



TQF 3 Course Specifications

Section 1 General Information

1. Course code and course title

Thai จริยธรรมทางชีววิทยา

English Ethics for Biological Sciences

2. Number of credits 4 (4-0-7)

3. Program and type of subject

3.1 Program Undergraduate Degree (International Program)

3.2 Type of Subject Required

4. Course Coordinator and Course Lecturer

4.1 Course Coordinator Associate Professor Chulathida Chomchai, M.D.

4.2 Course Lecturer Associate Professor Chulathida Chomchai, M.D.

5. Trimester/ Year of Study

5.1 Trimester 1-2-3

5.2 Course Capacity Approximately 30 students

7. Co-requisites N/A

8. Venue of Study Mahidol University International College

9. Date of Latest Revision

Date MonthYear

Section 2 Goals and Objectives

1. Course Goals

Goals in this course include introducing students to the basics of ethics and ethical thinking, presenting the main ethical principles of bioethics, and showing how these apply to key areas of practice involving biotechnology, including interventions into reproduction, end-of-life decision-making, and genetic research, as well as the ethical codes of conduct which governs clinical trials on human and professionalism of scientists.

2. Objectives of Course Development/Revision



2.1 Course Objectives

- 2.1.1 Identify ethical issues in everyday life, medicine, health care and life science
- 2.1.2 Identify and discuss basic principles of bioethical practice, such as the importance of autonomy, and good professional practice, and apply them to specific situations.
- 2.1.3 Use ethical reasoning to decipher ethical dilemmas
- 2.1.4 Display greater awareness and tolerance for ethical disagreement among people and ethical ambiguity in reasoning.

2.2 Course-level Learning Outcomes: CLOs

By the end of the course, students will be able to (CLOs)

CLO 1 Recognize ethical issues present in human and animal experimentation(5.1)
CLO 2 Recognize emerging ethical issues in the discipline of biological sciences(5.2)
CLO 3 Apply known ethical standards and principles to resolve ethical dilemmas(5.3)
CLO 4 Select a course of action that is in accordance with moral and ethical standard of society (5.4)
CLO 5 Recognize alternative courses of action for any given ethical dilemma (5.3)
CLO 6 Integrate knowledge in biological science with ethics to solve new ethical dilemma (6.1)



Section 3 Course Management

1. Course Description

(Thai) หลักจริยธรรมและค่านิยมที่เกี่ยวข้องกับชีวิตโดยเฉพาะอย่างยิ่ง การใช้เทคโนโลยี (โดยเฉพาะเทคโนโลยีชีวภาพ และทางการแพทย์) เพื่อรักษา ต่อชีวิต และหรือแม้แต่สร้างชีวิตมนุษย์ วิเคราะห์หลักการทางจริยธรรมที่เกี่ยวข้องกับการใช้เทคโนโลยีชีวภาพ ในการเริ่มต้นชีวิต การบริจาคอวัยวะ เทคโนโลยีการเจริญพันธุ์ ชีววิทยาโมเลกุลทางการแพทย์ และการวิจัยในคน และอภิปรายประเด็นจริยธรรมที่เกี่ยวข้องกับการใช้ชีวิตในยุคเทคโนโลยีที่ทุกคนจะเผชิญกับคำถามดังกล่าวในชีวิตประจำวันของเรา

(English) Bioethics considers the ethical principles and values relevant to life, especially to the use of technology (particularly medical technology) to maintain, extend, and even produce human life. Many of these interventions occur in medical contexts, and so the bulk of our analysis concerns “medical ethics” more particularly. Our main area of consideration is life’s beginning— reproductive ethics—, but we will also apply our analyses to the questions of life’s ending, organ donation and human experimentation. These discussions are relevant to all thinking people on a practical level, as all of us will most likely face such questions in some form at some time in our lives.

2. Credit hours per trimester

Lecture (Hour(s))	Laboratory/field trip/internship (Hour(s))	Self-study (Hour(s))
48	-	84

3. Number of hours that the lecturer provides individual counseling and guidance.

4 hours per week

Section 4 Development of Students’ Learning Outcome

1. Short summary on the knowledge or skills that the course intends to develop in students (CLOs)

By the end of the course, students will be able to

CLO 1 Recognize ethical issues present in human and animal experimentation(5.1)
CLO 2 Recognize emerging ethical issues in the discipline of biological sciences(5.2)
CLO 3 Apply known ethical standards and principles to resolve ethical dilemmas(5.3)



CLO 4 Select a course of action that is in accordance with moral and ethical standard of society (5.4)
CLO 5 Recognize alternative courses of action for any given ethical dilemma (5.3)
CLO 6 Integrate knowledge in biological science with ethics to solve new ethical dilemma (6.1)

2. Teaching methods for developing the knowledge or skills specified in item 1 and evaluation methods of the course learning outcomes

Course Code	Teaching methods	Evaluation Methods
CLO1	Case study, VDO scenario and group discussion	Examination
CLO2	Ethics for everyday life case study	Portfolio of cases with discussion
CLO3	Case study, VDO scenario and group discussion	Examination
CLO4	Group discussion and presentation	Examination
CLO5	Group discussion and presentation	Examination
CLO6	Ethics in everyday life discussion	Portfolio of cases with discussion

Section 5 Teaching and Evaluation Plans

1. Teaching plan

week	Class schedule	time	ICBI 207	Ethics for Biological Sciences
	Date Friday		topic	teacher
1	1 May 2020	08:00-12:00	Introduction to Medical Ethics and Ethical Reasoning	Chulathida
2	8 May 2020	08:00-12:00	Autonomy and Confidentiality	Chulathida
3	15 May 2020	08:00-12:00	MiniQuiz and Good Death	Chulathida
4	22 May 2020	08:00-12:00	Medical Science and Life Support	Chulathida



