Spring 2022

BME Student/Faculty Guide for Course Selection (Machine Learning content)
Below is a list of courses (Engineering and Computer Science) that have Machine Learning (ML) content. In some cases, there is overlap of content, so BME students and faculty should use this document a guide for selecting (and approving) courses for Plans of Study.

ENGR:2995 -- Intro AI and Machine Learning for AI
This is an introductory level Machine Learning (ML) course offered by College of Engineering (COE). If you have taken any other COE ML course, you cannot take this course due to "regression." This course can be taken as an elective towards the BME degree requirements. Bioimaging and Bioinformatics focus area students can take this course instead of Thermodynamics as a required Engineering course. If you take this course in place of Thermodynamics, however, it cannot count as a replacement for Thermodynamics AND an elective (you will need an additional elective instead of ENGR:2995). Note, Thermodynamics can also be taken as an elective if ENGR:2995 is taken as a required Engineering course.

ECE:5450 / IGPI:5450 Machine Learning
This course is the next course to take in sequence after ENGR:2995 and can be taken as an elective.

Cross-listed:
CEE:4511 Scientific Computing and Machine Learning
ME:4111 Scientific Computing and Machine Learning
These two courses have overlapping content with each other. These two courses do NOT overlap content with ECE:5450 Machine Learning. Only ONE of the two course can be taken as an elective towards the BME degree requirements.

BAIS:6480 Knowledge Discovery
BME students cannot take this course as an elective, they should take ENGR:2995 instead.
The course is intended for graduate students in BAIS only.

CS:5430 Machine Learning
This course is considered to be overlapping with ECE:5450 Machine Learning. Engineering students should take ECE:5450. This course is RESTRICTED to only CS graduate students, so engineering students cannot register for this course.

BAIS:7500:0001 STATISTICAL MACHINE LEARNING
This course can be taken as an elective.

BIOC:3310 / CBIO:3310/ MMED:3310 Practical Data Science & Bioinformatics
This course is intended for students with NO computational background and is also intended for students in life-science programs/departments. This course cannot be taken as an elective towards the BME degree requirements.

BIOS:6720:0001 Machine Learning for Biomedical Data
This course is currently restricted to BIOS majors, so it cannot be taken by COE students. There also appears to be overlap with ENGR:2995.