map: Construction (General Building Construction)

- Bachelor of Science (B.S.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| 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 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. Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses |
| # CON 495: Construction Planning and Scheduling (L) | 3 | | | 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 | \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. 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:
 - o Literacy and Critical Inquiry (L)
 - Mathematical Studies (MA)
 - o Computer/Statistics/Quantitative applications (CS)
 - o Humanities, Fine Arts, and Design (HU)
 - o Social and Behavioral Sciences (SB)
 - o Natural Science-Quantitative (SQ)
 - Natural Science-General (SG)
- General Studies Awareness Requirements
 - o Cultural Diversity in the US (C)
 - Global Awareness (G)
 - o Historical Awareness (H)
- First-Year Composition



Major Map: Construction (Heavy Construction) – Bachelor of Science (B.S.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed AT | | Completed AGEC: Yes No | |
|---|-------|-------------------|--------------------------|------------------------------|--|--|
| 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 | 1110. | Division | Course, Grade | required | Tadatona Citica recument rotes | |
| # ASU 101-FSE: The ASU Experience | 1 | | | | Complete MAT 265; PHY 111, 113 each with a | |
| MAT 265: Calculus for Engineers I (MA) | 3 | | | Grade of C | minimum grade of "C" | |
| PHY 111/113: General Physics I/ Laboratory I (SQ) | 3/1 | | | Grade of C | ASU 101-FSE should be completed first | |
| # CON 101: Construction and Culture: A Built Environment (HU, G, | 3/1 | | | Grade of C | semester. An SAT, ACT, Accuplacer, or TOEFL score | |
| Н) | 3 | | | | determines placement into first-year composition | |
| # CON 100: Introduction to Construction | 2 | | | | courses | |
| | | | | | ASU Math Placement Exam score determines | |
| | | | | | placement in Mathematics course **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 | | | | | # Designates Major Course: A minimum cumulative | |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | gpa of 2.0 required. | |
| TERM TWO: 16 30 CREDIT HOURS | | | ı | | | |
| # CON 243: Heavy Construction Equipment, Methods, Materials | 3 | | | Grade of C | Complete CON 243 with a minimum grade of "C" | |
| # CON 244: Working Drawing Analysis | 1 | | | | • Complete CON 244, 252 | |
| # CON 252: Building Construction Methods, Materials, Equipment | 3 | | | | # Designates Major Course: A minimum cumulative | |
| ECN 211: Macroeconomic Principles (SB) | 3 | | | | gpa of 2.0 required. | |
| ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR | | | | | | |
| ENG 103: Advanced First-Tear Composition Cor ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | | |
| TERM THREE: 31 45 CREDIT HOURS | | | | | | |
| | 2 | | | G 1 6G | • Complete CON 221, ENG 102 or 108 or 105 | |
| # CON 221: Applied Statics | 3 | | | Grade of C | each with a minimum grade of "C" | |
| # CON 251: Microcomputer Applications for Construction | 3 | | | | Complete COM 225; CON 251; ECN 212; STP | |
| COM 225: Public Speaking (L) | 3 | | | | 226. Complete First-Year Composition requirement: | |
| ECN 212: Microeconomic Principles (SB) | 3 | | | | ENG 101 & 102 or ENG 107 & 108 or ENG 105 | |
| • . | | | | | # Designates Major Course: A minimum cumulative | |
| STP 226: Elements of Statistics (CS) | 3 | | | | gpa of 2.0 required. | |
| TERM FOUR: 46 60 CREDIT HOURS | 2 | | | 0 1 60 | Complete CON 223 with a minimum grade of | |
| # CON 223: Strength of Materials | 3 | | | Grade of C | "C"; CON 100, CON 271 | |
| # CON 271: Construction Safety | 3 | | | | # Designates Major Course: A minimum cumulative | |
| # CON 241: Surveying Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 | | | | gpa of 2.0 required. | |
| US (C) | 3 | | | | | |
| | | | | | | |
| Science: Quantitative (SQ) or Science General (SG) | 4 | | | | | |
| TERM SUMMER 2 nd Year: 1 CREDIT HOUR | | | 1 | | | |
| # CON 296: Field Internship | 1 | | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | _ | ĺ | | #Designates Maior Common Aminimum annual etima | |
| # CON 310: Testing and Materials for Construction | 4 | | | Grade of C | # Designates Major Course: A minimum cumulative gpa of 2.0 required. Note: maximum of two "D" | |
| # CON 345: Mechanical Systems | 4 | | | Grade of C | grades are allowed in all 3XX and 4XX courses | |
| # CON 273: Electrical Construction Fundamental and Project Management | 3 | | | | combined. | |
| # CON 383: Construction Estimating | 4 | | | Grade of C | | |
| Select 1: | - | | | 51440 51 0 | 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 | | |
| TERM SIX: 76 90 CREDIT HOURS | | | | 21440 01 0 | | |
| # 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 | | | 51440 51 0 | gpa of 2.0 required. Note: maximum of two "D" | |
| Upper division Humanities, Fine Arts & Design (HU) OR | 3 | | | | grades are allowed in all 3XX and 4XX courses combined. | |
| Social & Behavioral Science (SB) | 3 | ⊠ | | Grade of C | Comonicu. | |
| Select 2 additional: | 1 | | | | | |
| # CON 394: Special Topics: Advanced Heavy Equipment Operations (3 hrs) | 3 | | | Grade of C | | |
| # CON 394: Special Topics: Environmental Aspects of Heavy | , | | | Stude of C | | |
| 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 Earthworks (3 nrs) # CON 494: Special Topics: Heavy Construction Project Management | | | | | | |
| (3 hrs): | 3 | \boxtimes | | Grade of C | | |



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

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| 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 SUMMER 3 rd Year: 1 CREDIT HOUR | | | | | |
| # CON 484: Internship | 1 | \boxtimes | | Grade of C | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | ı | | "B : M : C |
| # CON 450: Geotechnical Applications for Construction | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative gpa of 2.0 required. Note: maximum of two "D" |
| # CON 453: Construction Project Management I | 4 | \boxtimes | | Grade of C | grades are allowed in all 3XX and 4XX courses |
| # CON 495: Construction Planning and Scheduling | 3 | \boxtimes | | Grade of C | 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 | \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: # 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 | |

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



Major Map: Construction (Residential Construction) – Bachelor of Science (B.S.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATP: | □Yes □ No | Completed AGEC: Yes No |
|---|-------|-------------------|--------------------------|------------------------------|--|
| 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 | 1113. | Division | Course/Grade | Required | Additional Critical Requirement Proces |
| # ASU 101-FSE: The ASU Experience | 1 | | | | • Complete MAT 265; PHY 111, 113 with a |
| - | 3 | | | Grade of C | minimum grade of "C" |
| MAT 265: Calculus for Engineers I (MA) | | | | | ASU 101-FSE should be completed first |
| PHY 111/113: General Physics I/Laboratory I (SQ) # CON 101: Construction & Culture: A Built Environment (HU, G, | 3/1 | | | Grade of C | semester. |
| H) | 3 | | | | An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition |
| # CON 100: Introduction to Construction | 2 | | | | courses |
| | | | | | 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 be taken prior to graduation. See Advisor. |
| ENG 105: Advanced First-Year Composition** OR | | | | | # Designates Major Course: A minimum cumulative |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | gpa of 2.0 required. |
| TERM TWO: 16 30 CREDIT HOURS | | | | | |
| # CON 243: Heavy Construction Equipment, Methods, Materials | 3 | | | Grade of C | Complete CON 243 with a minimum grade of |
| # CON 244: Working drawing Analysis | 1 | | | | "C" |
| # CON 252: Building Construction Methods, Materials, | | | | | Complete CON 244, 252 # Designates Major Course: A minimum cumulative |
| Equipment | 3 | | | | gpa of 2.0 required. |
| 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 CON 221, ENG 102 or 108 or 105 |
| | | | | Grade or C | each with a minimum grade of "C" Complete COM 225; CON 251; ECN 212; STP |
| # CON 251: Microcomputer Applications for Construction | 3 | | | | 226. |
| COM 225: Public Speaking (L) | 3 | | | | Complete First-Year Composition requirement: |
| ECN 212: Microeconomic Principles (SB) | 3 | | | | ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| | | | | | # Designates Major Course: A minimum cumulative gpa of 2.0 required. |
| STP 226: Elements of Statistics (CS) | 3 | | | | gpt of 2.0 required. |
| TERM FOUR: 46 60 CREDIT HOURS | 3 | | | Crade of C | Complete CON 223 with a minimum grade of |
| # CON 221: Strength of Materials | | | | Grade of C | "C"; CON 100; CON 271 |
| # CON 271: Construction Safety | 3 | | | | # Designates Major Course: A minimum cumulative |
| # CON 241: Surveying Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 | | | | gpa of 2.0 required. |
| US (C) | 3 | | | | |
| Science Quantitative (SQ) or Science General (SG) | 4 | | | | |
| TERM SUMMER 2 nd Year: 1 CREDIT HOUR | | | | | |
| # CON 296: Field Internship | 1 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | |
| # 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 | | | | Grade of C | grades are allowed in all 3XX and 4XX courses combined. |
| Management | 3 | | | | comonica. |
| # CON 383: Construction Estimating | 4 | \boxtimes | | Grade of C | |
| Select 1 | | | | | |
| # 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 | \boxtimes | | CON courses | |
| TERM SIX: 76 90 CREDIT HOURS | | ı | | | WD |
| # CON 389: Construction Cost Accounting and Control (CS) | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative gpa of 2.0 required. Note: maximum of two "D" |
| LES 305: Legal, Ethical, Regulatory Issues in Business | 3 | ⊠ | | | grades are allowed in all 3XX and 4XX courses |
| Select 1 additional course from: # CON 377: Residential Construction Production Procedures (3 hrs) | | | | | combined. |
| # 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 | |
| Upper division Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) | 3 | \boxtimes | | | |
| Upper division Elective | 3 | ⊠ | | | |
| TERM SUMMER 3 rd Year: 1 CREDIT HOUR | | ر ا | | | |
| # CON 484: Internship | 1 | \boxtimes | | Grade of C | |
| | | تے ر | i | J 01 C | 1 |



Major Map: Construction (Residential Construction) -

Bachelor of Science (B.S.)
Ira A. Fulton School of Engineering, Tempe Campus
Catalog Year: 2009-2010

| 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 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. Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses |
| # CON 495: Construction Planning and Scheduling | 3 | \boxtimes | | Grade of C | 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. Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses |
| # CON 496: Construction Contract Administration (L) | 3 | | | Grade of C | 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) Upper division elective (3 hrs) | 3 | \boxtimes | | 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)
 - Mathematical Studies (MA)
 - Computer/Statistics/Quantitative applications (CS)
 - o Humanities, Fine Arts, and Design (HU)
 - o Social and Behavioral Sciences (SB)
 - o Natural Science-Quantitative (SQ)
 - o Natural Science-General (SG)
- General Studies Awareness Requirements

 Coltrard Discouring in the US (C)
 - o Cultural Diversity in the US (C)
 - o Global Awareness (G)
 - o Historical Awareness (H)
- First-Year Composition



