## M.S. in Artificial Intelligence (EG-MS-ARIN)
## Program Worksheet

Name: _____    Z#: _____    Starting Term: _____

Phone #: _____    Overall GPA: _____    Date: _____

### Degree Requirements

Students can choose between thesis and non-thesis options. Both options require a minimum of 30 credit hours (crs). Regardless of the option chosen, all students must complete the following requirements:

- Maintain a minimum 3.00 GPA to remain and graduate from the program.
- All courses within the degree program must be completed with a letter grade of "C" or higher.
- A minimum of 15 credit hours must be taken at the 6000 level.
- A maximum of 3 credit hours of Directed Independent Study (DIS) can be taken (faculty approval required).
- After completing 9 credit hours of coursework, students are required to submit a Plan of Study (POS) via MyPOS.

### Thesis Option Requirements

- Students must secure a Thesis Advisor.
- Complete **6 credits hours** of Master's Thesis under the supervision of a faculty advisor.

*See additional Thesis Requirements on the last page*

### Prerequisite Courses Required for Admissions (Mandatory, need to be taken first semester)

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
|  |  |  |
|  |  |  |
|  |  |  |

### Core Courses- Complete two courses (6 crs) from the three listed below.

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
| CAP 5625   Computational Foundations of Artificial Intelligence |  |  |
| CAP 6635   Artificial Intelligence |  |  |
| CAP 6673   Data Mining and Machine Learning |  |  |

The program worksheet undergoes periodic review and is subject to change.
This worksheet is intended to assist with tracking your coursework and completing the required POS.

10/2024

**AI Electives section-** From the subsections below, complete four electives (12 crs).  If non-thesis option.
Complete two (6 crs) electives if thesis option.

### Computer Vision section

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
| CAP 6411   Foundations of Vision | | |
| CAP 6415   Computer Vison | | |
| CAP 6618   Machine Learning for Computer Vision | | |
| COP 6728   Visual Information Retrieval | | |

### Data Analytics & Algorithms section

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
| CAP 5625   Computational Foundations of Artificial Intelligence | | |
| CAP 5768   Introduction to Data Science | | |
| CAP 6315   Social Networks and Big Data Analytics | | |
| CAP 6546   Data Mining for Bioinformatics | | |
| CAP 6635   Artificial Intelligence | | |
| CAP 6780   Big Data Analytics with Hadoop | | |
| CEN 6405   Computer Performance Modeling | | |
| COT 6405   Analysis of Algorithms | | |

### Knowledge Management & Reasoning section

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
| CAP 6640   Natural Language Processing | | |
| CAP 6776   Information Retrieval | | |
| CAP 6777   Web Mining | | |
| COP 5859   Semantic Web Programming | | |

### Machine Learning section

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
| CAP 5615   Introduction to Neural Networks | | |
| CAP 6512   Evolutionary Computing | | |
| CAP 6617   Sparse Learning | | |
| CAP 6619   Deep Learning | | |
| CAP 6629   Reinforcement Learning | | |
| CAP 6673   Data Mining and Machine Learning | | |
| CAP 6778   Advanced Data Mining and Machine Learning | | |

### Applications section

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
| CAP 6683  Artificial Intelligence in Medicine & Healthcare | | |
| CAP 6807  Computational Advertising & Real-time Data Analytics | | |
| EEL 5661   Robotic Applications | | |

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**Electives section- Complete <u>any</u> four (12 crs) graduate courses offered by the EECS department.**

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
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**Thesis Option- Complete 6 credit hours of Thesis.  Student is required to have a thesis form signed by a faculty advisor to register for thesis credits.**

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
| CAP 6974 Master's Thesis Artificial Intelligence | | |
| | | |

**List any Directed Independent Study (DIS) course here.  Student is required to have a DIS form signed by a faculty advisor to register for a DIS course.**

| Course Number & Title | Semester Taken | Grade |
|---|---|---|
| | | |

**The EECS Department may approve substitutions for core or elective courses.  List any course substitutions here.  Student is required to have advisor approval in writing.**

| Course Number & Title | Indicate "core" or "elective" | Semester Taken | Grade |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**List all failed courses here, with letter grades lower than a "C".**

| Course Number & Title | | Semester Taken | Grade |
|---|---|---|---|
| | | | |
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**Eligibility Requirements for Thesis Candidacy:**

Students may apply for candidacy upon completing 9 credit hours of coursework and maintaining a 3.00 overall/cumulative GPA.  Students must prepare a POS via MyPOS in consultation with their graduate advisor, detailing the courses necessary for fulfilling their degree requirements. Approval from the student's advisor is required for all listed courses.

Students working toward the MS Thesis option degree may <u>not</u> register for thesis <u>credits</u> <u>until</u> their POS has been approved.

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**The Thesis Committee is composed of:**

• At least three faculty members

• A minimum of two members are from the EECS Department

• The Committee Chair from the EECS Department

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