

Modern Physics
Quarter 4 - Spring 2020
General Information

INSTRUCTOR: Hasan Fakhruddin

E-MAIL: hfakhrud@bsu.edu

OFFICE: Elliot B009B

PHONE: 285 7415;

OFFICE HOURS: M: 12 – 3 PM

W: 12 – 3 PM

F: 12 – 3 PM

Th: 12 – 2 PM

And by appointment

TEXT: Modern Physics by Randy Harris, 2nd Edition

About this course:

This course will be taught by three instructors: Mr. Hasan Fakhruddin; Mr. Steve Schuh; and Dr. Sazzad Nasir in that order. There is no lab component to this course

EVALUATION:

75% - Homework assignments: You will be assigned homework periodically at the end of various topics covered in class.

25% - Final Exam (Friday, March 20, 2020): This will be a comprehensive for my part of the syllabus

GRADING SCALE (May be curved depending on the class performance):

92% - 100% = A

88% - 91% = A-

84% - 87% = B+

82% - 83% = B

78% - 81% = B-

74% - 77% = C+

72% - 73% = C

70% - 71% = C-

0% - 69% = D*

POLICY FOR MAKE-UP WORK:

Make-up work will be allowed only for the excused absences. You must make arrangements for the make-up work before or immediately after the excused absence. You must make every effort to make contact with your instructor in this regard personally or by a written note, p-mail, or phone.

LATEWORK POLICY:

Late homework assignments may be accepted up to one week after the due date with a penalty of 20% of the maximum points on that assignment. However, if the delay is due to an excused absence or with valid reasons, the instructor may reduce or forego the penalty.

ACADEMIC PROGRESS REPORTS:

Your performance will be evaluated periodically through out the semester. If any problems is encountered an academic progress report will be sent out as per the Academy policy.

TARDY AND UNEXCUSED-ABSENCE POLICIES:

A student late to class/lab up to 5 minutes will be marked 'tardy'.

A student late to class/lab for more than 5 minutes will be marked 'absent'.

ACADEMIC DISHONESTY POLICY:

Academic dishonesty may be detrimental to a student's grade for the course.

Academy dishonesty includes but is not limited to:

- Plagiarism
- Manipulating lab data to obtain expected results
- Copying lab report from another student
- Copying in the tests and exams

For details, please refer to the Academic Dishonesty Policy in the Student's Handbook

USE OF LAPTOP COMPUTERS IN CLASSROOM

1. You may use the laptop in the lecture. You have option of writing notes on your laptop or in traditional notebook.
2. Unless told otherwise, please boot up your computer as soon as you arrive in class so that you will be ready to go to work as soon as class starts.
3. You are responsible for maintaining the power of your computer.
4. Keep your laptop on until the class ends for the day.
5. The volume on your laptop should be turned all the way down during class. Your laptops should be silent except for the clicking of the keyboard.
6. You may not read or send e-mail, play music or games, "IM", participate in chat rooms, or download any files during class. If this becomes a chronic problem, you will be asked to leave the classroom, with an unexcused absence for that day.
7. You may take class notes using your laptop, but you also need to be prepared to use pen and paper when asked.
8. You are responsible for maintaining your computer. Please make sure your computer is working before coming to class. If your computer is not working or is not able to connect to the wireless server, you should follow the help instructions in your laptop management document.
9. Print assignments before coming to class.
10. Remember to save your work frequently. Loss of a file by accident is not an acceptable excuse.
11. Close your lid/screen half way during discussions or class presentations or when otherwise requested by the instructor.
12. Do not hide toolbars (the dock). Keep all items you are working on visible on the screen and available for teacher inspection.
13. Do not bring you laptop to an exam.

Ball State University's Statement on the Importance of Diversity and Inclusion

Ball State University aspires to be a university that attracts and retains a diverse faculty, staff, and student body. Ball State is committed to ensuring that all members of the campus community are welcome through our practice of valuing the varied experiences and worldviews of those we serve. We promote a culture of respect and civil discourse as evident in our [Beneficence Pledge](#).

At Ball State, diversity is an integral part of our identity. Our success depends on our efforts to cultivate inclusivity within our pedagogical, scholarly, and creative pursuits. Community is an inherent and crucial aspect of such efforts at local, national and international levels. As we recruit and retain a diverse administration, faculty/staff and student body, we strive to ensure that our students are prepared to engage and succeed in increasingly diverse environments. Our recruitment efforts will continue to include historically underrepresented populations to create the cultural milieu that promotes participation by all.

We are committed to the pursuit of excellence by being inclusive of individuals without regard to race, religion, color, sex (except where sex is a bona fide qualification), sexual orientation, gender identity/gender expression, physical or mental disability, national origin, ancestry, or age. Ball State will be a place recognized for its positive climate—one where all stakeholders know that their contributions to the mission of the university are essential to our success.

Ball State University is committed to:

- creating innovative [courses](#), [programs](#), and practices that attract, retain, and nurture a diverse university community
- fostering a university environment that enables all who contribute to excel in a culture that is growing ever more diverse

Whereas other initiatives focus on particular aspects of diversity, our equal opportunity and affirmative action policies use a broad definition of diversity referring to race, religion, color, gender, sexual orientation, physical or mental disability, national origin, ancestry, age, and citizenship.

The Office of Institutional Diversity is not only committed to diversity programming for students; it also support several faculty development programs as well. The [Diversity Associates Program](#), the Developing Pedagogies to Enhance Excellence Seminar, and the [Diversity Seminars](#) are three programs that encourage faculty to explore the relevance of diversity in all classes.

Modern Physics – Q4; Spring 2020 – Syllabus *(Tentative)*

Mr. Hasan Fakhruddin

I will teach the following topics on the following dates

Monday, March 9, 2020

1. Black body radiation and the birth of quantum physics
2. Photoelectric Effect

Wednesday, March 11, 2020 Wave-particle duality

3. X-ray production
4. Compton Effect

Monday, March 16, 2020

5. Hydrogen Atom – Bohr's Model – Hydrogen spectral series
6. Discovery of Nucleus

Wednesday, March 18, 2020

7. Nuclear Structure
8. Radioactivity
9. Nuclear Reactions
10. Fission and Fusion

Friday, March 20, 2020

Exam

March 23 – May 1, 2020: Course taught by Mr. Steve Schuh and Dr. Sazzad Nasir