

Student Information

Name: _____ OSU ID: _____ OSU Admit Term: _____

Phone: _____ Email (*name.number@osu.edu*): _____

Suggested Curriculum*

This should be used as a **guide** only. Semester offerings are subject to change.

Year	Autumn	Spring
1	___ PHYSICS 1250 (<i>Intro Physics 1</i>) 5 hr ___ MATH 1151 (<i>Calculus 1</i>) 5 hr ___ ENGR 1181 (<i>Fundamentals of ENGR 1</i>) 2 hr ___ ENGR 1100 (<i>Engineering Survey</i>) 1 hr ___ General Education (<i>1st Social Science</i>)..... 3 hr	___ PHYSICS 1251 (<i>Intro Physics 2</i>)..... 5 hr ___ MATH 1172 (<i>Engineering Math A</i>)..... 5 hr ___ ENGR 1182 (<i>Fundamentals of ENGR 2</i>)..... 2 hr ___ General Education (<i>Writing I, English 1110.xx</i>)... 3 hr ___ CSE 1223 (<i>Programming Java</i>)..... 3 hr
2	___ MATH 2568 (<i>Linear Algebra</i>)..... 3 hr ___ STAT 3470 (<i>Probability & Statistics</i>)..... 3 hr ___ CSE 2112 (<i>Modeling w/ Sprdst & DB for Engr.</i>).... 3 hr ___ ISE 2040 (<i>Engineering Economics</i>)..... 2 hr ___ MECHENG 2040 (<i>Statics & Mechanics</i>)..... 4 hr	___ MATH 2415 (<i>Ordinary & Partial Diff Eq</i>)..... 3 hr ___ MECHENG 2850 (<i>Numerical Methods</i>)..... 3 hr ___ ISE 2400 (<i>Design of Work</i>)..... 2 hr ___ General Education (<i>2nd Social Science</i>)..... 3 hr ___ Additional Science ¹ 4 hr
3	___ ISE 2500 (<i>Intro to Manf. Engineering</i>)..... 3 hr ___ ISE 3200 (<i>Linear & Integer Programming</i>)..... 3 hr ___ ISE 3600 (<i>Workplace Ergonomics</i>)..... 3 hr ___ ISE 3700 (<i>Cognitive Systems Eng</i>)..... 3 hr ___ General Education (<i>Writing II</i>)..... 3 hr	___ ISE 3210 (<i>Non-linear & Dynamic Optimization</i>)... 3 hr ___ ISE 3800 (<i>Project Management</i>)..... 3 hr ___ ISE 4120 (<i>Quality & Reliability Engineering</i>)..... 3 hr ___ ISE 3400 (<i>Prod Plan & Fac Design</i>)..... 4 hr ___ General Education (<i>Literature</i>)..... 3 hr
4	___ ISE 4100 (<i>Stoch Modeling & Simulation</i>)..... 4 hr ___ Technical Elective ² 3 hr ___ Technical Elective..... 3 hr ___ Technical Elective..... 3 hr ___ General Education (<i>Visual & Performing Arts</i>)... 3 hr	___ ISE 4900 (<i>Capstone Design</i>)..... 4 hr ___ Technical Elective..... 3 hr ___ Technical Elective..... 3 hr ___ General Education (<i>Ethics + Cultures & Ideas</i>)... 3 hr ___ General Education (<i>History</i>)..... 3 hr

Total Hours to complete the degree program = 127

Program Options

¹ Choose either Chemistry 1210 (5), Chemistry 1250 (4), Biology 1113 (4), Biology 1114 (4), or Biology 2100 (4)

All students must satisfy a 32 credit hour minimum for math and basic sciences. Students with high math or science placements and transfer students without credit for lower courses must meet this criteria. Students should consult with an ISE academic advisor to ensure this minimum is met. Such students may be required to take additional approved coursework to meet graduation requirements.

Acceptance Criteria

Acceptance into this program is based on the eligibility point hour ratio (EPHR) of Math 1151, 1172; Engineering 1181; English 1110; Physics 1250, 1251; and CSE 1223. The following additional classes must be completed before applying to the major, but are not included in the EPHR calculation: English 1110.XX; and ENGR 1182.01. Additionally, Math 2568 and Statistics 3470 must be completed or in progress during the term the student applies. Acceptance into ISE requires a C or better in Math 2568 and, for competitiveness, students should earn a C or better in Statistics 3470. The application review includes assessment of grades in the courses listed above, along with a complete review of each student’s full academic record (including transfer grades). Applications are accepted during autumn and spring terms.

Technical and Other Electives

² The ISE program includes 15 semester hours of technical electives. Three technical elective courses must be taken as a set, from a list of Technical Elective packages approved by the ISE Undergraduate Studies Committee. These packages are designed to provide depth within an area of ISE that is of particular interest to each student and include the following options: Supply Chain & Logistics Management, Data Analytics & Optimization, Management Systems & Operations Research, Human Systems Integration & Design, and Manufacturing. In total, a maximum of two technical elective courses may come from programs other than Industrial & Systems Engineering. Please contact the Undergraduate ISE Advisor for a full list of the approved electives from programs other than ISE.

General Education Requirement

Writing and Communication

English 1110.xx 3 hr

Second Writing Course: recommend ENR 2367, COMM 2367, NURSING 2367 or COMPSTD 2367.04 3 hr

Social Science

Only one course per Social Science group may count.

_____ 3 hr

_____ 3 hr

Literature

_____ 3 hr

Visual and Performing Arts

_____ 3 hr

Historical Study

_____ 3 hr

Second Historical Study or Cultures and Ideas

_____ 3 hr

Social Diversity in the U.S. or Global Diversity

Some courses may overlap with another GE category, See course list.

_____ 0 / 3 hr

Ethics

Some courses may overlap with another GE category, See course list.

_____ 0 / 3 hr

Foreign Language

Pre-approved substitutions

- A. Credit (including EM) for a foreign language sequence through 1103, or credit for a foreign language course with a prerequisite of 1103, can be substituted for one Gen Ed course requirement as a Cultures & Ideas.
- B. Completion of a foreign language minor can be substituted for two Gen Ed courses: one course as a Social Science, (Individuals & Groups or Organizations & Politics subgroups only) and one course as either a Literature or a Cultures & Ideas.

Parameters: Students must choose either Substitution A OR Substitution B. Both substitutions cannot be applied simultaneously.

University Capstone (Cross-Disciplinary Seminar)

Pre-approved substitutions

Completion of a Social Science 3597 or 4597 can be substituted for a Social Science general education course in any group. Completion of an Arts & Humanities 3597 or 4597 can be substituted for a Visual/Performing Arts general education course.

See the list of approved general education courses for additional details: www.advising.engineering.osu.edu.