Moberly Area Community College
Common Syllabus
PHY202 Engineering Physics II

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

Catalog Description: PHY202 Engineering Physics II (3-4-5)
PHY202 is the second course in a calculus-based physics sequence for science and engineering students. The course covers the principles of electricity, magnetism, circuits, and light with an emphasis on problem solving and application in science and engineering. Course includes a laboratory component.

Prerequisite/Corequisite: Completion of PHY201 with a grade of “C” or higher and completion of MTH203 with a grade of “C” or higher or concurrent enrollment in MTH203.

Text(s): Title: Modified Mastering Physics Package w/ eText - Physics for Scientists and Engineers: A Strategic Approach with Modern Physics
Author: Knight
Publisher: Pearson
ISBN: 978-0-13-446577-7

Other Required Materials: None

Purpose of Course: This course is designed to provide a background in physics necessary for further study in a wide range of disciplines including physics, physical science and engineering.

Course Objectives: Students will acquire the following skills:
- The ability to demonstrate basic understanding of the concepts relating to the topics listed above.
- The knowledge and understanding of good experimental methods.
- Develop good problem solving approaches and critical thinking techniques.
- The ability to relate these concepts to the world around them.

Course Content: We will cover chapters 2 - 15 which covers the following topics:
- Electric Charge and Fields
- Gauss's Law
- Electric Potential
- Capacitance, Current and Resistance
- Circuits
- Magnetic Fields and Induction
- Maxwell's Equations
- *Alternating Currents
- Electromagnetic Waves
- Optics

*Material on these topics will be covered if time permits

Instructional methods involve a compilation of lecture, discussion and question-answer techniques. Student’s involvement in the presentation is necessary. Quantitative explorations and labs are used to compliment the classroom materials.

Assessment of Student Learning: Instructional methods involve a compilation of lecture, discussion and question-answer techniques. Student involvement in the presentation is necessary. Quantitative explorations and labs are used to compliment the classroom materials.

Tests/Exams (≥50%, 20 % labs, and up to 30% other—quizzes, homework, projects)

Grades will be assigned by the following guidelines:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90 - 100%</td>
<td>A</td>
</tr>
<tr>
<td>80 - 89%</td>
<td>B</td>
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<tr>
<td>70 - 79%</td>
<td>C</td>
</tr>
<tr>
<td>60 - 69%</td>
<td>D</td>
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<tr>
<td>Below 60%</td>
<td>F</td>
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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 Assignments: We will have three hour-exams and one two-hour final. We will also have at most one lab every week beginning the third week. Homework will be assigned on a weekly basis, and I will randomly choose one problem to grade every time, so make sure to solve all problems assigned. The percentage assigned to each is:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>3 one-hour exams</td>
<td>30%</td>
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<tr>
<td>Two-hour final</td>
<td>20%</td>
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<tr>
<td>Labs</td>
<td>20%</td>
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<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Attendance</td>
<td>10%</td>
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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 of topics 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:

- **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.

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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<tr>
<td></td>
<td>• Participation in threaded discussions</td>
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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)
**Tardiness:** per instructor’s policy

**Make-up tests and late work:** There will be no make-up exams unless arranged with instructor prior to exam date with acceptable justification. Assignments will be turned in on time. Late assignments will receive only half credit if turned in the following day, and no credit after that.

**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 x11240 or the Columbia office at (573) 234-1067 x12120, or visit our web page at [http://www.macc.edu/index.php/services/access-office](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](http://www.macc.edu/sexual-misconduct-policy) (links to an external site) or contact Ms. Cheryl Lybarger, MACC’s Title IX Coordinator, at 660-263-4110, ext. 11369 or CherylLybarger@macc.edu.