

Frontiers in Bioethics
BioCEP
Dr. John D. Loike and Dr. Ruth Fischbach
Center for Bioethics,
Columbia University
Spring 2011

Classroom hours: 40 hours (including lectures, debates, and student presentations)
Off-site visits 15 hours (five visits)

COURSE SYNOPSIS:

In this seminar-style course, students will examine two basic topics. First, how emerging biotechnologies (such as human cloning, transgenic technologies, new reproductive technologies, genomics, and proteomics) impact emerging bioethical challenges. Second, how culture and religion impact bioethics. Students will engage in discussions, debates, and role playing in enabling them to better analyze and resolve bioethical dilemmas. About 30% of the time, students will attend off-site visits to various institutions to see first-hand how culture and religion influence bioethical issues.

REQUIREMENTS:

Students should have at least one year of college level biology. All students will be expected to attend class regularly and to keep up with assigned reading. Students will be graded based on: a student presentation on a cross-cultural bioethical dilemma, a final paper that the student writes based on the presentation and the comments emerging from his or her presentation, and student participation in the class. The paper will be due by Sept 1, 2011. Selected papers will be considered for publication in the Columbia University Journal of Bioethics.

GRADING:

Student Presentation	- 33%
Student Paper	-33%
Class Participation	-33%

TOPICS

Topics are taught by faculty and guest speakers from the USA and host country. The list below is provided for Thailand (topics in India will be similar and taught by faculty from the USA and India).

1. Science, religion and medical ethics: Topics will include:

Basic principles of Buddhism,

Buddhism perspectives on bioethical issues such as the beginning of life, end of life, and reproductive medicine

Bioethics in Thailand

Culture and education in Thailand

Faculty: Phra Chainarong, a Buddhist monk who specializes in bioethics

Dr. Ruth Fischbach, Center for Bioethics, Columbia University

Mr. Brian Phillips, Dean of Mahidol University International College

2. Stem Cell Research: Topics will include:

Progress in Stem cell technology
Future clinical applications of stem cell technology
When does human life begin
How is human life defined
Legal and Social ramifications of stem cell technology

Faculty: Dr. Suradej Honging, Department of Pediatrics, Faculty of Medicine,
Ramathibodi Hospital, Mahidol University
Dr. John D. Loike, Center for Bioethics, Columbia University

3. Cancer & Ethics: Topics will include:

Ethics of clinical testing
Patient rights and confidentiality

Faculty: Dr. Saw Neha, National Cancer Institute of Thailand
Off-site visit to the National Cancer Institute of Thailand

4. Human cloning and human-animal chimeras: Topics will include:

Human reproductive cloning
Cloning the Neanderthal woman
Reconstituting human brains or a human uterus in animals

Faculty: Dr. John D. Loike, Center for Bioethics, Columbia University
Thai faculty to be named

5. Alternative Medicine: Topics will include:

Health Care system in Thailand
Integrating Western and Eastern therapies
Educating of the medically uninformed about Western medicine

Faculty: Associate Professor Prasert Assantachai, Head, Department of Preventative
Medicine, Siriraj Hospital, Mahidol University
Dr. Visan, Deputy Director, Jubilee Hospital
Dr. Ruth Fischbach, Center for Bioethics, Columbia University
Off-site visit to the Alternative Medicine Clinic at Jubilee Hospital

6. Medical Tourism: Topics will include:

Medical tourism- an emerging area of medicine
Impact of medical tourism on insurance and medical training
Future directions for medical tourism

Faculty: Dr. Isamael Naypa, Associate Director of Yanhee Hospital of Health and Beauty
Dr. John D. Loike, Center for Bioethics, Columbia University
Dr. Supot Sumritvanitcha, Owner & Managing Director of Yanhee Hospital
Off-site Visit- Yanhee Hospital of Health and Beauty

