Department of Aerospace Engineering & Mechanics

BSAE Program – 126 credit hours (effective Fall 2014)

**FRESHMAN YEAR**

**Fall**
16 credit hours

- Placement
- MATH 125 Calculus I
  - MATH 4
- AEM 201
  - AEM 249
  - MATH 126
  - PH 105

**Spring**
15 credit hours

- Placement
- MATH 125
  - MATH 4
- PH 105
  - Physics I
  - NS 4
- AEM 201
  - AEM 249
  - MATH 227
  - ME 215

**Fall**
16 credit hours

- Placement
- CH 101 Chemistry
  - NS 4
- MATH 125
- AEM 249
- MATH 126
  - Calculus II
  - MATH 4
- PH 106
  - Physics II
  - NS 4
- AEM 250
- AEM 264
- PH 105
  - AEM 201

**SOPHOMORE YEAR**

**Fall**
16 credit hours

- Placement
- ENGR 103 Engineering Foundations
  - ENGR 3
- AEM 201
- EC 110 Microeconomics
  - SB 3
- PH 105
  - MATH 125
  - ENGR 103
- AEM 250
- AEM 311

**Spring**
16 credit hours

- Placement
- AEM 121 Intro to Aerospace
  - ES 2
- ENGR 103
  - ENGR 3
- EN 101
  - English Comp II
  - FC 3
- EN 102
  - English Comp II
  - FC 3
- ENGR 161
  - Small-Scale Engr Graphics
  - ENGR 1

**Fall**
16 credit hours

- Placement
- ENGR 101 English Comp I
  - FC 3
- EN 102
  - English Comp II
  - FC 3
- ENGR 161
  - Small-Scale Engr Graphics
  - ENGR 1

- Placement or EN 099
- ENGR 161
  - Small-Scale Engr Graphics
  - ENGR 1

**Spring**
16 credit hours

- Placement
- ENGR 103
  - ENGR 3
- EN 101
  - English Comp I
  - FC 3
- ENGR 103
  - ENGR 3
- ENGR 161
  - Small-Scale Engr Graphics
  - ENGR 1

- Placement or EN 099
- ENGR 161
  - Small-Scale Engr Graphics
  - ENGR 1

**Legend**

- C: Computer Requirement
- ES: Engineering Science
- FC: Freshman Composition
- HI/SB: History/Social & Behavioral Sciences
- HU/L/FA: Humanities/Literature/Fine Arts
- MATH: Mathematics
- NS: Natural Science Requirement
- W: Writing Requirement

**Key**

- Pre-requisites
- Co-requisites
- Course #
- Title
- Area & Credits
- Downward Dependencies

This is an unofficial flow chart prepared to assist students in planning their coursework. The UA Undergraduate Catalog contains the official listing of academic information.

Aerospace Engineering & Mechanics and other departments change their pre-requisites & co-requisites from time to time. Students should consult the UA Undergraduate Catalog and seek advising prior to registering for courses.

Dr. John Baker, Department Head
Aerospace Engineering & Mechanics

version: 01.12.2015
Department of Aerospace Engineering & Mechanics

BSAE Program – 126 credit hours (effective Fall 2014)

JUNIOR YEAR

**Fall**
16 credit hours

- AEM 264
  - AEM 313
  - AEM 368
  - AEM 311
  - AEM 349
  - ES 3
  - [Fall Only]

- ME 215
  - AEM 311
  - AEM 368
  - MATH 238
  - variable

- HU/L/FA Elective
  - HU/L/FA 3

**Spring**
16 credit hours

- AEM 313
  - AEM 368
  - AEM 402
  - AEM 394
  - AEM 468
  - ES 4
  - [Spring Only]

- AEM 413
  - AEM 402
  - AEM 408
  - AEM 360
  - variable

- HI/SB Elective
  - HI/SB 3

**SENIOR YEAR**

**Fall**
15 credit hours

- AEM 341
  - AEM 413
  - AEM 408
  - AEM 368
  - Aircraft Structures
  - Engineering Analysis
  - Astronautics
  - flight dynamics & control
  - flight dynamics & control II
  - variable

- AEM 495
  - AEM 402
  - AEM 495
  - variable

- HI/SB Elective
  - HI/SB 3

**Spring**
16 credit hours

- AEM 349
  - AEM 451
  - AEM 402
  - AEM 408
  - Aerospace Design I
  - Aerospace Design II
  - variable

- AEM Comput. Elective
  - (see below)
  - ES/C 3

**Key**

- Pre-requisites
- Co-requisites

**Course # Title Area & Credits**

**Engineering Elective (choose one):**
- ECE 320 Fundamentals of Electrical Engineering
- ME 309 Heat Transfer
- MTE 271 Engineering Materials

**AEM Computational Elective (choose one):**
- AEM 420 Computational Fluid Dynamics
- AEM 461 Comput. Meth. Aerospace Structures

Consult [http://courseleaf.ua.edu/engineering](http://courseleaf.ua.edu/engineering) for information on pre- and co-requisites.

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Students in the BSAE program are required to take the Fundamentals of Engineering (FE) examination as a requirement for graduation.