Major Map: Construction (Specialty Construction) – Bachelor of Science (B.S.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATP | | Completed AGEC: Yes No | | | |
|--|------|-------------------|--------------------------|------------------------------|--|--|--|--|
| 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 | | | | | | | | |
| # ASU 101-FSE: The ASU Experience | 1 | | | | • Complete MAT 265; PHY 111, 113 each with a | | | |
| MAT 265: Calculus for Engineers I (MA) | 3 | | | Grade of C | minimum grade of "C" | | | |
| PHY 111/113: General Physics I/ Laboratory I (SQ) | 3/1 | | | Grade of C | ASU 101-FSE should be completed first semester. As SAT ACT Acceptance of TOFFI. | | | |
| # CON 101: Construction and Culture: A Built Environment (HU, G, | | | | | An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition | | | |
| H) | 3 | | | | courses | | | |
| # CON 100: Introduction to Construction | 2 | | | | ASU Math Placement Exam score determines | | | |
| | | | | | placement in Mathematics course **If ENG 105 a 3 hr applicable elective must also be | | | |
| ENG 101 or 102: First-Year Composition OR | | | | | taken prior to graduation. See Advisor. | | | |
| ENG 105: Advanced First-Year Composition** OR | | | | | # Designates Major Course: A minimum cumulative | | | |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | gpa of 2.0 required. | | | |
| TERM TWO: 16 30 CREDIT HOURS | 2 | | | G 1 6G | Complete CON 243 with a aminimum grade of | | | |
| # CON 244: Heavy Construction Equipment, Methods, Materials | 3 | | | Grade of C | "C" | | | |
| # CON 244: Working Drawing Analysis | 1 | | | | • Complete CON 244, 252 | | | |
| # CON 252: Building Construction Methods, Materials, Equipment | 3 | | | | # Designates Major Course: A minimum cumulative | | | |
| ECN 211: Macroeconomic Principles (SB) ENG 101 or 102: First-Year Composition OR | 3 | | | | gpa of 2.0 required. | | | |
| 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 CON 221, ENG 102 or 108 or 105 each with a minimum grade of "C" | | | |
| # CON 251: Microcomputer Applications for Construction | 3 | | | | Complete COM 225; CON 251; ECN 212; STP | | | |
| COM 225: Public Speaking (L) | 3 | | | | 226.Complete First-Year Composition requirement: | | | |
| ECN 212: Microeconomic Principles (SB) | 3 | | | | 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. | | | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | | | | |
| # CON 223: Strength of Materials | 3 | | | Grade of C | Complete CON 223 with a minimum grade of | | | |
| # CON 271: Construction Safety | 3 | | | | "C"; CON 100, CON 271. # Designates Major Course: A minimum cumulative | | | |
| # CON 241: Surveying | 3 | | | | gpa of 2.0 required. | | | |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 2 | | | | | | | |
| US (C) | 3 | | | | | | | |
| Science Quantitative (SQ) or Science General (SG) | 4 | | | | | | | |
| TERM SUMMER 2 nd Year: 1 CREDIT HOUR | 1 | | | | | | | |
| # CON 296: Field Internship | 1 | | | | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | 4 | M | | Condo of C | # Designates Major Course: A minimum cumulative | | | |
| # CON 310: Testing and Materials for Construction | 4 | | | Grade of C | gpa of 2.0 required. Note: maximum of two "D" | | | |
| # CON 345: Mechanical Systems # CON 273: Electrical Construction Fundamental and Project | 4 | | | Grade of C | grades are allowed in all 3XX and 4XX courses | | | |
| Management | 3 | | | | combined. | | | |
| # CON 383: Construction Estimating | 4 | \boxtimes | | Grade of C | | | | |
| Select 1 # CON 469: Machanical and Floatrical Estimating (2 hrs) | | | | | | | | |
| # CON 468: Mechanical and Electrical Estimating (3 hrs) # CON 471: Mechanical and Electrical Project (3 hrs) | | | | | | | | |
| # CON 494: Special Topics: Cleanroom Construction (3 hrs) | | | | Grade of C in CON | | | | |
| Upper division elective (3 hrs) | 3 | \boxtimes | | Courses | | | | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | #Decimates Maior Comment | | | |
| # CON 389: Construction Cost Accounting and Control (CS) | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative gpa of 2.0 required. Note: maximum of two "D" | | | |
| LES 305: Legal, Ethical, Regulatory Issues in Business Select 1 additional course from: | 3 | | | | grades are allowed in all 3XX and 4XX courses | | | |
| # CON 468: Mechanical and Electrical Estimating (3 hrs) | | | | | combined. | | | |
| # CON 471: Mechanical and Electrical Project (3 hrs) | | | | | | | | |
| # CON 494: Special Topics: Cleanroom Construction (3 hrs) | 2 | | | Grade of C in CON | | | | |
| Upper division elective (3 hrs) Upper division Humanities, Fine Arts & Design (HU) OR | 3 | | | Courses | | | | |
| Social & Behavioral Science (SB) | 3 | \boxtimes | | | | | | |
| Upper division elective | 3 | \boxtimes | | | | | | |
| TERM SUMMER 3 rd 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 School of Engineering, Tempe Campus Catalog Year: 2009-2010

| 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 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. Note: maximum of two "D" grades are allowed in all 3XX and 4XX courses |
| # CON 495: Construction Planning and Scheduling | 3 | ⊠ | | Grade of C | 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 | | | 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 | 3 | \boxtimes | | Grade of C | 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 | \boxtimes | | 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)
 - Mathematical Studies (MA) 0
 - Computer/Statistics/Quantitative applications (CS)
 - Humanities, Fine Arts, and Design (HU) Social and Behavioral Sciences (SB) 0

 - Natural Science-Quantitative (SQ) 0
 - Natural Science-General (SG)
- General Studies Awareness Requirements
 - Cultural Diversity in the US (C)
 - Global Awareness (G) 0
 - Historical Awareness (H)
- First-Year Composition



Major Map: Electrical Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATP: | □Yes □ No | Completed AGEC: Yes No | | |
|--|-------|-------------------|--------------------------|------------------------------|--|--|--|
| 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 | | | | Complete MAT 265 with a minimum grade of | | |
| CHM 114: General Chemistry for Engineers (SQ) OR | | | | | "C". | | |
| CHM 116: General Chemistry II * (SQ) | 4 | | | | ASU 101-FSE should be completed first semester. An SAT, ACT, Accuplacer, or TOEFL score | | |
| # CSE 100: Principles of Programming with C++ (CS) OR # EEE 120: Digital Design Fundamentals | 3 | | | | determines placement into first-year composition | | |
| # EEE 120. Digital Design Fundamentals # EEE 101: Introduction to Engineering Design OR | 2 or | | | | courses | | |
| BME 111: Engineering Perspectives on Biological Systems | 3 | | | | ASU Math Placement Exam score determines 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 | | |
| ENG 101 and 102: First-Year Composition OR | | | | | **If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor. | | |
| ENG 107 and 108: English for Foreign Students OR | | | | | # Designates Major Course: A minimum cumulative | | |
| ENG 105: Advanced First-Year Composition ** | 3 | | | Grade of C | GPA of 2.0 required. | | |
| TERM TWO: 16 30 CREDIT HOURS | | | | ı | | | |
| # CSE 100: Principles of Programming with C++ (CS) OR # EEE 120: Digital Design Fundamentals | 3 | | | | • Complete EEE 101 | | |
| # EEE 101: Introduction to Engineering Design OR | 2 or | | | | Complete MAT 266; PHY 121 & 122 each with a minimum grade of "C" | | |
| BME 111: Engineering Perspectives on Biological Systems | 3 | | | | # Designates Major Course: A minimum cumulative | | |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | GPA of 2.0 required. | | |
| PHY 121/122: University Physics I/Laboratory I (SQ) | 3/1 | | | Grade of C | | | |
| ENG 101 and 102: First-Year Composition OR ENG 107 and 108: English for Foreign Students OR | | | | | | | |
| 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 | | | | Complete EEE 202; MAT 267, 274 or 275 and | | |
| # EEE 202: CIrcuits I | 4 | | | | PHY 131, 132 with a minimum grade of "C" | | |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | Complete First Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105 | | |
| MAT 274: Elementary Differential Equations (MA) OR | , | _ | | Condo of C | # Designates Major Course: A minimum cumulative | | |
| MAT 275: Modern Differential Equations (MA) | 3 | | | Grade of C | GPA of 2.0 required. | | |
| PHY 131/132: University Physics II Electricity and Magnetism/ Laboratory II (SQ) | 3/1 | | | Grade of C | | | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | | | |
| # EEE 203: Signals and Systems I | 3 | | | | Complete EEE 203 and EEE 241 | | |
| # EEE 241: Fundamentals of Electromagnetics | 3 | | | | # Designates Major Course: A minimum cumulative | | |
| MAT 342: Linear Algebra (MA) OR | | | | | GPA of 2.0 required. | | |
| 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), Global Awareness (G) or Historical Awareness (H) | 3 | | | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | | | |
| # EEE 334: Circuits II | 4 | \boxtimes | | | Area Pathway Courses: (choose 4) EEE 304, 333, | | |
| # EEE 350: Random Signal Analysis | 3 | \boxtimes | | | 335, 341, 352, 360. Area Pathway courses are prerequisites for Technical Electives. See Advisor | | |
| # EEE 230: Computer Organization and Assembly Language | | | | | for guidance in selection. | | |
| Programming | 3 | | | | # Designates Major Course: A minimum cumulative | | |
| # Area Pathway Course | 4 | | | | GPA of 2.0 required. | | |
| TERM SIX: 76 90 CREDIT HOURS ECN 211/212 (SB): Macroeconomic Principles/Microeconomic | | | | | A Poderous Common (donne A) EEE 204 222 | | |
| Principles or ECN 201: Economic Issues & Analysis (SB) | 3 | | | | Area Pathway Courses: (choose 4) EEE 304, 333, 335, 341, 352, 360. Area Pathway courses are | | |
| # Area Pathway Course | 4 | | | | prerequisites for Technical Electives. See Advisor | | |
| # Area Pathway Course | 4 | | | | for guidance in selection. | | |
| # Area Pathway Course | 4 | | | | # Designates Major Course: A minimum cumulative GPA of 2.0 required. | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | A 1975 | | |
| # 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 | | | | | 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. | | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | 22 - 2 of 200 required. | | |
| # Technical Elective | 3 | | | | | | |
| # Technical Elective | 3 | | | | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | | | |
| # EEE 489: Senior Design Laboratory II (L) | 3 | | | | See Degree Audit Reporting System (DARS) for | | |
| # Technical Elective | 3 | | 1 | | approved list of Technical Electives | | |
| # Technical Elective | 3 | | 1 | | # Designates Major Course: A minimum cumulative GPA of 2.0 required. | | |
| #Technical Elective | 3 | | | | GFA 01 2.0 required. | | |
| UD Humanities, Fine Arts & Design (HU) OR Social Behavioral & | 3 | | | | - | | |
| Science (SB) | 3 | \boxtimes | | 1 | | | |



Major Map: Electrical Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus

Catalog Year: 2009-2010

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



Major Map: Electrical Engineering (Electrical Engineering (Electric Power and Energy Systems) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATI | P: \[Yes \[\] No | Completed AGEC: Yes No |
|---|-----------|-------------|---------------|---------------------|--|
| Course Subject and Title (courses in bold/shading are critical) | Hrs. | Upper | Transfer | Minimum Grade if | |
| TERM ONE: 0 15 CREDIT HOURS | ms. | 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 OR | | | | | "C" |
| CHM 116: General Chemistry II * | 4 | | | | ASU 101-FSE should be completed first semester. |
| # CSE 100: Principles of Programming with C++ (CS) OR # EEE 120: Digital Design Fundamentals | 3 | | | | An SAT, ACT, Accuplacer, or TOEFL score |
| # EEE 101: Introduction to Engineering Design OR | 2 or | _ | | | determines placement into first-year composition courses |
| BME 111: Engineering Perspectives on Biological Systems | 3 | | | | ASU Math Placement Exam score determines |
| MAT 265: Calculus for Engineers I | 3 | | | Grade of C | placement in Mathematics course |
| | | | | | * 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 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR | | | | | taken prior to graduation. See Advisor. # Designates Major course: A minimum cumulative |
| ENG 103. Advanced Prist-Teal Composition ** OK ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | GPA of 2.0 required. |
| TERM TWO: 16 30 CREDIT HOURS | | | | | |
| # CSE 100: Principles of Programming with C++ (CS) OR | 2 |] | | | Complete EEE 101 |
| # EEE 120: Digital Design Fundamentals # EEE 101: Introduction to Engineering Design OR | 3 2 or | | | | • Complete MAT 266; PHY 121 & 122 each with a minimum grade of "C" |
| BME 111: Engineering Perspectives on Biological Systems | 3 | | | | # Designates Major Course: A minimum cumulative |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | GPA of 2.0 required. |
| 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 103: Advanced First-Tear 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 EEE 202; MAT 267, 274 or 275 and |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | PHY 131, 132 with a minimum grade of "C" Complete First Year Composition requirement: |
| MAT 274: Elementary Differential Equations (MA) OR | | | | G 1 6G | ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| MAT 275: Modern Differential Equations (MA) PHY 131/132: University Physics II Electricity and Magnetism/ | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative |
| Laboratory II (SQ) | 3/1 | | | Grade of C | GPA of 2.0 required. |
| TERM FOUR: 46 60 CREDIT HOURS | | | _ | _ | |
| # EEE 203: Signals and Systems I | 3 | | | | Complete EEE 203 and EEE 241 # Designates Major Course: A minimum cumulative |
| # EEE 241: Fundamentals of Electromagnetics | 3 | | | | GPA of 2.0 required. |
| MAT 342: Linear Algebra OR 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 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS # EEE 230: Computer Organization and Assembly Language | | | | | # Designates Major Course: A minimum cumulative |
| Programming | 3 | | | | GPA of 2.0 required. |
| # 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. |
| # Area Pathway Course | 4 | | | | # Designates Major Course: A minimum cumulative GPA of 2.0 required. |
| TERM SEVEN: 91 105 CREDIT HOURS | 7 | | | | 22.12.01.200 toquirodi |
| # EEE 488: Senior Design Laboratory I (L) | 3 | \boxtimes | | | # Designates Major Course: A minimum cumulative |
| Select 2 | | | | | GPA of 2.0 required. |
| # EEE 460: Nuclear Concepts for the 21st 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 (Power Elec.) (3 hrs) # EEE 498: Pro-Seminar (Solar Energy) (3 hrs) | 6 | | | | |
| GCU 364: Energy in the Global Arena (SB, G) | 3 | ⊠ | | | 1 |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | _ | | | | 1 |
| US (C), or Historical Awareness (H) | 3 | | | | |



Major Map: Electrical Engineering (Electric Power and Energy Systems) – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| 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 | | | | See Degree Audit Reporting System (DARS) for |
| Select 1 not previously selected: | | | | | approved list of Technical Electives |
| # EEE 460: Nuclear Concepts for the 21st Century (3 hrs) | | | | | # Designates Major Course: A minimum cumulative |
| # EEE 463: Electrical Power Plant (3 hrs) | | | | | GPA of 2.0 required. |
| # 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 | | | |
| # Technical Elective | 3 | \boxtimes | | | |
| # Technical Elective | 3 | | | | |
| Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) | 3 | | | | |

