BS – Industrial Engineering with Applied Math minor  
(SC-BS/IE/APMA)  
2017 Catalog year: College of Science and Engineering

This is not an official degree audit and it is subject to change. This chart is intended to be used by students who start at Texas State. Please contact the College of Science and Engineering Undergraduate Advising Center for advising.

Note: In addition to major courses, students must also complete all core and minor requirements if applicable and any other requirements for graduation.

**Student and advisor must work together to determine if IE 3310 & IE 4390 or if IE 4392 & IE 4393 should be taken. IE 3310 should not be taken until the semester prior to IE 4390.**

### Freshman
- **Fall semester**
  - MATH 2471 (F,S,Su) Calculus I
  - ENGR 1313 (F,S,Su) Engineering Design Graphics
- **Spring semester**
  - MATH 2472 (F,S,Su) Calculus II
  - CHEM 1341 (F,S,Su) General Chemistry I

### Sophomore
- **Fall semester**
  - MATH 3377 (F,S,Su) Linear Algebra
  - PHYS 1430 (F) Mechanics
  - CHEM 1141 (F,S,Su) General Chemistry I Lab
- **Spring semester**
  - MATH 3323 (F,S,Su) Differential Equations
  - PHYS 2425 (F,S) Electricity & Magnetism
  - ENGR 2300 (F,S) Materials Engineering

### Junior
- **Fall semester**
  - ENGR 3375 (F,S,Su) Engineering Mechanics
  - ENGR 3311 (F,S) Mechanics of Materials
  - MFGE 2332 (F,S) Material Selection
- **Spring semester**
  - IE 3320 (F,S) Engineering Statistics
  - IE 3340 (F,S) Operations Research
  - IE 3310 (F,S) Project Management

### Senior
- **Fall semester**
  - IE 3360 (F,S) Methods Engineering & Ergonomics
  - IE 3330 (F,S) Quality Engineering
  - MATH 3373 (F,S,Su) Calculus III
- **Spring semester**
  - IE 4310 (F) Statistical Design of Experiments
  - IE 4370 (F) Probabilistic Operations Research
  - One from:
    - MATH 2358
    - PHYS 2435
    - PHYS 3315
    - IE 4396 (S,Su) Manufacturing Systems Design
  - IE 4355 (F,S) Facilities Planning

Choose 8 hours from:
- IE 4330 – Reliability Engineering
- IE 4340 (F) – Optimization Technology
- IE 4360 (F) – Human Factors Design
- MFGE 4367 (S) – Polymer Properties & Processing
- MFGE 4392 (F,S) – Microelectronics
- IE 4399A (S) – Six Sigma Methods
- IE 4399B – Human Computer Interactions
- IE 4399C – Engineering Statistics II
- IE 4399D – Optimization Technology
- IE 4399E – Intro to Systems Engineering
- IE 4399F – Intro to Data-Intensive Analysis & Simulation

### CORE REQUIREMENTS
- **Fall semester**
  - IE 3310, MFGE 4396
- **Spring semester**
  - IE 4360

### Key
- Arrows indicate prerequisites.
- Arrows with dotted lines indicate co-requisites.
- Arrows with dash lines are recommended prerequisites.
- Courses taught in specific semesters are indicated with the following codes:
  - F: Fall
  - S: Summer Session I or II
  - S-Spring
- Required WI courses: IE 3310, MFGE 4396
- Additional WI courses: IE 4360

Core courses must be completed:
- __US 1100__
- __COMM 1310__
- __PHIL 1305 or 1320__
- __ENG 1310__
- __ENG 1320__
- __ENG 2310-2360__
- __HIST 1310__
- __HIST 1320__
- __ART/DAN/MU/TH 2313__
- __POSI 2310__
- __POSI 2320__
- __ECO 2301 or ECO 2314__

US 1100 & ENG 1310 recommended for first semester. HIST 1310/1320 not recommended for first semester.
Potential Routes to Fall 2018/Spring 2019 graduation

Your path should be chosen in consultation with an academic advisor.