



DIVISION OF SOCIETY, CULTURE, MEDIA AND PHILOSOPHY
DEPARTMENT OF PHILOSOPHY

PHIL260/ELS 860
BIOETHICS AND BIOTECHNOLOGY

Semester 2, 2008

UNIT INFORMATION & READING LIST

**MACQUARIE UNIVERSITY
DIVISION OF SCMP
PHIL260/ELS860 UNIT OUTLINE**

Year and Semester: 2008, Semester 2.

Unit convenor: Dr Mianna Lotz

Students in this unit should read this unit outline carefully at the start of semester. It contains important information about the unit. If anything is unclear, please consult Dr Lotz.

ABOUT THIS UNIT

This unit introduces students to some of the major ethical questions and concerns posed by current developments in biotechnology. The unit is designed to equip students with a distinctly ethical perspective and framework from which to evaluate the new and often controversial developments in this field of science. The unit is divided into three parts: (i) An introduction to key ethical concepts and theories and to a philosophical style of reasoning, issues of social justice, and the relationship between scientific enquiry and social/moral values in the context of biotechnology; (ii) A consideration of key ethical issues posed by biotechnology in the spheres of human medicine and reproduction – including genetic screening/testing, genetic therapies (somatic and germline), genetic enhancement and cloning; (iii) an exploration of the impact of biotechnologies on other aspects of human, non-human animal, and environmental wellbeing – including GMOs, GE food, genetic screening for insurance purposes and in the workplace, and bioprospecting for pharmaceutical resources. The unit aims primarily to develop an understanding of the philosophical and conceptual – rather than scientific or technological – issues, and presumes no prior knowledge/education in the sciences.

TEACHING STAFF

Convenor and Lecturer: Dr Mianna Lotz
Room 734, W6A
Tel: 9850 8804
Email: Mianna.Lotz@scmp.mq.edu.au
Consultation hours: Wednesday 2–3pm; Thursdays 3–4pm. Other times by appointment.

CLASSES

Students are required to attend one lecture (2 hours duration) per week, plus one tutorial (1 hour duration) per week.

Lectures: Thursdays 11am-1pm E5A119

Tutorials: Thursdays 2-3pm E6A 108

*Tutorials commence in the **second** week of semester.*

Satisfactory attendance at tutorials is a compulsory requirement in this unit. Students who fail to attend at least 75% of tutorials will not be eligible to sit the final examination.

The timetable for classes can be found on the University website at: <http://www.timetables.mq.edu.au>

REQUIRED AND RECOMMENDED TEXTS

The required reading for this unit is contained in the course reader: *PHIL260/ELS860 Bioethics and Biotechnology*, available at the Co-op Bookstore on campus.

The readings contained in the Reader are **compulsory** reading for this unit. You will be expected to keep up with the readings throughout semester, and tutorial discussion will presume prior familiarity with the relevant readings.

An additional list of Supplementary Readings will be provided on the WebCT for this unit (see below). Most of the readings on this list will be available either online (for journal articles) or at the University Library, and many of them are available on Reserve (3-hour lending). The Supplementary Readings list will be updated and expanded throughout semester, so students are advised to check it regularly.

UNIT WEB PAGE

There is an Online Unit page for this unit, which can be found at: <http://learn.mq.edu.au>

Alternatively you can access the PHIL260/ESL860 Online Unit site via the Departmental website (www.phil.mq.edu.au/undergraduate.htm) and clicking “Undergraduate” and “PHIL260”. On the website you will find the unit outline, copies of lecture handouts, essay questions, and other general information about the unit. Lecture handouts will be posted on the website shortly after the lecture.

EXPECTED WORKLOAD

This unit is a combined undergraduate and Graduate Certificate/Masters in Biotechnology unit. Only students enrolled in the Graduate Certificate or Masters in Biotechnology are eligible to complete this unit under the ELS860 unit code. For all students, this unit is worth 4 credit points. It is assumed that 1 credit point equals 3 hours work per week on average, across the whole semester (including non-teaching weeks), including classes. That means that for this unit you are expected to put in on average *12 hours work per week* across the whole semester (including the 3 hours of classes per week). You need to allocate a substantial amount of weekly reading time in order to succeed in this unit.