${\bf Graduation\ Requirements\ Summary:}$

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



Major Map: Engineering Special Studies (Pre-medical Engineering) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | Completed ATF | | Completed AGEC: Yes No | |
|---|----------|-------------------|--------------------------|------------------------------|---|
| Course Subject and Title | Hrs. | Upper Division | Transfer Course/Grade | Minimum Grade if Required | Additional Critical Requirement Notes |
| (courses in bold/shading are critical) TERM ONE: 0 15 CREDIT HOURS | nis. | Division | Course/Grade | Required | Additional Critical Requirement Notes |
| ASU 101-FSE: The ASU Experience | 1 | | | | Complete BME 100 with a minimum grade of |
| BME 100: Introduction to Bioengineering OR | 2 or | | | Grade of C in BME | "C" or BIO 188 |
| BIO 188: General Biology II (CS) | 4 | | | 100 | Complete MAT 265 with a minimum grade of "C" |
| MAT 265: Calculus for Engineers I | 3 | | | Grade of C | An SAT, ACT, Accuplacer, or TOEFL score |
| CHM 113: General Chemistry I (SQ) | 4 | | | | determines placement into first-year composition |
| | | | | | courses |
| ENG 101 or 102: First-Year Composition OR | | | | | 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. |
| TERM TWO: 16 30 CREDIT HOURS | | | | | |
| BME 100: Introduction to Bioengineering OR BIO 188: General Biology II (SQ) | 2 or 4 | | | Grade of C in BME 100 | Complete BIO 188; BME 100 with a minimum grade of "C"; CHM 116; MAT 266 with a |
| CHM 116: General Chemistry II (SQ) | 4 | | | 100 | minimum grade of "C"; PHY 121 & 122 |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | Complete ASU101-FSE |
| PHY 121/122: University Physics I/ Laboratory I (SQ) | 3/1 | | | Grade or C | |
| ENG 101 or 102: First-Year Composition OR | 3/1 | | | | |
| 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 | | | | | |
| BME 235: Physiology for Engineers | 4 | | | Grade of C | Complete PHY 131 & 132 Complete First Year Composition requirement: |
| PHY 131/132: University Physics II Electricity and Magnetism/Laboratory II (SQ) | 3/1 | | | | ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| CHM 233/237: General Organic Chemistry I/Laboratory I | 3/1 |] [] | | | |
| CSE 100: Principles of Programming with C++ (CS) | 3 | | | | |
| TERM FOUR: 46 60 CREDIT HOURS | 3 | | | | |
| BME 200: Conservation Principles in Bioengineering | 3 | | | Grade of C | Complete BME 200, 235 each with a minimum |
| EEE 202: Circuits I | 4 | | | Grade or C | grade of "C" |
| MAE 212: Engineering Mechanics | 4 | | | | |
| | 3 | | | | |
| MAT 275: Modern Differential Equations (MA) CHM 234/238: General Organic Chemistry II/Laboratory II OR | 3 | Ш | | | |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 4 or | | | | |
| US (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | 1 | | | | #D : |
| # BME 318: Biomaterials | 4 | | | Grade of C | # Designates Major Course: A minimum cumulative GPA of 2.0 required. |
| # BME 350: Signals and Systems for Bioengineering | 3 | | | Grade of C | or required. |
| # CHM 341: Elementary Physical Chemistry | 3 | \boxtimes | | | |
| # MAT 343: Applied Linear Algebra | 3 | \boxtimes | | | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | |
| TERM SIX: 76 90 CREDIT HOURS | 5 | | | | |
| # BME 300: Bioengineering Product Design | 3 | \boxtimes | | Grade of C | # Designates Major Course: A minimum cumulative |
| # BME 331: Bioengineering Transport Phenomena | 3 | ⊠ | | Grade of C | GPA of 2.0 required. |
| # BME 370: Microcomputer Applications in Bioengineering | 3 | ⊠ | | Grade of C | |
| 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 234/238 completed | 4 or 3 | | | | |
| # IEE 380: Probability and Statistics for Engineering Problem Solving | 3 | | | | |
| TERM SEVEN: 91 105 CREDIT HOURS | 3 | | | | |
| # BME 413: Biomedical Instrumentation (BME 413 + 423 = L) | 3 | \boxtimes | | Grade of C | # Designates Major Course: A minimum cumulative |
| # BME 417: Biomedical Engineering Capstone Design I (L) | 4 | | | Grade of C | GPA of 2.0 required. |
| # BME 423: Biomedical Instrumentation Laboratory | 1 | | | Grade of C | |
| # BME 434: Applications of Bioengineering OR | 1 | KN | | Grade or C | |
| # BME 416: Biomechanics OR | | _ | | | |
| # BME 419: Biocontrol Systems Social & Behavioral Science (SB) AND Cultural Diversity in the US | 3 | ⊠ | | Grade of C | |
| (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | |
| # BME 490: Biomedical Engineering Capstone Design II | 4 | \boxtimes | | Grade of C | # Designates Major Course: A minimum cumulative |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | <u> </u> | | | State of C | GPA of 2.0 required. |
| US (C), Global Awareness (G) or Historical Awareness (H) | 3 | \boxtimes | | | |
| # Technical Elective | 1 | \boxtimes | | Grade of C | |
| UD Humanities, Fine Arts & Design (HU) OR Social Behavioral | 2 | [7] | | | |
| Science (SB) | 3 | \boxtimes | <u> </u> | <u> </u> | |



Major Map: Engineering Special Studies (Pre-medical Engineering) – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus

Catalog Year: 2009-2010

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



Major Map: Industrial Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | 1 | 1 | Completed AT | | Completed AGEC: Yes No |
|--|-----------|-------------------|--------------------------|------------------------------|--|
| 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 | | | | | |
| ASU 101-FSE: The ASU Experience | 1 | | | | Complete at least one of: BME 111; CSE 110 |
| IEE 100: Intro to Engineering Design OR | | | | | (or 100) with a minimum grade of "C"; IEE |
| CSE 110: Principles of Programming with Java (or CSE 100: | 2 or | | | G 1 60 | 100 with a minimum grade of "C"; MAT 265 with a minimum grade of "C" |
| Principles of Programming with C++) (CS) | 3 | | | Grade of C | ASU 101-FSE should be completed first semester. |
| BME 111: Engineering Perspectives on Biological Systems | 3 | | | | An SAT, ACT, Accuplacer, or TOEFL score |
| MAT 265: Calculus for Engineers I ENG 101 or 102: First-Year Composition OR | 3 | | | Grade of C | determines placement into first-year composition |
| ENG 101 of 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR | | | | | Courses ASU Math Placement Exam score determines |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | placement in Mathematics course |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US | | | | | ** If ENG 105 a 3 hr applicable elective must also be |
| (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | taken prior to graduation. See Advisor. |
| TERM TWO: 16 30 CREDIT HOURS IEE 100: Intro to Engineering Design OR | | | | | Complete |
| CSE 110: Principles of Programming with Java (or CSE 100: | 2 or | | | | - CSE 110 (or 100) with a minimum grade |
| Principles of Programming with C++) (CS) | 3 | | | Grade of C | of "C", OR PHY 121 & 122 with a |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | minimum grade of "C" |
| PHY 121/122: University Physics I/ Laboratory I (SQ) | 3/1 | | | Grade of C | - ENG 101 or 107 or 105 with minimum grade of "C" |
| ENG 101 or 102: First-Year Composition OR | | | | | - IEE 100 with a minimum grade of "C" |
| ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | - MAT 265 with a minimum grade of "C" |
| TERM THREE: 31 45 CREDIT HOURS | 3 | | | Grade of C | |
| ECN 211: Macroeconomic Principles (SB) | 3 | | | | Complete CSE 110 (or 100) with a minimum |
| CSE 205: Concepts of Computer Design and Data (CS) | 3 | | | | grade of "C", PHY 121 & 122 with a minimum |
| IEE 210: Introduction to Industrial Engineering | 3 | | | Grade of C | grade of "C" Complete ECN 211: BME 111: MAT 266 with a |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | Complete ECN 211; BME 111; MAT 266 with a minimum grade of "C" |
| PHY 131/132: University Physics II Electricity and Magnetism/ | 3 | | | | Complete First Year Composition requirement: |
| Laboratory II (SQ) | 3/1 | | | | ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | |
| IEE 220: Business/Industrial Engineering | 3 | | | Grade of C | Complete IEE 220 with a minimum grade of |
| CHM 114: General Chemistry for Engineers OR | | | | | *C" *CHM 113 is a prerequisite and does not apply |
| CHM 116: General Chemistry II * | 4 | | | | towards degree credit |
| MAT 242: Elementary Linear Algebra | 2 | | | | , and the second |
| MAT 275: Modern Differential Equations (MA) Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 | | | | |
| US (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | |
| IEE 300: Economic Analysis for Engineers | 3 | ⊠ | | Grade of C | |
| IEE 305: Information Systems Engineering | 3 | ⊠ | | Grade of C | |
| IEE 380: Probability and Statistics for Engineering Problem Solving | 3 | ⊠ | | Grade of C | |
| IEE 382: Probability & Statistics Lab | 1 | ⊠ | | Grade of C | |
| Choose 2: | | | | | |
| EEE 202: Circuits I (4 hrs) | - | | | | |
| MAE 212: Engineering Mechanics (4 hrs) MSE 250: Structure and Properties of Materials (3 hrs) | 7 or 8 | | | | |
| TERM SIX: 76 90 CREDIT HOURS | Ü | | | | |
| IEE 376: Operational Research Deterministic Technology | 3 | \boxtimes | | Grade of C | |
| IEE 369: Work Analysis and Design (L) | 3 | ⊠ | | Grade of C | |
| Choose remaining 1: | | | | Grade of C | |
| 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 | 4 | | | | |
| US (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | |
| IEE 470: Stochastic Operations Research | 3 | | | Grade of C | |
| IEE 474: Quality Control | 3 | \boxtimes | | Grade of C | |
| IEE 475: Simulating Stochastic Systems | 4 | | | Grade of C | |
| Career Focused Elective | 3 | \boxtimes | | | |
| UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral | | | | | |
| Science (SB) | 3 | \boxtimes | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | |
| IEE 461: Production Control | 3 | | | Grade of C | |
| IEE 490: Project in Design/Development (L) | 3 | ⊠ | | Grade of C | |
| IEE Technical Elective | 3 | ⊠ | | Grade of C | |
| Career Focused Elective | 3 | ⊠ | | |] |
| Career Focused Elective | 3 | \boxtimes | | | |



Major Map: Industrial Engineering -Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

Graduation Requirements Summary:

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

General University Requirements: Legend

- General Studies Core Requirements:
 - Literacy and Critical Inquiry (L)
 - 0 Mathematical Studies (MA)
 - 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)
- General Studies Awareness Requirements
 - Cultural Diversity in the US (C) 0

 - Global Awareness (G) 0
 - Historical Awareness (H)
- First-Year Composition



Major Map: Materials Science and Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed AT | P: \[Yes \[\] No | Completed AGEC: Yes No | | | |
|--|------|-------------|--------------|---------------------|---|--|--|--|
| 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 | | | | Complete MAT 265 with a minimum grade of | | | |
| CHM 114: General Chemistry for Engineers (SQ) OR CHM 113/116: General Chemistry I/General Chemistry II (SQ) | 4 | | | | "C"; CHM 113 or 114; MSE 100. ASU 101-FSE should be completed first semester. Minimum CUM ASU 2.0 GPA required An SAT, ACT, Accuplacer, or TOEFL score | | | |
| MAT 265: Calculus for Engineers I | 3 | | | Grade of C | | | | |
| # MSE 100: Introduction of Materials Engineering | 2 | | | | | | | |
| 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 | determines placement into first-year composition courses • ASU Math Placement Exam score determines | | | |
| | | | | | placement in Mathematics course **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 (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | # Designates Major Course: A minimum cumulative GPA of 2.0 required. | | | |
| TERM TWO: 16 30 CREDIT HOURS | | | | | MSE 250 must be completed by the end of the | | | |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | 4 th semester with a minimum grade of "C" | | | |
| # MSE 250: Structure and Properties of Materials | 3 | | | Grade of C | CHM 116 must be completed for those who | | | |
| PHY 121/122: University Physics I/Laboratory I (SQ) ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students | 3/1 | | | Grade of C | took CHM 113 Complete MAT 266 with a minimum grade of "C"; and PHY 121 & 122 Minimum CUM ASU 2.0 GPA required | | | |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | Grade of C | # Designates Major Course: A minimum cumulative GPA of 2.0 required. | | | |
| TERM THREE: 31 45 CREDIT HOURS | | | | · | · | | | |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | Complete MAT 267 with a minimum grade of | | | |
| PHY 131/132: University Physics II Electricity and Magnetism/Laboratory II (SQ) | 3/1 | | | | "C"; and PHY 131 & 132 Complete First-Year Composition requirement: | | | |
| BME 111: Engineering Perspectives on Biological Systems | 3 | | | | ENG 101 & 102 OR ENG 107 & 108 or ENG 105 Minimum CUM ASU 2.0 GPA required | | | |
| #MSE 215: Materials Synthesis Social & Behavioral Science (SB) AND Cultural Diversity in the US | 3 | | | | # Designates Major Course: A minimum cumulative | | | |
| (C), Global Awareness (G) or Historical Awareness (H) | 3 | | | | GPA of 2.0 required. | | | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | | | | |
| MAT 275: Modern Differential Equations (MA) | 3 | | | | Minimum CUM ASU 2.0 GPA required | | | |
| MAT 343: Applied Linear Algebra | 3 | \boxtimes | | | MSE 250 must be completed with a minimum grade of "C". | | | |
| # MSE 211: Introduction to Mechanics of Materials | 3 | | | | # Designates Major Course: A minimum cumulative | | | |
| IEE 220: Business/Industrial Engineering # Advanced Science Elective | 3 | | | | GPA of 2.0 required. | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | | | | |
| Math or Science Elective | 3 | | | | # Designates Major Course: A minimum cumulative | | | |
| # MSE 315: Mathematical and Computer Methods in Materials (CS) | 3 | \boxtimes | | | GPA of 2.0 required. | | | |
| # MSE 330: Thermodynamics of Materials | 3 | \boxtimes | | | | | | |
| # MSE 355: Materials Structure and Microstructure | 3 | \boxtimes | | | | | | |
| # MSE 356: Materials Structure and Microstructure Laboratory | 1 | \boxtimes | | | | | | |
| 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 | ⋈ | | | # Designates Major Course: A minimum cumulative | | | |
| # MSE 335: Materials Kinetics and Processing | 3 | | | | GPA of 2.0 required. | | | |
| # MSE 358: Introduction to Electronic, Magnetic, & Optical Properties # MSE 420: Physical Metallurgy | 3 | | | | 1 | | | |
| # MSE 420: Physical Metallurgy # MSE 421: Physical Metallurgy Laboratory | 1 | | | | 1 | | | |
| # MSE 450: Introduction to Materials Characterization | 3 | | | | † | | | |
| # MSE 451: Introduction to Materials Characterization Laboratory | 1 | | | | 1 | | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | <u> </u> | · | | | |
| # MSE 440: Mechanical Properties of Solids | 3 | \boxtimes | | | # Designates Major Course: A minimum cumulative | | | |
| # MSE 470: Polymers and Composites | 3 | ⊠ | | | GPA of 2.0 required. | | | |
| # MSE 471: Introduction to Ceramics | 3 | \boxtimes | | | | | | |
| # MSE 482: Materials Engineering Design (L) | 3 | \boxtimes | | | | | | |
| # Advanced Science Elective | 3 | | | | | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | | | | |
| # MSE 490: Capstone Design Project (L) | 3 | \boxtimes | | | # Designates Major Course: A minimum cumulative | | | |
| # MSE Technical Elective | 3 | | | | GPA of 2.0 required. | | | |
| # MSE Technical Elective | 3 | | | | | | | |
| UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) | 3 | | | | | | | |



