

Student Information

Name: _____ OSU Email: _____

Suggested Curriculum

This should be used as a guide only. Offerings are subject to change. **BOLD courses offered only in indicated semesters.** Beginning at a Math level lower than 1151 will extend your time to degree. Summer classes are an option you can explore. Please connect with your advisor for academic and financial support resources available to students.

Year	Autumn	Spring
1	___ ENGR 1100 (<i>Engineering Survey</i>) 1 hr ___ ENGR 1181 (<i>Fundamentals of Engr 1</i>) 2 hr ___ MATH 1151 (<i>Calculus 1</i>) 5 hr ___ PHYSICS 1250 (<i>Mechanics, Thermal, Waves</i>)..... 5 hr ___ General Education 3 hr	___ ENGR 1182 (<i>Fundamentals of Engr 2</i>) 2 hr ___ MATH 1172 (<i>Engineering Math A</i>)..... 5 hr ___ First Chemistry*(See options below) 4-5 hr ___ General Education 3 hr
2	___ MATSCEN 2010 (<i>Intro to Engr Materials</i>)..... 3 hr ___ MATH 2177 (<i>Ord & Part Diff Eq</i>)..... 4 hr ___ PHYSICS 1251 (<i>E&M, Optics, Modern Phys</i>)..... 5 hr ___ Second Chemistry*(See options below)..... 4-5 hr	___ MATSCEN 2241 (<i>Struc & Characterization</i>)..... 3 hr ___ MATSCEN 2331 (<i>Struc & Char Lab</i>)..... 2 hr ___ MATSCEN 2251 (<i>Materials & Thermo</i>)..... 3 hr ___ MATSCEN 2321 (<i>Modeling & Sim 1</i>)..... 3 hr ___ General Education 3 hr ___ General Education 3 hr
3	___ MECHENG 2040 (<i>Statics & Mechanics</i>)..... 4 hr ___ MATSCEN 3141 (<i>Struc Transformations</i>)..... 3 hr ___ MATSCEN 3151 (<i>Transport & Kinetics</i>)..... 3 hr ___ MATSCEN 3331 (<i>Materials Lab 1</i>)..... 2 hr ___ Technical Elective (<i>see TE notes</i>)..... 3 hr ___ General Education 3 hr	___ MATSCEN 3261 (<i>Mechanical Behav of Mats</i>)... 3 hr ___ MATSCEN 3271 (<i>Electronic Materials</i>)..... 3 hr ___ MATSCEN 3321 (<i>Modeling & Sim 2</i>)..... 2 hr ___ MATSCEN 3332 (<i>Materials Lab 2</i>)..... 2 hr ___ Technical Elective (<i>see TE notes</i>)..... 3 hr ___ General Education 3 hr
4	___ MATSCEN 4181 (<i>Materials Selection</i>)..... 2 hr ___ MATSCEN 4381 (<i>Senior Design 1</i>)..... 3 hr ___ MATSCEN Elective 3 hr ___ MATSCEN Elective 3 hr ___ MATSCEN Elective 3 hr ___ MATSCEN Elective Lab 1 hr	___ MATSCEN 4382 (<i>Senior Design 2</i>)..... 3 hr ___ MATSCEN Elective 3 hr ___ MATSCEN Elective 3 hr ___ General Education 3 hr ___ General Education 3 hr

Total Hours to complete the degree program = 127

*Students can fulfill chemistry requirements with either Chem 1250+2310 (8 hours) or Chem 1210+1220 (10 hrs) or 1250+1220 (9 hours). **Please consult with academic advisor.**

Program Options

MATSCEN Elective Lab, MATSCEN Electives, and Technical Electives are chosen based on student's interest and focus area in Materials. Generally, these can be: Biomaterials, Ceramics, Electronic Materials, Metallurgy, or Polymers.

Acceptance Criteria

Admitted students will begin major courses in spring term, regardless of the term in which they are admitted to the major. **MATSCEN 2010 must be completed with a grade of C or higher to continue on to the MSE major courses.**

MATSCEN and Technical Electives (TE)

Twenty-one credit hours of electives are required, with **at least 15 credit hours coming from MATSCEN courses numbered 5000 or higher**. One MATCCEN 5000-level lab is also required. The remaining **six credit hours of TE** may be any graded course in Engineering, Math, Biological, or Physical Sciences numbered 3000 or higher. Exceptions and recommendations: for Electronic Materials, ECE 2300 (*Electrical Cir and Elect Devices*); for Biomaterials and Polymers, Chem 2310 or 2510 (*Organic Chemistry*), if not already used as core chemistry requirement; for Biomaterials only, BIOLOGY 1113 (*Biological Sci – Energy Transfer and Development*).

General Education Requirement

Writing and Communication

English 1110.xx 3 hr

Second Writing Course 3 hr

Social Science

Must choose each course from a distinct subgroup of this category.

_____ 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

Optional: Foreign Language

Foreign Language 1103 Course: credit (including EM) for a foreign language sequence through 1103, or credit for a foreign language course with a prerequisite of 1103, can be used to satisfy the Cultures & Ideas Gen Ed category.

Foreign Language Minor Courses: completion of a foreign language minor permits a student to overlap up to 6 credit hours between the Gen Ed and minor. A curricular petition must be submitted to the student's program, which will forward it to the college for review. The courses must meet the spirit of the Gen Ed category for which overlap is requested.

Optional: University Capstone

Completion of a Social Science 3597 or 4597 can be substituted for a Social Science general education course in any subgroup. 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