LEARNING OUTCOMES

The objectives of this unit are to develop the following discipline-based skills:

- A sound understanding of the ethical issues posed by specific biotechnological advances
- A strong grasp of the key ethical principles that arise in debates concerning the applications of biotechnological developments
- Ability to apply the skills involved in ethical reasoning and argument

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop students’ generic skills in a range of areas. One of the aims of this unit is that students develop their skills in the following:

- *Critical thinking skills:* you will learn how to *identify* ethical issues and problems, and how to *analyse* and *evaluate* arguments
- *Problem-solving skills:* you will learn how to *apply* ethical principles and theories to real-world situations and challenges, and will *develop* these application skills
- *Communication skills:* you will develop your skills in expressing your ideas clearly and logically, both orally (in tutorials and lectures) and in writing (in assignments)
- *Creative thinking skills:* you will learn how to construct arguments in support of your own ethical positions/values

TEACHING AND LEARNING STRATEGY

PHIL260/ELS860 is taught through lectures and tutorials. Opportunities will be provided throughout the unit for interactive discussion, in both plenary and small-group formats, and in both lectures and tutorials.

There are weekly reading requirements that must be completed prior to lectures and tutorials. Students are expected to come to tutorials prepared to discuss the topics covered in the lecture and readings. Students are also expected to participate actively in lectures, which will incorporate designated participation segments (small group or plenary).

A week-by-week list of topics to be covered in lectures can be found at the end of this Outline.

RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

Assessment for the unit is made up of 5 **compulsory** components. All assessment must be completed in order to be eligible to pass the unit.

- The **in-class test**: is designed to assess your ability to identify ethical principles and apply an ethical style of reasoning and argument to a case study.
- **Class participation**: You will be assessed on *both* your tutorial attendance (frequency) *and* your contribution to discussion in tutorials (quality). **Please note**: Satisfactory attendance at tutorials is a **compulsory** requirement in this unit. Students who fail to attend at least 75% of tutorials will not be eligible to set the final examination.
- **Essay(s)**: The **essay tasks** are designed to test your ability to engage with an ethical issue in depth. Essay writing tests your ability to express, analyse and organise key ideas clearly and systematically, and to develop an argument in a sustained way. Depending on the assessment option (A or B below) students will be required to submit one or two essays (for PHIL260 students a word length of 1500 words per essay applies; for ELS860 the word length is 2000 words.) Essay topics will be distributed at least one month before each due date, and will be available on the unit website.
- **Class presentation**: This assessment task is compulsory for ELS860 students (unless an exemption has been applied for and granted by Dr Lotz) and optional for PHIL260 students. This assessment offers an opportunity for students to substitute one essay for a written report plus 15-minute presentation to the class. The presentation must consist of a critical discussion of one of the class readings, and must take place in the week for which that reading is designated. Students are expected not merely to summarise the views presented in the reading, but to engage *critically* with them. **Presentation reports must be fully written and submitted immediately following the class presentation.** *Further guidelines for presentations will be supplied early in the semester.* You will need to consult with Dr Lotz in order to have your presentation option confirmed. Students doing presentations will need to submit their topic request to Dr Lotz by Week 3 (Thursday August 21). Only one presentation will be held per lecture, and there will be only one presentation per topic/reading. Topics will be allocated on a first-come-first-serve basis. A schedule of class presentations will be provided to all students after Week 3. **Important note**: Once your class presentation request has been confirmed, you are committed to giving the presentation, and can only opt out of it with the approval of Dr Lotz. Students who fail to give a committed-to presentation, without having re-negotiated with Dr Lotz, will forfeit that 25% of their overall grade.
- **The short-answer examination** will be held in the examination period at the end of semester and is designed to test your general familiarity with the main ideas and issues covered in the lectures, tutorials and readings.

Assessment weightings:

- (i) **In-class test: 15%**
- (ii) **Class participation: 10%**
- (iii) **Option A: 2 essays: 50% (25% each)**
Option B: 1 class presentation + report (25%) plus 1 essay (25%)
- (iv) **Short answer Exam (1.5 hours): 25%**

Assessment dates:

- In-class test: 11am, Thursday 21 August 2008**
- Essay 1: Friday September 19, 4pm**
- Essay 2: Friday November 7, 4pm.**

Please **submit** your essays and presentation reports through the **SCMP Enquiry Office** on the ground floor of **Building W6A**, via the appropriate Philosophy submission chute. You must attach a signed Philosophy Cover Sheet to all work submitted. No essays will be accepted via email. You will also be required to submit your essays electronically via the Turn-It-In anti-plagiarism system (further details to be supplied in class).

