



ARTIFICIAL INTELLIGENCE (MS)

The School of Computing aims to increase students' breadth of knowledge and develop depth of expertise in a subfield of computer science and engineering.

Description

The MS in Artificial Intelligence (AI) is designed to equip both current and aspiring computing professionals with a foundational understanding of AI along with a practical proficiency in exploiting AI technologies to develop holistic AI solutions for their respective fields. The courses in this program cover core AI topics such as an introduction to AI, constraint processing, machine learning, deep learning, natural language processing, data mining, game theory, and information retrieval. Students have the option to focus on applying AI techniques to other disciplines including data science, cognitive science, engineering, and business to address complex AI challenges. The primary objectives of this program are:

- **Foundation in core AI:** Ensure that students develop a solid understanding of the fundamental principles of AI, including introduction to AI, constraint processing, machine learning, deep learning, natural language processing, neural networks, game theory, multiagent systems, image processing, data mining, information retrieval, and computer vision.
- **Hands-on experience with AI tools and technologies:** Emphasize the application of AI across different sectors, such as healthcare, engineering, commerce, agriculture, media, finance, robotics, and autonomous systems, to solve practical problems.
- **Research and innovation:** Equip students with the skills needed to conduct cutting-edge industrial research in AI and contribute to advancements in the field. Ethical and responsible AI development: Foster an understanding of the ethical, legal, and societal implications of AI, with a focus on fairness, accountability, and transparency.
- **Close the skills gap:** Address the increasing demand for AI specialists in the state, ensuring a steady pipeline of skilled professionals.
- **Increase career opportunities through lifelong learning:** Enhance the expertise and employability of the workforce, empowering professionals to advance their careers or transition into AI-focused roles. Foster a commitment to lifelong learning to stay ahead of the fast-evolving advancements in AI and emerging technologies.

The School of Computing is home to advanced computing research infrastructure, including the Holland Computing Center, with over 121 trillion floating-point operations per second (121 TFlops) computation rate and over 7 petabytes of storage. Graduate students have access to state-of-the-art research facilities, including unmanned aerial vehicle testbeds, a city-wide gigabit wireless network testbed, advanced embedded systems facilities, and dedicated research labs.

Program-Related Information

Graduate Chair

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Support Staff

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Program Website

<https://computing.unl.edu/graduate/>

Applying for Admission

Standard requirements for all graduate programs

- Application for Admission with \$50 non-refundable application fee (<https://graduate.unl.edu/admissions/requirements/#appfee>).
- Transcripts (<https://graduate.unl.edu/admissions/requirements/#transcripts>) (unofficial): Uploaded as part of application form.

If International: Uploads must include all college- or university-level transcripts or mark sheets (records of courses and marks earned), with certificates, diplomas, and degrees plus certified English translations.

After admission: Official documents are required from all students who are admitted and enroll. Photocopies of certified records are not acceptable. International students enrolled in other U.S. institutions may have certified copies of all foreign records sent directly to the Office of Graduate Studies by their current school's registrar office.

- If applicant's native language is not English, verification of English proficiency (<https://graduate.unl.edu/admissions/english-proficiency/>) is required.

When sending TOEFL scores, our institution code is 6877 and a department code is not needed.

- If applicant is not a US citizen and expects an F or J visa: financial information (<https://graduate.unl.edu/prospective/international/financial/>).
- Applicants must also fulfill any additional requirements the department specifies at the time of application.

Additional requirements specific to this program

- Minimum English proficiency: Internet TOEFL 100, IELTS 7.0, Duolingo 120.
- GRE is *not* required
- Resume/CV
- Personal Statement: Your statement should include your research interests, your objectives, and names of potential faculty advisors.
- Letters of recommendation: Three letters are required; up to 5 may be submitted if identified in the application form prior to submission.

Admission Application Deadlines

For financial consideration: apply by January 15 for Fall or by September 1 for Spring. Otherwise: March 1 for Fall or October 1 for Spring.

Requirements

Hours required: 30

Options for the Master's Degree (<https://catalog.unl.edu/graduate-professional/policies/academic-program-requirements/#masters>)