Bachelor of Science in Industrial Engineering (BSIE)

Suggested Plan of Study AY 2022-2023

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Fall | Winter | Spring | Key Course to have Completed |
|  | Math 220-1 | Math 220-2 | Math 228-1 | Math 220-1,2; 228-1 |
| Freshman | EA 1 | EA 2 | EA 3 | EA 1, 2, 3 |
| Basic Science w/ Lab | COMP\_SCI 111 | COMP\_SCI 150 | COMP\_SCI 111, 150 |
|  | DTC 1 | Theme | DTC 2 | DTC 1, 2 |
|  |  |  |  |  |
|  |  |  |  |  |
|  | Math 228-2 | COMP\_SCI 217 | CIV\_ENV 205 | Math 228-2 |
| Sophomore | Unrestricted Elective | ESM 245 | Theme | ESM 245 |
| IEMS 202 | IEMS 303 | IEMS 304 | IEMS 202, 303, 304, 313 |
|  | Basic Science | IEMS 313 | IE/OR Elective | COMP\_SCI 217 |
|  |  |  |  | CIV\_ENV 205 |
|  |  |  |  |  |
|  | IE/OR Elective | MS Elective | General Tech Elective | IEMS 315, 317, 394 |
| Junior | Unrestricted Elective | Theme | Unrestricted Elective |  |
| IEMS 315 | IEMS 317 | Theme |  |
|  | Basic Science | General Tech Elective | IEMS 394 |  |
|  |  |  |  |  |
|  | MS Elective | General Tech Elective | P&L Elective |  |
| Senior | General Tech Elective | Unrestricted Elective | Unrestricted Elective |  |
| Theme | Theme | Theme |  |
|  | Basic Science | IE/OR Elective | Communications Course |  |
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|  |  |  |  |  |

* The plan above is a suggested plan only. Fulfillment of IE degree options has a high degree of flexibility, as long as prerequisite requirements are met, and as long as key requirements are completed on schedule as indicated above.
* All students are required to meet quarterly with a department advisor. Students should take advantage of these advisor meetings to plan courses to make appropriate and satisfactory degree progress. If you are a McCormick co-op student, you are especially encouraged to meet with your advisor to plan courses to accommodate your co-op schedule.
* A note about prerequisites:
  + Prerequisite chains include IEMS 202🡪303🡪304; and IEMS 202🡪315🡪317.
  + Math 228-2 is a co-req for IEMS 202, and IEMS 303 is a co-req for IEMS 315. “Co-req” means you must have either completed the course, or be concurrently enrolled.
  + IEMS 313 requires prior completion of CS 111; IEMS 303 requires prior completion of CS 150.
  + IEMS 394 requires prior completion of IEMS 202, 303, 304, 313, 315, 317, without exception.
* Although this is subject to change from year to year, in general:
  + IEMS 202, 317 are offered Fall/Winter
  + IEMS 315 and Civ\_Env 205 are offered Fall/Spring
  + IEMS 303, 304, 313 are offered every quarter
  + CS 111, 150, and 217 are offered every quarter
  + You should plan to take IEMS 394 in Junior Spring or Senior Fall. Delay until Senior Spring requires permission from the Dir. of Undergrad Studies. The course is not offered in winter.

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Tips for Students with Minors/Dual Degrees/Double Majors AY 2022-2023

* Student who pursue multiple degrees or certificates often have more than 48 required credits. Previously earned credits (e.g., AP/IB exams) and creative use of double counting can help these students graduate in four years or less.
* For dual degree or double major students, IN GENERAL there are no double-counting restrictions.
  + This is not true for all programs! Be sure to check with your advisor(s).
* An example plan for an IEMS major with a McCormick Computer Science minor is shown below.
  + The CS minor can be completed in the 48 units required for the BSIE.
  + Courses in red are required by the CS minor AND count towards BSIE requirements.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Fall | Winter | Spring | Key Course to have Completed |
|  | Math 220-1 | Math 220-2 | Math 228-1 | Math 220-1,2; 228-1 |
| Freshman | EA 1 | EA 2 | EA 3 | EA 1, 2, 3 |
| Basic Science w/ Lab | COMP\_SCI 111 | COMP\_SCI 150 | COMP\_SCI 111, 150 |
|  | DTC 1 | Theme | DTC 2 | DTC 1, 2 |
|  |  |  |  |  |
|  |  |  |  |  |
|  | Math 228-2 | Theme | CIV\_ENV 205 | Math 228-2; ESM 245 |
| Sophomore | COMP\_SCI 211 (UE) | ESM 245 | COMP\_SCI 213 (UE) | COMP\_SCI 211, 213 |
| IEMS 202 | IEMS 303 | IEMS 304 | IEMS 202, 303, 304, 313 |
|  | Basic Science | IEMS 313 | IE/OR Elective | CIV\_ENV 205 |
|  |  |  |  |  |
|  |  |  |  |  |
|  | IE/OR Elective | MS Elective | General Tech Elective | IEMS 315, 317, 394 |
| Junior | COMP\_SCI 214 (UE) | COMP\_SCI 212 (UE) | COMP\_SCI 339 (217)\* | COMP\_SCI 212, 214, 339 |
| IEMS 315 | IEMS 317 | IEMS 394 |  |
|  | Basic Science | Theme | Theme |  |
|  |  |  |  |  |
|  | MS Elective | Unrestricted Elective | P&L Elective | 2 CS Breadth courses |
| Senior | CS Breadth (GTE) | CS Breadth (GTE) | General Tech Elective | (CS 3XX) |
| Theme | Theme | Theme |  |
|  | Basic Science | IE/OR Elective | Communications Course |  |
|  |  |  |  |  |

\* *COMP\_SCI 339 can replace COMP\_SCI 217 by petition. If COMP\_SCI 339 cannot be taken or the petition is denied, it can be replaced with a different Breadth Requirement and count as a General Tech Elective instead of the IEMS computing requirement.*