Advising Guide for Electives for CS Majors

University GenEd Requirements

- A student has to take **three AH and three SS** GenEd courses, but **not more than two courses** from the same department
- **42.220** is a required AH GenEd
- **CS Ethics** (NOT University Ethics) course from the list below.
    - 45.203 Introduction to Ethics (CSE+AH+D)
    - 45.334 Engineering and Ethics (CSE+AH)
    - 45.335 Ethical Issues in Technology (CSE+AH)
    - 45.341 Science, Ethics, and Society (CSE+AH)
    - 45.342 Critical Theory & Society (CSE+AH)
    - 45.401 Bioethics and Genetic Research (CSE+AH)
    - 47.363 Introduction to Disability Studies (CSE+SS+D)
    - 57.211 Sustainable Development (CSE+SS)
    - 57.220 Designing the Future World (CSE+SS)
    - 59.303 Society & Technology (Understanding Tech. Risk) (CSE+AH)
    - 59.395 Computers in Society (CSE+AH)
- From the remaining **four GenEds**, one has to be from University-designated **Diversity** course (denoted by 'D' in GenEd list), if no GenEd with 'D' is taken from CS Ethics.

Technical Electives

- **6 credits** from courses offered by the College of Sciences (including CS) or the College of Engineering.
- Courses that fulfill this requirement must be classified as required or elective courses for the majors in those departments.
- In general, 90.xxx courses may *not* be used to fulfill this requirement.
- Specific courses may be recommended for different minors (Math, Robotics, etc.).

General (Free) Electives

- **12 credits** from courses offered by any academic department within the University as general electives.
- However, CS students must avoid:
    - courses in areas required by the CS curriculum (mathematics and physics) unless they are at a level higher than the courses required by the CS curriculum
    - non-CS courses having a significant computing component or a significant overlap in content with courses required by the CS curriculum
    - CS courses for non-majors
    - Examples of courses that may *NOT* be used as general electives are
        - programming language courses offered by other departments (all CS courses have 91.xxx course numbers; 90.xxx and 92.xxx courses are offered by the Math Dept.)
        - MIS or IT courses
        - Math courses below the level of the science and engineering calculus sequence
        - CS courses for non-majors
        - many certificate courses (including some Computer Science Department courses) offered through Continuing Education such as 94.xxx

Natural Sciences Electives

- **Three (Science course + accompanying lab) or (Four science courses + one lab)**
- Science course have to be classified as either **required or elective courses for the majors in the respective departments**. In general, courses that satisfy GenEd technical elective requirements for non-science majors do **_not_** satisfy the CS natural science elective requirement. Such unaccepted courses are ones whose University catalog descriptions contain the statement: "This course satisfies the GenEd science requirement, but not specific science requirements for majors in the Division of Science."

**Not** Accepted: **(NSC: No Science Credits; Free: Free elective)**

Biology	81.122	Biology	(Physical Therapy)
	83.106	Human Biology	(NSC)
	83.123	Nutrition and Disease	(NSC)
	83.125/127	Plants & Human Society	(NSC)
	83.214	Human Ecology	(NSC)
Chemistry	84.101	Applied Chemistry for Non-Scientists	(Gen Ed, NSC)
	84.102	Forensic Science for the Non-Scientist	(Gen Ed, NSC)
	84.111	General Chemistry I/lab	(Gen Ed)
EnvEarthAtm	85.120	The Nature of Science	(Gen Ed)
	85.141/143	Weather and Climate/Lab	(Gen Ed)
	87.104/105	Conservation & Environ. Concern/Lab	
	87.115/117	Astronomy/Lab	(Gen Ed)
	89.101/103	General Geology/Lab	(Gen Ed)
Physics	95.101/96.101	Introductory Physics I/Lab	(Gen Ed)
	95.103/96.103	General Physics I/lab;	
	95.104/96.104	General Physics II/lab	(Gen Ed)
	95.121/96.121	Exploring the Universe/lab	(Gen Ed, Free)
	99.101/102	Radiation and Life/lab	(Gen Ed, Free)

Accepted: **(partial list)**

Biology	81.315/317	Principles of Ecology/Lab;
	83.101/103	Life Sciences I/lab
	83.102/104	Life Sciences II/lab
	81.111/117	Principles of Biology I/lab (primarily for Biology majors)
Chemistry	84.121/123	Chemistry I/Lab
	84.122/124	Chemistry II /Lab
EnvEarthAtm	87.201/203	Earth & Environ. Sys. I /lab
	87.202/204	Earth & Env. Sys. II/lab
	89.215	Forensic Geology (GenEd, but **_does_** satisfy NS req.)
	89.314	Hydrogeology
	89.315	Environmental Geochemistry (4 credits)
Physics	95.141/96.141	Physics I/lab
	95.144/96.144	Physics II/lab

Most higher-level 81.xxx, 83.xxx, 84.xxx, 87.xxx, 89.xxx, 95.xxx and 96.xxx courses