

## 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 Launch ..... 1 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 ___ General Education ..... 3 hr
2	___ MATSCEN 2010 ( <i>Intro to Engr Materials</i> )..... 3 hr ___ MATH 2177 ( <i>Ord &amp; Part Diff Eq</i> )..... 4 hr ___ PHYSICS 1251 ( <i>E&amp;M, Optics, Modern Phys</i> )..... 5 hr ___ Second Chemistry*(See options below)..... 4-5 hr	___ <b>MATSCEN 2241</b> ( <i>Struc &amp; Characterization</i> )..... 3 hr ___ <b>MATSCEN 2331</b> ( <i>Struc &amp; Char Lab</i> )..... 2 hr ___ <b>MATSCEN 2251</b> ( <i>Materials &amp; Thermo</i> )..... 3 hr ___ <b>MATSCEN 2321</b> ( <i>Modeling &amp; Sim 1</i> )..... 3 hr ___ General Education Theme ..... 4 hr
3	___ MECHENG 2040 ( <i>Statics &amp; Mechanics</i> )..... 4 hr ___ <b>MATSCEN 3141</b> ( <i>Struc Transformations</i> )..... 3 hr ___ <b>MATSCEN 3151</b> ( <i>Transport &amp; Kinetics</i> )..... 3 hr ___ <b>MATSCEN 3331</b> ( <i>Materials Lab 1</i> )..... 2 hr ___ Technical Elective ( <i>see TE notes</i> )..... 3 hr ___ General Education ..... 3 hr	___ <b>MATSCEN 3261</b> ( <i>Mechanical Behav of Mats</i> )... 3 hr ___ <b>MATSCEN 3271</b> ( <i>Electronic Materials</i> )..... 3 hr ___ <b>MATSCEN 3321</b> ( <i>Modeling &amp; Sim 2</i> )..... 2 hr ___ <b>MATSCEN 3332</b> ( <i>Materials Lab 2</i> )..... 2 hr ___ Technical Elective ( <i>see TE notes</i> )..... 3 hr ___ General Education ..... 3 hr
4	___ <b>MATSCEN 4181</b> ( <i>Materials Selection</i> )..... 2 hr ___ MATSCEN 4381 ( <i>Senior Design 1</i> )..... 3 hr ___ MATSCEN Elective..... 3 hr ___ MATSCEN Elective..... 3 hr ___ <b>MATSCEN Elective Lab</b> ..... 1 hr ___ General Education Theme ..... 4 hr	___ MATSCEN 4382 ( <i>Senior Design 2</i> )..... 3 hr ___ MATSCEN Elective..... 3 hr ___ MATSCEN Elective..... 3 hr ___ MATSCEN Elective..... 3 hr ___ General Education ..... 3 hr

**Total Hours to complete the degree program = 127**

## Program Options

- MATSCEN Elective Lab, MATSCEN Electives, and Technical Electives are chosen based on student's interest and focus area in Materials.
- Choices are: Biomaterials, Ceramics, Electronic Materials, Metallurgy, or Polymers.
- Math 2174 +2174 can substitute for Math 2177
- \*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.**

## Acceptance Criteria

Materials Science Engineering is direct admission, to change major to MSE, e-mail or make an appointment in OnCourse with Kami [Westhoff.11@osu.edu](mailto:Westhoff.11@osu.edu).

**Students begin major courses in spring term after completion of MATSCEN 2010 with a C or higher, regardless of the term in which they change majors.**

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## MATSCEN and Technical Electives (TE)

**21 credit hours of electives are required total.**

**15 of the total TE credit hours must be MATSCEN courses numbered 5000 or higher.**

The remaining **six credit hours of TE** can be any graded course in Engineering, Math, Biological, or Physical Sciences numbered 3000 or higher.

Exceptions and recommendations:

- Electronic Materials, ECE 2300 (*Electrical Cir and Elect Devices*)
- Biomaterials and Polymers, Chem 2310 or 2510 (*Organic Chemistry*), if not already used as core chemistry requirement
- Biomaterials only, BIOLOGY 1113 (*Biological Sci – Energy Transfer and Development*).

1 MATSCEN 5000-level lab is also required.

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## General Education Requirement

### Launch Seminar

GENED 1201	1 hr
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### Foundations

Writing and Information Literacy	3 hr
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Historical and Cultural Studies	3 hr
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Social and Behavioral Sciences	3 hr
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Race, Ethnicity and Gender Diversity	3 hr
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Literary, Visual and Performing Arts	3 hr
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### Thematic Pathways

Citizenship for a Just and Diverse World	4-6 hr
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Additional Theme(s)	4-6 hr
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### Optional: Foreign Language

**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.

For more information about general education courses:

<https://www.advising.engineering.osu.edu/current-students/curriculum/general-education>