

STATE UNIVERSITY OF NEW YORK
New Paltz, New York.

Modern Physics

Course No. PHY308 (3 credits)
Spring 2020

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Text

- **Post Newtonian (“Modern”) Physics** by Tarun Biswas (download from Blackboard).

Reference

- **Fundamentals of Physics** by D. Halliday, R. Resnick and J. Walker. (not required.)
- **Modern Physics** by Kenneth Krane. (not required.)

Course Description

The following chapters of the text will be covered (some selected sections may be excluded).

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|---------|-----------------------------------|
| Chap. 1 | Some Good Old Physics. |
| Chap. 2 | Special Relativity. |
| Chap. 3 | From Waves to Particles and Back. |
| Chap. 4 | The Schrödinger Equation. |
| Chap. 5 | The Structure of Matter – Atoms. |

Evaluation

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|--------------|-----|
| Midterm exam | 40% |
| Final exam | 60% |

Problems for Homework

- Chap. 1 – 2, 3, 4, 7, 8, 9, 13, 14, 15, 16.
Chap. 2 – 2, 4, 5, 8, 9, 10, 14, 15, 16, 22, 23, 24, 29, 30, 31, 32.
Chap. 3 – 1, 2, 5, 6, 7, 8, 9, 11, 12, 14, 15, 16.
Chap. 4 – 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13.
Chap. 5 – 1, 2, 3, 4, 5, 6, 7, 8.

Administrative Addenda

Student Learning Outcomes

To acquire basic skills in handling some physical phenomena discovered after the end of the nineteenth century viz. special relativity and quantum physics.

Academic Integrity Policy

http://www.newpaltz.edu/ugc/policies/policies_integrity.html

Disability Resources

https://www.newpaltz.edu/drc/policy_procedure_manual.html

Veterans Resources

<http://www.newpaltz.edu/veterans>

Computer and Network Policies

<https://sites.newpaltz.edu/csc/policies/acceptable-uses-and-privacy-policy/>

Deadlines

<http://www.newpaltz.edu/events/academic.php>