Northwestern
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OF ENGINEERING

MLDS Minor Advising for Computer Science Majors

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

Overview

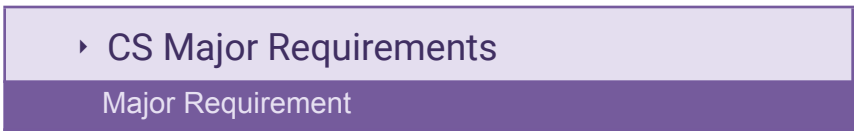
The MLDS minor consists of **8 courses**:

- ➔ 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 Computer Science website.



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.

Notes

- ➔ Students majoring in computer science are **not** eligible for the Machine Learning specialization.

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The guides below represent some of the possible paths for Computer Science majors who are pursuing the MLDS minor. Other paths are possible – talk to your advisor or email dse@northwestern.edu.

Potential Data Science Specialization Tracks

Course Selection	How this counts towards your CS degree	Notes
Programming Foundations		
COMP_SCI 150	Major Requirement	
Statistics Foundation		
IEMS 201/ IEMS 303	Major Requirement	
Data Science Specialization		
COMP_SCI 217	Unrestricted Elective	Unique Course
IEMS 304	Major Requirement (Advanced Elective)	
DATA_ENG 200	Unrestricted Elective	Unique Course
DATA_ENG 300	Unrestricted Elective	Unique Course
MLDS Electives		
COMP_SCI 333**	Major Requirement (Breadth Courses: Interfaces)	
MLDS Approved Elective	Unrestricted Elective	Unique Course

Potential option 1: Data Science specialization double counting Statistics Foundations requirement

*** This is an example course that could double count– many others also could. See approved MLDS electives for more options.*

Course Selection	How this counts towards your CS degree	Notes
Programming Foundations		
COMP_SCI 150	Major Requirement	
Statistics Foundation		
BMD_ENG 220/ CHEM_ENG 312/ CIV ENV 306	Unrestricted Elective	Unique Course
Data Science Specialization		
COMP_SCI 217	Unrestricted Elective	Unique Course
IEMS 304	Major Requirement (Advanced Elective)	
DATA_ENG 200	Unrestricted Elective	Unique Course
DATA_ENG 300	Unrestricted Elective	Unique Course
MLDS Electives		
COMP_SCI 333**	Major Requirement (Breadth Courses: Interfaces)	
COMP_SCI 392**	Major Requirement (Breadth Courses: Software Development and Programming Languages)	

Potential option 2: Data Science specialization using unique Statistics Foundations requirement, double counting MLDS Electives

*** This is an example course that could double count– many others also could. [See approved MLDS electives for more options.]*

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Potential Hybrid Specialization Tracks

Course Selection	How this counts towards your CS degree	Notes
Programming Foundations		
COMP_SCI 150	Major Requirement	
Statistics Foundation		
IEMS 201/ IEMS 303	Major Requirement	
Hybrid Specialization		
COMP_SCI 214	Major Requirement	
COMP_SCI 349	Major Requirement (Breadth Course: Artificial Intelligence)	
DATA_ENG 200	Unrestricted Elective	Unique Course
DATA_ENG 300	Unrestricted Elective	Unique Course
MLDS Electives		
MLDS Approved Elective	Unrestricted Elective	Unique Course
MLDS Approved Elective	Unrestricted Elective	Unique Course

Potential option: Hybrid specialization using COMP_SCI 214 and COMP SCI 249 as double counts