

## Physics for Scientists and Engineers II

### Syllabus\*

Physics 202: Physics for Scientists and Engineers II is an introductory, calculus-based physics course covering mainly electromagnetism and matter. Topics to be covered include electrostatics (phenomena and properties of stationary electric charges), magnetostatics (the study of magnetic fields in systems where currents are steady), electromagnetics, and waves and optics. Also to be covered are the applications of these topics to describe networks of ideal electrical circuit elements and optical systems.

### Expected Outcomes

- Have sound theoretical understandings of the core topics of this course (see below).
- Be able to apply calculus and/or physical laws to describe electromagnetic phenomena.

### General Information

#### Course information:

Prefix and number:	Physics 202, Section 0x
Title:	Physics for Scientists and Engineers II
Number of credits:	4
UCORE category:	PSCI
Prerequisites:	Physics 201 with a C or better or Physics 205 with a C or better; Math 172 with a C or better or Math 182 with a C or better

#### Meeting schedule:

Days and times:	M-W-F, 4:10–5:00 PM
Location:	Zoom (information announced via <a href="#">Blackboard</a> )

#### Instructor information:

Name:	Dr. Jeffrey M. McMahon
Office:	Webster Physical Sciences Building, Room 947D
Office hours:	M, 3:00–4:00 PM, or by appointment (starting Week 2)
Contact information:	(509) 335-7219; <a href="mailto:jeffrey.mcmahon@wsu.edu">jeffrey.mcmahon@wsu.edu</a>

#### Course materials:

Course notes:	<a href="https://labs.wsu.edu/mcmahon/physics-202">labs.wsu.edu/mcmahon/physics-202</a>
Textbook**:	Randall D. Knight, <i>Physics for Scientists and Engineers: A Strategic Approach</i> (4 <sup>th</sup> edition)
MasteringPhysics:	Access via <a href="#">Blackboard</a>
Blackboard:	<a href="https://learn.wsu.edu">learn.wsu.edu</a>

### Course Format and Grading

This course is divided into four core sections:

- Electrostatics
- Magnetostatics and electromagnetics
- Electrical circuits

- Waves and optics

See the schedule, for a more detailed description.

### Recitation

There will be recitation section(s) offered most weeks, starting Week 2. Information will be announced via [Blackboard](#).

### Grading

Homework	20%
Hour Exams ( $\times 4$ )	40%
Final Exam	15%
Laboratory	25%

A	93–100%
A–	90–92%
B+	87–89%
B	83–86%
B–	80–82%
C+	77–79%
C	73–76%
C–	70–72%
D+	67–69%
D	63–66%

Example: 92.9% corresponds to an A–.

### Homework

Homework will be assigned and graded through the (online) MasteringPhysics system. In general, assignments for the following week will be assigned on Friday, every week, prior to Closed Week; they will then be due by class the following Monday (i.e., 10 days later). Late homework will not be accepted. In order to use MasteringPhysics, you must have or purchase an access code.

### Exams

**Hour exams:** There will be four one-hour exams. Each will cover a core section of the course (see above). Dates will be announced in class. There will be no make-up exams.

**Final exam:** The final exam is cumulative. It is scheduled for the last week of the semester.

- Exams will be open notes (course and handwritten). Simple calculators can be used. *All* other materials and items (e.g., electronic devices), except for the electronic interface to the exam itself, cannot.

### Laboratory

For details on laboratory grading, refer to the Physics Lab Syllabus in the lab manual.

### Suggestions

- Attend class.
- Read the suggested (or similar) material, view / work on the assigned homework, etc. prior to class ...

- ... and come prepared with any questions.
- Work on homework in groups (often, there are multiple perspectives on / ways to solve a problem).

## Additional Notes

- Course announcements will be made via [Blackboard](#).
- WSU regulations require student–faculty email communication to occur via @wsu.edu email addresses.

## Other Information

**Expectations for Student Effort:** Students should expect to spend a minimum of 9 hours per week for each online 3-credit course, engaged in the following types of activities: reading, listening to/viewing media, discussion, or conversation in the LMS or other academic technology, conducting research, completing assignments and reviewing instructor feedback, studying for and completing assessments, etc.