Extensions must be requested **before** the due date. Essays submitted after the due date, or after the extension date, will lose 1 mark for each day late, including weekends. (Please note that deadlines in other subjects, and foreseeable workload pressures, will not be regarded as legitimate reasons for the granting of extensions.)

The first essay will be returned, with comments, in tutorials approximately 3 weeks after the due date. The second essay will be available for students to collect from the SCMP office, Level 1, Building W6A, from November 21, 2008.

EXAMS

The 2008 end-of-year examinations will be held between Wednesday 19 November and Friday 5 December, including Saturdays. You are expected to present yourself for examination at the time and place designated in the University Examination Timetable. The timetable will be available in draft form approximately eight weeks before the commencement of the examination period and in Final form approximately four weeks before the commencement of the examination period. Details can be found at <http://www.timetables.mq.edu.au/exam>

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration. Information about unavoidable disruption and the special consideration process is available at <http://www.reg.mq.edu.au/Forms/APSCon.pdf>

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period.

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, that is the final day of the official examination period.

FINAL GRADES AND UNIVERSITY POLICY ON GRADING

Academic Senate has a set of guidelines on the distribution of grades across the range from fail to high distinction. Your final result will include one of these grades plus a standardised numerical grade (SNG).

On occasion your raw mark for a unit (i.e., the total of your marks for each assessment item) may not be the same as the SNG that you receive. Under the Senate guidelines, results may be scaled to ensure that there is a degree of comparability across the university, so that units with the same past performances of their students should achieve similar results.

It is important that you realise that the policy does not require that a minimum number of students be failed in any unit. In fact it does something like the opposite, in requiring examiners to explain their actions if more than 20% of students fail in a unit.

The process of scaling does not change the order of marks among students. A student who receives a higher raw mark than another will also receive a higher final scaled mark.

For an explanation of the policy see

<http://www.mq.edu.au/senate/MQUonly/Issues/Guidelines2003.doc> or
<http://www.mq.edu.au/senate/MQUonly/Issues/detailedguidelines.doc>.

Your overall grade for this course will be worked out by adding up all your marks, scaling according to the University guidelines for grading, and translating these into a grade (High Distinction, Distinction, Credit, Pass etc.). The table below lists the range of scaled marks aligned to each grade.

	<i>Grade</i>	<i>Scaled marks</i>
HD	High Distinction	85-100
D	Distinction	75-84
Cr	Credit	65-74
P	Pass	50-64
PC	Pass Conceded	45-49
F	Fail	0-44

PLAGIARISM

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. You must read the University's practices and procedures on plagiarism. These can be found in the *Handbook of Undergraduate Studies* or on the web at:

<http://www.student.mq.edu.au/plagiarism/>

The policies and procedures explain what plagiarism is, how to avoid it, the procedures that will be taken in cases of suspected plagiarism, and the penalties if you are found guilty. Penalties may include a deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

N.B. SEARCH ENGINES WILL BE USED TO CHECK ANY ESSAY SUSPECTED OF PLAGIARISM FROM WEB SITES. Where evidence of plagiarism is found, assignments may be given zero and further disciplinary action may be taken.

STUDENT SUPPORT SERVICES

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at <http://www.student.mq.edu.au>.

SCHEDULE OF CLASSES AND REQUIRED READINGS

Note: The following are REQUIRED readings for this unit. All readings listed below are in the Unit Reader. Where more than one reading is listed priority is to be given to reading(s) marked ‘’, but it is expected that all readings listed here will have been read by the end of the unit.*

SECTION I: (LECTURES 1–4) FRAMEWORKS FOR ETHICAL REASONING

LECTURE 1 (Aug 7): Introduction/overview of course. Introducing the process and principles of ethical reasoning.

Reading:

- *Stephen Cohen: ‘What is Ethics?’
- *James Rachels: ‘What is Morality?’

NOTE: NO TUTORIALS in Week 1

LECTURE 2 (Aug 14): Overview of key moral theories and their applications to issues in biotechnology

Reading:

- * Damian Grace and Stephen Cohen: Excerpt from *Business Ethics: Problems and Cases*.
- * Anne Thomson: ‘Moral Principles and Moral Theories’.

LECTURE 3 (Aug 21): IN-CLASS TEST plus the role of ethics and social values in science.

