

 FLORIDA ATLANTIC UNIVERSITY	NEW/CHANGE PROGRAM REQUEST Graduate Programs	UGPC Approval _____ UFS Approval _____ Banner Posted _____ Catalog _____
	Department Comp. and Electr. Eng. and Comp. Science College Engineering and Computer Science	
Program Name MS in Artificial Intelligence	<input type="checkbox"/> New Program <input checked="" type="checkbox"/> Change Program	Effective Date (TERM & YEAR) Fall 2020
Please explain the requested change(s) and offer rationale below or on an attachment This proposal adds "CEN 6405 Computer Performance Modeling " as an elective to the MS in Artificial Intelligence program.		
Faculty Contact/Email/Phone Dr. Waseem Asghar/wasghar@fau.edu/561-297-2766	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>Ramesh Teegavarapu</u> College Dean <u>Mihaela Carde</u> UGPC Chair <u>[Signature]</u> UGC Chair <u>[Signature]</u> Graduate College Dean <u>[Signature]</u> UFS President _____ Provost _____	<small>Digitally signed by Hanqi Zhuang DN: cn=Hanqi Zhuang, o=Florida Atlantic University, ou=CCEEC, email=hzhuang@fau.edu, c=US Date: 2019.12.02 16:36:28 -0500</small> <small>Digitally signed by Ramesh Teegavarapu DN: cn=Ramesh Teegavarapu, ou=FAU, ou=CSE / COECS, email=teegavarapu@fau.edu, c=US Date: 2019.12.01 17:19:48 -0500</small> <small>Digitally signed by Mihaela Carde DN: cn=Mihaela Carde, o=Florida Atlantic University, ou=College of Engineering and Computer Science, email=carde@fau.edu, c=US Date: 2019.12.01 17:19:48 -0500</small>	Date <u>12/2/2019</u> <u>12/3/2019</u> <u>12/4/2019</u> <u>1/29/20</u> <u>1/29/20</u> <u>1-29-20</u>

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

GRADUATE COLLEGE

DEC 04 2019

Master of Science with Major in Artificial Intelligence

The Master of Science (M.S.) with Major in Artificial Intelligence provides a comprehensive curriculum, consisting of foundation and theory of artificial intelligence and elements of computer vision, data analytics and algorithms, knowledge management and reasoning, machine learning and applications. Both thesis and non-thesis options of the M.S. in Artificial Intelligence require a minimum of 30 credits. The thesis option consists of a minimum of 24 coursework credits and 6 thesis credits.

With approval of the advisor, substitution can sometimes be made among similar courses. See the Department of Computer & Electrical and Computer Science [website](#) for updates.

Admission Requirements

Applicants for admission to the master's program are approved by the University upon the recommendation of the department. All applicants must submit with their applications the official transcripts from previous institutions attended and have official GRE scores forwarded to the Graduate College. Applications for admission are evaluated on an individual basis. At a minimum, applicants are expected to meet the following requirements. Students with non-engineering bachelor's degrees, click [here](#) for additional requirements.

1. A baccalaureate degree in Computer Science or a related field (students without a computer science background will be expected to take additional courses);
2. At least a 3.0 (of a 4.0 maximum) GPA in the last 60 credits attempted prior to graduation;
3. Submission of the Graduate Record Examination (GRE) scores. GRE scores more than five years old are not acceptable. The GRE requirement is waived for any student who has a baccalaureate degree from FAU's Department of Computer & Electrical Engineering and Computer Science with a GPA of at least 3.25 (out of a possible 4.0) in the last 60 credits attempted prior to graduation; and
4. International students from non-English-speaking countries must be proficient in written and spoken English as evidenced by a score of at least 500 (paper-based test) or 213 (computer-based test) or 79 (Internet-based test) on the Test of English as a Foreign Language (TOEFL) or a score of at least 6.0 on the International English Language Testing System (IELTS).