Major Map: Materials Science and Engineering – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

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



Major Map: Mechanical Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | ** | Completed ATF | | Completed AGEC: Yes No |
|---|------|-------------------|--------------------------|------------------------------|--|
| 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 | | | | | <u></u> |
| +ASU 101-FSE: The ASU Experience | 1 | | | | • Complete CHM 114 or 116 or 115; MAT 265 |
| CHM 114: General Chemistry for Engineers (SQ) OR CHM 115: General Chemistry with Qualitative Analysis (SQ) OR | | | | | each with a minimum grade of "C" + ASU 101-FSE and MAE 100 required for |
| CHM 116: General Chemistry II* (SQ) | 4 | | | Grade of C | freshmen and should be completed first semester. Non-freshmen see advisor for petitioning |
| +MAE 100: Intro to Mechanical and Aerospace Engineering (or Department Approved Elective) | 2 | | | Grade of C in MAE 100 | replacement electives. |
| MAT 265: Calculus for Engineers I (MA) | 3 | | | Grade of C | An SAT, ACT, Accuplacer, or TOEFL score |
| ENG 101 or 102: First-Year Composition OR | Ť | | | | determines placement into first-year composition courses |
| ENG 105: Advanced First-Year Composition** OR | 2 | | | Condo of C | ASU Math Placement Exam score determines |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | placement in Mathematics course |
| | | | | | *CHM 113 is a prerequisite and does not apply towards degree credit |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US | | | | | **If ENG 105 a 3 hr applicable elective must also be |
| (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | taken prior to graduation. See Advisor. |
| TERM TWO: 16 30 CREDIT HOURS | | | | ı | |
| MAT 266: Calculus for Engineers II | 3 | | | Grade of C | Complete MAT 266; PHY 121, 122 each with a minimum grade of "C |
| PHY 121/122: University Physics I/ Laboratory I (SQ) | 3/1 | | | Grade of C | a minimum grade or 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 | 2 | | | | |
| US (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | |
| TERM THREE: 31 45 CREDIT HOURS | | | | | • Complete ENG 102 or 108 or 105; MAE 212; |
| MAE 212: Engineering Mechanics | 4 | | | Grade of C | MAT 275; PHY 131, 132 each with a minimum |
| MAT 275: Modern Differential Equations | 3 | | | Grade of C | grade of "C" |
| PHY 131/132: University Physics II Electricity and Magnetism/ | | | | | Complete First Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| Laboratory II | 3/1 | | | Grade of C | ENG 101 & 102 of ENG 107 & 108 of ENG 103 |
| MAE 214: Computer-Aided Engineering I | 3 | | | Grade of C | - |
| MAT 267: Calculus for Engineers III TERM FOUR: 46 60 CREDIT HOURS | 3 | | | Grade of C | |
| MAE 213: Solid Mechanics | 3 | | | Grade of C | Complete MAE 213, 240 each with a minimum |
| MAE 240: Thermofluids I | 4 | | | Grade of C | grade of "C". |
| EEE 202: Circuits I | 4 | | | Grade of C | 1 |
| MAT 343: Applied Linear Algebra | 3 | ⊠ | | Grade of C | 1 |
| MSE 250: Structure and Properties of Materials | 3 | | | Grade of C | 1 |
| TERM FIVE: 61 75 CREDIT HOURS | J | | | Grade of C | |
| BME 111: Engineering Perspectives on Biological Systems (or dept | | | | | |
| approved BIO) | 3 | | | | _ |
| MAE 322: Structural Mechanics | 4 | | | Grade of C | _ |
| MAE 340 Thermofluids II | 3 | \boxtimes | | Grade of C | _ |
| MAE 384: Numerical Methods for Engineers (CS) | 3 | | | Grade of C | - |
| Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H) | 3 | \boxtimes | | | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | |
| MAE 323: Computer-Aided Engineering II | 2 | \boxtimes | | Grade of C | |
| MAE 318: Sensors and Controls | 5 | \boxtimes | | Grade of C |] |
| MAE 342: Principles of Mechanical Design | 3 | \boxtimes | | Grade of C |] |
| Technical Elective | 3 | \boxtimes | | Grade of C |] |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | |
| MAE 488: Mechanical Engineering Design I | 3 | | | Grade of C | |
| MAE 491: Experimental Mechanical Engineering (L) | 3 | | | Grade of C | |
| Technical Elective | 3 | | | Grade of C | |
| 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 | | | | - |
| Science (SB) | 3 | \boxtimes | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | · | |
| MAE 400: Engineering Profession (L) | 3 | \boxtimes | | Grade of C | See advisor for approved General Electives. |
| MAE 489: Mechanical Engineering Design II | 3 | ⊠ | | Grade of C |] |
| Technical Elective | 3 | ⊠ | | Grade of C |] |
| Technical Elective | 3 | | | Grade of C |] |
| General Elective | 3 | | | | |



Major Map: Mechanical Engineering – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

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



Major Map: Mechanical Engineering (Computational and Mathematical Mechanics) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed A | | Completed AGEC: | | | |
|--|-----------------------|-------------------|--------------------------|--|---|--|--|--|
| 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 | | | | | | | | |
| ACU 101 FCF. The ACU Francisco | 1 | | | | Complete CHM 114 or 116 or 115; MAT 265 each with a minimum grade of "C" | | | |
| +ASU 101-FSE: The ASU Experience | 1 | | | | + ASU 101-FSE and MAE 100 required for | | | |
| CHM 114: General Chemistry for Engineers (SQ) OR CHM 115: General Chemistry with Qualitative Analysis (SQ) OR | | | | | freshmen and should be completed first semester. Non-freshmen see advisor for petitioning replacement electives. | | | |
| CHM 116: General Chemistry With Quantative Analysis (SQ) OR CHM 116: General Chemistry II* (SQ) | 4 | | | Grade of C | | | | |
| | | | | | An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition | | | |
| +MAE 100: Introduction to Mechanical and Aerospace Engineering (or Department Approved Elective) | 2 | | | Grade of C in MAE 100 | courses | | | |
| Department Approved Elective) | | | | M112 100 | ASU Math Placement Exam score determines | | | |
| MAT 265: Calculus for Engineers I (MA) | 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 | | | | Grade of C | towards degree credit | | | |
| ENG 105: Advanced First-Year Composition** OR 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. | | | |
| TERM TWO: 16 30 CREDIT HOURS | 3 | | | Grade of C | | | | |
| CSE 100: Principles of Programming with C++(CS) OR | | | | | • Complete MAT 266; PHY 121, 122 with a | | | |
| CSE 110: Principles of Programming with Java (CS) | 3 | | | Grade of C | minimum grade of "C" | | | |
| MAT 266: Calculus for Engineers II PHY 121/122: University Physics I/ Laboratory I (SQ) | 3/1 | | | Grade of C Grade of C | 1 | | | |
| ENG 101 or 102: First-Year Composition OR | | | | | 1 | | | |
| ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | | | | |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US | | | | 51.000 01 0 | 1 | | | |
| (C), Global Awareness (G), or Historical Awareness (H) | 3 | | | | | | | |
| TERM THREE: 31 45 CREDIT HOURS MAE 212: Engineering Mechanics | 4 | | | Grade of C | • Complete ENG 102 or 108 or 105; MAT 275; | | | |
| MAT 275: Modern Differential Equations | 3 | | | Grade of C | PHY 131, 132; MAE 212 each with a minimum | | | |
| PHY 131/132: University Physics II Electricity and Magnetism/ | 3 | | | Grade of C | grade of "C" Complete First Year Composition requirement: | | | |
| Laboratory II (SQ) | 3/1 | | | Grade of C | ENG 101 & 102 or ENG 107 & 108 or ENG 105 | | | |
| 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 | 2 | | | G 1 6G | Complete MAE 213, 240 each with a minimum | | | |
| MAE 213: Solid Mechanics MAE 240: Thermofluids I | 3 | | | Grade of C Grade of C | grade of "C" | | | |
| PHI 103: Principles of Sound Reasoning (HU) | 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 | • | , | | | | | | |
| MAE 340: Thermofluids II | 3 | | | Grade of C | _ | | | |
| EEE 202: Circuits I | 4 | | | Grade of C | _ | | | |
| MAE 322: Structural Mechanics MAE 384: Numerical Methods for Engineers (CS) | 3 | | | Grade of C Grade of C | - | | | |
| TERM SIX: 76 90 CREDIT HOURS | , , | | | 31440 01 0 | <u></u> | | | |
| BME 111: Engineering Perspectives on Biological Systems (or dept | | | | | | | | |
| approved BIO) MAE 318: Sensors and Controls | 5 | | | Grade of C | - | | | |
| MAE 318: Sensors and Controls MAE 323 Computer-Aided Engineering II | 2 | | | Grade of C | 1 | | | |
| MAE 342: Principles of Mechanical Design | 3 | | | Grade of C | - | | | |
| Technical Elective | 3 | | | Grade of C | <u> </u> | | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | | | | |
| TERM SEVEN. 91 103 CREDIT HOURS | | | | Grade of C | | | | |
| MAE 491: Experimental Mechanical Engineering (L) | 3 | | | Grade or e | | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I | 3 | ⊠ | | Grade of C | | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I Technical Elective | 3 | | | Grade of C Grade of C | - - - | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I Technical Elective Technical Elective | 3 | ⊠ | | Grade of C | | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I Technical Elective | 3 | | | Grade of C Grade of C | | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I Technical Elective Technical Elective Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 3 3 | | | Grade of C Grade of C | | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I Technical Elective Technical Elective Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness, (G), or Historical Awareness (H) TERM EIGHT: 106 120 CREDIT HOURS MAE 400: Engineering Profession (L) | 3 3 3 3 | | | Grade of C Grade of C Grade of C Grade of C | | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I Technical Elective Technical Elective Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness, (G), or Historical Awareness (H) TERM EIGHT: 106 120 CREDIT HOURS MAE 400: Engineering Profession (L) MAE 489: Mechanical Engineering Design II | 3 3 3 3 3 | | | Grade of C | | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I Technical Elective Technical Elective Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness, (G), or Historical Awareness (H) TERM EIGHT: 106 120 CREDIT HOURS MAE 400: Engineering Profession (L) MAE 489: Mechanical Engineering Design II Technical Elective | 3 3 3 3 | | | Grade of C Grade of C Grade of C Grade of C | | | | |
| MAE 491: Experimental Mechanical Engineering (L) MAE 488: Mechanical Engineering Design I Technical Elective Technical Elective Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness, (G), or Historical Awareness (H) TERM EIGHT: 106 120 CREDIT HOURS MAE 400: Engineering Profession (L) MAE 489: Mechanical Engineering Design II | 3 3 3 3 3 | | | Grade of C | | | | |



Major Map: Mechanical Engineering (Computational and Mathematical Mechanics) – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

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) |
|---|---|-----------------------|------------------------------|-------------------------------------|------------------------------------|---|-----------------------------------|
| I | | | | | | | |

