Moberly Area Community College
Common Syllabus

BIO220 General Genetics

Current Term

Instructor:
Office number:
Office hours:
Contact information:
Classroom number:
Class days and time:

Catalog Description: BIO220 General Genetics (3-2-4)
Principles of classical and molecular genetics, epigenetics, and biotechnology. Course content is foundational to concepts of modern biology, recommended for all majors in life science-related fields. (FA, SP, SU)

Prerequisite/Co-requisite: Grade “C” or higher in BIO155 General Biology for Majors I and PHY121 General Chemistry I

Text(s):
Title: Genetics: Analysis & Principles
Author: Brooker
Edition: 7th Edition
Publisher: McGraw-Hill

Title: The Immortal Life of Henrietta Lacks
Author: Skloot
Edition: 10th Edition
Publisher: Penguin

Other Required Materials: Per instructor’s policy

Purpose of Course: This course provides a comprehensive molecular and biochemical basis for inheritance and the practical application of these genetic mechanisms.

Course Objectives: Upon successful completion of this course, students will be able to:

- Demonstrate a clear understanding of the central theories and methodologies that define the field of genetics.
- Recognize and describe the structure, organization, and function of genetic material.
- Explain gene expression and control of gene expression.
• Describe the process of genetic engineering and its application.
• Apply genetic concepts to solving genetic problems.

Course Content:
1. Structure of genetic material
2. Replication of genetic information
3. Cell Division
4. Inheritance
5. Epistasis
6. Genomics
7. Recombinant DNA technology
8. Genetic Modification
9. Genetic Regulation
10. Population Genetics
11. Molecular Evolution

Relative emphasis on topics per instructor’s policy.

Assessment of Student Learning: Per instructor’s policy

Grading Scale:
A – 90-100%
B – 80-89%
C – 70-79%
D – 60-69%
F – 0-59%

Expected Study Time Commitments: Students should expect to spend approximately 2 to 4 hours per week studying, reading, and working on assignments for each registered credit hour. For example, 6 to 12 study hours per week may be expected for a 3 credit hour class.

Description of Major Assignment(s)/Project(s): Per instructor

Schedule of Student Assignments/Activities: Instructors will identify a Student Assignment/Activities schedule. Instructors have the prerogative to construct the schedule by class periods, weeks, or an overview to be covered.

Statement to Connect Course with General Education Outcomes: In compliance with MACC’s General Education outcomes, the student who successfully completes this course will be able to:

• Higher Order Thinking: Students will demonstrate the ability to distinguish among opinions, facts, and inferences; to identify underlying or implicit assumptions; to make informed judgments; to solve problems by applying evaluative standards; and to reflect upon and refine
those problem-solving skills. This outcome involves creative thinking, critical thinking, and quantitative literacy.

- **Communication:** Students will demonstrate the ability to communicate effectively through oral, written, or digital channels using the English language or quantitative or other symbolic systems. Students should be able to write and speak with thoughtfulness, clarity, coherence, and persuasiveness; read and listen critically; and select channels appropriate to the audience and message.

- **Managing Information:** Students will demonstrate the ability to discern when there is a need for information; and to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand.

- **Valuing:** Students will demonstrate the ability to understand the moral and ethical values of a diverse society; and to appreciate the values of diversity, equity, and sustainability.

**College / Instructor Policies:**

**Academic Dishonesty:** MACC board policy is as follows: “Academic dishonesty by students damages institutional credibility and unfairly jeopardizes honest students; therefore, it will not be tolerated in any form.” Forms of academic dishonesty include but are not limited to the following: violations of copyright law, plagiarism, fabrication, cheating, collusion, and other academic misconduct. Incidents of dishonesty regarding assignments, examinations, classroom/laboratory activities, and/or the submission of misleading or false information to the College will be treated seriously. The procedure for handling academic dishonesty is outlined in the Student Handbook (Policy Handbook, M.010). In cases of alleged academic dishonesty, the burden of proof is on the student, not on the instructor.

