NEW/CHANGE PROGRAM REQUEST
Graduate Programs

FLORIDA ATLANTIC UNIVERSITY

Department Comp. and Electrical Eng. and Computer Science

College Engineering and Computer Science

UGPC Approval _____
UFS Approval _____
Banner _____
Catalog _____

Program Name	☐ **New Program***	**Effective Date** *(TERM & YEAR)*
Master of Science with Major in Artificial Intelligence	✔ **Change Program***	Spring 2021

Please explain the requested change(s) and offer rationale below or on an attachment.

A Add the new course CAP 6547 Reinforcement Learning to the MS in Artificial Intelligence curriculum.

*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.

Faculty Contact/Email/Phone	**Consult and list departments that may be affected by the change(s) and attach documentation**
Hanqi Zhuang / zhuang@fau.edu / 561-297-3413	NA

Approved by		***Date***
Department Chair	Hanqi Zhuang Digitally signed by Hanqi Zhuang DN: cn=Hanqi Zhuang, o=FAU, ou=CEECS, email=zhuang@fau.edu, c=US Date: 2020.05.13 17:11:11 -04'00'	5/13/2020
College Curriculum Chair	Ramesh Teegavarapu Digitally signed by Ramesh Teegavarapu DN: cn=Ramesh Teegavarapu, o=Florida Atlantic University, ou=Civil, Environmental and Geomatics Engineering, email=rteegava@fau.edu, c=US Date: 2020.05.14 09:02:28 -04'00'	5/14/2020
College Dean	Mihaela Cardei Digitally signed by Mihaela Cardei DN: cn=Mihaela Cardei, o=Florida Atlantic University, ou, email=mcardei@fau.edu, c=US Date: 2020.05.24 17:08:22 -04'00'	5/24/2020
UGPC Chair		
UGC Chair		
Graduate College Dean		
UFS President		
Provost		

Email this form and attachments to UGPC@fau.edu 10 days before the UGPC meeting.

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.

Core Courses (9 credits) *Students in both thesis and non-thesis options complete the Core Courses*		
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 *(may be taken over multiple terms)*	COT 6970	6
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		
Non-Thesis Option (30 credits)		
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		
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	
Computer Performance Modeling	CEN 6405	
Analysis of Algorithms	COT 6405	
Knowledge Management and Reasoning		
Natural Language Processing	CAP 6640	
Information Retrieval	CAP 6776	
Web Mining	CAP 6777	
Semantic Web Programming	COP 5859	
Machine Learning		
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	

Reinforcement Learning	CAP 6547
Applications	
Artificial Intelligence in Medicine and Healthcare	CAP 6683
Computational Advertising and Real-Time Data Analytics	CAP 6807
Robotic Applications	EEL 5661
Additional Elective Allowance _Students may substitute three elective courses with any relevant graduate courses with prior approval from the advisor._	