



ACADEMIC EXCELLENCE REDEFINED
American University of Ras Al Khaimah

Spring 2018

Syllabus for BIOL 270

General Genetics

Sunday-Tuesday-Thursday

12:00-12:50

I. Instructor Information:

Name: Dr. Maxime Merheb

Office: Room No. 4, Building C

Email: maxime.merheb@aurak.ac.ae

Office Phone: 07-2210500 ext. 1110

Please observe office hours or make an appointment for a different time.

II. Course:

Course Credit Hours: 3

Co-requisites: BIOL 271

III. Course Description:

Basic principles of heredity and modern developments in this field

IV. Course Materials and Basic Resources:

Essentials of Genetics, 8th Edition. William S. Klug, Michael R. Cummings, Charlotte A. Spencer, Michael A. Palladino,

ISBN-10: 0321803108 • ISBN-13: 9780321803108

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V. Course Goals and Student Learning Outcomes

Goals:

Survey the principles of genetics so that students will have a foundation for more specialized course.

Prepare students for various graduate examinations and careers in biological science

Student Learning Outcomes:

At the end of the course the student should be able to:

SLO 1	Define principles of genetics orally and through writing
SLO 2	Apply principles to genetics problems
SLO 3	Discuss and explain the causes and inheritance of some genetics diseases examples

VI. Weekly Topics and Assignments

Tentative Schedule

Week/Date	Chapter No.	Topics/In-Class Activities	Assignment Due Dates	S L O
Week 1	Chapter 1	Introduction to Genetics		1
Week 2	Chapter 2	Cell Structure and Genetic Function		1
Week 3	Chapter 3	Cell Structure and Genetic Function		1 - 2
Week 4	Chapter 4	Mitosis and Meiosis	Quiz	1 - 2
Week 5	Chapter 5	Mitosis and Meiosis		3
Week 6	Chapter 6	Mendels Principles: Monohybrid Crosses	Quiz	3
Week 7	Chapter 7	Mendels Principles: Dihybrid Crosses		2 - 3
Week 8		Mendels Principles: Trihybrid Crosses	Midterm	1 - 2 - 3
Week 9	Chapter 8			2

Week 10	Chapter 8	Modifications of Mendelian Genetics I		2
Week 11	Chapter 9	Modifications of Mendelian Genetics II		3
Week 12	Chapter 9	Modifications of Mendelian Genetics II		3
Week 13	Chapter 10	Chromosome Mutations Variation in Chromosome Number		3
Week 14	Chapter 11	Chromosome Mutations- Variation in Chromosome Composition and Arrangement	Quiz	3
Week 15	Chapter 12	Gene Mutation, DNA Repair, and Transposition	Quiz	3
Week 16			Revision/ Class activities	

VII. Evaluation of Learning

The grade breakdown is as follows:

Methods	Dates	Weights
4 Quizzes	Weeks 4, 6, 14,15	20%
Assignment	Week 16	20%

Midterm Exam	Week 8	20%
Final Exam	<u>Week 17</u>	40%

VIII. Grading System and Scale

University course work is measured in terms of quantity and quality. A credit normally represents one hour per week of lecture or recitation or not fewer than two hours per week of independent or laboratory work throughout a semester. The number of credits is a measure of quantity. The grade is a measure of quality. The university system for undergraduate grading is as follows:

Grade	GPA Points	Percentage Score
A	4.0	90-100
B+	3.5	87-89
B	3.0	84-86
B-	2.75	80-83
C+	2.5	77-79
C	2.0	74-76
C-	1.75	70-73
D+	1.50	67-69
D	1.0	64-66
D-	0.75	60-63
F	0	0-59

IX. Methodologies for Teaching and Learning:

The primary method of instruction will be lectures using a combination of audiovisuals, whiteboard, handouts, quizzes and take-home assignments. Home-work will comprise mainly of assigned readings (usually but not restricted to the textbook), and problem solving questions. To enhance student learning and analytical thinking, methods that enhance active participation as well as individual and co-operative learning will be employed. These include student-led discussions, question and answer and oral presentation. Relevant and recent course-related information from scientific and popular media will be briefly discussed in class. Students are encouraged to make good use of the textbook and the online resources for the textbook that provide additional materials such as animations and podcasts, interactive activities, suggested readings etc. Students will also be required to give oral presentations on topics relevant to the course material which will provide opportunities for enhancing presentation skills.

