**Physics G**

Two-Dimensional Motion and Vectors Syllabus

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| Block | Class | Due on this class | |
| 1  Nov 4/5 | -Introduction to vectors "Where am I?"  -Rules of vectors  -Finding vector components |  | |
| 2  Nov 6/9 | -Making angle magnitude vectors  -Adding vector component vectors  -Adding two angle magnitude vectors | **Read:** 3.1-2[[1]](#footnote-1)  **Check Formative:** VS: 1-6 | |
| 3  Nov 10/16 | -Work on VS 15, 16  -Hand out FA 3.1  -Principles of projectile motion  -Simple Cliff Problem solved  -Explain classroom flip/noteguide | **Check Formative:** VS: 7-14 | |
| 4  Nov 17/18 | **-Summative Assessment:**  **-SA 3.1 Vector Addition**  -Work in groups on Cliff Quizlette  -(Work on 2DM: 1,2,3)  -Explain classroom flip/noteguide | **Video Flip: Cliff Problem (G)[[2]](#footnote-2)**  **Turn in Formative:** VS: 1-16  **Read:** 3.3  **Turn in:** FA 3.1 | |
| 5  Nov 19/20 | -Arc Trajectories Example  -Deriving the Range Equation  -Work in groups on Arc Quizlette  -(Work on 2DM: 4,5,6) | **Video Flip: Arc Problem (H) and Range Equation (I)**  **Turn in:** Cliff Quizlette | |
| 6  Nov 23/24 | -Projectile motion demos  -Solving boat crossing river problems  -Work in groups on Practice 3.4: 1-3  -(Work on 2DM 7- 9, SO2DM 5-7) | **Practice:** 2DM: 1-6, 10-15  **Turn in:** Arc Quizlette  **Read:** 3.4 | |
| 7  Nov 25/30 | -Introduction of *Vernier Trajectories* lab  -Demonstration of *Trajectory of a Marble* lab  -Hand out FA 3.2, 3.3, 3.4  -Work time for labs | **Video Flip: Trajectory of a Marble lab**  **Practice:** 2DM: 7-9 | |
| 8  Dec 1/2 | -Posers from Interactive Physics  -In class time to work on labs | **Practice:** SO2DM: 1,3 | |
| 9  Dec 3/4 | -In class time to work on labs and FAs | **Practice:** SO2DM: 2-7 | |
| 10  Dec 7/8 | -In class time to work on labs and FAs | **Practice:** P3D: 1,3 P3E: 1,3,5 | |
| 11  Dec 9/10 | **-Summative Assessments:**  **-SA 3.2 Cliff Problems**  **-SA 3.3 Arc Problems**  **-SA 3.4 Boat Crossing River** | **Turn in:** *Vernier Trajectories* lab  **Turn in:** *Trajectory of a Marble* lab  **Turn in:** FA 3.2, 3.3, 3.4 | |
| 12  Dec 11/14 | Newton's Laws!!!!!! |  | |
| Assignments:   * 3 Labs:   + *Where am I?* lab – Drawing in class on graph paper /10 pts   + *Vernier Trajectories* lab – Computer simulation. /30 pts   + *Trajectory of a Marble* lab – In class – hit a target with a marble. /20 pts * 2 Quizlettes – group work on problems (10 formative points each) * Formative: VS 1-16 /10 pts * 4 Formative/ Summative assessments:   + 3.1 - Adding Two Vectors   + 3.2 - Cliff Problems   + 3.3 - Arc Problems   + 3.4 - Boat Crossing River | | Handouts:  Syllabus-2DMotionAndVectors  Worksheet-Vector Sheet  Worksheet-2DimensionalMotion  Lab-VernierTrajectories  Lab-TrajectoryOfAMarble  Noteguide-Cliff  Noteguide-Arc  Worksheet-SonOf2D  Quizlette-Cliff  Quizlette-Arc  FA 3.1  FA 3.2  FA 3.3  FA 3.4 |

1. Chapter 3 starts on page 84 [↑](#footnote-ref-1)
2. Video Flip means that you must watch the video on line. I will not be teaching the material in class, the only way you will learn it is to view the video. If you come to class having not watched the video, you will have to watch it in class. It is much better to work on the quizlette in class. [↑](#footnote-ref-2)