ISE Requirements and Prerequisite Map

### Misc Required Courses
- Engl 1
- Engl 2
- Eco 1
- Acct 108 Sp
- ENGR 5
- ENGR 10
- ISE 112 Fa
- CSE 3 or 7
- Physics 11/12
- Physics 21/22
- Math 21
- Math 22
- Math 23
- Math 205
- Chem 30

### Choose One Path (Required)
- Mat 33
- ISE 215/216 Sp
- CSE 4 or 7
- ISE 172 Sp
- ISE 364 Fa
- ISE 260 Fa
- ISE 224 Fa/Sp
- ISE 240 Fa/Sp
- ISE 324 SP
- ISE 230 Fa/Sp
- ISE 131/132 Fa
- ISE 226 Sp
- ISE 251 Fa
- ISE 254 Fa/Sp
- ISE 121 Fa/Sp

### Engle Electives

#### Technical Electives
Choose at least 4, at least 2 must be ISE 3xx (Highlighted)
Examples:
Math 230, CSE 2xx except 241/252, CSE 3xx, BIS 3xx, Math 251

### Minimum 130 Credits are Required to graduate

**ISE 1xx and 2xx are Required (except 260 is Elective).**
**ISE 3XX are Electives (except 308 – Required).**

### Dashed lines are co-requisites,
Light Blue arrows indicate other Prerequisites

**ISE 100 – Industrial Employment** – An internship experience that must be completed for zero credits

***(xxx) designates old number for the course (if any)**

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**Engineering Elective Requirements:**
At least 3 courses of 3 or more credits associated with a departmental program from BIOE, CHE, CEE, CSE, ECE, MAT, ME, or MECH may be selected, with exceptions listed at https://ise.lehigh.edu/content/courses
**HSS Requirements:**

A minimum of four multi-credit courses and a minimum of 13 credits in courses designated as HU (humanities) or SS (social science), with the following restrictions:

1. **Depth:** At least eight credits must be in a common discipline and from the same department or program. At least three of these credits must be at the 100-level or above, or at the intermediate level or above for a single modern foreign language.
2. **Breadth:** At least three credits in a discipline different from, and not cross-listed with, the discipline employed to satisfy the depth requirement.
3. At least three credits must be designated as HU.
4. None of the courses used for HSS can be taken Pass/Fail.
5. None of the course can be one-credit courses.

**Note on Engineering Electives:**

If ISE 172 is taken, CSE 4 or CSE 7 is Required and no longer count as an Eng’g Elective. Similarly, if ISE 215/216 is taken, Mat 33 is Required and no longer count as an Eng’g Elective. Both courses are otherwise acceptable Engineering electives.

**List of courses excluded from consideration as an Engineering Elective:**

- CHE 171 (CEE 171, EMC 171, ES 171) Fundamentals of Environmental Technology 4 Credits
- CEE 010 (ARCH 010) Engineering/Architectural Graphics and Design 3 Credits
- CEE 202 CEE Planning and Engineering Economics 3 Credits
- CSE 012 Survey of Computer Science 0-3 Credits
- CSE 042 (EMC 042) Game Design 3 Credits
- CSE 252 (EMC 252, GCP 252, STS 252) Computers, the Internet, and Society 3 Credits
- CSE 241 Database Systems and Applications 3 Credits
- CSE 379 Senior Project 3 credits
- MAT 020 Computational Methods in Materials Science 3 Credits
- MAT 221 (STS 221) Materials in the Development of Man 3 Credits
- ME 010 Graphics for Engineering Design 3 Credits
- ME 240 Manufacturing 3 Credits

**A student may take one of the courses in the following course sets for use as an Engineering Elective:**

- CEE 003 Engineering Statics or MECH 2 Elementary Engineering Mechanics or MECH 3 Fundamentals of Engineering Mechanics 3 Credits
- CEE 059 Strength of Materials or MECH 12 Strength of Materials 3 Credits