IB Physics

Chapter 5 Syllabus

Gravity and Circular Motion

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| Block | Class | Due |
| 1  Dec 7/8 | -Why it is important to consider the weight of a barrel of bricks  -Centripetal acceleration  -Centripetal Force  -RPMs, RPS and velocity  -Centripetal vs. Centrifugal  -Intro to Vertical Circle | **Turn in: Force Lab (Des, CE?)**  **Read:** 5.1-3 |
| 2  Dec 9/10 | -Work on Motion in a Vertical Circle problems  -**Fun**damental forces in Physics  -Universal Gravitation | **Video Flip: Vertical Circle (C)**  **Chapter 5 Problems:** 1, 6(3.6 m/s/s)  **Read:** 5.5 |
| 3  Dec 11/14 | -Work on Orbit Problems in class  -Models of orbital mechanics  -Escape Velocity | **Video Flip: Orbit Problems (F)**  **Chapter 5 Problems:** 9, 16(1.7 m/s, 3.3 m/s)  **Read:** 5.6-8,10 |
| 4  Dec 15/16 | -Orbit Lab  -Hand out FA 5.1, 5.2, 5.3 | **Video Flip: Kepler’s Laws (G)**  **Video Flip: Banked Corners (H)**  **Chapter 5 Problems:** 43, 58(160 years)  **Read:** 5.9  **Turn in: Vertical Circle Problems** |
| 5  Dec 17/18 | **Energy!!!!!** | **Turn in: Orbit Problems**  **Turn In: Orbit Lab**  **Turn in: Ch. 5:** 1, 6, 9, 16, 43, 58 |

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| Assignments   * 1 Lab:   + Orbit Lab – Computer simulation of orbit – in class * 3 Formative/2 Summative Assessments:   + 5.1 – Centripetal Acceleration\*   + 5.2 - Vertical Circle   + 5.3 - Orbit and Gravity * Ch. 5 problems: 1, 6, 9, 16, 43, 58 (formative) * Vertical Circle Problems (10 pts formative) * Orbit Problems (10 pts formative)   \*Formative only | Handouts:  Syllabus-GravityAndCircularMotion2015  FA5.1  FA5.2  FA5.3  Noteguide-Orbit  Worksheet-Orbit  Noteguide-VerticalCircle  Worksheet-VerticalCircleProblems  Worksheet-VerticalCircle5.2  Lab-Orbit (class copies) |