| Date | Day | Class Day | Special Note | Topic | Reading/Assignment |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8/24/23 | Thu | 1 | First Day of Class | Intro, Review: Inertial Frames |  |
| 8/29/23 | Tue | 2 |  | SR: Transformations, SR Postulates | Knight: 36.1-3, and UP 38.1-3 |
| 8/31/23 | Thu | 3 |  | SR: Simultaneity, Time Dilation | Knight: 36.4-6, and UP 38.4-7, 38.9 |
| 9/5/23 | Tue | 4 |  | SR: Length, Lorentz Transform | Knight: 36.7-8, and UP 38.8, 38.11-12 |
| 9/7/23 | Thu | 5 | HW 1 Due | SR: Spacetime Diagrams | Handout: Spacetime Diagrams |
| 9/12/23 | Tue | 6 |  | SR: Momentum and Energy | Knight: 36.9-10, and UP 38.10 |
| 9/14/23 | Thu | 7 |  | SR: Conservation, 4-Vectors, Causality |  |
| 9/19/23 | Tue | 8 | HW 2 Due | Waves: Review SHM, Types, Sinusoidal | UP: 17.1-17.4 OR OpenStxVol1:16.1-2 |
| 9/21/23 | Thu | 9 |  | Waves: Velocity, Energy | UP: 17.5-7 OR OpenStxVol1:16.3-4 |
| 9/26/23 | Tue | 10 |  | Waves: Superposition, Interference | UP: 17.8-17.11 OR OpenStxVol1:16.5-6 |
| 9/28/23 | Thu | 11 |  | Waves: Standing Waves, Beats | OpenStxVol1: 17.5-6 OR UP: 18.5-6 |
| 10/3/23 | Tue | 12 |  | QM: Lab 1, e/m | Handout: Error Analysis |
| 10/5/23 | Thu | 13 | HW 3 Due | QM: EM Spectrum, Lab 2: Young's 2x Slit | OpenStxVol2: 16.5 AND <br> OpenStxVol3:1.6, 3.1, 3.2 |
| 10/10/23 | Tue | 14 | Lab 1 Due | QM: Blackbody Rad., Compton Eff. | OpenStxVol3: 6.1, 6.3 |
| 10/12/23 | Thu | 15 |  | Exam 1:SR and Waves |  |
| 10/17/23 | Tue |  | Fall Break |  |  |
| 10/19/23 | Thu |  | Fall Break |  |  |
| 10/24/23 | Tue | 16 | Lab 2 Due | QM: Photoelectric Effect | OpenStxVol3: 6.2 |
| 10/26/23 | Thu | 17 |  | (If time: Lab 3, Planck's Constant) |  |
| 10/31/23 | Tue | 18 | HW 4 Due | QM: Spectroscopy, Bohr Model | OpenStxVol3: 6.4 |
| 11/2/23 | Thu | 19 |  | QM: Spectroscopy, Bohr Model |  |
| 11/7/23 | Tue | 20 | (If assigned, Lab 3 Due) | QM: De Broglie, Matter Waves | OpenStxVol3: 6.5, 6.6, What Is Matter? PDF |
| 11/9/23 | Thu | 21 |  | 1DQM: Probability Density | Knight: 39.1-2 |
| 11/14/23 | Tue | 22 | Final Paper Topic Submission | 1DQM: Wavefunctions | Knight: 39.3-5 |
| 11/16/23 | Thu | 23 |  | 1DQM: Heisenburg Uncertainty | Knight: 39.6 |
| 11/21/23 | Tue | 24 | HW 5 Due | 1DQM: Schrodinger Equation | Knight: 40.1-2 |
| 11/23/23 | Thu |  | Thanksgiving Break |  |  |
| 11/28/23 | Tue | 25 | Optional: Paper Draft Due | 1DQM: Particle in a Box | Knight: 40.3-5, and UP 10.5 OR OpenStxVol1: 8.4 |
| 11/30/23 | Thu | 26 |  | 1DQM: Finite Potential Wells | Knight: 40.6-7 |
| 12/5/23 | Tue | 27 | Final Paper Due | 1DQM: Other Potential Wells | Knight: 40.8-9 |
| 12/7/23 | Thu | 28 |  | 1DQM: Tunneling | Knight: 40.10 |
| 12/12/23 | Tue | 29 | HW 6 Due | (Review, Spillover...) | 100 Years of Quantum Mysteries PDF |
| 12/14/23 | Thu | 30 | Last Day of Class | Exam 2: Quantum Mechanics |  |

"UP" means "Understanding Physics" by Cummings, Laws, Redish, and Cooney.
"Knight" means "Physics for Scientists and Engineers" by Randall D. Knight.
OpenStx refers to free online textbook.