5	29 May 2020	08:00-12:00	Advances and Complications of Fertility Treatment	Chulathida
7	5 Jun. 2020	08:00-12:00	Midterm	Chulathida
6	12 Jun. 2020	08:00-12:00	Preimplantation Genetic Diagnosis	Chulathida
8	19 Jun. 2020	08:00-12:00	Ethics of Biomedical Science Research (virtual tour: SIMR)	Dr. Prapaporn Jungtrakul
9	26 Jun. 2020	08:00-12:00	Intellectual Property Management (Group Presentation Preparation)	Chulathida Dr. Pattarachai Kiratisin
10	3 Jul. 2020	08:00-12:00	Ethics of Drug Research in Development Countries	Chulathida
11	10 Jul. 2020	08:00-12:00	Ethics of animal research	Chulathida Dr. Kasem
12	17 Jul. 2020	08:00-12:00	Group Presentation	Chulathida
13	24 Jul. 2020	08:00-12:00	Final Examination	
<p>*iStudy=independent study can be done any time before class. A short quiz will be given at the beginning of the interactive session.</p> <p>*INTV=interactive class time using Zoom where attendance is taken</p> <p>*GRP=interactive group discussion using Zoom and monitored by instructor</p>				

2. Plans for assessing course outcomes

2.1 Assessing and Evaluating Learning Achievement

a. Formative Assessment

Writing assignments submitted through e-learning

Questions and answers during class

Ethics in everyday life discussion and presentation

Grading	
Midterm	35%
Final	35%
Quiz	15%
Presentation and participation	15%



b. Summative Assessment

(1) Tools and Percentage Weight in Assessment and Evaluation

Learning Outcomes	Assessment Methods	Assessment Ratio (Percentage)	
CLO 1	Writing rubric	20	10
CLO 2	Writing rubric	20	20
CLO 3	Writing rubrics	20	60
CLO 4	Writing rubrics	20	80
CLO 5	Writing rubrics	5	85
CLO 6	Oral presentation rubrics	10	95
	quality of cases selected for portfolio	5	100

(2) Grading System

Grade	Achievement	Final score (% range)	GPA
A	Excellent	90-100	4.0
B+	Very Good	85-89	3.5
B	Good	80-84	3.0
C+	Fairly Good	75-79	2.5
C	Fair	70-74	2.0
D+	Poor	65-69	1.5
D	Very Poor	60-64	1.0
F	Fail	Less than 60	0.0

(3) Re-examination (If course lecturer allows to have re-examination)

N/A - (Not applicable with MUIC)

3. Student Appeals

Written appeal can be submitted through Biological Science Program Director



Section 6 Teaching Materials and Resources

1. Textbooks and/or other documents/materials
 - 1) Oxford Textbook of Biomedical Ethics
 - 2) Biomedical Ethics in Asia: case studies
2. Recommended textbooks and/or other documents/materials
 - 1) Ethics for Pediatricians collection of articles from Pediatrics in Review
 - 2) Declaration of Helsinki
 - 3) On being a scientist
3. Other Resources (If any)
https://www.youtube.com/watch?v=g_p0kmrFi_o
Outsourcing clinical trials in developing countries.

Section 7 Evaluation and Improvement of Course Management

1. Strategies for evaluating course effectiveness by students
 - 1.1 Student feedback of instructors, teaching methods and materials, and course content through MUIC student evaluation forms
 - 1.2 Written feedback submitted via Program Director
2. Strategies for evaluating teaching methods
 - 2.1 Evaluation of effectiveness based on student evaluation scores and comments
 - 2.2 Evaluation through peer observations by co-instructor or other Division faculty
 - 2.3 Formative evaluation through quizzes, case discussions or pre-post tests



3. Improvement of teaching methods

3.1 Adjustments based on student feedback, personal observations, comments from peer observations and discussions with supervisor and/or other Division faculty in one-on-one and/or group meetings as specified by MUIC guidelines

3.2 Adjustments based on recommendations from peer-observation, co-instructor or other faculty members

4. Verification process for evaluating students' standard achievement outcomes in the course

4.1 Verification through student performance on assessments based on MUIC/Division standards

5. Review and plan for improving the effectiveness of the course

5.1 Course instructors (and coordinator/supervisor) will meet to discuss results of student evaluations and student performance based on learning outcomes in order to identify point for improvement

5.2 Program instructors meet to discuss curriculum evaluation and improvement in the monthly Program meetings chaired by the Program Director

5.3 Strategy for improvement set according to MUIC/Division guidelines

5.4 Curriculum revision cycle set by MUIC Office of Academic Affairs



Appendix

Alignment between Courses and Program

Table 1 The relationship between course and Program Learning Outcomes (PLOs)

Course Name	Program Learning Outcomes (PLOs)					
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
Ethics for Biological Sciences						
ICBI 207	I	I	I	D	M	R

Note: Indicate the level of CLOs by letter I, R, P or M. Using the information as shown in the Curriculum Mapping of TQF2

Table 2 The relationship between CLOs and PLOs



(Course code)	Program Learning Outcomes (PLOs)					
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
ICBI 207						
CLO1					5.1	
CLO2					5.2	
CLO3					5.3	
CLO4					5.4	
CLO5					5.3	
CLO6						6.1

Table 3 The description of PLOs and Sub Los of the course

PLOs	Sub PLOs (CLOs)
5. Possess moral and ethical values	5.1 Recognize ethical issues of human and animal experimentation
	5.2 Recognize emerging ethical issues in biological science
	5.3 Apply accepted ethical standards to resolve ethical dilemma
	5.4 Implement the course of action in accordance with moral and ethical standard
6. Able to integrate different disciplines to formulate solutions for novel situations	6.2 Integrate knowledge from different disciplines to solve problem