**Attendance Policy:** Students are expected to attend all class sessions for which they are enrolled. The College reserves the right to drop or withdraw students from courses due to lack of attendance.

Students need to be aware that dropping/being dropped from a course and their last date of attendance in the course may impact their financial aid.

MACC faculty are required to track attendance and report lack of attendance. An instructor must complete the appropriate steps to drop a student within one week following the student’s violation of the attendance policy. Additionally, a student’s attendance rate will be calculated based upon the first day the academic session begins (not the student’s date of enrollment in the course). If a student does not attend a course as defined below, the student will be dropped as “Never Attended.”

**Term Length Drop Calculations**

16-week: Any student who misses two (2) consecutive weeks of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.
8-week: Any student who misses one (1) consecutive week of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

4-week: Any student who misses two (2) consecutive days of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

Intersession: Any student who misses one (1) day of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

Acceptable justification may include, but is not limited to, family emergencies, illness or injury, college-approved co-curricular and extra-curricular activities, and religious holidays.

Definition of Course Attendance

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<thead>
<tr>
<th>In Seat Course</th>
<th>Physically attending scheduled, face-to-face, class meetings</th>
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<tbody>
<tr>
<td>Virtual Course</td>
<td>Being present, via appropriate platform, for scheduled class meetings/activities</td>
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<tr>
<td>Hybrid Course</td>
<td>Physically attending scheduled, face-to-face, class meetings and active participation in the online portion of the course which may include any or all of the following:</td>
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<td></td>
<td>• Completion of quizzes or exams during class meetings and online</td>
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<td></td>
<td>• Submission of assignments during class meetings and online</td>
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<tr>
<td></td>
<td>• Participation in discussions during class meetings and online</td>
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<tr>
<td>Online Course</td>
<td>Active participation in an online course includes the following:</td>
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<tr>
<td></td>
<td>• Completion of quizzes or exams</td>
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<tr>
<td></td>
<td>• Submission of assignments</td>
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<td>• Participation in threaded discussions</td>
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</tbody>
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Simply logging into the Learning Management System (Canvas) and/or accessing the course and course related material does not constitute active participation for the online component of hybrid courses or for online courses. (Policy Handbook, I.090 & M.095)

Missed class meetings include those missed due to illness, late enrollment, administrative/financial suspension or other reasons.

Tardiness: Per instructor’s policy
Make-up and late work: Per instructor’s policy

Extra-credit work: Per instructor’s policy

Student Email: MACC Mail is the official student email system at MACC. Official college communication is sent via this email system. Students are responsible for checking their MACC Mail account regularly. Students may also receive notifications and reminders from MACC through the online learning platform. However, students should remain aware that the online learning platform messaging system and MACC Mail (student email) system are two separate systems.

ADA Statement: Students who have disabilities that qualify under the Americans with Disabilities Act may register for assistance through the Office of Access and ADA Services. Students are invited to contact the Access Office to confidentially discuss disability information, academic accommodations, appropriate documentation and procedures. For more information, please call either the Moberly office at (660) 263-4100 x 11240 or the Columbia office at (573) 234-1067 x 12120, or visit our web page at http://www.macc.edu/index.php/services/access-office.

Title IX Statement: MACC maintains a strict policy prohibiting sexual misconduct in any form, including sexual harassment, sexual discrimination, and sexual violence. All MACC employees, including faculty members, are considered mandated reporters of sexual misconduct and as such are expected to contact the Title IX Coordinator when they become aware, in conversation or in writing, of an incident of sexual misconduct. For more information on this policy or to learn about support resources, please see http://www.macc.edu/sexual-misconduct-policy or contact Ms. Cheryl Lybarger, MACC’s Title IX Coordinator, at 660-263-4110, ext. 11369 or CherylLybarger@macc.edu.