**COVID-19 Statement:** Students are expected to abide by all current COVID-19 related university policies and public health directives, which could include wearing a cloth face covering, physically distancing, self-attestations, and sanitizing common use spaces. All current COVID-19 related university policies and public health directives are located at <https://wsu.edu/covid-19/>. Students who do not comply with these directives may be required to leave the classroom; in egregious or repetitive cases, students may be referred to the Center for Community Standards for university disciplinary action.

**Academic Integrity Statement:** Academic integrity is the cornerstone of higher education. As such, all members of the university community share responsibility for maintaining and promoting the principles of integrity in all activities, including academic integrity and honest scholarship. Academic integrity will be strongly enforced in this course. Students who violate WSUs Academic Integrity Policy (identified in Washington Administrative Code (WAC) 504-26-010(4) will fail the course, will not have the option to withdraw from the course pending an appeal, and will be reported to the Center for Community Standards.

Cheating includes, but is not limited to, plagiarism and unauthorized collaboration as defined in the Standards of Conduct for Students, WAC 504-26-010(3). You need to read and understand all of the definitions of cheating. If you have any questions about what is and is not allowed in this course, you should ask course instructors before proceeding.

If you wish to appeal a faculty members decision relating to academic integrity, please use the form available at [communitystandards.wsu.edu](http://communitystandards.wsu.edu). Make sure you submit your appeal within 21 calendar days of the faculty members decision.

**Reasonable Accommodations Statement:** Reasonable accommodations are available for students with documented disabilities or chronic medical or psychological conditions. If you have a disability and need accommodations to fully participate in this class, please visit your campus Access Center/Services website to follow published procedures to request accommodations. Students may also contact their campus offices to schedule an appointment with a Disability Specialist. All disability related accommodations are to be approved through the Access Center/Services on your campus. It is a university expectation that students visit with instructors (via email, Zoom, or in person) to discuss logistics within two weeks after they have officially requested their accommodations.

For more information contact a Disability Specialist on your home campus:

- Pullman, WSU Global Campus, Everett, Bremerton, and Puyallup: 509-335-3417 Access Center (<https://www.accesscenter.wsu.edu>) or email at [access.center@wsu.edu](mailto:access.center@wsu.edu)
- Spokane: 509-358-7816 Access Services (<https://spokane.wsu.edu/studentaffairs/access-resources/>) or email [j.schneider@wsu.edu](mailto:j.schneider@wsu.edu)
- Tri-Cities: Access Services (<http://www.tricity.wsu.edu/disability/>) or email [g.hormel@wsu.edu](mailto:g.hormel@wsu.edu)
- Vancouver: 360-546-9238 Access Center (<https://studentaffairs.vancouver.wsu.edu/student-wellness-center/access-center>) or email [van.access.center@wsu.edu](mailto:van.access.center@wsu.edu)

**Accommodation for Religious Observances or Activities:** Washington State University reasonably accommodates absences allowing for students to take holidays for reasons of faith or conscience or organized activities conducted under the auspices of a religious denomination, church, or religious organization. Reasonable accommodation requires the student to coordinate with the instructor on scheduling examinations or other activities necessary for course completion. Students requesting accommodation must provide written notification within the first two weeks of the beginning of the course and include specific dates for absences. Approved accommodations for absences will not adversely impact student grades. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the course work required during the period of absence. Students who feel they have been treated unfairly in terms of this accommodation may refer to Academic Regulation 104 Academic Complaint Procedures.

**Safety and Emergency Notification:** Classroom and campus safety are of paramount importance at Washington State University, and are the shared responsibility of the entire campus population. WSU urges students to follow the “Alert, Assess, Act,” protocol for all types of emergencies and the “Run, Hide, Fight” response for an active shooter incident. Remain ALERT (through direct observation or emergency notification), ASSESS your specific situation, and ACT in the most appropriate way to assure your own safety (and the safety of others if you are able).

Please sign up for emergency alerts on your account at MyWSU. For more information on this subject, campus safety, and related topics, please view the FBI's Run, Hide, Fight video and visit the WSU safety portal.

Full details can be found at <https://provost.wsu.edu/classroom-safety/>.

\*Syllabus subject to change.

\*\*Recommended. Similar information can be found in many other introductory, calculus-based physics textbooks.