ARTIFICIAL INTELLIGENCE FOR ENGINEERING DATA ANALYTICS, CAPSTONE CERTIFICATE

The Artificial Intelligence for Engineering Data Analytics capstone certificate equips practicing engineers with specialized expertise in AI-driven data analysis as well as design, development, and deployment of AI applications. Developed by world-class faculty in the UW–Madison College of Engineering, this nine-credit program also provides a pathway for students wishing to apply for admission to the online Master of Engineering in Data Analytics (MEDA) program and a number of online and accelerated masters programs across a variety of engineering disciplines.

Designed to meet the growing demand for AI expertise in engineering, the capstone certificate prepares students to apply AI techniques in their professional roles and advance their careers in data analytics and intelligent systems. This fully online certificate accommodates working professionals and can be completed in two or three consecutive semesters.

HOW TO GET IN

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APPLICANT REQUIREMENTS

- A BS degree in science, technology, engineering, computer science or a related field with a sufficient coursework and professional experience to demonstrate proficiency in engineering practice or at least 16 credits of math and science coursework from an ABET-approved program or the equivalent.*
- A minimum undergraduate grade-point average (GPA) of 2.75 on the equivalent of the last 60 semester hours (approximately two years of work).
  - Applicants from an international institution must have a strong academic performance comparable to a 2.75 for an undergraduate or master's degree. All GPAs are based on a 4.00 scale.
- GRE: Not required but may be considered if available.
- International degree-seeking applicants must demonstrate English proficiency by providing official results of an English proficiency exam. Scores must be within two years of the anticipated start of enrollment.
  - TOEFL: 92 internet (iBT)
  - IELTS: 7.0
  - Duolingo English Test: 125

* Equivalency to an ABET-accredited program: Applicants who do not have bachelor's degree from an ABET-accredited program may also qualify for admission to the program. Such applicants must have a BS in science, technology, or a related field with sufficient coursework and professional experience to demonstrate proficiency in engineering practice.

ADMISSION

Applications are accepted for admission to all three terms (fall, spring, summer).

- Fall deadline: Aug 1
- Spring deadline: Dec 1
- Summer deadline: June 1

Note: Adult Career and Special Student Services (ACSSS) is the admitting office for all University Special students. However, the department offering the Capstone Certificate program makes the final admission decision upon review of all applicant materials.

APPLICATION STEPS

1. Submit an online application for admission (http://continuingstudies.wisc.edu/advising/apply.htm) as a University Special student, selecting UNCS Capstone Certificate and the program: Artificial Intelligence for Engineering Data Analytics. This application is received and processed by Adult Career and Special Student Services with final decision held for approval from the specific capstone certificate coordinator.
2. Submit the following materials to gradadmissions@interpro.wisc.edu:
   a. Resume/CV that includes educational history and professional experience
   b. Transcripts of all previous college work
   c. Two letters of recommendation submitted by the recommender. Use this recommendation form (https://uwmadison.box.com/s/104t5ce1rvo4qaccsbepe1qlwhd1sakw/).
3. After a decision has been made, the Graduate Advisor will contact you by email to inform you of the decision and inform you of next steps.

ENROLLMENT

After a decision has been made, the Graduate Advisor will contact applicants by email to inform of the decision.

Admitted students receive a formal letter of admission to UW–Madison from Adult Career and Special Student Services along with general enrollment information. Additional detail is provided on the ACSSS enrollment page (http://continuingstudies.wisc.edu/advising/enroll-special.htm).

REQUIREMENTS

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REQUIRED COURSES

Code	Title	Credits
Core		
I SY E 521	Machine Learning in Action for Industrial Engineers	3
E P D 522	Generative Artificial Intelligence for Engineering Applications	3
Elective		
Students must complete one of the following courses.		3

E P D 416	Engineering Applications of Statistics	
I SY E 516	Introduction to Decision Analysis	
Total Credits		**9**

MINIMUM REQUIREMENTS FOR CAPSTONE CERTIFICATE COMPLETION

- Students must earn a minimum grade of C in each course used to meet Capstone Certificate requirements.
- Courses in which a student elects the pass/fail or audit option will not count toward completion of Capstone Certificate requirements.
- All of the Capstone Certificate credits must be earned "in residence" (which includes on campus and distance-delivered courses) at UW-Madison.
- All of the Capstone Certificate credits must be earned while enrolled in the Capstone Certificate program.

Individual Capstone Certificate programs may have additional requirements for completion, which will be listed above as/if applicable.

LEARNING OUTCOMES

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1. Understand the foundations of artificial intelligence (AI).
2. Analyze and interpret data using artificial intelligence (AI).
3. Demonstrate the ability to utilize AI methods to solve complex engineering problems.
4. Design, develop, and deploy AI applications using current technologies and platforms.