General University Requirements: Legend

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



Major Map: Mechanical Engineering (Energy and Environment) – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

| | | | Completed ATP | e: Yes No | Completed AGEC: Yes No |
|---|-------|-------------------|--------------------------|------------------------------|--|
| 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 | 1118. | Division | Course/Grade | Required | Additional Critical Requirement Notes |
| +ASU 101-FSE: The ASU Experience | 1 | | | | • Complete CHM 114 or 116 or 115; MAT 265 |
| CHM 114: General Chemistry for Engineers(SQ) OR | | | | | each with a minimum grade of "C" |
| CHM 115: General Chemistry with Qualitative Analysis (SQ) OR CHM 116: General Chemistry II* (SQ) | 4 | | | Grade of C | + ASU 101-FSE and MAE 100 required for freshmen and should be completed first semester. |
| +MAE 100: Introduction to Mechanical and Aerospace Engineering (or | 4 | | | Grade of C in | Non-freshmen see advisor for petitioning |
| Department Approved Elective) | 2 | | | MAE 100 | replacement electives. • An SAT, ACT, Accuplacer, or TOEFL score |
| MAT 265: Calculus for Engineers I | 3 | | | Grade of C | determines placement into first-year composition |
| ENC 101 102 E4 V C | | | | | courses |
| ENG 101 or 102: First-Year Composition OR ENG 105: Advanced First-Year Composition** OR | | | | | ASU Math Placement Exam score determines 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 |
| Social & Behavioral Science (SB) AND Cultural Diversity in the US | 2 | | | | **If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor. |
| (C), or Historical Awareness (H) | 3 | | | | 1 0 |
| TERM TWO: 16 30 CREDIT HOURS MAT 266: Calculus for Engineers II | 3 | | | Grade of C | • Complete MAT 266; PHY 121, 122 each with a |
| PHY 121/122: University Physics I/ Laboratory I (SQ) | 3/1 | | | Grade of C | minimum grade of "C" |
| ENG 101 or 102: First-Year Composition OR | 3/1 | | | Grade of C | |
| ENG 105: Advanced First-Year Composition** OR | 2 | | | G 1 6G | |
| ENG 107 or 108: English for Foreign Students Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the | 3 | | | Grade of C | |
| US (C), or Historical Awareness (H) | 3 | | | | |
| TERM THREE: 31 45 CREDIT HOURS | | | | | |
| MAE 212: Engineering Mechanics | 4 | | | Grade of C | Complete ENG 102 or 108 or 105; MAT 275; PMY 131 132: MAE 312 are built a minimum. |
| MAT 275: Modern Differential Equations (MA) | 3 | | | Grade of C | PHY 131, 132; MAE 212 each with a minimum grade of "C" |
| PHY 131/132: University Physics II Electricity and Magnetism/ Laboratory (SQ) | 3/1 | | | Grade of C | Complete First Year Composition requirement: |
| MAE 214: Computer-Aided Engineering I | 1 | | | Grade of C | ENG 101 & 102 or ENG 107 & 108 or ENG 105 |
| MAT 267: Calculus for Engineers III | 3 | | | Grade of C | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | |
| MAE 213: Solid Mechanics | 3 | | | Grade of C | Complete MAE 213, 240 each with a minimum |
| MAE 240: Thermofluids I | 4 | | | Grade of C | grade of "C" |
| CHM 231: Elementary Organic Chemistry | 3 | | | Grade of C | |
| MAT 343: Applied Linear Algebra | 3 | \boxtimes | | Grade of C | |
| MSE 250: Structure and Properties of Materials | 3 | | | Grade of C | |
| TERM FIVE: 61 75 CREDIT HOURS | | | 1 | | |
| MAE 340: Thermofluids II | 3 | | | Grade of C | |
| EEE 202: Circuits I | 4 | | | Grade of C | |
| MAE 322: Structural Mechanics | 4 | | | 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 320: Fundamentals of Ecology | 3 | ⊠ | | | |
| MAE 318: Sensors and Controls | 5 | ⊠ | | Grade of C | |
| MAE 342: Principles of Mechanical Design | 3 | | | Grade of C | |
| Technical Elective | 3 | \boxtimes | | Grade of C | |
| TERM SEVEN: 91 105 CREDIT HOURS | | _ | l | | |
| MAE 382: Thermodynamics | 3 | | | Grade of C | |
| MAE 491: Experimental Mechanical Engineering (L) | 3 | | | Grade of C | |
| Technical Elective | 3 | | | Grade of C | |
| Technical Elective GCU 364: Energy in the Global Arena (SB,G) or | 3 | | | Grade of C | |
| PUP 190: Sustainable Cities (HU, G or SB,G) | 3 | | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | |
| MAE 400: Engineering Profession (L) | 3 | ⊠ | | Grade of C | |
| MAE 446: Energy Systems Design | 3 | \boxtimes | | Grade of C | |
| Technical Elective | 3 | \boxtimes | | Grade of C | |
| GPH 314: Global Change (HU,G) or | _ | | | | |
| PHI 310: Environmental Ethics (HU) Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science | 3 | | | | |
| (SB) (6 hrs min in both SB & HU required) | 3 | | | | |



Major Map: Mechanical Engineering (Energy and Environment) -**Bachelor of Science in Engineering (B.S.E.)**

Ira A. Fulton School of Engineering, Tempe Campus

Catalog Year: 2009-2010

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) 0
 - 0
 - Social and Behavioral Sciences (SB)
 - Natural Science-Quantitative (SQ)
 - Natural Science-General (SG) 0
- General Studies Awareness Requirements
 - Cultural Diversity in the US (C)
 - Global Awareness (G)
 - Historical Awareness (H)
- First-Year Composition



Major Map: Journalism & Mass Communication – Bachelor of Arts (B A)

Bachelor of Arts (B.A.)
Walter Cronkite School of Journalism, Downtown Phoenix Campus
Catalog Year: 2009-2010

| | | | Completed ATI | | Completed AGEC: \(\sum \) Yes \(\sum \) No |
|---|-------|-------------------|--------------------------|------------------------------|---|
| 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 | 1113. | Division | Course/Grade | Required | Additional Critical Placking Potes |
| ASU 101: The ASU Experience | 1 | | | Grade of C | ASU 101 is for ASU freshman students only. Not |
| ENG 101 and 102: First-Year Composition OR | | | | | required of transfer students |
| ENG 107 and 108: English for Foreign Students OR | 3 | | | Grade of C | An SAT, ACT, Accuplacer, or TOEFL score |
| ENG 105: Advanced First-Year Composition | | | | | determines placement into first-year composition |
| MAT 142: College Mathematics (MA) or higher | 3 | | | | courses |
| Second Language | 4 | | | Grade of C | ASU Math Placement Exam score determines placement in Mathematics course |
| JMC 101: Grammar for Journalists | 1 | | | Grade of Y | Minimum 2.50 ASU cumulative GPA |
| JMC 110: Principles and History of Journalism (SB) (includes English Grammar Exam) | 3 | | | Grade of C | William 2.50 ASC Camalative GI A |
| 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 | William 200 Table Cumulative GTT |
| ENG 105: Advanced First-Year Composition | | | | | |
| Statistics (CS) | 3 | | | | |
| Second Language | 4 | | | | |
| JMC 201: News Reporting and Writing (L) | 3 | | | Grade of C | |
| HST 109: United States to 1865 (HU/SB, H) OR | 3 | | | | |
| HST 110: United States since 1865 (SB, H) | | | | | |
| TERM THREE: 31 45 CREDIT HOURS Complete at least one of two: | | | | | Minimum 2.50 ASU cumulative GPA |
| JMC 366: Journalism Ethics and Diversity OR | _ | | | ~ | William 2.50 ASC cumulative Gi A |
| JMC 301: Intermediate Reporting & Writing (Print/PR/Digital) | 3 | | | Grade of C | |
| JMS 315: Intermediate Reporting & Writing (Broadcast/Digital) | | | | | |
| JMC 425: Online Media | 3 | | | Grade of C | |
| Natural Science – Quantitative (SQ) | 4 | | | | |
| Second Language | 3 | | | | |
| SOC 101: Intro to Sociology (SB) | 3 | | | | |
| TERM FOUR: 46 60 CREDIT HOURS Complete at least one of two: | | 1 | ı | | W. CDA |
| JMC 366: Journalism Ethics and Diversity OR | | | | | Minimum 2.50 ASU cumulative GPA Must complete 366 and 301 or 315 (depending on |
| JMC 301: Intermediate Reporting & Writing (Print/PR/Digital) | 3 | | | Grade of C | track) by end of term 4 with grade of "C or better" |
| JMS 315: Intermediate Reporting & Writing (Broadcast/Digital) | | | | | truck) by the of term 1 with grade of C of better |
| POS 110: Government and Politics (SB) OR | 3 | | | | |
| POS 310: American Government (SB) | 3 | | | | |
| Second Language (G) | 4 | | | | |
| English Literature (HU) | 3 | | | | |
| HST Elective: | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS JMC 313: Introduction to Editing (Print/PR/Digital) OR | | | | | Minimum 2.50 ASU cumulative GPA |
| JMC 345: Videography (Broadcast/Digital) | 3 | | | Grade of C | William 2.50 ASO cumulative GFA |
| Track class *** | 3 | | | Grade of C | |
| 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: Intro to Ethics (HU) OR | 3 | | | | |
| PHI 305: Ethical Theory (HU) OR | | | | | |
| PHI 306: Applied Ethics (HU) OR PHI 309: Social and Political Philosophy (HU) | | | | | |
| Natural Science (SQ or SG) | 4 | П | | | |
| TERM SIX: 76 90 CREDIT HOURS | • | | | | |
| JMC 402: Mass Communication Law (L) | 3 | | | Grade of C | Minimum 2.50 ASU cumulative GPA |
| ECN 211: Macroeconomic Principles (SB) OR | | | | | |
| ECN 212: Microeconomic Principles (SB) | 3 | | | | |
| Track class *** | 3 | | | Grade of C | |
| Related Area | 3 | | | Grade of C | |
| Elective | 2 | | | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | |
| Track class *** | 3 | | | Grade of C | Minimum 2.50 ASU cumulative GPA |
| PGS 101: Intro to Psychology (SB) | 3 | | | | |
| Related Area | 3 | ⊠ | | Grade of C | |
| Related Area | 3 | ⊠ | | Grade of C | |
| | | | | Stade of C | |
| Awareness Area – Cultural Diversity (C) or Elective if completed | 3 | | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | |
| JMC 473: Business of Journalism | 3 | | | Grade of C | Minimum 2.50 ASU cumulative GPA |
| JMC/MCO Elective | 3 | | | Grade of C | |
| Related Area | 3 | ⊠ | | Grade of C | |
| Upper Division Elective | 3 | | | | |



Major Map: Journalism & Mass Communication – Bachelor of Arts (B.A.)

Walter Cronkite School of Journalism, Downtown Phoenix Campus Catalog Year: 2009-2010

***Track Classes:

Broadcast

JMC 330: Television Reporting AND JMC 475: Television Newscast Production (3-9 hrs) OR JMC 437: Documentary Production and Broadcast Elective JMC 478: Cronkite News Service (3-9 hrs)

Print Journalism

JMC 325: Multimedia Reporting OR JMC 440: Magazine Writing OR JMC 470: Depth Reporting AND JMC 478: Cronkite News Service (3-9 hrs) OR 2 Paired Journalism/online electives (chosen in consultation with your advisor)

Public Relations

JMC 310: Public Relations AND JMC 415: Writing for Public Relations AND JMC 417: Public Relations Campaign

Digital Journalism

JMC 460: Advanced Online AND
JMC 494: Digital Media Entrepreneurship AND
JMC 325: Multimedia Reporting OR
JMC 494: Knight Center Independent Study OR
JMC 494: New Media Innovation Lab

Graduation Requirements Summary:

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

General University Requirements: Legend

- General Studies Core Requirements:
 - Literacy and Critical Inquiry (L)
 - Mathematical Studies (MA)
 - o Computer/Statistics/Quantitative applications (CS)
 - o Humanities, Fine Arts, and Design (HU)
 - o Social and Behavioral Sciences (SB)
 - o Natural Science-Quantitative (SQ)
 - o Natural Science-General (SG)
- General Studies Awareness Requirements
 - o Cultural Diversity in the US (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 2.5 ASU cumulative GPA and a 2.5 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



Major Map: Legal Studies – Bachelor of Science (B.S.) Sandra Day O'Connor College of Law | Catalog Year: 2009-2010

| | | | Completed ATP: ☐ Yes ☐ No | | Completed AGEC: Yes No | | | |
|---|-------|-------------------|---------------------------|------------------------------|---|--|--|--|
| 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 | 1113. | Division | Course/ Grade | Required | Additional Child Requirement Potes | | | |
| ENG 101 or 102: First-Year Composition or ENG 105: Advanced First-Year Composition or | | | | | An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition | | | |
| ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | courses | | | |
| LAW 105: Structure/Methodology of American Legal System | 3 | | | Grade of C | ASU Math Placement Exam score determines | | | |
| MAT 142: College Mathematics or higher (MA) | 3 | | | Grade of C | placement in Mathematics course Complete First-Year Composition requirement by | | | |
| Social & Behavioral Science (SB) | 3 | | | | the end of semester 3 | | | |
| ASU 101: The ASU Experience | 1 | | | | Complete Math course requirement by end of | | | |
| Elective | 3 | | | | semester 3 | | | |
| TERM TWO: 16 30 CREDIT HOURS | | | | | | | | |
| ENG 101 or 102: First-Year Composition or | | | | | Complete First-Year Composition requirement by | | | |
| ENG 105: Advanced First-Year Composition or ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | the end of semester 3 Complete Math course requirement by end of | | | |
| Computer/Statistics/Quantitative applications (CS) | 3 | | | | semester 3 | | | |
| Cultural Diversity in the US (C) | 3 | | | | | | | |
| Natural Science - General (SG) or Quantitative (SQ) | 4 | | | | | | | |

NOTE: The College of Law is still considering and developing the curriculum for the BS in Legal Studies and may propose changes to the LAW courses required after term 2. The LAW courses listed in terms 3-8 are still pending final approval by the College of Law and the University.

