Data Science & CS+X at UC Berkeley

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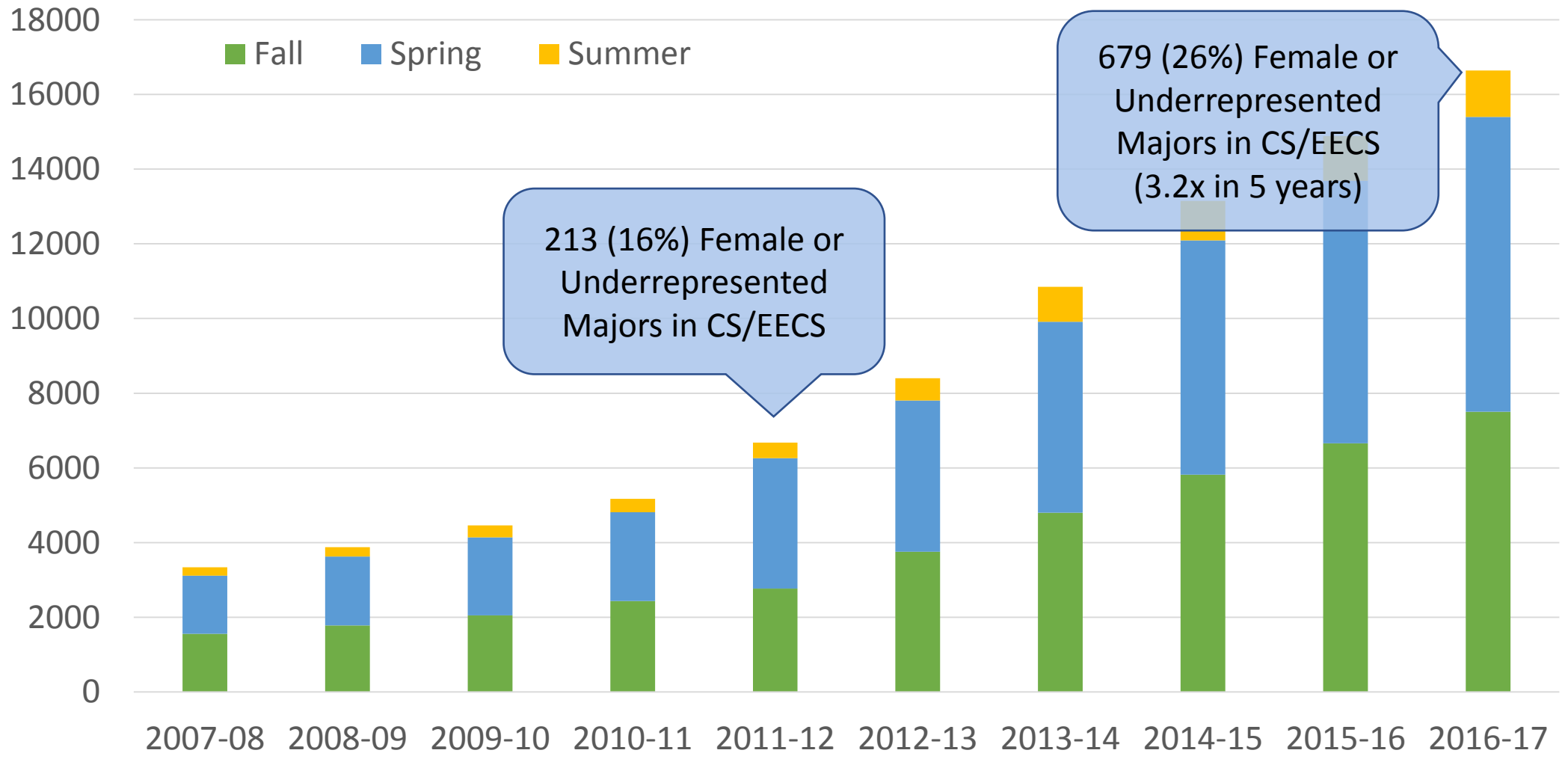
