

College of Engineering and Computer Science

Bachelor of Science in Industrial and Systems Engineering

| Old ISE | | New ISE | |
|------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| I. General Education Requirements* | 66 | I. General Education Requirements* | 66 |
| Required Substitutions | | Required Substitutions | |
| Area One | 18 | Area One | 18 |
| MTH 229, 230 | | MTH 229, 230 | |
| Area Two | 8 | Area Two | 8 |
| Area Three | 8 | Area Three | 8 |
| Area Four | 12 | Area Four | 12 |
| Area Five | 16 | Area Five | 16 |
| PHY 240/200, 242/202, 244/204 | | PHY 240/200, 242/202, 244/204 | |
| Area Six | 4 | Area Six | 4 |
| College Component: EGR 190** | | College Component: EGR 190** | |
| *Courses taken to satisfy GE requirements may not be counted toward the major. | | *Courses taken to satisfy GE requirements may not be counted toward the major. | |
| **For incoming freshmen only. Other students should consult a department advisor. | | **For incoming freshmen only. Students with more than 45 credit hours are required to take ISE 210. | |
| II. Engineering Requirements | 90 | II. Engineering Requirements | 94 |
| Core Engineering Requirements | | Core Engineering Requirements | |
| BME 419, 440 | 7 | BME 428 | 4 |
| CEG 220 | 4 | EGR 101, 482 | 8 |
| EE 301/302, 321 | 9 | EE 301/302, 321 | 9 |
| ME 212, 213, 220, 315 | 15 | ME 212, 213, 315 | 12 |
| Major Courses | | Major Courses | |
| ISE 195, 301, 302, 306, 307, 451, 465, 470, 471 | 34 | ISE 195, 301, 302, 406, 407, 451, 465, 470, 471 | 36 |
| ISE 472, 473, 474, 481, 482, 483 | 21 | ISE 472, 473, 474, 481, 482, 483, 484 | 25 |
| III. Related Course Requirements | 27 | III. Related Course Requirements | 27 |
| CHM 121 | 5 | CHM 121 | 5 |
| MS 307 | 4 | CEG 220 | 4 |
| MTH 231, 232, 233, 253 | 18 | MTH 231, 232, 233*, 253* | 18 |
| IV. Technical Communications Requirement | 3 | IV. Technical Communications Requirement | 3 |
| EGR 335 | 3 | EGR 335 | 3 |
| V. Elective/Concentration Requirement | 11-12 | V. Elective/Concentration Requirement | 8 |
| ISE Honors Thesis Track | 11-12 | ISE Honors Undergraduate Thesis Track: | 8 |
| ISE 499-9, ISE 499-10, and one technical elective | | ISE 499-9 and ISE 499-10 | |
| Human Computer Interaction Track: | 12 | Human Integrated Systems Track: | 8 |
| PSY 110, ISE 431, ISE 480 | | PSY 110 and ISE 431 | |
| *Information & Computer Systems Track: | 11-12 | Operations Management Track: | 8 |
| Select three from the following: | | MS 307 and MS 320 | |
| CS 241, 242, 400, 405, and MTH 257 | | Minor in Operations Management available. See COBA | |
| **Operations Management Track: | 12 | Ergonomic Systems Track: | 8 |
| MS 320, and 2 technical electives | | BME 420 and ISE 480 | |
| ***Materials Science & Engineering Track: | 11-12 | Computer Science Track: | 8 |
| ME 370, ME 371, and ME 472 | | CS 240 and CS 241 | |
| Total (minimum) | 197 | Minor in CS for Engineers & Scientist available. See CS Dept for details. | |
| *Minor in Computer Science for Engineers and Scientist available. See CS Dept for additional requirements and details. | | Computer Systems Track: | 8 |
| **Minor in Operations Management available. See College of Business for requirements and details | | CEG 305 and CEG 330 | |
| ***Minor in Materials Science and Engineering available. See ME Dept for additional requirements and details. | | Materials Science and Engineering Track: | 8 |
| | | Select two: ME 220, ME 370, ME 371 and ME 472 | |
| | | Minor in Materials Science and Egr available. See ME Dept for details. | |
| | | Total (minimum) | 198* |
| | | *MTH 233 and MTH 253 will be replaced by a 4-5 credit hour integrated course yielding a required minimum total of 194-195 program credit hours. | |