Course Specification

(Postgraduate)

Course Title:	Ethical considerations in molecular diagnosis
Course Code:	373505-2
Program:	**Master of Clinical Laboratory Sciences in Molecular Diagnostics** **Master of Clinical Laboratory Sciences in Diagnostic Hematology**
Department:	**Clinical Laboratory Sciences**
College:	**Applied medical Sciences**
Institution:	**Taif University**
Version:	**No 3**
Last Revision Date:	18/01/2024

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A. General information about the course:

1. Course Identification:

1. Credit hours: (2 hrs)				
2. Course type				
A.	☐ University	☐College	☒ Department	☒ Track
B.	☒ Required		☐Elective	
3. Level/year at which this course is offered: (2nd level/1st year)				
4. Course general Description:				
On completion of this course, the students will be able to: • Understand the basic principles of ethical issues in molecular diagnose applied to health and disease. • Understand the Islamic, ethical, social, and legal issues related to several molecular areas such as genetic testing, genetic engineering, cloning and stem cell therapy and DNA fingerprinting.				
5. Pre-requirements for this course (if any)**:**				
None				
6. Pre-requirements for this course (if any)**:**				
None				
7. Course Main Objective(s):				
The purpose of this course is to allow students to develop a principle understanding of Ethical considerations in molecular diagnose and molecular research • Ethical issues in molecular sciences such as gene therapy, genetic testing, Bioethics in human diagnostic or experimental animal. • Islamic position of molecular biology, testing and research.				

2. Teaching Mode: (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	2 hours /week= 30 hours/semester	100
2	E-learning	N/A	0
3	Hybrid • Traditional classroom • E-learning	N/A	0
4	Distance learning	N/A	0

3. Contact Hours: (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	N/A
3.	**Field**	N/A
4.	**Tutorial**	N/A
5.	**Others (specify)……**	N/A
	Total	30

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods:

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Develop awareness of ethical, social, religious, environmental, and legal issues related to DNA studies and research and associated technologies.	K1	Lectures, Problem Based Learning	-Exams
1.2	Realize the criteria applied to molecular diagnosis and research.	K1	Lectures	-Exams
2.0	Skills			
2.1	Develop a research problem that has a significance in molecular diagnosis practice	S1	Problem Based Learning, group discussion.	Presentation
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate the role of bioethics in molecular biology	V1	Group discussion	Group discussion

C. Course Content:

No	List of Topics	Contact Hours
1.	Introduction and history of ethical consideration of molecular diagnosis	2
2.	General principle of ethics in molecular biology	4
3.	Ethical Questions and Dilemmas	2
4.	Bioethics in genetic testing	4
5.	Bioethics in gene transfer	2
6.	Bioethics in biological materials	2
7.	Ethical issues in cloning	2
8.	Ethical issue in stem cell research	2
9.	Ethics in experimental animal	2
10.	Overview of Morality and Ethics in Islam	4
11.	Ethical issues in Biotechnology	4
Total		30

D. Students Assessment Activities:

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Group discussions (X3)	4th week 10th week 14th week	60%
2.	Final presentation	19th	40%
	Total		100%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities:

1. References and Learning Resources:

Essential References	Ethical issues in Biotechnology and related areas By S.N. JOGDAND,2015 - Contemporary bioethics: Islamic perspective By Mohamad Ali Al-Bar& Hassan Chamsi-Pasha .2019
Supportive References	N/A
Electronic Materials	Websites, Search engines (Saudi Digital Library, PubMed, Google Scholar
Other Learning Materials	N/A

2. Educational and Research Facilities and Equipment Required:

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classrooms
Technology equipment (Projector, smart board, software)	Data show, Blackboard and A/V, interactive presentations softwares e.g. Mendeley
Other equipment (Depending on the nature of the specialty)	None

F. Assessment of Course Quality:

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Peer evaluators	Direct: Peer evaluation
Effectiveness of student's assessment	Students	Indirect: Questionnaire Survey at the end of each semester.
Quality of learning resources	Program Leaders /Teaching staff/ Development and accreditation committee	Indirect: Review by Department Committee
The extent to which CLOs have been achieved	Program Leaders /Teaching staff/ Development and accreditation committee	Indirect: Review course reports and program annual reports by Department Committee
Other	-	-

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval Data:

COUNCIL /COMMITTEE	Department council
REFERENCE NO.	06
DATE	**21/01/2024**

قسم المختبرات
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جامعة الطائف
TAIF UNIVERSITY