Applicants are expected to have taken the following prerequisite courses (or equivalents) before pursuing a master's degree. In some cases, prerequisite courses may be taken after admission to the graduate program.

Data Structures and Algorithm Analysis	COP 3530
Design and Analysis of Algorithms	COT 4400
Calculus with Analytic Geometry 1	MAC 2311
Calculus with Analytic Geometry 2	MAC 2312
Stochastic Models for Computer Science	STA 4821

Submission of Plan of Study

Students are required to submit a Plan of Study when they have completed between 9 and 15 credits of coursework with a minimum cumulative GPA of 3.0. All courses must be approved by the student's advisor. A student may not register for thesis credits prior to submitting a Plan of Study.

Degree Requirements

The M.S. in Artificial Intelligence program offers both thesis and non-thesis options. Both options require a minimum of 30 credits, as specified in the table.

Students must satisfy all of the University graduate requirements. In addition, the following requirements must be met. The coursework credits must satisfy the following constraints:

1. No more than 3 credits of directed independent study may be taken.
2. No course can be counted toward the degree that is more than 10 years old at the time the degree is awarded.
3. At least one-half of the credits must be at the 6000 level or above.
4. The student must have a GPA of 3.0 (out of 4.0) or better.
5. All courses in the degree program must be completed with a grade of "C" or better.

Transfer Credits

Any transfer credits toward the requirements for an M.S. in Artificial Intelligence must be approved by the department, the College and the University. The transfer credits must correspond to equivalent requirements and performance levels expected for the degree. Normally no more than 6 credits of coursework (that have not been applied to a degree) can be transferred from another institution.

Core Courses (9 credits) <i>Students in both thesis and non-thesis options complete the Core Courses</i>	
Computational Foundations of Artificial Intelligence	CAP 5625
Artificial Intelligence	CAP 6635
Data Mining and Machine Learning	CAP 6673
Thesis Option (30 credits)	
Master's Thesis - Computer Science (<i>may be taken over multiple terms</i>)	COT 6970 6
<i>In addition to the Core Courses and the Thesis credits, students complete five elective courses (15 credits) with the following constraints: Minimum of 3 credits of 6000-level courses and maximum of 3 credits of Directed Independent Study, COT 6900 or COT 6905</i>	
Non-Thesis Option (30 credits)	
<i>In addition to the Core Courses, students complete seven elective courses (21 credits) with the following constraints: Minimum of 9 credits of 6000-level courses and maximum of 3 credits of Directed Independent Study, COT 6900 or COT 6905</i>	
Electives (maximum of 15 credits in Thesis option and 21 credits in Non-Thesis option)	
Computer Vision	
Foundations of Vision	CAP 6411
Computer Vision	CAP 6415
Machine Learning for Computer Vision	CAP 6618
Visual Information Retrieval	COP 6728
Data Analytics and Algorithms	
Introduction to Data Science	CAP 5768
Social Networks and Big Data Analytics	CAP 6315
Data Mining for Bioinformatics	CAP 6546
Big Data Analytics and Hadoop	CAP 6780
Analysis of Algorithms	COT 6405
Computer Performance Modeling	CEN 6405
Knowledge Management and Reasoning	
Natural Language Processing	CAP 6640

Information Retrieval	CAP 6776
Web Mining	CAP 6777
Semantic Web Programming	COP 5859
<i>Machine Learning</i>	
Introduction to Neural Networks	CAP 5615
Evolutionary Computing	CAP 6512
Sparse Learning	CAP 6617
Deep Learning	CAP 6619
Advanced Data Mining and Machine Learning	CAP 6778
<i>Applications</i>	
Artificial Intelligence in Medicine and Healthcare	CAP 6683
Computational Advertising and Real-Time Data Analytics	CAP 6807
Robotic Applications	EEL 5661
<i>Additional Elective Allowance</i> Students may substitute 3 elective courses with any course in the College of Engineering and Computer Science with prior approval from the advisor.	