Course Description Form

1. Course Name:

Molecular Genetics

2. Course Code:

MOGE462

3. Semester / Year:

2024/2023

4. Description Preparation Date:

2024 / 2 / 1

5. Available Attendance Forms:

In Classroom

6. Number of Credit Hours (Total) / Number of Units (Total)

(3 unit) (45 hour)

7. Course administrator's name (mention all, if more than one name)

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8. Course Objectives

Course Objectives	1-Familiarity with genetic material 2-The nature of the formation of DNA and RN 3-Training on DNA isolation

9. Teaching and Learning Strategies

Strategy	1- Education strategy collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The first	3Theoretical	Introduction to molecular genetics Identify cells and their types	The cell and its components	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
The second	3Theoretical	Familiarity with cell division methods	Cellular division	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes

The third	3Theoretical	What is genetic material?	Genetic material	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
The fourth	3Theoretical	How genetic material is replicated	genetic material is replicated	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
Fifth	3Theoretical	Chemical components of genetic material	Chemical composition of genetic material	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
VI	3Theoretical	Identify the genetic code	Genetic code	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
Seventh	3Theoretical	Familiarity with the chemical structure of the chromosome	Chemical structure of the chromosome	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
VIII	3Theoretical	Inference about gene expression and protein synthesis	Gene expression and protein synthesis	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
Ninth	3Theoretical	How gene expression is regulated in prokaryotes and eukaryotes	Regulation of gene expression in prokaryotes and eukaryotes	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
The tenth	3Theoretical	Identifying genetic material outside chromosomes	Genetic material outside the chromosomes	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
Eleventh	3Theoretical	Identification of DNA in mitochondria	DNA in mitochondria	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
Twelveth	3Theoretical	How to obtain chloroplast and cytoplasmic genetics	Chloroplast and cytoplasmic genetics	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
Thirteenth	3Theoretical	Familiarity with genetic transfer	Genetic transfer	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
fourteenth	3Theoretical	Learn about ways to diagnose genes	Molecular methods in genetic diagnosis	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes
Fifteenth	3Theoretical	Learn about the applications of genetic engineering	Applications genetic engineering	In class and Use the Google Classroom website	Exams, reports, discussions, quizzes

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Molecular genetics and applications
Recommended books and references (scientific	

journals, reports...)	
Electronic References, Websites	

Subject teacher
Prof.Dr.Mohammed Subhi Mostufa

Head of scientific committee
Weam Yahya Rashid

Head of department
Maysar Muhammad Aziz