IB Physics

Forces

Chapter 4 and 9 Syllabus[[1]](#footnote-2)

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| Block | Class | Due on this class | | |
| 1  Oct 29/30 | -Tests Back  -Welcome to Physics!!  -Aristotle and Galileo  -Newton's laws L/D  -The difference between mass and weight  -Net Force introduction | **Read:** 4.1-6 | | |
| 1 ¾  Oct 31/Nov 1 | Projection Science  Hot Beverages | **Bring a ceramic mug**  **☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺** | | |
| 2  Nov 2/5 | -Work on Net Force Problems 1-12  -Net Force worksheet **(handout)**  -Friction demo | **Video Flip: Net Force (D and E)**  **Read:** 4.7  **Check #1:** Ch 4: 1, 3, 5, 7, 11 | | |
| 3  Nov 6/7 | -Work on Friction Problems 4-13  -Inclined Planes Demo  -Forces on inclined planes - Note guide **(handout)** | **Video Flip: Friction (F and G)**  **Check #2:** Net Force: 1-12 | | |
| 4  Nov 8/13 | -Work on Inclined Planes 1, 2, 5, 6  -Forces on pulleys demo | **Video Flip: Inclined Planes (I)**  **Read:** p. 94  **Check #3:** Friction: 4-13 | | |
| 5  Nov 14/15 | -Planes and Pulleys worksheet **(handout)**  **-Pre-Quiz 4.1 (Net Force) (handout)**  -Work on Pulley problems (P&P 5, 6)  -Solving Statics problems: Equilibrant | **Video Flip: Pulleys (J)**  **Read:** 9.1-2 (pp. 226-229, only not torque)  **Check #4:** Inclined Planes: 1, 2, 5, 6 | | |
| 6  Nov 16/26 | -Solving Statics problems: 1, 2 unknowns – Matrices  -How to deal with no mass on Inclined Planes 8, 9  -**Skill Set 4.1** | **Check #5:** Planes and Pulleys: 5, 6, 10, Ch 9: 1, Inclined Planes: 7 | | |
| 7  Nov 27/28 | **-Pre-Quiz 9.1 (Force equilibrium) (handout)**  -Intro of *Equilibrium Lab (no handout)*  -Intro of *Force Lab (no handout)*  -Work on *Equilibrium Lab* | **Check #6:** Inclined Planes: 8, 9, Planes and Pulleys: 7, 8  **Turn in: Equilibrium Lab** | | |
| 8  Nov 29/30 | -**Skill Set 9.1**  -Variables for *Force Lab*  -Work on *Force Lab* | **Check #7:** Planes and Pulleys: 11 Ch 9: 11, 12(Left = 258 N, Right = 195 N), Ch 4: 9, 12(+3.8m/s/s), 15 | | |
| 9  Dec 3/4 | -Work on *Force Lab* | **Check #8:** Net Force: 13, 14, 15, Friction: 14, 15 | | |
| 10  Dec 5/6 | **Test** on Forces | **Turn in:** Homework (8 Days) | | |
|  | -Why it is important to consider the weight of a barrel of bricks.  **Gravity and circular motion!!!!!** | **Turn in: Force Lab (Des)** | | |
| Assignments   * 2 Labs:   + Force Equilibrium (short in-class lab with force tables)   + Student designed lab on force * 2 PreQuizzes/Skill Sets (The skill sets are like tests)   + 4.1 – Net Force   + 9.1 – Statics and vector forces * One Test on Forces – Look on the website for study examples, and do study for this test * Homework from 8 nights | | | | \*Handouts:  Syllabus-Forces  Prequiz-04.1  Prequiz-09.1  Worksheet-NetForceAndFriction  NoteGuide-InclinedPlanesExample.doc  Worksheet-PlanesAndPulleys  Worksheet-InclinedPlanesFriction  IA-Des-Description |

1. This unit uses both chapter 4, (which starts on page 72, and has problems starting on page 98) and chapter 9 (which starts on page 226 and has problems starting on page 247) [↑](#footnote-ref-2)