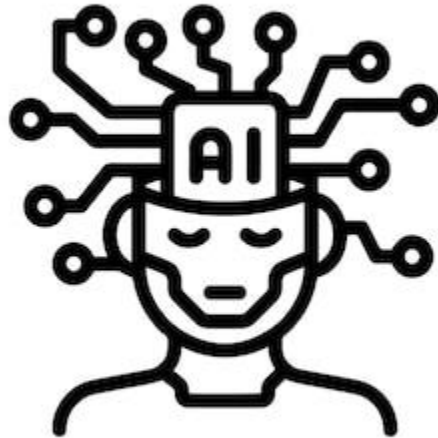# Foundations of Artificial Intelligence in Education

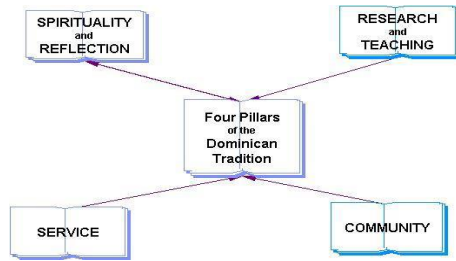## Molloy University
## Graduate Education

**(3 Credits)**

## Course Description

This foundational course introduces participants to the core concepts and capabilities of AI in education. Through hands-on exploration and critical discussions, educators will gain an understanding of how AI can enhance learning environments and streamline instructional practices. Participants will also examine the ethical dimensions of AI adoption, focusing on equity, privacy, and the responsible use of technology.

## Shared Vision



The Molloy University Teacher Education faculty has derived its vision for the exemplary teacher from the University's mission statement, the four pillars of the Dominican tradition, comments and input from the Professional Education Unit's Advisory Board and degree candidates as well as numerous faculty discussions rooted in the department's knowledge base which undergirds the initial and advanced programs' curriculum, pedagogy, and values.

The teaching professionals, both undergraduate and graduate teacher candidates, who complete Molloy's teacher preparation programs are distinguished by their ability to exemplify and promote core values in their own teaching. These values include:

- Belief that all children can learn
- Learner centered and value-centered curriculum and pedagogy
- Ethics and spirituality
- Intellectual curiosity
- Independence and risk taking, while promoting collective identity and responsibility
- Diversity, multiculturalism and pluralism, including divergent thinking
- Passion for teaching
- Commitment to students and their communities
- Civic responsibility through the promotion of social justice and interdependence
- Commitment to democracy

## Learning Objectives

Upon successful completion of this course, participants will be able to:

- • Define the foundational concepts of artificial intelligence (AI) and its relevance to education.

- • Identify key AI technologies such as machine learning, natural language processing, and predictive analytics and their potential applications in classroom settings.
- • Analyze the role of cognitive science in designing AI-enhanced educational tools.
- • Evaluate the ethical implications of AI in education, including considerations of equity, bias, and data privacy.
- • Create lesson plans or instructional strategies that integrate AI tools to personalize learning for diverse student needs.
- • Assess the limitations of AI technologies and how they impact educational practices.
- • Develop a framework for responsibly adopting AI in an educational setting.
- • Collaborate with peers to discuss case studies of successful AI applications in schools.

## Key Topics
- • Basics of AI and machine learning in education
- • Human-centered design and cognitive science in learning
- • Ethical considerations: equity, privacy, and accessibility

## Assignments and Grading

Participants will be assessed on their ability to engage with course materials, collaborate with peers, and demonstrate understanding of key concepts. Assignments include:

| Assignment | Description | Percentage of Final Grade |
|---|---|---|
| Discussion Participation | Engage in weekly discussion forums with peers and faculty. | 20% |
| Annotated Readings | Complete assigned readings and submit annotations demonstrating comprehension. | 20% |
| AI Tool Analysis | Analyze an AI tool and evaluate its educational applications. | 30% |
| Final Project | Design an AI-powered lesson plan or project that integrates course concepts. | 30% |

## Suggested Readings
- • Russell, S., & Norvig, P. (2020). Artificial Intelligence: A Modern Approach (4th Edition). Pearson.
- • Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features from an Instructional Design Perspective. Performance Improvement Quarterly.
- • Rahimi, E., van den Berg, J., & Veen, K. (2021). A Systematic Review of AI in Education: Potentials, Challenges, and Future Directions. Computers and Education.

## Participation and Collaboration

This course is delivered online. However, regular participation and collaboration with both faculty and fellow students is a mandatory requirement. Active engagement in discussions, assignments, and peer activities is essential for success in this course.

## Academic Integrity Statement

Molloy University maintains and affirms a strong policy of academic honesty. Participants are expected to adhere to this policy. Plagiarism, fabrication, and other forms of academic dishonesty will not be tolerated and may result in disciplinary action.

### Attendance

At Molloy University, faculty take attendance and establish course policies for each course. This course requires regular participation in an online course.

### Expectations of Academic Integrity for All Students

Honor Pledge and Academic Honesty Policy

### Course Withdrawals

View Withdrawal Policy for potential financial implications

View Academic Calendar and/or the course syllabus for the last day to withdraw dates

### Incompletes

Incompletes Policy

### Health and Wellness

Student Health Services

Student Counseling Center (SCC)

### Center for Access and Disability (Access)

Center for Access and Disability

**Technical Support**

[Student Account, Technology and Canvas](#)


**Ally for Canvas**

[Supportive Tools and Resources/ Ally](#)


**Use of Proctorio for Exams/Quizzes (if applicable)**

[Proctorio Resources for Students](#)


**Email Accounts**

Students are to utilize their Molloy e-mail account or via Canvas when communicating throughout the semester. Those who use a non-Molloy account may miss important messages. Students are responsible for responding to all methods of communication in a timely fashion relating to this course.


**Recording**

To foster an environment that encourages and supports the full and free expression of information, ideas, and opinions between students, faculty, and administration of the University; students, faculty, employees, and administrators are prohibited from recording in any manner or by any means conversations, meetings, class lectures, or any communication.  The exceptions when recordings are permitted are:

- Students are registered with an approved accommodation that requires "recording" class meetings, lectures, etc., and faculty are notified of the accommodation.

- Faculty, at their discretion, can permit individual students to record the lectures.

- Students are informed in advance by the faculty that "recording" of an assignment, presentation, or video is required for individual or group grading or assessment purposes.

- Faculty informs students that lectures or other course-related resources will be recorded for educational purposes, uploaded into the course management system, or distributed to students as a course resource.

- Recording of ZOOM meetings when all participants consent to the recording.

This is a critical commitment to the collegiate experience at Molloy, and any violation may become a subject of disciplinary action.