7. Reproductive Biology: Topics will include:

IVF
Abortion
PGD

Faculty: Associate Professor Prasert Assantachai, Head, Department of Preventative
Medicine, Siriraj Hospital, Mahidol University
Associate Professor Orawan Kiriwat, Siriraj Hospital, Mahidol University

Dr. Isarin Tanabunyawat, Director of IVF clinic, Siriraj Hospital, Mahidol University
Off-site visit- Molecular Laboratory and IVF Clinic, Siriraj Hospital, Mahidol University

8. Genetic Screening: Topics will include:
Genetic Screening from embryo to birth
Genetic Counseling
Sex selection
Surrogate motherhood

Faculty: Dr. Chanin Limwongse, Genetic Counseling, Siriraj Hospital, Mahidol
Dr. Ruth Fischbach, Center for Bioethics, Columbia University
Off-site Visit- Genetic Counseling at Siriraj Hospital, Mahidol University

9. Sexually Transmitted Diseases, AIDS, and Birth Control:
Faculty: Dr. Somyot Kittimunkong, Chief AIDS Cluster, Ministry of Public Health, Thailand
Dr. Ruth Fischbach, Center for Bioethics, Columbia University

10. Neuroethics
Faculty- Dr. Naiphinich Kotchabhakdi, Director of Neuro-Behavioural Biology Center, Mahidol University
Dr. Ruth Fischbach, Center for Bioethics, Columbia University

11. Student Presentations- Each student from North America will partner with a student from Southeast Asia to present a 30 min lecture and discussion on topics in cross-cultural bioethics. Previous topics have included: Hymenoplasty: Bioethical Issues, Singing a Song of Death (End of Life Issues), Cognitive Enhancement or Academic Doping?, fMRI Lie Detection (Neuroethics).

READINGS

Selected readings from “Frontiers in Bioethics” by John D. Loike, Ph.D. and Ruth L. Fischbach, Ph.D.. This unpublished book has been used as the basic text for “Crossroads in Bioethics” course taught at Columbia College for the past six years.

Chapters in the course

1. Traditional ethical approaches to bioethics
 - a. (Ethical theory; justice, non-malificence, beneficence, autonomy, deontology, utilitarianism)
2. Redefining research bioethics
 - a. (rationale, developing appropriate guidelines, regulation)
3. The Science of nuclear transfer technology
 - a. (early human embryology, nuclear transfer)
4. The bioethics of reproductive cloning: Patenting a Designer Human Being.
 - a. (individuality, fetal rights, is reproduction a parental right or privilege?)
5. Human stem cells: the alchemists dream
 - a. (definition, functions, sources, potential medical applications, potential medical risks)
6. Bioethics of stem cell research: The web of life’s beginnings
 - a. (When does human life begin, Religious theories, Classical ethical theories, Public views)

7. Human-animal chimeras and synthetic biology
 - a. (reconstituting human embryonic stem cells in mice, reconstituting human brain cells into mice and monkeys, creating artificial organisms)
8. Genetic Sovereignty of Human Disease
 - a. (origins of mutations, imprinting, genetic basis of diseases, dominant, recessive, genes that increase susceptibility, Genetic testing)
9. Neurotechnology and Neuroethics
 - a. (brain imaging and its impact on behavior science)
10. Women's Reproductive Technology
 - a. (oocyte freezing, egg freezing, egg donation, IVF, regulation of menses)
12. Women's Reproductive Technology: Ethical Standpoints
13. Ethical Considerations Emerging From Future Biotechnologies

In addition, published papers on various topics are presented to the students for background material

VISITS

The list of visits below is for Thailand. Similar visits will be organized in India.

- Genetic Counseling at Siriraj Hospital, Mahidol University
- Molecular Laboratory and IVF Clinic, Siriraj Hospital, Mahidol University
- Yanhee Hospital of Health and Beauty
- Alternative Medicine Clinic at Jubilee Hospital
- National Cancer Institute and Hospital of Thailand