

 FLORIDA ATLANTIC UNIVERSITY	NEW/CHANGE PROGRAM REQUEST Undergraduate Programs	UUPC Approval <u>10-12-20</u> UFS Approval _____ Banner Posted _____ Catalog _____
	Department Computer and Electrical Eng and Computer Science College Engineering and Computer Science	
Program Name Artificial Intelligence Certificate	<input checked="" type="checkbox"/> New Program <input type="checkbox"/> Change Program	Effective Date (TERM & YEAR) Spring 2021
Please explain the requested change(s) and offer rationale below or on an attachment <p>We are proposing a Certificate in Artificial Intelligence (AI) opened to students with any background. Students are expected to satisfy the prerequisite courses required for each course in the certificate curriculum. The certificate requires completion of 5 courses (15 credits) and it is structured into two tracks: Development track and Applications track. The Development track is intended for students proficient in programming who will develop new algorithms and mechanisms in AI. The Applications track is opened to the students who have introductory programming skills are interested to learn how to use the tools and algorithms of AI. Please see the catalog entry for more details.</p>		
Faculty Contact/Email/Phone Dr. Hanqi Zhuang/zhuang@fau.edu/561-297-3413	Consult and list departments that may be affected by the change(s) and attach documentation NA	
Approved by Department Chair <u>Hanqi Zhuang</u> College Curriculum Chair <u>Dan Meeroff</u> College Dean <u>Jerry Haky</u> UUPC Chair _____ Undergraduate Studies Dean <u>Edward Pratt</u> UFS President _____ Provost _____	<small>Digitally signed by Hanqi Zhuang DN: cn=Hanqi Zhuang, o=FAU, ou=CEECS, email=zhuang@fau.edu, c=US Date: 2020.06.19 16:40:06 -0400</small>	Date <u>6/19/2020</u> <u>8-24-20</u> <u>9/14/20</u> <u>10-12-20</u> <u>10-12-20</u> _____ _____

Email this form and attachments to mjenning@fau.edu one week before the UUPC meeting so that materials may be viewed on the UUPC website prior to the meeting.

Artificial Intelligence Certificate

Over the past years, there has been dramatic progress in the rise of artificial intelligence (AI) and its use in the development of systems that can reason and respond to increasingly complex situations. AI is everywhere and the changes enabled by this technology have just begun. AI is transforming every segment of American industry. It is making agriculture more precise and efficient, revealing new medical technologies and bringing the prospect of autonomous transportation and advanced manufacturing closer to reality. To become competitive, companies and corporations will have to embrace AI to some extent. These technological innovations are made possible by engineers and scientists with knowledge and expertise in the latest advancements in the field of AI. This 15-credit certificate provides students with knowledge and skills in the concepts, technologies and applications of artificial intelligence.

Admissions

The program is opened to students with any background. Students are expected to satisfy the prerequisite courses required for each course in the certificate curriculum. All five courses must be completed with a grade of "C" or better. This certificate requires 5 courses which have not been counted in any other minor or certificate within the College of Engineering and Computer Science.

Curriculum

The certificate has two tracks: Development track and Applications track. The Development track is intended for students proficient in programming who will develop new algorithms and mechanisms in AI. The Applications track is opened to students with no prior programming experience who are interested to learn programming and how to use tools and algorithms of AI. Students in both tracks are expected to have completed a statistics course.

Development Track (15 credits)

Core Courses (9 credits)

- COP 3043 Data Structures and Algorithm Analysis with Python, or COP 3530 Data Structures and Algorithm Analysis
- CAP 4630 Introduction to Artificial Intelligence
- One of the courses: CAP 4770 Introduction to Data Mining and Machine Learning, CAP 4613 Introduction to Deep Learning, CAP 4773 Introduction to Data Science and Analytics

Elective Courses (6 credits)

- Select 2 courses from Table 1

Applications Track (15 credits)

(not opened to undergraduate students in the CEECS department)

Core Courses (9 credits)

- COP 2035 Introduction to Programming in Python, or COP 1034C Computer Programming and Data Literacy for Everyone
- CAP 2500 Applications of Artificial Intelligence
- CAP 4612 Applied Machine Learning and Data Mining, or CAP 2751 Tools for Data Science

Elective Courses (6 credits)

- Select 2 courses from Table 1

Table 1 (Electives)

Select two courses from the list below. Additional undergraduate or graduate courses may be used as electives with prior approval of the advisor.

Introduction to Artificial Intelligence	CAP 4630
Introduction to Data Mining and Machine Learning	CAP 4770
Introduction to Deep Learning	CAP 4613
Introduction to Data Science and Analytics	CAP 4773
Trustworthy Artificial Intelligence	CAP 4623
Tools for Data Science	CAP 2751
Robotic Applications	EEL 4930
Artificial Intelligence for Social Good	CCJ 3071