<table>
<tr><td rowspan="2">FAU

FLORIDA ATLANTIC UNIVERSITY</td><td colspan="2">**NEW/CHANGE PROGRAM REQUEST**
Graduate Programs</td><td rowspan="2">UGPC Approval _____
UFS Approval _____
Banner _____
Catalog _____</td></tr>
<tr><td colspan="2">**Department** Computer and Electrical Eng and Computer Science

College Engineering and Computer Science</td></tr>
</table>

Program Name Minor in Artificial Intelligence	✓ **New Program*** ☐ **Change Program***	**Effective Date** *(TERM & YEAR)* Spring 2021

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

We are proposing a minor in Artificial Intelligence (AI) which is open to all graduate students at Florida Atlantic University who are not majoring in Artificial Intelligence. The minor has four graduate-level courses (12 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 open 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.

*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 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		*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: 2020.06.11 17:03:29 -04'00'	6/11/2020
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: 2020.06.12 07:26:17 -04'00'	6/12/2020
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: 2020.06.14 15:14:22 -04'00'	6/14/2020
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.

Minor in Artificial Intelligence

The minor in Artificial Intelligence (AI) is open to all graduate students at Florida Atlantic University who are not majoring in Artificial Intelligence. The minor is awarded upon graduation from a graduate program at FAU; it is not awarded independently of these degrees.

Requirements for the minor include completion of four graduate-level courses (12 credits) with an average grade of B or better. This minor requires 4 courses which have not been counted in any other minor or certificate within the College of Engineering and Computer Science.

The minor 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 open to the students who have introductory programming skills are interested to learn how to use the tools and algorithms of AI. Students in both tracks are expected to have completed a statistics course.

Students must ensure that they have the necessary prerequisites for the selected courses. Students cannot apply for both Minor in AI and the Certificate in AI.

Development Track (12 credits)
Required courses (6 credits)
- CAP 6635 Artificial Intelligence
- CAP 6673 Data Mining and Machine Learning

Elective Courses (6 credits)
- Select 2 courses from Table 1.

Applications Track (12 credits)
(not opened to graduate students in the CEECS department, except MSITM major)
Required courses (6 credits)
- CAP 5625 Computational Foundations of Artificial Intelligence
- CAP 6616 Applied Machine Learning

Elective Courses (6 credits)
- Select 2 courses from Table 1.

Table 1 (Electives)
Select two courses from the list below. Additional courses may be used as electives with prior approval of the advisor.

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	
Big Data Analytics with Hadoop	CAP 6780

Social Networks and Big Data Analytics	CAP 6315
Data Mining for Bioinformatics	CAP 6546
Design and Analysis for Engineering Data	CGN 5716
Introduction to Data Science	CAP 5768
Computer Performance Modeling	CEN 6405
Knowledge Management and Reasoning	
Information Retrieval	CAP 6776
Web Mining	CAP 6777
Natural Language Processing	CAP 6640
Semantic Web Programming	COP5859
Machine/Deep Learning	
Introduction to Neural Networks	CAP 5615
Evolutionary Computing	CAP 6512
Deep Learning	CAP 6619
Advanced Data Mining and Machine Learning	CAP 6778
Sparse Learning	CAP 6617
Reinforcement Learning	CAP 6547
Applications	
Robotic Applications	EEL 5661
Computational Advertising and Real-time Data Analytics	CAP 6807
Artificial Intelligence in Medicine and Healthcare	CAP 6683
Intelligent Transportation Systems	TTE 6272
Intelligent Underwater Vehicles 1	EOC 6663
Industrial Automation	EIN 5603C