| LAW 200: Legal Research 3 | TERM THREE: 31 45 CREDIT HOURS | | | | | |
|--|---|-----|-------------|---|------------|--|
| Complete National Section | | 3 | | | Grade of C | Complete First-Year Composition requirement by |
| Compiler Main Coarse Fequirement by end of terms Compiler Main Coarse Fequirement by end of terms Compiler Main Coarse Fequirement by end of terms Coarse Fequirement Coarse Fequirem | 5 | | | | | the end of semester 3 |
| Natural Science = Quantitative (SQ) | | | | | Grade of C | |
| Elective | | | | | | term 5 |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | | - |
| LAW 215: Legal Writing | | 3 | | | | |
| LAW 220: Technology & Legal Practice 3 | | 3 | | | Grade of C | |
| Humanities, Fine Arts & Design (HU) 3 | · · · · · · | | | | Grade of C | 1 |
| Historical Awareness (H) | | | | | | 1 |
| Elective | | | | | | 1 |
| LAW 310: Advanced Legal Research 3 | ` ' | | | | | 1 |
| LAW 310: Advanced Legal Research 3 ☑ LAW 320: Legal Ethics 3 ☑ LAW 330: Alternative Dispute Resolution 3 ☑ Upper division Literacy & Critical Inquiry (L) (ENG 301: Writing for Professions or ENG 302: Business Writing recommended) 3 ☑ Humanities, Fine Arts & Design (HU) 3 ☐ TRRM SIN: 76 90 CREDIT HOURS Image: Comparities of the C | | 3 | | | | |
| LAW 320: Legal Ethics 3 ☑ LAW 330: Alternative Dispute Resolution 3 ☑ Upper division Literacy & Critical Inquiry (L) (ENG 301: Writing for Professions or ENG 302: Business Writing recommended) 3 ☑ Humanities, Fine Arts & Design (HU) 3 ☑ TERM SIX: 76 90 CREDIT HOURS Image: Comparities of the Compari | | 3 | M | | | |
| LAW 330: Alternative Dispute Resolution 3 | | | | | | 1 |
| Upper division Literacy & Critical Inquiry (L) (ENG 301: Writing for Professions or ENG 302: Business Writing recommended) TERM SIX: 76 90 CREDIT HOURS LAW 340: Torts/Personal Injury Practice LAW 350: Law Office Management & Accounting LAW 360: Administrative Law & Process Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB) Global Awareness (G) TERM SEVEN: 91 105 CREDIT HOURS LAW 370: Business & Corporate Practice LAW 370: Business & Corporate Practice JAW 380: Litigation Practice Upper division LAW course Elective 3 | | | | | | 1 |
| Humanities, Fine Arts & Design (HU) 3 □ TERM SIX: 76 90 CREDIT HOURS LAW 340: Torts/Personal Injury Practice 3 □ LAW 350: Law Office Management & Accounting 3 □ LAW 360: Administrative Law & Process 3 □ Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB) 3 □ Global Awareness (G) 3 □ TERM SEVEN: 91 105 CREDIT HOURS LAW 370: Business & Corporate Practice 3 □ LAW 380: Litigation Practice 3 □ Upper division LAW course 3 □ Elective 3 □ Elective 3 □ Upper division LAW course 3 □ | | | | | | 1 |
| TERM SIX: 76 90 CREDIT HOURS | | | | | | |
| LAW 340: Torts/Personal Injury Practice 3 ⊠ LAW 350: Law Office Management & Accounting 3 ⊠ LAW 360: Administrative Law & Process 3 ⊠ Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB) 3 ⊠ Global Awareness (G) 3 □ TERM SEVEN: 91 105 CREDIT HOURS LAW 370: Business & Corporate Practice 3 ⊠ LAW 380: Litigation Practice 3 ⊠ Upper division LAW course 3 □ Elective 3 □ TERM EIGHT: 106 120 CREDIT HOURS Upper division LAW course 3 ⊠ Upper division LAW course 3 ⊠ Upper division LAW course 3 ⊠ Upper division LAW course 3 ⊠ Upper division LAW course 3 ⊠ Upper division LAW course 3 ⊠ W W Upper division LAW course 3 ⊠ W Upper division LAW course 3 ⊠ W Upper division LAW course 3 ⊠ W Upper division LAW course 3 | | 3 | | | | |
| LAW 350: Law Office Management & Accounting LAW 360: Administrative Law & Process Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB) Global Awareness (G) TERM SEVEN: 91 105 CREDIT HOURS LAW 370: Business & Corporate Practice 1 | TERM SIX: 76 90 CREDIT HOURS | | | 1 | 1 | |
| LAW 360: Administrative Law & Process 3 | LAW 340: Torts/Personal Injury Practice | 3 | | | | |
| Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB) | LAW 350: Law Office Management & Accounting | 3 | | | | |
| Behavioral Science (SB) 3 | | 3 | \boxtimes | | | |
| Global Awareness (G) | | 3 | | | | |
| TERM SEVEN: 91 105 CREDIT HOURS LAW 370: Business & Corporate Practice 3 □ LAW 380: Litigation Practice 3 □ Upper division LAW course 3 □ Elective 3 □ Elective 3 □ TERM EIGHT: 106 120 CREDIT HOURS Upper division LAW course 3 □ Upper division LAW course 3 □ □ Upper division elective 3 □ □ | ` ' | | | | | 1 |
| LAW 370: Business & Corporate Practice 3 ☑ LAW 380: Litigation Practice 3 ☑ Upper division LAW course 3 ☑ Elective 3 ☐ Elective 3 ☐ TERM EIGHT: 106 120 CREDIT HOURS Upper division LAW course 3 ☑ Upper division elective 3 ☑ | \$ 7 | 3 | | | | |
| LAW 380: Litigation Practice 3 □ Upper division LAW course 3 □ Elective 3 □ TERM EIGHT: 106 120 CREDIT HOURS Upper division LAW course 3 □ | | 2 | M | | | |
| Upper division LAW course 3 □ Elective 3 □ Elective 3 □ TERM EIGHT: 106 120 CREDIT HOURS Upper division LAW course 3 □ Upper division lective 3 □ | | | | | | - |
| Elective 3 □ Elective 3 □ TERM EIGHT: 106 120 CREDIT HOURS Upper division LAW course 3 □ Upper division elective 3 □ | | | | | | 1 |
| Elective 3 □ TERM EIGHT: 106 120 CREDIT HOURS Upper division LAW course 3 □ Upper division elective 3 □ | ** | | | | | - |
| TERM EIGHT: 106 120 CREDIT HOURS Upper division LAW course 3 ☒ Upper division elective 3 ☒ | | | | | | - |
| Upper division LAW course 3 ☒ Upper division LAW course 3 ☒ Upper division LAW course 3 ☒ Upper division elective 3 ☒ | | 3 | | | | |
| Upper division LAW course 3 ☑ Upper division LAW course 3 ☑ Upper division elective 3 ☑ | | 2 | M | | | |
| Upper division LAW course 3 🖂 Upper division elective 3 🖂 | 11 | | | | | 1 |
| Upper division elective 3 | ** | + - | | | | 1 |
| | ** | | | | | 1 |
| | Elective | 3 | | | | 1 |



Major Map: Legal Studies – Bachelor of Science (B.S.) Sandra Day O'Connor College of Law | Catalog Year: 2009-2010

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:
 - 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)
 - Natural Science-General (SG)
- General Studies Awareness Requirements
 - Cultural Diversity in the US (C)
 - Global Awareness (G) 0
 - Historical Awareness (H)
- First-Year Composition



Major Map: General Studies – Bachelor of General Studies (B.G.S.) School of Letters & Sciences | Catalog Year: 2009-2010

Total UD Res

| I. First | ∕ear Comp | osition (3-6 | hours) | Hours | Hours | Hours | Grade | III. BGS Clusters (36 hours) | Hours | Hours | Hours | Grade |
|----------------------------|--------------------------------|--------------------------------|----------------------------------|---------------------|--------------------|------------|--|------------------------------|-------|-------|-------------------|-------|
| ENG 101: | First Year Cor | mp 1 (3) and | | | | | | Cluster #1 | | | | |
| ENG 102: | First Year Cor | np 2 (3) <i>or, if</i> 6 | eligible | | | | | | | | | |
| ENG 105: | Advance First | t Year Comp (| 3) | | | | | - | | | | |
| | | | | • | • | | | | | | | |
| | 0 | 104 " | (05.1) | | | | | - | | | | |
| | | | (35 hours) | | | | | Cluster #2 | | ı | | |
| | | | vioral Scienc in the other AN | | | | | | | | | |
| division. | inica, o noars in | i one area, 5 me | on the other Aiv | D ONC COO | iioc iiiu | ot be up | pci | | | | | |
| HU: | | | | | | | | | | | | |
| HU: | | | | | | | | | | | | |
| SB: | | | | | | | | Cluster #3 | | ı | | |
| SB: | | | | | | | | | | | | |
| HU or SI | 3: | | | | | | | | | | | |
| Natural | Sciences (8 h | nours) | | | | | | | | | | |
| SQ: | | | | | | | | | | | | |
| SQ/SG: | | | | | | | | Cluster #4 | | ı | | |
| Mathem | atics & Statis | tics/Compute | er Application | s (6 hou | rs) | | | | | | | |
| MA: MA | T 142: College | e Mathematics | (MA) or highe | er | | | | | | | | |
| CS: | | | | | | | | | | | | |
| Literacy | & Critical Inc | quiry (6 hours | s) | | | | | | | | | |
| L: | | | | | | | | | I | l | | |
| Upper di | vision L: | | | | | | | n | | | | |
| | , | | um and must fulf | | , | | | IV. Electives | | 1 | | |
| | | | Awareness Are Awareness Are | | courses | that ful | fill | | | | <u> </u> | |
| | areness (G): | o, and within the | 7 Walcilooo 7 lic | uo. | | | | | | | <u> </u> | |
| | Awareness (H): | | | | | | | | | | <u> </u> | |
| | iversity (C): | | | | | | <u> </u> | | | | <u> </u> | |
| | , , , | | | | l | l | <u> </u> | | | | | |
| II. Maio | requireme | ents | | | | | | | | | <u> </u> | |
| | | erience (fresh | men only) | 1 | | | | | | | <u> </u> | |
| | Society and t | , | | 3 | 3 | | | | | | <u> </u> | |
| 00111 1011 | Coolety and t | ino marviadar | | | Ŭ | | <u> </u> | | | | <u> </u> | |
| | | | | | | | | | | | | |
| Graduat | ion Requir | ements | | | | | | | | | | |
| Total Hours | Upper Division | ASU Resident | Max. 2-yr Transfer | Minimum GF | | Resident F | | | | | $ldsymbol{f eta}$ | |
| Required (120 hrs. min) | Hours Required (45 hrs min) | Hours Required (30 hrs min) | Hours allowed (64 hrs max.) | required (2.0 min.) | 00 Acade hrs mi | | gnition (56 | | | | $ldsymbol{f eta}$ | |
| | | | | | | | | | | | igsquare | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Total UD Res

Please Note:

- A grade of C or better is required in all Major courses
 Majors must maintain at least a 2.0 ASU cumulative
- GPA and 2.0 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: Students will choose four [4] clusters and at least 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, Technology 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: 2009-2010

| | | | Completed AT | P: \[Yes \[\] No | Completed AGEC: Yes No |
|---|------|-------------|--------------|---------------------|--|
| 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 16 CREDIT HOURS | | | | | ASU 101 is for ASU freshman students only Not |
| ASU 101: The ASU Experience ENG 101 and 102: First-Year Composition OR | 1 | | | | required of transfer students |
| ENG 107 and 108: English for Foreign Students OR | | | | | An SAT, ACT, Accuplacer, or TOEFL score |
| ENG 105: Advanced First-Year Composition | 3 | | | Grade of C | determines placement into first-year composition 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 | | | | |
| Elective | 3 | | | | |
| TERM TWO: 17 32 CREDIT HOURS | | | | | |
| ENG 101 or 102: First-Year Composition | | | | | Minimum C grade in first-year composition |
| ENG 105: Advanced First-Year Composition ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | courses Math (MA) requirement must be completed by the |
| Humanities, Fine Arts & Design (HU) | 3 | | | Grade of C | end of the second semester |
| Computer/Statistics/Quantitative applications (CS) | 3 | | | | 1 |
| Natural Science – Quantitative (SQ) | 4 | | | | 1 |
| Elective | 3 | | | | 1 |
| TERM THREE: 33 47 CREDIT HOURS | 3 | | | | |
| HTY 301 Historical Research Methods (SB, H) | 3 | ⊠ | | Grade of C | First-year composition requirement completed |
| Track specific focus area course (see list below) | 3 | | | Grade of C | with a minimum "C" grade. |
| Literacy & Critical Inquiry (L) | 3 | | | Grade of C | Academic Review: Students should choose a track within the degree. |
| Natural Science – Quantitative (SQ) or General (G) | 4 | | | | within the degree |
| Elective | 2 | | | | 1 |
| TERM FOUR: 48 62 CREDIT HOURS | Z | | | | |
| HST 343 American Southwest (SB, H) | 3 | \boxtimes | | Grade of C | A minimum of 6 hours of Upper Division |
| HST 344 Arizona (SB, H) | 3 | | | Grade of C | Coursework must be completed in this semester |
| Track specific elective course (see list below) | 3 | | | Grade of C | † |
| Elective | 3 | | | Grade of C | † |
| Elective | 3 | | | | 1 |
| TERM FIVE: 63 76 CREDIT HOURS | 3 | | | | |
| Track specific focus area course (see list below) | 3 | | | Grade of C | A minimum of 9 hours of Upper Division |
| Track specific focus area course (see list below) | 3 | | | Grade of C | coursework must be completed in this semester. |
| Elective | 3 | | | Grade of C | 1 |
| Elective | 2 | | | | † |
| Elective | 3 | | | | † |
| TERM SIX: 77 91 CREDIT HOURS | 3 | | | | |
| Track specific focus area course (see list below) | 3 | | | Grade of C | A minimum of 9 hours of Upper Division |
| Track specific elective area course (see list below) | 3 | | | Grade of C | coursework must be completed in this semester |
| Elective | 3 | | | | |
| Elective | 3 | | | | |
| Elective | 3 | | | | |
| TERM SEVEN: 92 106 CREDIT HOURS | | | 1 | ~ | A minimum of O house of Hanna Division |
| Track specific elective area course (see list below) Cultural Diversity in the US (C), or if completed, Elective | 3 | | | Grade of C | A minimum of 9 hours of Upper Division coursework must be completed in this semester |
| Upper Division Elective | 3 | | | | C (cultural awareness) requirement may be |
| Upper Division Elective | 3 | ⊠ | | | satisfied by track-specific course or other elective |
| Elective | 3 | | | | 1 |
| TERM EIGHT: 107 120 CREDIT HOURS | , | | | | |
| HTY498: History and Culture Capstone Project | 3 | ⊠ | | Grade of C | A minimum of 9 hours of Upper Division |
| Global Awareness (G) or if completed, Elective | 3 | | | | coursework must be completed in this semester |
| | | | | | G (global awareness) requirement may be satisfied by track-specific course or other elective |
| Elective | 3 | | | | of their specific course of other elective |
| Elective | 3 | | | | - |
| Elective | 2 | | l | | |



Major Map: History and Culture - Bachelor of Arts (B.A.)