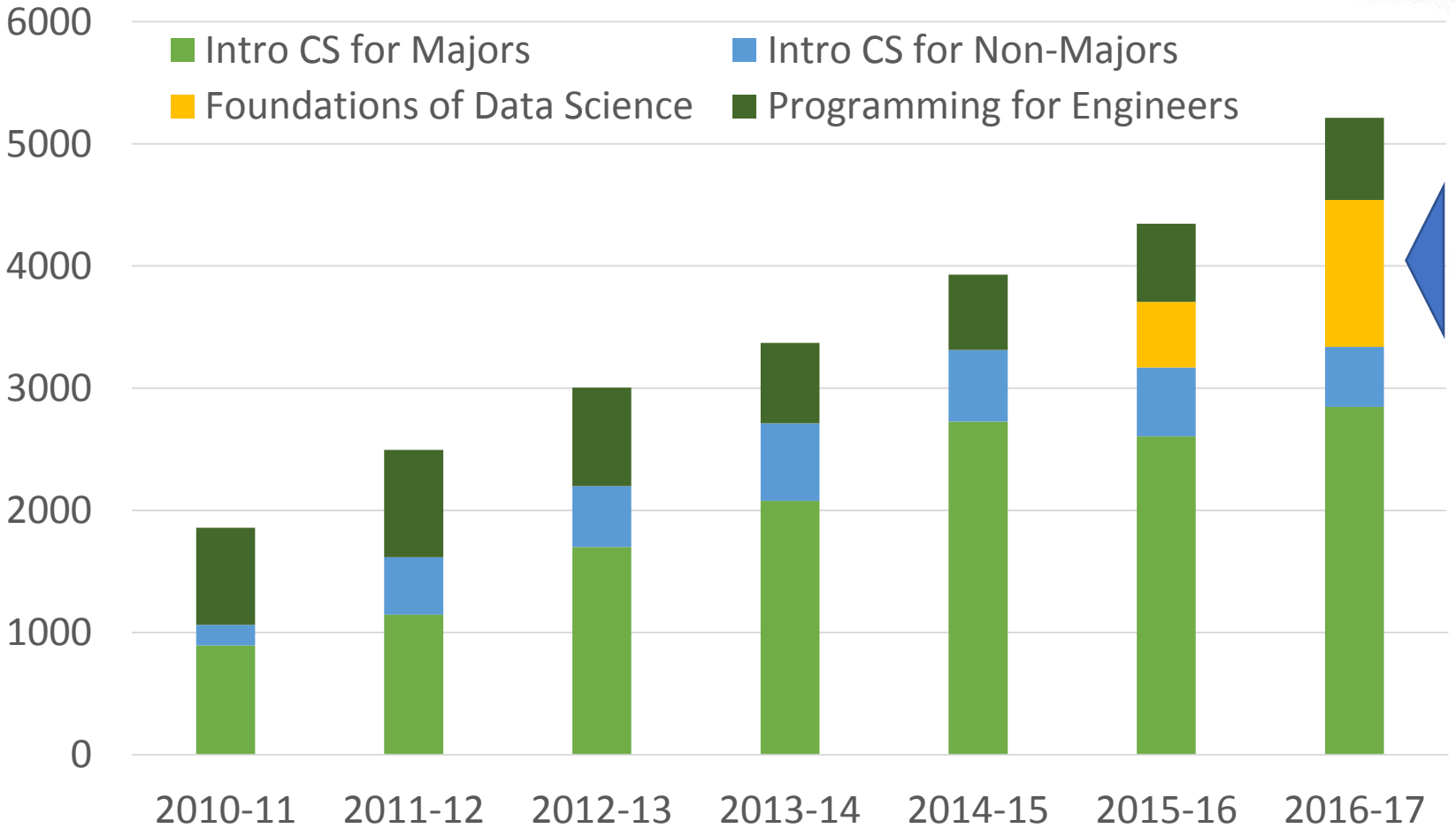
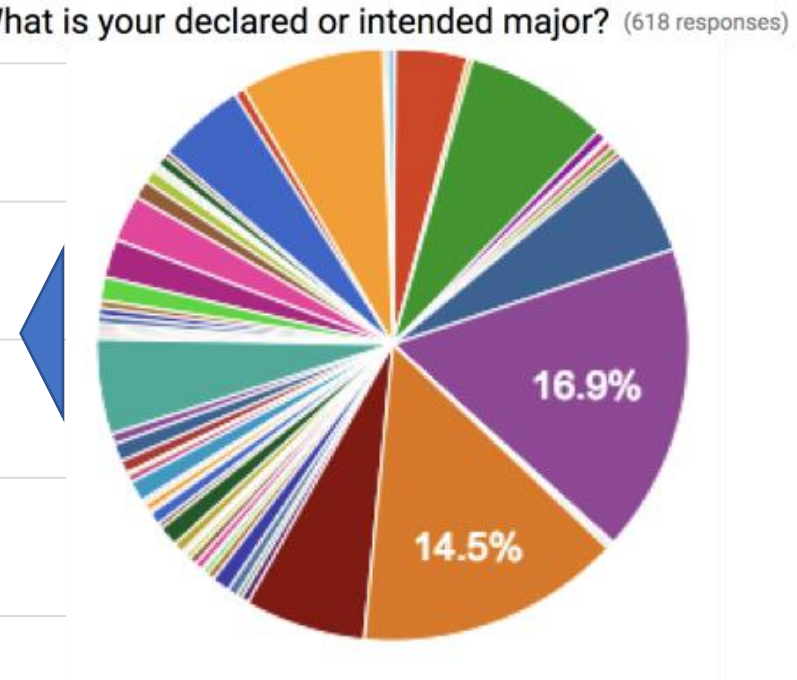
Undergraduate Lecture Course Enrollment in Computer Science



