IB Physics

Chapter 5 Syllabus

Gravity and Circular Motion

|  |  |  |  |
| --- | --- | --- | --- |
| Block | In Class | Due | If you miss this class: |
| 1  Dec  1/4 | -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  **Watch:** Videos A, B, C |
| 2  Dec  5/6 | -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  **Watch:** Videos C, D |
| 3  Dec  7/8 | -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  **Watch:** Videos F |
| 4  Dec  11/12 | -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)  **Turn in:** Vertical Circle Problems | **Read:** 5.9  **Watch:** Videos G, H |
| Dec  13/14 | **So let's add a day - and do the SA 5.2 and 5.3 on this day plus something??**  (We will do the ch 5 and 6 assessments together later) | **Turn in:** Orbit Problems  **Turn In:** Orbit Lab  **Turn in: Ch. 5:** 1, 6, 9, 16, 43, 58 |  |
| Dec 15/  Jan2 |  |  |  |

|  |  |
| --- | --- |
| 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 * 3 Formative assignments:   + Ch. 5 problems: 1, 6, 9, 16, 43, 58 (12 pts)   + Vertical Circle Problems (12 pts)   + Orbit Problems (12 pts)   \*Formative only | Handouts:  Syllabus-GravityAndCircularMotion2016  FA5.1  FA5.2  FA5.3  Noteguide-Orbit  Worksheet-Orbit  Noteguide-VerticalCircle  Worksheet-VerticalCircleProblems  Worksheet-VerticalCircle5.2  Lab-Orbit (class copies) |