

**Physics 114A - Autumn 2020
Course Schedule**

Textbook
College Physics, Knight, Jones Field

| Week | Day | Posted | Lecture | Content | Textbook | Assignments due date |
|------|-------------|---------------|---------|--|------------------------|----------------------|
| | Wed | 30-Sep | 0 | Introduction | | |
| | Fri | 2-Oct | 1 | Scaling | Handout | 9-Oct |
| 2 | Mon | 5-Oct | 2 | Scaling/Representing Motion | 1.1 - 1.6 | 12-Oct |
| | Tues | 6-Oct | | Tutorial 1: Scaling | | 13-Oct |
| | Wed | 7-Oct | 3 | One-Dimensional Motion | 2.1 - 2.3 | 14-Oct |
| | Fri | 9-Oct | 4 | Acceleration | 1.6 ^a , 2.4 | 16-Oct |
| 3 | Mon | 12-Oct | 5 | Free-Fall | 2.5 ^b & 2.7 | 19-Oct |
| | Tues | 13-Oct | | Tutorial 2: Acceleration in 1-Dimension | | 20-Oct |
| | Wed | 14-Oct | 6 | Vectors and Motion | 1.6 & 3.1 - 3.4 | 21-Oct |
| | Fri | 16-Oct | 7 | Projectile Motion | 3.5 - 3.6 | 23-Oct |
| 4 | Mon | 19-Oct | 8 | Forces | 4.1 - 4.4 | 26-Oct |
| | Tues | 20-Oct | | Tutorial 3: Forces and Newton's Laws | | 26-Oct |
| | Wed | 21-Oct | 9 | Newton's Laws | 4.5 - 4.7 | 28-Oct |
| | Fri | 23-Oct | 10 | Applying Newton's Laws | 5.1 - 5.4 | 30-Oct |
| 5 | Mon | 26-Oct | | Exam 1 Review | | 2-Nov |
| | Tues | 27-Oct | | Midterm 1 | | |
| | Wed | 28-Oct | 11 | Friction | 5.5 ^c | 4-Nov |
| | Fri | 30-Oct | 12 | Drag & Reynolds number | 5.6 | 6-Nov |
| 6 | Mon | 2-Nov | 13 | Interacting Objects / Ropes & Pulleys | 5.7 - 5.8 | 9-Nov |
| | Tues | 3-Nov | | Tutorial 4: Tension | | 10-Nov |
| | Wed | 4-Nov | 14 | Circular Motion | 3.7, 6.1 - 6.3 | 13-Nov |
| | Fri | 6-Nov | 15 | Rotational Motion | 7.1 - 7.2 ^d | 16-Nov |
| 7 | Mon | 9-Nov | 16 | Torque & Center of gravity | 7.3 - 7.4 | 16-Nov |
| | Tues | 10-Nov | | Tutorial 5: Biomechanics Torque | | 18-Nov |
| | Fri | 13-Nov | 17 | Rotational Dynamics | 7.5 - 7.6 ^e | 20-Nov |
| 8 | Mon | 16-Nov | 18 | Static Equilibrium/Exam 2 Review | 8.1 & 8.5 | 23-Nov |
| | Tues | 17-Nov | | Midterm 2 | | |
| | Wed | 18-Nov | 19 | Stat. Equi. Springs and Hooke's Law | 8.2 - 8.3 | 30-Nov |
| | Fri | 20-Nov | 20 | Stretching and Compressing Materials | 8.4 | 1-Dec |
| 9 | Mon | 23-Nov | 21 | Impulse and Momentum | 9.1 - 9.3 | 1-Dec |
| 10 | Mon | 30-Nov | 22 | Conservation of Momentum | 9.4 - 9.5 | 7-Dec |
| | Tues | 1-Dec | | Tutorial 6: Conservation of Momentum | | 8-Dec |
| | Wed | 2-Dec | 23 | Work and Kinetic Energy | 10.1 - 10.3 | 9-Dec |
| | Fri | 4-Dec | 24 | Potential Energy | 10.4 | 11-Dec |
| 11 | Mon | 7-Dec | 25 | Thermal Energy and Conservation of Energy | 10.5 - 10.6 | 14-Dec |
| | Tues | 8-Dec | | Tutorial 7: Conservation of Energy | | 14-Dec |
| | Wed | 9-Dec | 26 | Conservation of Energy | 10.6 - 10.7 | 14-Dec |
| | Fri | 11-Dec | 27 | Energy in collision and Power | 10.9 & 10.10 | 14-Dec |
| 12 | Thu | 17-Dec | | Final Exam (8:30am-10:20am) | Comprehensive | |

a Velocity Vectors section

b Constant acceleration kinematics only in the context of free fall or constant friction

c no rolling friction

d no rotational kinematics with constant angular acceleration

e no constraints due to ropes and pulleys