Reading:

- * Campbell: ‘Biotechnology and Fear of Frankenstein.’
- Glass: ‘The Ethical Basis of Science.’

LECTURE 4 (Aug 28): The moral legacy of eugenics and key principles of justice in biotechnology.

Reading:

- * Buchanan et al: Excerpt from ‘Eugenics and Its Shadow’
- * Wikler and Barondess: ‘Bioethics and Anti-Bioethics in Light of Nazi Medicine: What Must We Remember?’
- Buchanan et al: Excerpt from ‘Genes, Justice and Human Nature.’

SECTION II (LECTURES 5–9): GENETIC TECHNOLOGY IN THE SPHERE OF HUMAN HEALTH AND REPRODUCTION

LECTURE 5 (Sept 4): Ethical issues posed by genetic screening and diagnosis.

Reading:

* Clarke: 'Genetic Screening and Counselling.'

Steinbock: 'Preimplantation Genetic Diagnosis and Embryo Selection.'

LECTURE 6 (Sept 11): The ethics of somatic and germline genetic therapy.

Reading:

* Chadwick: 'Gene Therapy.'

* Elias and Annas: 'Somatic and Germline Gene Therapy.'

Warren: 'The Moral Status of the Gene.'

LECTURE 7 (Sept 18): Stem cell research and the moral status of human embryonic stem cells.

Reading:

* Harris: 'Stem Cells, Sex and Procreation'

Excerpts from 'The Lockhart Review' (*Legislation Review: Prohibition of Human Cloning Act 2002 and Research Involving Human Embryos Act 2002*).

NOTE: THERE WILL BE NO TUTORIALS THIS WEEK (to allow you to put those finishing touches on your essays!)

ESSAY 1 DEADLINE: Friday September 19, 4pm.

MONDAY 22 SEPTEMBER – FRIDAY 3 OCTOBER: MID-SEMESTER BREAK

LECTURE 8 (Oct 9): The acceptability of genetic enhancement, and the moral significance of the therapy/enhancement distinction.

Reading:

* Pinker: 'Better Babies? Why Genetic Enhancement Is Too Unlikely To Worry About.'

* Harris: 'Is Gene Therapy a Form of Eugenics?'

LECTURE 9 (Oct 16): Would it be morally permissible to clone human beings?

Reading:

* Brock: 'Cloning Human Beings: An Assessment of the Ethical Issues Pro and Con.'

Holm: 'A Life in the Shadow: One Reason Why We Should Not Clone Human Beings.'

Kass: 'The Wisdom of Repugnance.'

SECTION III (LECTURES 10–13): THE SOCIAL AND ENVIRONMENTAL IMPLICATIONS OF BIOTECHNOLOGY

LECTURE 10 (Oct 23): Use of genetic information for employment and insurance purposes.

Reading:

- * McLean and Mason: ‘Genetics, Insurance and Employment.’
- * MacDonald and Williams-Jones: ‘Ethics and Genetics: Susceptibility Testing in the Workplace.’
- O’Neill: ‘Genetic Information and Insurance: Some Ethical Issues.’

LECTURE 11 (Oct 30): Ethical issues posed by commercial exploitation of genetic material.

Reading:

- * Chadwick and Hedgecoe: ‘Commercial Exploitation of the Human Genome’
- Munzer: ‘Property, Patents and Genetic Material.’
- Christie: ‘Enclosing the Biodiversity Commons: Bioprospecting or Biopiracy?’

LECTURE 12 (Nov 6): Ethical issues in food biotechnology.

Reading:

- *Thompson: ‘Ethical Issues in Food Biotechnology’
- Altieri and Rosset: ‘Ten Reasons Why Biotechnology Will Not Ensure Food Security, Protect the Environment and Reduce Poverty in the Developing World.’
- McGloughlin: ‘Ten Reasons Why Biotechnology Will Be Important to the Developing World.’

ESSAY 2 DEADLINE: Friday November 7, 4pm.

**LECTURE 13 (Nov 13): Environmental ethics and plant biotechnology.
Exam Information.**

Reading:

- * Nuffield Council on Bioethics: ‘The Environmental Impact of Genetically Modified Crops: The Ethical and Social Issues.’
- Wills: ‘Disrupting Evolution: Biotechnology’s Real Result.’

SEMESTER ENDS – EXAMINATIONS BEGIN

Thanks – hope you enjoy the course!