**IB Physics**

Linear Kinematics (Chapter 2) Syllabus

Text: *Physics* 6th edition by Douglas Giancoli

|  |  |  |  |
| --- | --- | --- | --- |
| Block[[1]](#footnote-1) | In Class | Due on this class[[2]](#footnote-2) | If you miss this class: |
| 1  **Sept**  **6/7** | -Check out textbooks?  -Calculating Speed/Sig Figs  -Speed Trap lab outside  -Hand out Syllabus/Course Policy  -Website Assignment (Watch Video)  -Information card | **Bring:** Your smiling face  **Bring:** Paper and pencil  **Turn in:** Completed information card | **Watch:** Videos A (SF&U) |
| 2  **Sept**  **8/11** | -Calculating Uncertainty  -Vector nature of velocity  -Hand out Uncertainty Worksheet  -Finish Speed Trap Lab in class | **Video:** Tour of the website  **Bring:** A calculator (every day hereafter :-)  **Read:** This Syllabus (All the footnotes)  **Turn in:** Speed trap | **Watch:** Videos B-E (SF&U)  **Watch:** Videos A, B (?) (Kin)  **Watch:** Tour of the website |
| 3  **Sept 12/13** | -Velocity and Acceleration  -Hand out the IB Data Booklet  -Velocity, acceleration, displacement  -Tips for Book Problems | **Practice:** Uncertainty Worksheet (optional) | **Read:** 2.1-5[[3]](#footnote-3)  **Watch:** Videos C, D (Kin) |
| 4  **Sept 14/15** | -**Quiz** on Course policy  -Grade quiz in class/ Tour of the room  -Unit conversions for Physics  -More velocity, acceleration, displacement | **Check:** P2.3 1-5, 21,22 | **Read:** Course Policy**,** 2.6  **Watch:** Videos C-E (Kin) |
| 5 Sept 18/19 | -Hand out *Graphs of Motion*  -Position time graphs  -Velocity time graphs  -Demo *Plot Matching Lab*  -Finish *Graphs of Motion 1 and 2* | **Check:** P2.3 6-10, 23, 24  **Turn In:** P2.3 1-10, 21-24 | **Read:** 2.8  **Watch:** Videos F, G (Kin) |

|  |  |  |  |
| --- | --- | --- | --- |
| 6  **Sept 20/21** | -Free Fall and Terminal Velocity Demos  -Solving Free fall problems  -Work on **2.4 #1, 2, 4** | **Turn In:** Graphs #1, and #2 | **Read:** 2.7  **Watch:** Videos H (Kin) |
| 7  **Sept 22/26** | -More Solving Free Fall Problems  -Hand out Moving Plots/Air Rocket  -Hand out FA1.1, 2.3, 2.4  Gather data for:  -*Moving Plots* lab | **Check 2.4:** 1, 2, 3[[4]](#footnote-4)  **Practice:** Problems from 2.3  **Video Flip:** Moving Plots Data Gathering (?) | **Watch:** Videos H (Kin)  **Watch:** Moving Plots lab videos (Kin) |
| 8  **Sept**  **27/28** | -Air Rocket Demo  Gather data for:  -*Measuring the Initial Velocity of an Air Rocket* lab[[5]](#footnote-5)  In class time to work on Labs  -Work on **2.4 #3, 6, 8** | **Video Flip:** Air Rocket Lab  **Bring:** A warm or rain coat**?**  **Video:** Moving Plots Lab  **Check 2.4:** 4, 5, 6 | **Read:** 2.7  **Watch:** Air Rocket lab videos (Kin) |
| 9  **Sept 29/**  **Oct 2** | In class time to work on:  -*Air Rocket* lab (indiv)  -*Plot Matching* lab (indiv)  -*Moving Plots* lab (groups of 2) | **Check 2.4:** 7, 8, 9 | **Watch:** Lab videos(Kin) |
| 10  **Oct**  **3/4** | **Summative assessments on:**  **-SA 1.1 Uncertainty**  **-SA 2.3 Basic Kinematics**  **-SA 2.4 Free Fall Kinematics** | **Turn In:** P2.4 #1-9  **Turn in: FA 2.3**  **Turn in: FA 2.4**  **Turn in: FA 1.1**  **Turn in: All** formative work for this unit you want credit for | **Make up the tests** |
|  | Beginning of vectors | **Turn in:**  *Plot Matching* lab affidavit  **Turn in:** *Air rocket* lab  **Turn in:** *Moving Plots* lab |  |

|  |  |
| --- | --- |
| Assignments   * 4 Labs:   + Speed Trap Lab – done the first day of class, written up the second day. No handout   + Air Rocket Lab - outdoors   + Moving Plots Lab – tape timer and cart   + Plot Matching Lab – matching the plots on the computer/written note saying you did it. No handout * 1 Quiz - (Formative)   + Course Policy Quiz – study especially the bold items in the course policy * 2 Formative Homework:   + P2.3 1-10, 21-24 /28 pts   + Practice 2.4 #1-9 /45 pts * 3 Formative/Summative Assessments:   + 1.1 Propagation of Uncertainty   + 2.3 Basic Kinematics   + 2.4 Free Fall Kinematics | Handouts |

1. This is the block of the syllabus, and the numbers that follow are the dates that they will happen, the first is for A day classes, the second for B. [↑](#footnote-ref-1)
2. Note that this column is for readings, things to be brought to class completed, or things to be turned in. This is the due date for these things, not what you do after the class described to the left. So on block 2, for example, you will turn in your speed trap lab from the first day. The practice problems are problems like the material covered in the previous class. [↑](#footnote-ref-2)
3. These are readings from your book. You will understand class much better if you read the book even casually the night before. Section 2.1 starts on page 19 [↑](#footnote-ref-3)
4. This is homework I want to collect. Show your work on a separate piece of paper, and at the beginning of class, we will put these on the board and answer questions. I will stamp them, and if you want to write one on the board, I will give you an extra stamp. [↑](#footnote-ref-4)
5. This lab is outdoors so dress appropriately. [↑](#footnote-ref-5)