* Each HW assignment has a related Warm-up due 24 hours earlier

# Physics 121 040X Course Schedule
## Spring 2018 — Dr. Li

| | *HW due** | *Lecture topic* | *Book sections* |
|---|---|---|---|
| Jan 24 | Warm-up 0 | All about the course | |
| Jan 29 | | Representing position and motion | 1.1–1.3 |
| | | Graphing motion; Acceleration | 2.1–2.4 |
| Jan 31 | HW 1 | The case of constant acceleration | 2.5–2.7 |
| Feb 5 | | Relative motion; Units; Uncertainty | 3.5; 1.4 |
| | | Forces and mass: Newton's laws | 4.1–4.2, 4.5–4.6 |
| Feb 7 | HW 2 | Springs, strings, and atoms | 4.3–4.4, 8.3 |
| Feb 12 | | Solving problems with Newton's laws | |
| | | Newton's third law | 4.7, 5.7 |
| Feb 14 | HW 3 | Apparent weight | 5.3 |
| Feb 19 | | Drag | 5.6 |
| | | Review and discussion | |
| Feb 21 | HW 4 | **Exam 1** | |
| Feb 26 | | Vectors in physics; Sideways accel. | 3.1–3.3 |
| | | Newton's laws in 2-D | 3.6–3.8 |
| Feb 28 | HW 5 | Using Newton's laws in 2-D | 5.2, 5.4, 5.8 |
| Mar 5 | | Friction | 5.5 |
| | | Circular motion and forces | 6.3–6.4 |
| Mar 7 | HW 6 | Gravity and orbits | 6.5–6.6 |
| Mar 12 | | Impulse and momentum | 9.1–9.3 |
| | | Conservation of momentum | 9.4–9.6 |
| Mar 14 | HW 7 | Work, energy, and power | 10.1, 10.2, 10.8 |
| Mar 26 | | Kinetic and potential energy | 10.3, 10.4 |
| | | Conservation of energy | 10.6, 10.7 |
| Mar 28 | HW 8 | Review and discussion | |
| Apr 2 | | **Exam 2** | |
| | | Rotational motion and torque | 7.1–7.3 |
| Apr 4 | | Rotational dynamics | 7.4–7.6, 9.7 |
| Apr 9 | HW 9 | Equilibrium and balance | 8.1, 8.2 |
| | | Elasticity and strength of materials | 8.4 |
| Apr 11 | | Linear response systems | |
| Apr 16 | HW 10 | Density and pressure in fluids | 13.1–13.3 |
| | | Buoyancy; Fluids in motion | 13.4, 13.5 |
| Apr 18 | | Viscosity and fluid flow in tubes | 13.6, 13.7 |
| Apr 23 | HW 11 | Thermal energy and temperature | 11.4, 11.5 (part) |
| | | Gas pressure and the ideal gas law | 12.1, 12.2 |
| Apr 25 | | Gas processes; Thermal expansion | 12.3, 12.4 |
| Apr 30 | HW 12 | Review and discussion | |
| | | **Exam 3** | |
| May 2 | | Energy usage in living systems | 11.1–11.3 |
| May 7 | | Heat flow | 11.5, 12.8 |
| | | Using thermal energy; Entropy | 11.6–11.8 |
| May 9 | HW 13 | Course discussion and review | |
| May xx | | **Final Exam: xx:00–xx:00 x.m.** | |