# Area Courses
## Data Science and Engineering: Core

### Fundamental Software Courses
- **CSCI 455X** Introduction to Programming Systems Design
  - 4 units
- **EE 538** Computing Principles for Electrical Engineers
  - 2 units
- **EE 547** Applied and Cloud Computing for Electrical Engineers
  - 2 units

### Fundamental Math Courses
- **EE 503** Probability for Electrical and Computer Engineers
  - 4 units
- **EE 510** Linear Algebra for Engineering
  - 4 units

### Machine Learning
- **EE 541** A Computational Introduction to Deep Learning
  - 2 units
- **EE 556** Stochastic Systems and Reinforcement Learning
  - 4 units
- **EE 559** Machine Learning I: Supervised Methods
  - 3 units
- **EE 641** Deep Learning Systems
  - 2 units
- **EE 660** Machine Learning II: Mathematical Foundations and Methods
  - 4 units

### Mathematical Methods for Data Analytics and Machine Learning
- **EE 517** Statistics and Data Analysis for Engineers
  - 4 units
- **EE 546** Mathematics of High-Dimensional Data
  - 4 units
- **EE 583** Statistical Signal Processing
  - 3 units
- **EE 556** Stochastic Systems and Reinforcement Learning
  - 4 units
- **EE 512**

### Legend
- **EE 000** Course Title
- **Course Units**
- **Prerequisite Courses**
- **Corequisite Courses**
- **Recommended Prep.**
- A square indicates a class with a significant computing/design component.

This chart shows course relationships. Please check the University Catalogue for specific course details including any recommended preparatory courses and Degree Requirements.