Modern Physics II
Syllabus for the Spring 15 semester of Phys 3110

Lecturer
Dr. Nat Smith
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Office hours
Monday 1:30 pm – 2:30 pm
Wednesday 1:30 pm – 2:30 pm
Thursday 3:00 pm – 4:00 pm
Friday 1:30 pm – 2:30 pm
or by appointment.

Website
All course material and the schedule of topics can be found on the course website:
capone.mtsu.edu/njsmith/phys3110/
A link to the course website is also available in D2L.

Text
Modern Physics by Tipler and Llewellyn (6th Ed.)

Purpose
To provide physics, chemistry, or other science majors with a solid introduction to the physics of the 20th century. In particular, this second course in the two-semester Modern Physics sequence starts off with an introduction to Statistical Physics, both classical and quantum. It then goes on to introduce the topics of Molecular, Solid State, Nuclear, and Particle Physics.

Email
All email communication that I send will be to your official MTSU email account; I will not respond to any emails from non-MTSU email accounts. Although I will be using D2L in this course, I do not check D2L mail very often (perhaps once per week); if you want me to see something ASAP, please send it to my MTSU email account: nat.smith@mtsu.edu.

Grading
The course grade will be determined by your performance on the following: homework assignments, tests, and a research paper. Each test will cover one or two chapters of the text book, as detailed on the schedule. Unlike last semester, the final test will not be comprehensive. The research paper will be on a topic of your choosing, but must be related to something covered in class—more information about the research paper will be forthcoming later in the semester. At the end of semester your two lowest homework grades will be dropped and the average of the remaining homework grades computed. Your final grade will then be determined according to the following weighting scheme:

| Test 1 | 20% | Homework (2 drops) | 35% |
| Test 2 | 20% | Research paper | 5% |
| Test 3 | 20% |

Your final course grade will be assigned according to the following scheme:

A grade \( \geq 90 \)
B+ grade \( \geq 87.5 \)
B grade \( \geq 80 \)
B- grade \( \geq 79 \)
C+ grade \( \geq 77.5 \)
C grade \( \geq 70 \)
C- grade \( \geq 69 \)
D+ grade \( \geq 67.5 \)
D grade \( \geq 60 \)
D- grade \( \geq 59 \)
F grade is less than 59

Midterm grade
The midterm grade is provided for your information and is merely an estimate of your performance in the course so far. It is neither a threat nor a promise. The weighting of each category may be slightly altered to compute this value during the semester before all work is turned in and graded. Your final grade may differ from what is reported at midterm.

Homework
The homework is considered to be an extremely important part of this course, and will play a fundamental role in your learning the corresponding material. It is expected that your solutions to the assigned homework problems will follow the strict format outlined in the
homework submission rules. **Points will be deducted from your homework score if any of the rules are not followed!** The submitted solutions from each homework assignment corresponding to a given lecture (9.I, 9.II, 10.III, etc.) will be graded. The solutions will typically be cursorily examined and a grade out of 20 points will be awarded. However, I reserve the right to more carefully examine a particular problem solution, in which case the assigned homework grade for the entire set will more critically hinge on your performance on that problem. Since you will endeavor to submit perfect solutions for all problems, this should cause no concern. The homeworks will be due at the beginning of class on the dates given on the homework assignments. At the end of the semester your lowest two homework grades will be dropped and your resulting homework average computed.

**Withdrawal**

It is the policy of the Department of Physics & Astronomy that **no drops will be approved after the official university deadline**. The deadline for dropping with a grade of W for Spring 2015 is March 29.

**Disabilities**

Reasonable Accommodations for Students with Disabilities: Middle Tennessee State University is committed to campus access in accordance with Title II of the Americans with Disabilities Act and Section 504 of the Vocational Rehabilitation Act of 1973. Any student interested in reasonable accommodations can consult the Disability & Access Center (DAC) website [www.mtsu.edu/dac](http://www.mtsu.edu/dac) and/or contact the DAC for assistance at 615-898-2783 or dacemail@mtsu.edu.

**TELS Lottery Scholarship**

Do you have a lottery scholarship? To retain the Tennessee Education Lottery Scholarship eligibility, you must earn a cumulative TELS GPA of 2.75 after 24 and 48 attempted hours and a cumulative TELS GPA of 3.0 thereafter. A grade of C, D, F, FA, or I in this class may negatively impact TELS eligibility.

If you drop this class, withdraw, or if you stop attending this class you may lose eligibility for your lottery scholarship, and you will not be able to regain eligibility at a later time.

For additional Lottery rules, please refer to your Lottery Statement of Understanding form ([www.mtsu.edu/financial-aid/forms/LOTFOD.pdf](http://www.mtsu.edu/financial-aid/forms/LOTFOD.pdf)) or contact your MT One Stop Enrollment Counselor ([www.mtsu.edu/one-stop/counselor.php](http://www.mtsu.edu/one-stop/counselor.php)).

**Cheating**

Academic misconduct (aka cheating) is not tolerated by the Department of Physics and Astronomy. Instances of academic misconduct will, at a minimum, result in a zero for the assignment (test, lab report, etc.) in question. At my discretion, submission of a formal complaint (a “referral”) to the office of the Vice Provost for Academic Affairs may also be made.

The university defines academic misconduct as any of the following: plagiarism, cheating, and fabrication. The following definitions from the University Provost’s webpage, apply:

1. Plagiarism: The adoption or reproduction of ideas, words, statements, images, or works of another person as one’s own without proper attribution. This includes self-plagiarism, which occurs when an author submits material or research from a previous academic exercise to satisfy the requirements of another exercise and uses it without proper citation of its reuse.
2. Cheating: Using or attempting to use unauthorized materials, information, or aids in any academic exercise or test/examination.
3. Fabrication: Unauthorized falsification or invention of any information or citation in an academic exercise.

Aiding and abetting (for example, allowing someone to copy from your test) is prohibited and is considered a form of academic misconduct. If you are caught aiding and abetting, you will be treated the same as anyone else who is guilty of academic misconduct. See the Office of the University Provost’s web page for further information: [www.mtsu.edu/provost/acadmisconduct.php](http://www.mtsu.edu/provost/acadmisconduct.php).