BS CURRICULUM

Students who declare a CS major in Spring 2024 and beyond are required to follow the new curriculum. Students who declared a CS major before Spring 2024 can follow the new CS Curriculum or continue with the old CS Curriculum.

PREREQUISITES

- SEAS Prerequisites and ENGI E1006: Computing for EAS

CS CORE

- The following 6 courses must be taken:
  - COMS W1004 Intro to CS
  - COMS W3134 Data Structures
  - COMS W3157 Advanced Programming
  - COMS W3203 Discrete Math
  - COMS W3261 CS Theory
  - CSEE W3827 Fundamentals of Computer Systems
- Select 1 Linear Algebra course
  - COMS W3251, APMA E3101, APMA E2101, MATH UN2010, or MATH UN2015
- Select 1 Probability course (new)
  - STAT UN1201, STAT GU4001, IEOR 3658, or MATH UN2015
  - MATH UN2015 can double count for Linear Algebra and Probability requirements. This is the ONLY instance a course can double count

AREA FOUNDATION COURSES (AFC)

- Select 4 courses from the following list:
  - COMS W4111 Introduction to Databases
  - COMS W4113 Distributed Systems Fundamentals
  - COMS W4115 Programming Languages and Translators
  - COMS W4118 Operating Systems
  - CSEE W4119 Computer Networks
  - COMS W4152 Engineering Software-as-a-Service
  - COMS W4156 Software Engineering
  - COMS W4160 Computer Graphics
  - COMS W4167 Computer Animation
  - COMS W4170 User Interface Design
  - COMS W4181 Security 1
  - CSOR W4231 Analysis of Algorithms
  - COMS W4236 Introduction to Computational Complexity
  - COMS W4701 Artificial Intelligence
  - COMS W4705 Natural Language Processing
  - COMS W4731 Computer Vision
  - COMS W4733 Computational Aspects of Robotics
  - CBMF W4761 Computational Genomics
  - COMS W4771 Machine Learning
  - CSEE W4824 Computer Architecture
  - CSEE W4868 System-on-Chip Platforms

CS ELECTIVES

- 4 courses from COMS / CSXX / XXCS that are at least 3-point courses, and at the 3000-level or above

GENERAL TECHNICAL ELECTIVES (GTE)

- 4 courses from the following Columbia or Barnard departments that are 3-point courses, and at the 3000 level or above:
  - Any SEAS department
  - Astronomy
  - Biomedical Informatics
  - Biological Sciences
  - Chemistry
  - Earth and Environmental Sciences
  - Ecology, Evolution and Environmental Biology
  - Mathematics
  - Physics
  - Psychology
  - Statistics
  - Economics

QUESTIONS?

Email CS Advising: ug-advising@cs.columbia.edu