The Department of Industrial and Systems Engineering understands our students may work as Industrial Engineers in other engineering industries, and to help prepare them for these careers, the ISE Areas of Interest was formulated. The courses selected in Biomedical, Civil and Environmental, Electrical and Mechanical Engineering are those that will give students the most fundamental knowledge in these areas. Students will take these courses to fulfill their 11 credits of engineering breadth and directed elective requirements for the ISE program.

**Biomedical Engineering**
- BME 5010 - Engineering Physiology
- BME 5000 - level electives
- BME 4X10 - Introduction to (Biomechanics, Biomaterials, Biomedical Instrumentation)*
- BME 3470 - Biomedical Signals and Systems*
- 5000-level courses*
*Courses not yet available

**Civil Engineering**
*Transportation Track*
- CE 4600 - Intro to Transportation (pre-req. BE 2100)
- CE 4640 - Transportation Design (pre-req. CE 4600)
- CE 5610 - Highway Design (pre-req. CE 4640) or
- CE 6660 - Pavement Management (pre-req. CE 4640)
*Environmental Track*
- CE 3250 - Fluid Mechanics (pre-req. MAT 2030, Prof level standing)
- CE 4210 - Intro to Environmental Eng. (pre-req.)

**Electrical and Computer Engineering**
- ECE 2610 – Digital Logic (pre-req. BE 1200)
- ECE 3300 – Circuits 1 (pre-req. PHY 2185, MAT 2150 pre/co)
- ECE 3570 – Electronics 1 (pre-req. ECE 3300 pre/co)

**Mechanical Engineering**
- ME 2050 - Intro to CAD (Unigraphics) (pre req. BE 1200)
- ME 2200 - Thermodynamics (pre-req. MAT 2020, PHY 2175, BE 1200, BE 1330/1310 co-req)
- ME 2410 - Statics (pre req. MAT 2020, PHY 2175)
- ME 2420 - Mechanics and Materials (pre-req. ME 2410)

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