IB Physics

Forces

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

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| Block | Class  | Due on this class |
| 1Oct 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 ScienceHot Beverages | **Bring a ceramic mug****☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺☺** |
| 2Nov 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 |
| 3Nov 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 |
| 5Nov 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 |
| 6Nov 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 |
| 7Nov 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** |
| 8Nov 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 |
| 9Dec 3/4 | -Work on *Force Lab*  | **Check #8:** Net Force: 13, 14, 15, Friction: 14, 15 |
| 10Dec 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-ForcesPrequiz-04.1Prequiz-09.1Worksheet-NetForceAndFrictionNoteGuide-InclinedPlanesExample.docWorksheet-PlanesAndPulleysWorksheet-InclinedPlanesFrictionIA-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)