



University of Management & Technology
School of Science
Department of Life Sciences

BT-403 Biosafety and Bioethics

Lecture Schedule	Monday & Thursday : 2:00-3:15pm	Semester	Fall 2019
Pre-requisite	---	Credit Hours	3
Instructor	Ms. Anam Amir	Contact Moodle link	
Office	3S-37	Office Hours	See office window
Course Description	<p>This module considers the ethics of biotechnology and the life sciences. It begins by giving the student an ethics toolbox with which to approach, analyse and assess current bioethical controversies and discourses. It then addresses specific topics to further explore ethical issues arising from biotechnology and its uses, as well as an exercise to explore crucial ethical concepts and arguments. Finally, in an age of moral pluralism, it can be difficult for stakeholders to secure social consensus on how new biotechnologies should be controlled and exploited. As a result, the regulation of biotechnology has often been a site of sharp disagreement. This module will also examine how the bioethical discussion feeds into the regulatory and governance considerations of biotechnology.</p>		
Expected Outcomes	<p>On completion of this course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Appreciate the range of competing considerations and interests at play in the ethics and regulation of biotechnology and the life sciences; 2. Formulate well-reasoned and coherent arguments relating to biotechnology and bioethics; 3. Show a solid understanding of current bioethical debates, concepts and arguments relating to bioethics, as well as their normative and regulatory implications where applicable. 		
Textbook(s)	IPR, Biosafety and Bioethics. Deepa Goel, Shomini Parashar.		
Grading Policy	<ul style="list-style-type: none"> • Quizzes & Class participation(s): 10% • Assignment 5% • Presentation 5% • Midterm: 30% • Final Exam: 50% 		

Course Schedule

Week	Lecture #	TOPICS	Chapter no.
1	1	General introduction	Manual(1)
	2	Introduction to Biosafety levels	1+2
2	1	Biosafety level 1	3
	2	Biosafety level 2	3
3	1	Biosafety level 3	4
	2	Maximal containment	5
4	1	Introduction to Biosafety	Book (8)
	2	Biosafety of genetically engineered product	11
5	1	Product developed in RDTs	11
	2	Biosafety in gene therapy	11
6	1	Allergenicity	12
	2	Assessment of genetically modified food	12
7	1	Assessment methods of GMOs food	12
	2	Good laboratory biosafety practice	16
8	1	Practice of level 3	16
	2	Practice of level 4	16
9	1	Mid Term Exams	
	2	Case study in IPR	17
10	1	Introduction to bioethics	13
	2	BT brinjal, cotton and golden rice	13
11	1	NGOs for biosafety	14
	2	NGOs for bioethics	14
12	1	Bioethics issues in transgenic animals	13
	2	Areas subjected to bioethics	13
13	1	Ethical issues in gene therapy and human cloning	13
	2	Other related issues to bioethics	13
14	1	Stem cell research, placebo and xenotransplantation issues	13
	2	Patency	5
15	1	Patent owner, rights	5
	2	Patent owner duties	5