Guide to undergrad Machine Learning/AI curriculum at Princeton
(Aimed at COS majors as well as students in EE, ORF, MAT, ECON, etc.)

The following courses constitute a basic education in machine learning.

Prerequisites: COS 126, COS 226, Multivariate Calculus: MAT 201 or 203, Linear Algebra MAT202 or 204.

- Introduction to Machine Learning COS 324
- Reasoning about Computation COS 340.
- One or more of COS 424 (Fundamentals of Machine Learning), COS 402 (Artificial Intelligence), COS 485 (Neural Networks).
- Probability/Statistics: ORF 245 or ORF 309 or equivalent. (Optional but recommended.)
- Optimization: ORF 363/COS323 or equivalent (Optional but recommended)  
- Machine learning applied to specific domains, e.g., Computer Vision (COS 429), Computational Molecular Biology (COS455), Natural Language Processing, Robotics. (Optional but recommended.)

Advanced track:

For mathematically inclined students, the following additional courses are recommended. (Some of these can count towards MAT and ORF requirements as well.)

- Graduate coursework in ML such as COS 511, COS 513. (Keep an eye out for other courses being offered.)
- Algorithm design (COS423 or COS 521)
- Proof-based math preparation, e.g., MAT 215-217, or 216-218.