IB Physics

Chapter 5 Syllabus

Gravity and Circular Motion

|  |  |  |
| --- | --- | --- |
| Block | Class  | Due  |
| 1Dec 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 |
| 2Dec 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 |
| 3Dec 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 |
| 4Dec 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** |
| 5Dec 17/18 | **Energy!!!!!** | **Turn in: Orbit Problems****Turn In: Orbit Lab****Turn in: Ch. 5:** 1, 6, 9, 16, 43, 58 |

|  |  |
| --- | --- |
| 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-GravityAndCircularMotion2015FA5.1FA5.2FA5.3Noteguide-OrbitWorksheet-OrbitNoteguide-VerticalCircleWorksheet-VerticalCircleProblemsWorksheet-VerticalCircle5.2Lab-Orbit (class copies) |