School of Letters and Sciences | Catalog Year: 2009-2010

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

- o Natural Science-General (SG)
- General Studies Awareness Requirements
 - o Cultural Diversity in the US (C)
 - Global Awareness (G)
 - Historical Awareness (H)
- First-Year Composition

Additional Notes:

The B.A. in History and Culture has six tracks: The following are the focus area & specific elective courses for each track:

| The Bit. in Thistory and Cantine has set tracks. The journals are the joeds area & specific elective courses for each track. | | | | | | |
|--|--|--|--|--|--|--|
| Track 1: Archival Preservation and Digital Media | Track 1: Archival Preservation and Digital Media | | | | | |
| Focus Area Courses | Track Specific Elective Courses | | | | | |
| GIT 294 Special Topics: Introduction to Digital Photography | Any courses with ARD, ARS, ART, GIT, HST, HTY or TWC | | | | | |
| GIT 303 Digital Publishing | prefix | | | | | |
| HTY 220/294 Intro to Digital Archives | • | | | | | |
| HTY 230/294 Intro to Corporate Archiving | | | | | | |
| HTY 334/394 Archival Preservation and Digital Media | | | | | | |
| HTY 336/394 Editing Historical Documents | | | | | | |
| HTY 370/394 History of Collecting | | | | | | |
| HTY 410/394 Historic Preservation | | | | | | |

| Track 2: Environmental History and Culture | Track 2: Environmental History and Culture |
|---|---|
| Focus Area Courses | Track Specific Elective Courses |
| HST 319 U.S. Urban History | Any courses with an ABS, AGB, BIO, HST, or HTY prefix |
| HTY 320/394 History of American Agriculture | • |
| HTY 326 History of Landscaping | |
| HTY 350/394 Environmental History | |
| HTY 374/394 Western Rivers | |
| HTY 440/494 The Pre-Modern City | |
| HTY 450/494 History of Ecology and Conservation | |
| PHI 327 Environmental Philosophy | |

| Track 3: History and Culture of The American Southwest | Track 3: History and Culture of the American Southwest |
|---|---|
| Focus Area Courses | Track Specific Elective Courses |
| HST 293 Historical Themes in Latin America | Any courses with an AIS, CCS, HST, or HTY prefix. Students may also |
| HST 305 Studies in Latin American History | take courses with an SPA or SPN prefix. Students are strongly |
| HST 329 Women in 20 th Century U.S. West | encouraged to complete SPA 101 and SPA 102. |
| HST 330 Mexican Women in the U.S. Conquests and Migration | |
| HST 331 Mexican-American History to 1900 | |
| HST 332 Mexican-American History since 1900 | |
| HST 337 American Indian History to 1900 | |
| HST 338 American Indian History since 1900 | |
| HST 341 U.S. West, 19 th Century | |
| HST 342 U.S. West, 20 th Century | |
| HST 417 Topics in Mexican American History | |



Major Map: History and Culture - Bachelor of Arts (B.A.)

School of Letters and Sciences | Catalog Year: 2009-2010

Track 4: History and Philosophy of Science and Technology

Focus Area Courses

HTY 310/394 History of Technology

HTY 312/394 History of Science

HTY 314/394 History of Computing

HTY 316 History of Engineering

HTY 320/394 History of American Agriculture

HTY 325/394 History of American Business

HTY 326 History of Landscaping

HTY 330/394 History of Printing and Media

HTY 340/394 Exploration and Science

HTY 350/394 Environmental History

HTY 360/394 Women in Science

PHI 306 Applied Ethics

PHI 314 Philosophy of Science

Track 4: History and Philosophy of Science and Technology

Track Specific Elective Courses

Any courses with an ABS, AGB, BIO, GIT, HST, HTY, or PHI prefix.

Track 5: History and Public Policy

Focus Area Courses

HST 109 The United States to 1865

HST 110 The United States since 1865

HST 210 American Social History

HST 315 Political History of the United States

HST 320 U.S. Urban History Since 1850

HST 325 Immigration and Ethnicity in the United States

HST 342 The U.S. West in the 20th Century

HST 484 Internship

POS 220 Political Issues and Public Policy

POS 310 American National Government

POS 325 Public Policy Development

POS 426 Elements of Public Policy

Track 5: History and Public Policy

Track Specific Elective Courses

Any courses with an HST, HTY, PGV, PLS, or POS prefix.

Track 6: History for Secondary Teachers

Focus Area Courses

HST 101 Global History

HST 102 Western Civilization

HST 103 Western Civilization

HST 104 Western Civilization

HST 109 United States to 1865

HST 110 United States since 1865

HST 210 American Social History

HST 313 American Cultural History to 1865

HST 314 American Cultural History since 1865

HST 325 Immigration and Ethnicity

HST 337 American Indian History to 1900

HST 338 American Indian History since 1900

HST 341 U.S. West, 19th Century

HST 342 U.S. West, 20th Century

REL 100 Religions of the World

Track 6: History for Secondary Teachers

Track Specific Elective Courses

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.



I. First Year Composition (3-6 hours)¹ 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

| II. University General Studies (35-37 hour | s) | | | |
|---|--------------------|-----|-----------|-----|
| Humanities/Fine Arts & Social/Behavioral Science hours combined; 6 hours in one area, 9 hrs in the other AND 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 Interdis. Studies | Satisfied by major | | | |
| L: BIS 402: Senior Seminar | Satisfied by major | | | |
| Mathematics & Statistics/Computer Applications | (6 hou | rs) | | |
| MA: | | | | |
| CS: | | | | |
| Awareness Areas (2 courses minimum and must fulfill Double counting is permissible between Awareness Area graduation requirements, and within the Awareness Areas | s, other o | , | that fulf | ill |
| Global Awareness (G): | | | | |
| Historical Awareness (H): | | | | |
| 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 Allowed | Max. 2-yr Transfer Hours allowed with AGEC completion | AGEC Completed? | AA Completed? | |
| 90 | 75 | Y□ or N□ | Y□ or N□ | |

35-37

Sub Total (II):

- For more information about the BIS degree in Organizational Studies, please go to: http://sls.asu.edu/bis/org_studies.html
- 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: 2009-2010

| III. BIS Core (15 hours) ¹ | ASU Hours | Trans Hours | Grade | Upp Div |
|---|--------------|----------------|-------|------------|
| BIS 300 (BIS 394): Introduction to Org. Studies | 3 | | | Χ |
| BIS 301: Foundations of Interdis. Studies (L) | 3 | | | Χ |
| BIS 302: Interdisciplinary Inquiry | 3 | | | Χ |
| BIS 401: Applied Interdisciplinary Studies | 3 | | | Χ |
| BIS 402: Senior Seminar (L) | 3 | | | Χ |

Sub Total (III): 15

IV. Organizational Studies Concentration (30 hours) 1

| Organizational & Management Theory (3 hours) | | | |
|--|---|--|---|
| TMC 346: Management Dynamics | 3 | | Χ |
| Social Processes & Human Interaction (3 hours) | | | |
| FAS 330: Pers. Growth in Human Relationships | 3 | | Χ |
| Information Management & Organizational Technology (3 hours) | | | |
| COM 394: Communication in the Electronic Age | 3 | | Χ |
| Diversity (3 hours) | | | |
| BIS 394: Topics in Diversity | 3 | | Χ |
| Organizational Contexts (9 hours) | | | |
| POS 360: World Politics | 3 | | Х |
| SOC 321: Sociology of Work | 3 | | X |
| REL 320: American Religious Traditions (or) REL 321: Religion in America | 3 | | Х |
| Ethics (3 hours) | | | |
| PHI 306: Applied Ethics | 3 | | Χ |
| Quantitative Methods (3 hours) | | | |
| PAF 401: Statistics | 3 | | Χ |
| Organizational Tools/Skills (3 hours) | | | |
| ENG 301: Writing for the Professions (or) | | | |
| TWC 301: General Principles of Multimedia | 3 | | X |

Sub Total IV: 30

V. Electives (38-40 hours)²

Sub Total (V): 38-40

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

² 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.



Major Map: Literature, Writing and Film – Bachelor of Arts (B.A.) School of Letters and Sciences | Catalog Year: 2009-2010

| | | | Completed ATP | | Completed AGEC: Yes No |
|---|-------|-------------------|--------------------------|------------------------------|---|
| 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 16 CREDIT HOURS | 1110. | Division | Course Grade | required | Additional Critical Requirement Protes |
| ASU 101: The ASU Experience | 1 | | | | ASU 101 is for ASU freshman students only. Not |
| ENG 101 and 102: First-Year Composition OR | | | | | required of transfer students |
| ENG 107 and 108: English for Foreign Students OR | | _ | | | An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition |
| ENG 105: Advanced First-Year Composition | 3 | | | Grade of C | 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 | 2 | | | Code of C | Complete Mathematical Studies (MA) |
| ENG 105: Advanced First-Year Composition | 3 | | | Grade of C | |
| Computer Science course (CS) | 4 | | | | |
| Natural Science-Quantitative (SQ) | 3 | | | | |
| Elective | 3 | | | | |
| Elective TERM THREE: 33 47 CREDIT HOURS | 3 | | | | |
| Complete 2 courses from: ENG 200: Critical Reading and Writing About Literature (HU) ENG 217: Writing Reflective Essays (L) ENH 230: Introduction to Film Studies (HU) | 3 | | | Grade of C Grade of C | Complete First-Year Composition requirement: ENG 101 & 102 OR ENG 107 & 108 or 105 MILESTONE: Students must select a track |
| Natural Science- Quantitative (SQ) or General (SG) | 4 | | | Grade or C | |
| Elective | 3 | | | | |
| Elective | 2 | | | | |
| TERM FOUR: 48 62 CREDIT HOURS | _ | | | | |
| Complete remaining course from: ENG 200: Critical Reading and Writing About Literature (HU) ENG 217: Writing Reflective Essays (L) ENH 230: Introduction to Film Studies (HU) | 3 | | | Grade of C | HU or SB requirement may be satisfied by track- specific course or other elective |
| | 3 | | | Grade of C | |
| Track specific focus area course (see list on page 2) Track specific focus area course (see list on page 2) | 3 | | | Grade of C | 1 |
| Social & Behavioral Sciences (SB) | 3 | | | Grade of C | 1 |
| Elective | 3 | | | | |
| TERM FIVE: 63 76 CREDIT HOURS | J | | | | |
| Track specific focus area course (see list on page 2) | 3 | | | Grade of C | A minimum of 9 hours of Upper Division |
| Track specific focus area course (see list on page 2) | 3 | | | Grade of C | coursework must be completed in this semester. |
| Upper Division Literacy & Critical Inquiry (L) | 3 | | | Grade of C | HU or SB requirement may be satisfied by track- specific course or other elective |
| Elective | 2 | | | | specific course of other elective |
| Upper Division Elective | 3 | | | | |
| TERM SIX: 77 91 CREDIT HOURS | | | | | |
| 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 elective |
| Upper Division HU or SB, if completed take elective | 3 | | | | Upper Division HU or SB requirement may be |
| Elective | 3 | | | | satisfied by track-specific course or other elective |
| TERM SEVEN: 92 106 CREDIT HOURS | _ | | | | L. A |
| Track specific elective course (see list below) C (cultural awareness) if completed, take elective | 3 | | | Grade of C | A minimum of 12 hours of Upper Division coursework must be completed in this semester |
| Upper Division Elective | 3 | | | | C (cultural awareness) requirement may be |
| Upper Division Elective | 3 | | | | satisfied by track-specific course or other elective |
| Elective | 3 | | | | 1 |
| 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 |
| G (global awareness) if completed, take elective | 3 | | | | coursework must be completed in this semester |
| Upper division Elective | 3 | | | | G (global awareness) requirement may be satisfied by track-specific course or other elective |
| | | | | | J |
| Elective Elective | 3 2 | | | | 1 |
| Liective | |] | | l | 1 |



Major Map: Literature, Writing and Film -

Bachelor of Arts (B.A.)