Undergraduate Enrollment in Introductory Computing Courses





Design Goals for a Data Science Major

- Develop connections among computation, statistical inference, and domain context
- Provide integrative course experiences in both the lower division & upper division
- Build skills and knowledge for students to engage in data science upon graduation
  - Data lifecycle, management, & workflow
  - Inferential thinking
  - Software engineering
  - Knowledge of important techniques
  - Communication of results
  - Ethics & context of data

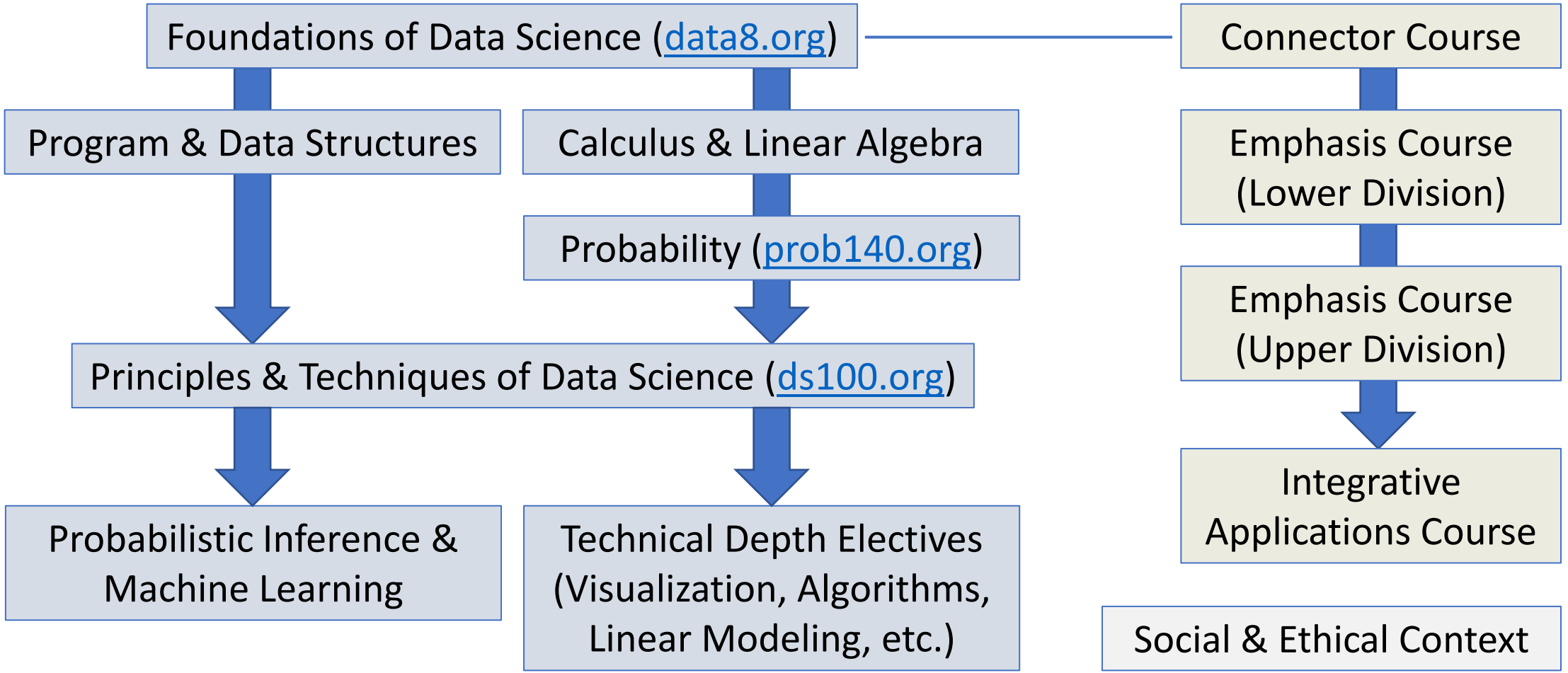
Integrative courses:

Foundations of Data Science
data8.org

Principles & Techniques of Data Science
ds100.org

Integrative application courses in each area of domain emphasis

Course Topics in a Data Science Major



Template for CS+X Majors

- For those students who want to apply core CS knowledge to interdisciplinary problems, CS+X will provide a major path that couples a required foundation in computing with the option to take upper-division coursework in another department.
- To declare some CS+X major, a student must meet declaration criteria for both CS and X.
- Proposed CS Core:
  - Math (either calculus, statistics, or linear algebra) [8 units]
  - Program Structures [4 units]
  - Data Structures [4 units]
  - Discrete Math [4 units]
  - Upper division CS/EECS depth [12 units]