ARTIFICIAL INTELLIGENCE (M.S. WITH A MAJOR IN AI HARDWARE AND SYSTEMS)

Artificial Intelligence (AI) is an area of study that explores how to endow machines with the ability to learn, make decisions, reason about data, and communicate with humans. In the Wayne State University’s Master of Science in Artificial Intelligence (MSAI) program, students learn to apply problem-solving, creative thinking, algorithmic design, and computer programming skills to build modern AI systems.

Students will gain deep technical training and expertise in a selected concentration area, which include AI Hardware and Systems, AI Algorithm and Systems, and Industrial AI. The program prepares students to (1) work as engineers, consultants and entrepreneurs in industries where AI can provide a competitive edge, or (2) pursue a Ph.D. degree in computer science, electrical engineering, industrial and systems engineering, or other related fields.

Applicants must meet requirements for admission to the Graduate School (http://bulletins.wayne.edu/graduate/general-information/admission/). Students must have a bachelor’s degree or the equivalent in Engineering from an accredited college or university. Students from all science, technology, engineering, and math (STEM) disciplines will be considered for admission.

The proposed program requires 30 credits for graduation, either Plan A (24 credits of coursework plus 6 credits of master’s thesis) or Plan C (30 credits of coursework). All courses must be graduate-level courses offered within the College of Engineering. All course work must be completed in accordance with the regulations of the Graduate School (http://bulletins.wayne.edu/graduate/general-information/academic-regulations/) and the College of Engineering (http://bulletins.wayne.edu/graduate/engineering/academic-regulations/).

A minimum grade point average of 3.00 for the MSAI program is required to obtain the master’s degree. A maximum of one course in which a C has been received may be used to meet graduation requirements, provided this is offset by sufficient A grades to maintain the required 3.00 average.

The co-advisor for each major, in working with students to develop their academic plan, will determine which electives are appropriate for their major.

AI Hardware and Systems Major
Hosted by the Electrical and Computer Engineering (ECE) department.

Degree Requirements
- 9 credit hours from AI Hardware and Systems core
- 3 credit hours from AI Hardware and Systems core
- 3 credit hours from Industrial AI core
- Plan A: 9 credit hours from AI Program electives, including at least 6 credit hours from AI Hardware and Systems electives, or
- Plan C: 15 credit hours from AI Program electives, including at least 12 credit hours from AI Hardware and Systems electives
- Plan A: 6 credit hours of ECE 8999 master’s thesis

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ECE 5995</td>
<td>Special Topics in Electrical and Computer Engineering I</td>
<td>3</td>
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Elective courses

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<tr>
<td>ECE 7500</td>
<td>Artificial Intelligence for Natural Language Processing</td>
<td>3</td>
</tr>
<tr>
<td>ECE 7640</td>
<td>Online and Adaptive Methods for Machine Learning</td>
<td>3</td>
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Artificial Intelligence (M.S. with a major in AI Hardware and Systems)
** Contact an advisor for specific topics that can apply to the AI Algorithms and Systems major.

**Industrial AI Major**

_Hosted by the Department of Industrial & Systems Engineering (ISE)._  

_Degree Requirements_

- 9 credit hours from Industrial AI core  
- 3 credit hours from AI Hardware and Systems core  
- 3 credit hours from AI Algorithms and Systems AI core  
- Plan A: 9 credit hours from AI Program electives, including at least 6 credit hours from Industrial AI electives, or  
- Plan C: 15 credit hours from AI Program electives, including at least 12 credit hours from Industrial AI electives  
- Plan A: 6 credit hours of IE 8999 master’s thesis

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<tr>
<td>IE 5995</td>
<td>Special Topics in Industrial Engineering ***</td>
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<tr>
<td>DSA 6100</td>
<td>Statistical Learning for Data Science and Analytics</td>
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<tr>
<td>IE 7860</td>
<td>Intelligent Analytics</td>
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**Core courses**

**Elective courses**

- 3 credit hours from AI Hardware and Systems core  
- 3 credit hours from AI Algorithms and Systems AI core  
- Plan A: 9 credit hours from AI Program electives, including at least 6 credit hours from Industrial AI electives, or  
- Plan C: 15 credit hours from AI Program electives, including at least 12 credit hours from Industrial AI electives  
- Plan A: 6 credit hours of IE 8999 master’s thesis

Contact an advisor for specific topics that can apply to the Industrial AI major.