

## MLDS Minor Advising for Mechanical Engineering Majors

**Note:** The guidance here is based on the [2023-2024 Mechanical Engineering degree requirements](#). You can find Machine Learning and Data Science (MLDS) Minor curriculum details on the [MLDS website](#).

### Overview

The MLDS minor consists of **8 courses**:

- 1 course in Programming Foundations
- 1 course in Statistics Foundations
- 4 specialization courses (Machine Learning, Data Science, or Hybrid)
- 2 electives in machine learning and data science.

The specific courses that satisfy these requirements can be found [here](#).

### Double Counting Rules

The McCormick School of Engineering requires that each minor consists of **4 unique courses** that are **not** used towards any other major or minor requirements. “Major requirements” are those designated as “Major Program (21 units),” which can be found on either MAS or the [Mechanical Engineering website](#).

▸ MechE Major Requirements

Major Requirement

*MAS dropdown for specific major requirements*

### Tips

- Be mindful of prerequisites for both the MLDS Specialization and Elective courses. Declaration of the minor does not imply that any prerequisites will be waived for you.

The guides below represent some of the possible paths for Mechanical Engineering majors who are pursuing the MLDS minor. Other paths are possible – talk to your advisor or email [dse@northwestern.edu](mailto:dse@northwestern.edu).

**Potential Machine Learning Specialization Tracks**

Course Selection	How this counts towards your MechE degree	Notes
<i>Programming Foundations</i>		
COMP_SCI 150	Unrestricted Elective	Unique Course
<i>Statistics Foundation</i>		
CHEM_ENG 312/ CIV_ENV 306/ IEMS 303	Major Requirement (Mechanical Engineering Breadth Concentration)	
<i>Machine Learning Specialization</i>		
COMP_SCI 111	Unrestricted Elective	Unique Course
COMP_SCI 214	Unrestricted Elective	Unique Course
COMP_SCI 348	Unrestricted Elective	Unique Course
COMP_SCI 349	Unrestricted Elective	Unique Course
<i>MLDS Electives</i>		
MLDS Approved Elective in MECH_ENG, 300-level	Major Requirement (Mechanical Engineering Breadth Concentration)	
MLDS Approved Elective in MECH_ENG, 300-level	Major Requirement (Mechanical Engineering Breadth Concentration)	

*Potential option: Machine Learning specialization using Mechanical Engineering Breadth Concentration*



**Potential Data Science Specialization Tracks**

Course Selection	How this counts towards your MechE degree	Notes
<i>Programming Foundations</i>		
COMP_SCI 150	Unrestricted Elective	Unique Course
<i>Statistics Foundation</i>		
CHEM_ENG 312/ CIV_ENV 306/ IEMS 303	Major Requirement (Mechanical Engineering Breadth Concentration)	
<i>Data Science Specialization</i>		
COMP_SCI 217	Unrestricted Elective	Unique Course
IEMS 304	Unrestricted Elective	Unique Course
DATA_ENG 200	Unrestricted Elective	Unique Course
DATA_ENG 300	Unrestricted Elective	Unique Course
<i>MLDS Electives</i>		
MLDS Approved Elective in MECH_ENG, 300-level	Major Requirement (Mechanical Engineering Breadth Concentration)	
MLDS Approved Elective in MECH_ENG, 300-level	Major Requirement (Mechanical Engineering Breadth Concentration)	

*Potential option: Data Science specialization using Mechanical Engineering Breadth Concentration as MLDS Electives*

**\*\* The table represents a possible track for Mechanical Engineering majors with a Breadth concentration. For help on other concentrations, please speak with your advisor.**



**Potential Hybrid Specialization Tracks**

Course Selection	How this counts towards your MechE degree	Notes
<i>Programming Foundations</i>		
COMP_SCI 150	Major Requirement (Basic Technical)	
<i>Statistics Foundation</i>		
IEMS 303	Major Requirement (Probability and Statistics)	
<i>Hybrid Specialization</i>		
COMP_SCI 214	Unrestricted Elective	
COMP_SCI 349	Unrestricted Elective	
DATA_ENG 200	Unrestricted Elective	
DATA_ENG 300	Unrestricted Elective	
<i>MLDS Electives</i>		
MLDS Approved Elective in MECH_ENG, 300-level	Major Requirement (Mechanical Engineering Breadth Concentration)	
MLDS Approved Elective in MECH_ENG, 300-level	Major Requirement (Mechanical Engineering Breadth Concentration)	

*Potential option: Hybrid specialization using Breadth Concentration as MLDS Electives*

**\*\* The table represents a possible track for Mechanical Engineering majors with a Breadth concentration. For help on other concentrations, please speak with your advisor.**

