BIOE 100 - ETHICS IN SCIENCE AND ENGINEERING (3 UNITS)

COURSE OVERVIEW

SUMMARY

(From course guide (https://guide.berkeley.edu)) The goal of BioE 100 is to “present the issues of professional conduct in the practice of engineering, research, publication, public and private disclosures, and in managing professional and financial conflicts”.

After the introduction, there are eight lectures on the first eight chapters from the required textbook (Ethics of Emerging Technologies: Scientific Facts & Moral Challenges by Budinger & Budinger - Wiley 2006). The following weeks would all be debates. The weekly discussion session mainly includes case studies, group activities, and lecture material reflection.

Lecture and discussion attendance are required. Weekly reflection would be case studies or guided discussion. Each student would be in one debate. There are announced quizzes for lectures and pop quizzes for discussions. One final consists of a take-home part and an in-class exam.

PREREQUISITES

N/A

TOPICS COVERED

- Textbook Based Lectures
  - Chapter 1: Ethical Principles, Reasoning and Decision Making
  - Chapter 2: Ethics in Scientific Research
  - Chapter 3: Ethics in Information Technology
  - Chapter 4: Business Ethics
  - Chapter 5: Environmental Ethics
  - Chapter 6: Ethics of GMOs
  - Chapter 7: Medical Ethics
  - Chapter 8: Ethics of Human & Animal Experiment
- Debates
  - Topics proposed by the students and then finalized by the instructors

WORKLOAD

COURSEWORK

- Weekly Reflections
- Discussions
  - Participation
  - Pop quizzes
- Debate
  - Group assigned within discussion session by random
  - Topics assigned based on group preference but side assigned by random
- In class response
  - Quizzes
  - Each debate two polls
- Final exam
  - Take home (case studies, course reflection, develop personal ethics code)
  - In class (multiple choice based on facts memorization from the textbook)

TIME COMMITMENT

- 3 hours of lecture and 1 hour of discussion per week
- Weekly reflection (~ 0.5 - 2 hrs, some would just be personal opinion but others would require some online research)
- Debate (~ 5 hrs, would know the topics, sides, and order around 1/3 of the semester, a GSI check-in during one of the discussion sessions, the debate itself

would be during 1.5 hr lecture time)

- Preparation for the quizzes and final

CHOOSING THE COURSE

WHEN TO TAKE

- Fall only
- Fulfills Chem/ChemBio allied subject

WHAT NEXT?

May look into other ethics courses (different departments)

ADDITIONAL COMMENTS AND TIPS

The course description is based on my BioE 100 experience with Prof. Nidhi Ahuja. I do not think it was curved. The content may vary to a certain extent based on the instructors.

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