

# Minor in Artificial Intelligence and Learning

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Restrictions: CS and SE students may not count more than 9 credits of their required CCI electives towards this minor. CS students pursuing this minor may not pursue the Artificial Intelligence and Machine Learning concentration in the CS degree.

## About the Minor

This minor explores the foundation and application of artificial intelligence and machine learning. It is designed to be an advanced minor with a focus on deep understanding of the underlying mathematics and algorithms used in AI. This minor will utilize aspects of computer science, engineering, mathematics, and data science.

All pre-requisites of all classes need to be fulfilled. Courses in this minor require various 100- and 200-level courses as pre-requisites, which do not count toward the 24 credits of the minor itself. This requires 6 earlier 3-credit courses to satisfy pre-requisites of the two required courses. Some elective choices may have additional requirements. A grade of C or better must be earned for each course in this minor for it to be counted.

## Admission Requirements

The Computer Science minor is available to all University students in good standing.

## Program Requirements

### Required Courses

CS 380	Artificial Intelligence	3.0
CS 383	Machine Learning	3.0

### Elective Courses **18.0**

At least 3 elective courses must be from the computer science department (CS, DSCI, INFO).

BMES 421	Biomedical Imaging Systems I: Images
BMES 477	Neuroengineering I: Neural Signals
CS 385	Evolutionary Computing
CS 387	Game AI Development
CS 435	Computational Photography
CS 481	Advanced Artificial Intelligence
CS 486	Topics in Artificial Intelligence
CS I499	Independent Study in Computer Science *
DSCI 351	Recommender Systems
DSCI 471	Applied Deep Learning
ENGR 361	Statistical Analysis of Engineering Systems
ECE 310	Machine Learning Engineering Practicum
ECE 361	Probability and Data Analytics for Engineers
ECEC 487	Pattern Recognition
ECES 434	Applied Digital Signal Processing
ECES 441	Bioinformatics
INFO 300	Information Retrieval Systems
INFO 332	Exploratory Data Analytics
INFO 371	Data Mining Applications
INFO 432	Advanced Data Analytics
INFO 440	Social Media Data Analysis
INFO I499	Independent Study in INFO *
MATH 305	Introduction to Optimization Theory

**Total Credits** **24.0**

\* Departmental permission needed. Independent Study topic must be related to Artificial Intelligence.