School of Letters and Sciences | Catalog Year: 2009-2010

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

- o Natural Science-Quantitative (SQ)
- o Natural Science-General (SG)
- General Studies Awareness Requirements

 Cultural Diversity in the US (C)
 - o Global Awareness (G)
 - o Historical Awareness (H)
- First-Year Composition

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, ENH, or FMS prefix courses | | | |
| | | | | | |
| | ENH 230: Introduction to Film Studies (L or HU) | | | | |
| | ENH 332: Literature on Film | | | | |
| | ENH 372: Environmental Creative Nonfiction (L & HU) | | | | |
| | ENH 374: Environmental Issues in Literature (L & HU) | | | | |
| | ENH 378: The American Southwest in Literature and Film (L & HU) ENH 380: Medievalism in Modern Culture | | | | |
| | ENH 430: Studies in International Film (L or HU, G) | | | | |
| | ENH 436: American Film Musicals (L or HU) | | | | |
| | ENH 440: Great Directors (L or HU) | | | | |
| | ENH 475: Environmental Literary 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 321: Introduction to Shakespeare (L or HU) | | | | |
| | ENG 365: History of Film (HU) | | | | |
| | ENG 385: Career Development for English Majors (L) | | | | |
| Writing | Students choose from among the following: | Any ENG or ENH Writing courses | | | |
| | | Any Upper Division ENG or ENH literature coursesAny of the | | | |
| | ENH 245: Introduction to Writing Family History (L) | following GIT courses: | | | |
| | ENH 246: Introduction to Researching Family History | GIT 194: Introduction to Computer Documents | | | |
| | ENH 317: Publishing in Literary Magazines | GIT 294: Introduction to Digital Photography | | | |
| | ENH 320: Writing a Personal History (L) | GIT 210: Creative Thinking and Design Visualization | | | |
| | ENH 322: Editing Family History for Public Audiences (L) ENH 325: Writing Creative Nonfiction for Publication | GIT 237: Web Content Design | | | |
| | ENH 346: Intermediate Family History Research | GIT 233 Digital Publishing GIT 333 Printing Technology | | | |
| | ENH 360: Travel Writing | GIT 414 Web Site Design and Internet/Web Technologies | | | |
| | ENH 362: Digital Project Management for Humanities and Arts | G11 414 Web Site Design and Internet Web Teenhologies | | | |
| | ENH 364: Digital Media in the Humanities and Arts | Any of the following TWC courses: | | | |
| | ENH 370: Travel Writing (L) | TWC 401 Principles of Technical Communication | | | |
| | ENG 204: Introduction to Contemporary Literature (HU) | TWC 403 Writing for Professional Publication | | | |
| | ENG 210: Introduction to Creative Writing | TWC 411 Principles of Visual Communication | | | |
| | ENG 310: Intermediate Creative Writing | TWC 421 Principles of Writing with Technology | | | |
| ENG 411: Advanced Creative Writing | | | | | |
| | ENG 412: Creative Nonfiction | | | | |
| | ENG 212 English Prose Style | | | | |
| | ENG 215 Strategies for Academic Writing | | | | |
| | ENG 216 Persuasive Writing on Public Issues | | | | |
| | ENG 385 Career Development for English Majors ENG 472 Rhetorical Studies | | | | |
| | TWC 301 General Principles of Multimedia Writing | | | | |
| English for Secondary Teachers | Students choose from among the following: | Any courses with an ENG or ENH prefix | | | |
| English for Secondary Teachers | ENH 332: Literature on Film | This courses with an 21 to of 21 th premi | | | |
| | ENH 378: The American Southwest in Literature (L & HU) | | | | |
| | ENH 380: Medievalism in Modern Culture (L & HU) | | | | |
| | ENH 420: Methods of Teaching Secondary Writing | | | | |
| | ENH 425: 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 | | | | |



Major Map: Science, Technology and Society – Bachelor of Science (B.S.) School of Letters and Sciences | Catalog Year: 2009-2010

| | | | Completed AT | | Completed AGEC: Yes No |
|--|-------|---------------|--------------------------|------------------------------|--|
| Course Subject and Title (courses in bold/shading are critical) | Hrs. | Upper Div. | Transfer Course/Grade | Minimum Grade if Required | Additional Critical Requirement Notes |
| TERM ONE: 0 15 CREDIT HOURS | 1113. | DIV. | Course/ Grade | Required | Additional Chical Requirement Potes |
| STS 101: Introduction to Science, Technology and Society (SB) | 3 | | | Grade of C | ASU 101 is for ASU freshman students only Not |
| ASU 101: The ASU Experience | 1 | | | Grade of C | required of transfer students |
| ENG 101 and 102: First-Year Composition OR | | | | | Transfer students with 64 credit hours or more transferred must take STS 304 instead of STS |
| ENG 107 and 108: English for Foreign Students OR | | _ | | | 101. |
| ENG 105: Advanced First-Year Composition | 3 | | | Grade of C | An SAT, ACT, Accuplacer, or TOEFL score |
| Humanities, Fine Arts & Design (HU) | 3 | | | | determines placement into first-year composition courses |
| | | | | | ASU Math Placement Exam score determines |
| Mathematics (MA) | 3 | | | | placement in Mathematics course |
| TERM TWO: 16 30 CREDIT HOURS | | | | | |
| STS 110: Global Technology and Development (SB, G) | 3 | | | Grade of C | * It is highly recommended that STS students take a |
| ENG 101 and 102: First-Year Composition OR | | | | | statistics course for their (CS) general studies requirement. |
| ENG 107 and 108: English for Foreign Students OR ENG 105: Advanced First-Year Composition | 3 | | | Grade of C | Transfer students with 64 credit hours or more |
| Computer/Statistics/Quantitative applications (CS)* | 3 | | | Grade of C | transferred must take STS 317 instead of STS 110. |
| Social & Behavioral Sciences (SB) | 3 | | | | |
| Global Awareness (G) | 3 | | | | |
| TERM THREE: 31 45 CREDIT HOURS | 3 | | | | |
| STS 301: Research in Science and Technology Studies (SB) | 3 | \boxtimes | | Grade of C | First-year composition requirement completed |
| Literacy & Critical Inquiry (L) | 3 | | | Grade of C | |
| Natural Science-General (SG) OR | 3 | | | | |
| Natural Science-Quantitative (SQ) | 4 | | | | |
| Cultural Diversity in the US (C) | 3 | | | | |
| Elective | 3 | | | | |
| TERM FOUR: 46 60 CREDIT HOURS | | | | | |
| STS 302: Philosophy of Science and Technology | 3 | \boxtimes | | Grade of C | See your advisor for a list of courses that fulfill |
| Humanities, Fine Arts & Design (HU) | 3 | | | | your chosen STS Track and to discuss the required Minor for the degree. |
| Natural Science-Quantitative (SQ) | 4 | | | | required without for the degree. |
| Approved upper division STS Track course | 3 | \boxtimes | | Grade of C | |
| Approved Minor course | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | | | | |
| STS 303: History of Science and Technology | 3 | \boxtimes | | Grade of C | |
| Approved upper division STS Track course | 3 | \boxtimes | | Grade of C | |
| Approved upper division STS Track course | 3 | \boxtimes | | Grade of C | |
| Approved Minor course | 3 | | | | |
| Elective | 3 | | | | |
| TERM SIX: 76 90 CREDIT HOURS | | | | | |
| STS 305: Science and Social Theory | 3 | \boxtimes | | Grade of C | |
| Approved upper division STS Track course | 3 | \boxtimes | | Grade of C | |
| Approved Minor course | 3 | | | | |
| Historical Awareness (H) | 3 | | | | |
| Upper division elective | 3 | \boxtimes | | | |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | |
| STS 306: Social Effects of Science and Technology | 3 | \boxtimes | | Grade of C | |
| Approved upper division STS Track course | 3 | \boxtimes | | Grade of C | |
| Approved Minor course | 3 | | | | |
| Social & Behavioral Sciences (SB) | 3 | | | | |
| Upper Division Literacy & Critical Inquiry (L) | 3 | \boxtimes | | | |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | |
| STS 484: Capstone/Internship | 3 | \boxtimes | | Grade of C | |
| Approved STS Track course | 3 | ⊠ | | Grade of C |] |
| Approved Minor course | 3 | | | | |
| Approved Minor course | 3 | | | |] |
| Upper division Humanities, Fine Arts & Design (HU) OR | | | | |] |
| Upper division Social & Behavioral Sciences (SB) | 3 | | | | |



Major Map: Science, Technology and Society -

Bachelor of Science (B.S.)

School of Letters and Sciences | Catalog Year: 2009-2010

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:
 - o Literacy and Critical Inquiry (L)
 - Mathematical Studies (MA)
 - o Computer/Statistics/Quantitative applications (CS)
 - Humanities, Fine Arts, and Design (HU)
 - Social and Behavioral Sciences (SB)
 - o Natural Science-Quantitative (SQ)
 - o Natural Science-General (SG)
- General Studies Awareness Requirements
 - o 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.
 - o 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 Sciences | Catalog Year: 2009-2010

| | | | Completed ATI | P: Yes No | Completed AGEC: Yes No |
|--|----------|-------------------|--------------------------|--|--|
| 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 | | Division | Course/Grade | Required | |
| ASU 101: The ASU Experience | 1 | | | | ASU 101 is for ASU freshman students only. Not |
| ENG 101 and 102: First-Year Composition OR | <u> </u> | | | | required of transfer students |
| ENG 107 and 108: English for Foreign Students OR | | | | | An SAT, ACT, Accuplacer, or TOEFL score |
| ENG 105: Advanced First-Year Composition | 3 | | | Grade of C | determines placement into first-year composition courses |
| MA (MAT 142 or any MA equivalent) | 3 | | | Grade of C | ASU Math Placement Exam score determines |
| Humanities, Fine Arts & Design (HU) | 3 | | | | placement in Mathematics course |
| Natural Science- Quantitative (SQ) | 4 | | | | |
| TERM TWO: 16 30 CREDIT HOURS | | | | | |
| ENG 101 or 102: First-Year Composition | | | | | |
| ENG 105: Advanced First-Year Composition ENG 107 or 108: English for Foreign Students | 3 | | | Grade of C | |
| Computer/Statistics/Quantitative applications (CS) | 3 | | | Grade of C | |
| | 4 | | | Grade of C | |
| Natural Science –General (SG) or Quantitative (SQ) | 3 | | | | |
| Social & Behavioral Science (SB) Elective | 3 | | | | |
| | 3 | Ш | | | |
| TERM THREE: 31 45 CREDIT HOURS | 3 | | | | First-year composition requirement completed |
| Humanities, Fine Arts & Design (HU) | 3 | | | | Related area: In consultation with an advisor; |
| Cultural Diversity in the US (C), if completed take elective | | | | | suggested courses use the following prefixes: GIT, |
| Social & Behavioral Science (SB) | 3 | | | G 1 6G | ENG, COM, or any other course related to the |
| Related Area Course | 3 | | | Grade of C | student's career path. |
| Elective | 3 | | | | |
| TERM FOUR: 46 60 CREDIT HOURS | 2 | | ĺ | 6 1 66 | |
| TWC 301 Introduction to Multimedia Writing (L) | 3 | | | Grade of C | |
| Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB) | 3 | ⊠ | | | |
| Global Awareness (G), if completed take elective | 3 | | | | |
| Elective | 3 | | | | |
| | . | | | | |
| Historical Awareness (H), if completed take elective | 3 | | | | |
| TERM FIVE: 61 75 CREDIT HOURS | | | I | | |
| TWC 401 Principles of Technical Communication (L) | 3 | | | Grade of C | |
| Elective | 3 | | | | |
| Elective | 3 | | | | |
| Elective | 3 | | | | |
| Upper Division Elective | 3 | \boxtimes | | | |
| TERM SIX: 76 90 CREDIT HOURS | | | ı | | |
| TWC 411, 421, or 431 | 3 | ⊠ | | Grade of C | Related area: In consultation with an advisor; suggested courses use the following prefixes: GIT, |
| TWC 44X, Genre Course | 3 | ⊠ | | Grade of C | ENG, COM, or any other course related to the |
| Upper division Related Area Course | 3 | | | Grade of C | student's career path. |
| Elective | 3 | | | | TWC Elective: Any TWC 300/400 course will fulfill this area, however an internship (TWC484) |
| TWC Elective | 3 | \boxtimes | | Grade of C | or supervised work experience is strongly |
| The Bleeding | | | | Grade of C | recommended. |
| TERM SEVEN: 91 105 CREDIT HOURS | | | | | |
| TWC 411, 421, or 431 | 3 | ⊠ | | Grade of C | Related area: In consultation with an advisor; |
| TWC 44X Genre Course | 3 | \boxtimes | | Grade of C | suggested courses use the following prefixes: GIT, ENG, COM, or any other course related to the |
| Upper division Related Area Course | 3 | ⊠ | | Grade of C | student's career path. |
| TWC Elective | 3 | ⊠ | | Grade of C | TWC Elective: Any TWC 300/400 course will |
| W. Bill W. | - | - | | | fulfill this area, however an internship (TWC484) |
| Upper Division Elective | 3 | | | | or supervised work experience is strongly recommended. |
| TERM EIGHT: 106 120 CREDIT HOURS | | | | | |
| TWC 411, 421, or 431 | 3 | \boxtimes | | Grade of C | Related area: In consultation with an advisor; |
| TWC 490 Capstone | 3 | ⊠ | | Grade of C | suggested courses use the following prefixes: GIT, |
| Upper division Related Area Course | 3 | ⊠ | | Grade of C | ENG, COM, or any other course related to the student's career path. |
| Elective | 3 | | | 2.000 01 0 | TWC Elective: Any TWC 300/400 course will |
| Licente | , | | | | fulfill this area, however an internship (TWC484) |
| TWC Elective | 3 | ⊠ | | Grade of C | or supervised work experience is strongly |
| | | | <u> </u> | <u> </u> | recommended. |



Major Map: Technical Communication -Bachelor of Science (B.S.)

School of Letters Sciences | Catalog Year: 2009-2010

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

 - Natural Science-Quantitative (SQ)
 - Natural Science-General (SG)
- General Studies Awareness Requirements
 - Cultural Diversity in the US (C)
 - Global Awareness (G) 0
 - Historical Awareness (H)
- First-Year Composition