

ARTIFICIAL INTELLIGENCE CERTIFICATE

Program Details

Department: Computer Science
Modality: In-Person
Concentrations: n/a
Semester Hours: 9–12

The graduate certificate in Artificial Intelligence is designed for individuals who have completed an undergraduate program in computer science or a closely related field who wish to strengthen their expertise in artificial intelligence (AI) and its applications. The program provides a structured, graduate-level learning pathway focused on specialized areas of AI, including but not limited to machine learning, natural language processing and large language models, generative AI, agentic AI, multi-agent systems, and deep learning. Ethical, responsible, and just use of AI through fairness, accountability, and transparency (FAcCT) is a common theme throughout the program, in line with the mission & identity of the university.

Upon completion of the certificate program, students may apply for the M.S. program in Computer Science. Courses completed for the certificate count toward the M.S. degree.

Admission Requirements

Students seeking admission should have completed an undergraduate program in computer science or a closely related field. To be considered for admission, students must submit an application, a statement of intent, and transcripts. Letters of recommendation and the Graduate Record Exam (GRE) are optional.

Applicants who have not completed an undergraduate degree in computer science or a closely related technical field must demonstrate completion of the required prerequisite coursework outlined below as part of the admissions review process.

The undergraduate preparation of all applicants, regardless of their previous degrees, should include the following subject areas:

- CMSI 1010 Computer Programming Laboratory
- CMSI 2120 Data Structures and Applications
- CMSI 2130 Algorithms and Analysis

If prerequisite coursework is incomplete at the time of application review, the application may be placed on hold until official documentation of course completion is submitted. Required courses need not be taken at Loyola Marymount University; however, applicants are responsible for ensuring that courses taken at other institutions meet LMU's course standards.

In limited cases, the Admissions Committee may offer admission to applicants who are missing a limited number of prerequisite courses. In such instances, the additional required coursework will be stated in the admission letter and must be completed within a specific timeframe. These requirements are mandatory and cannot be waived.

International applicants should submit the items listed above plus the additional items required by LMU Graduate Admission. To review the

additional requirements, visit the International Admission page (<https://graduate.lmu.edu/apply/internationalstudents/>).

Admission Policies

Deferment Policy

Students admitted into this graduate program may defer their admission offer for up to one year from the initial admission entry term. A formal request should be made by the student by contacting SeaverGraduateAdmission@lmu.edu. Requests to defer past the one-year mark from the initial admission entry term are reviewed upon request, and the decision is left to the discretion of the Admission Committee.

Appeal Process

The appeal process should be sought after once an admission decision has been provided, and the applicant would like to be reconsidered. To explore the appeal process, the applicant should be prepared to present new evidence of admissibility via new/additional/updated documentation aside from what was presented during the initial admission submission. Such documentation can be in the form of final grades, proof of updated relevant course completion and grade(s), etc.

In addition to the documents provided, the student will be required to submit a short essay stating why they are interested in having their application be reconsidered and explain how the new/updated documentation provided shows improvement for admission reconsideration. The admissions team will review the submission of all new documentation and provide the applicant with an updated decision. To request more information about this process, candidates interested in this option may contact SeaverGraduateAdmission@lmu.edu.

Certificate Requirements

Completion of three (3) of the following courses (9–12 semester hours) with a 3.0 grade point average or higher. For courses with prerequisites that a student has not taken at LMU, transcripts indicating satisfactory completion of equivalent coursework must be submitted to the Graduate Office.

Code	Title	Semester Hours
Select three (3) of the following:		
		9–12
CMSI 5350/ EECE 5150	Machine Learning	4
CMSI 5370	Natural Language Processing and Large Language Models	4
CMSI 5381	Agentic Artificial Intelligence in Game Development	3
CMSI 5390	Generative Artificial Intelligence Algorithms and Models	4
CMSI 5391	Generative Artificial Intelligence Infrastructure	4
CMSI 630	Artificial Intelligence	3
CMSI 638	Multi-agent Systems and Distributed Artificial Intelligence	3
CMSI 6352/ EECE 6250	Deep Learning Applications	4
HSEG 565	Artificial Intelligence and Emerging Technology in Healthcare	3
MATH 540	Deep Learning	4