Fall
2025

Introduction to Biomedical Ethics

Instructor:	Dr. Ruiqi DONG
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Office hours:	Monday 13:00~18:00 PM Tuesday 9:00~12:00 AM Any other days - by appointment only at N522
Class time:	Tuesday 18:30-21:05 PM
Class location:	SCUPI new building S104

Catalog Description:

This course is aimed to benefit junior/senior students who are interested in the field of biomedical research. By studying the moral foundation and four basic principles of bioethics, students could understand the fundamental concepts and core issues of bioethics, and develop critical thinking skills to analyze ethical dilemmas in medicine, biology, and technology. By exploring ethical controversies from diverse cultural, religious, and philosophical perspectives in the class, students will be guided to resolve moral dilemmas in real-life cases through thoughtful judgment and self-consistency of moral beliefs. The course objective is to cultivate students to approach, explore, solve, and expand cutting-edge issues in the field of biomedical ethics with the most open attitude.

Course contributes to the following ABET Criterion 3 outcomes:

2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

Reference:

Principles of Biomedical Ethics (Eighth Edition), *Tom L. Beauchamp and James F. Childress*, Oxford University Press, 2019.

Grades

Attendance	20%
Mid-term report and presentation	50%
Final report	30%

Topics Covered:

1. Definitions and Historical Context of Bioethics
2. Core Ethical Principles: Autonomy, Non-maleficence, Beneficence, Justice
3. Ethical Theories: Utilitarianism vs. Deontology
4. Ethical Theories: Virtue Ethics and Ethics of Care
5. Beginning & End of Life: Ethics of Abortion and Embryo Research
6. Beginning & End of Life: Euthanasia and Palliative Care
7. Genetic Technologies: Ethical Challenges of Gene Editing
8. Genetic Technologies: Eugenics and Designer Babies
9. Healthcare Justice: Allocation of Scarce Resources
10. Healthcare Justice: Global Health Inequalities
11. Research Ethics: Informed Consent and Protection of Vulnerable Populations
12. Research Ethics: Historical Cases: Tuskegee Syphilis Study
13. Emerging Technologies: AI in Healthcare: Bias and Accountability
14. Emerging Technologies: Brain-Computer Interface and Mind Uploading

Attendance:

On-time attendance at all class activities is expected and will be graded, that means students are responsible for any material that was covered, and any changes to the exam dates and homework assignments announced in class.

If you miss one-third or more of the classes this semester, you will fail directly.

Mid-term and Final Reports

The midterm report will be presented in group format. Every 4 or 5 students in a group, each group should complete a case analysis report based on the assignment topic and indicate each person's contribution. And then you will give a group oral presentation in class, which will be evaluated jointly by the instructor, guest judges, or other students..

The final report will be completed by an individual and submitted within the designated time. If you miss the submission deadline, **NO make-up** will be given without prior arrangement. If you have a serious conflict with the exam time, you MUST discuss it with the INSTRUCTOR well ahead of the scheduled exam day to make an appropriate arrangement.

You are encouraged to use AI to search for relevant materials and useful information, but **plagiarism and direct use of AI writing are strictly prohibited**. If your report is deemed to have been generated by AI, it will be considered **cheating behavior**. Your course grades will be cancelled and this action will be reported to the academic committee of the institute.

Other Policies

The instructor reserves the right to extend credit for alternative assignments, projects, or presentations and to make changes to this syllabus as needed. All changes will be announced via Blackboard and/or announced in class.

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Class Week	Topic
1	Interpretation of Syllabus Introduction: What is Bioethics? Definitions and Historical Context
2	Core Ethical Principles: Autonomy, Non-maleficence, Beneficence, Justice
3	Ethical Theories: Utilitarianism vs. Deontology
4	Ethical Theories: Virtue Ethics and Ethics of Care
5	Beginning & End of Life: Ethics of Abortion and Embryo Research
6	Beginning & End of Life: Euthanasia and Palliative Care
7	Genetic Technologies: Ethical Challenges of Gene Editing
8	Genetic Technologies: Eugenics and Designer Babies
9	**Mid-term report and oral presentation (in groups)**
10	**Mid-term report and oral presentation (in groups)**
11	Healthcare Justice: Allocation of Scarce Resources
12	Research Ethics: Informed Consent and Protection of Vulnerable Populations
13	Research Ethics: Core provisions of the Helsinki Declaration
14	Emerging Technologies: AI in Healthcare: Bias and Accountability
15	Emerging Technologies: Brain-Computer Interface and Mind Uploading
16	**Final report**