X. Relevant Policies

Relevant policies

A. Academic Misconduct

The Honor Code and Honor System

The Honor Code is an integral part of university life. Students are responsible, therefore, for understanding the code's provisions. Cheating and attempted cheating, plagiarism, lying, and stealing of academic work and related materials constitute Honor Code violations. In the spirit of the code, a student's word is a declaration of good faith acceptable as truth in all academic matters. To maintain an academic community according to these standards, students and faculty must report all alleged violations to the Honor Committee.

AURAK expects its students to uphold high standards of academic integrity and conduct. In particular, students are required to:

- Attend classes regularly and punctually.
- Be actively involved in class discussions and other course related classroom activities.
- Complete assignments on time.
- Meet the requirements for course and program completion.
- Abide by high standards of academic integrity, ethics, and honesty.
- Refrain from cheating on homework and examinations, plagiarizing other people's work by submitting it as their own, or any other forms of academic

dishonesty.

- Adhere to the published test or examination rules and regulations.
- Make every effort to maintain good academic standing.

Given the internet and easy access to information and knowledge sources, the University is committed to students' learning in an ethical manner. For all academic assignments, project work, and presentations, students need to ensure that due acknowledgement is given to the source of any information which they incorporate in their work. The following are some examples of academic misconduct:

- Cheating/using unfair means in examinations
- Significant paraphrasing in written academic work that is unacknowledged
- Unacknowledged use of information or ideas unless such ideas are commonplace
- Citing sources which student has not read or referred to
- Breaching the word limit of assignments and mentioning wrong word count
- Plagiarism

Plagiarism. Plagiarism is a serious academic offense. Plagiarism is the use of someone else's ideas, words, projects, artwork, phrasing, sentence structure or other work without properly acknowledging the ownership (source) of the property (item). Plagiarism is dishonest because it misrepresents the work of someone else as one's own. It is intellectual theft as it robs others of credit for their work. Plagiarism takes many forms including:

- Using someone else's words without putting those words in quotation marks and providing full information about their source, sufficient information so that another person could easily locate the words that are being quoted, whether it is in an article, a book, or on the web.
- Using unique, original ideas, phrases, sentences, paragraphs, or other materials, etc. from a single source or a variety of sources such as a text, journal, web page, electronic source, design, artwork, etc. in one's work without citing all sources. For a student found plagiarizing, the punishment will be a failing grade in the assignment without the right to redo the assignment up to a failing grade in the course.

Examples of Cheating. Acts of cheating include, but are not limited to, the following:

1. Copying from another student's paper during an exam, or allowing or encouraging another student to copy from your paper during an exam.
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Violations of plagiarism are subject to evaluation according to the criterion of “reasonable doubt”. The student’s right to appeal and the procedures to be followed in carrying out the appeal of the University’s decision is clearly stated in the *Student Handbook*.

Any violations of the University’s academic rules, regulations or directives are reported to the Deputy Vice Chancellor Academic Affairs and may result in one of the following disciplinary measures.

- Verbal or written warning
- Repeating the term
- Dismissal from the University

Please refer to the relevant section in the *Handbook* and ensure a clear understanding of the provisions of the University honor code and honor system in order to avoid infringement of the policy and attendant penalization.

B. Concerns about grades or other course matters. Students are responsible for their learning experiences. If you are concerned about a class matter, first discuss it with the instructor. If the matter is not resolved, the next step is to meet with the Program Chair. If you still have a concern, meet with the Dean. The matter is likely to be resolved before it reaches that point, but if it is not, then the following positions are next on the organization chart: the Deputy Vice Chancellor for Academic Affairs, and, finally, the Vice Chancellor. Students who decide to “jump to the top” will be referred back to the appropriate next step.

C. Assignments. University policy is that assignments are due on the date assigned. Instructors may refuse to accept late assignments or lower the grade that would be otherwise given.

D. Attendance. University policy is that students are to attend all classes and to arrive on time. Verified emergencies may require an absence or delay, but habitual tardiness or absence affects your learning and disrupts the class. Your presence is important since student contributions are a significant part of classroom activity and absence deprives others of your contributions.

E. Mobile Phones:All mobile phones, pagers and/or other communication devices should be turned off before entering the classroom.

F. Diversity and the Use of English. English is the common language of the AURAK campus, the use of which includes everyone. It is the only language to be used in the classroom. AURAK brings together students and faculty from diverse cultural and linguistic backgrounds, which is one of the strengths of the university. This diversity

provides an opportunity to share our different experiences and enlarge our understanding of the world. Classroom discussions and other activities are to be conducted with courtesy and civility and respect for one another and for our differences.

Further to the results analysis at major assignment level and course level as well, I can suggest that non graded class activity will be added before the final to train them on problem solving questions related Mendelian genetics. These activities were added in the week 16 as shown in the tentative schedule Weekly Topics and Assignments



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