IB Physics

Chapter 5 Syllabus

Gravity and Circular Motion

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| Block | In Class | Due | If you miss this class: |
| 1  Dec  1/4 | -Plates and Marbles  -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)  **Finish Group Work 5.1** | **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 | -Space Station Project Introduction  -Hand out FA 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 | -Space Station Project Worktime | **Turn in:** Orbit Problems  **Turn in: Ch. 5:** 1, 6, 9, 16, 43, 58 |  |
| Dec  15/Jan 2 | -Intro to Energy | **Turn in:** Space Station Project |  |

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| Assignments   * 1 Project/Assessment:   + Space Station Design Project * 2 Formative Assessments:   + 5.2 - Vertical Circle   + 5.3 - Orbit and Gravity * 4 Formative assignments:   + Ch. 5 problems: 1, 6, 9, 16, 43, 58 (12 pts)   + Groupwork 5.1   + Vertical Circle Problems (12 pts)   + Orbit Problems (12 pts) | Handouts:  Syllabus-GravityAndCircularMotion2016  Group Work 5.1  FA5.2  FA5.3  Noteguide-Orbit  Worksheet-Orbit  Noteguide-VerticalCircle  Worksheet-VerticalCircleProblems  Worksheet-VerticalCircle5.2  Space Station Design Project |