

PHYS1106 - Fund of Physics - Mechanics

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| Credits: | 3 (2/1/0) |
| Description: | Meets MnTC Goal Area 3. This course is an introduction to selected topics in classical physics. The topics covered include measurement and significant digits, dimensional analysis, vectors, motion, force, work and energy, momentum and rotational dynamics. An introductory-level college algebra is used frequently to ensure that students grasp the principles and retain a working knowledge of them. This course may be taken separately from PHYS 1105 and is intended for all students but especially designed for non-science majors or those who need an introductory-level working knowledge of physics. |
| Prerequisites: | <ul style="list-style-type: none"> • MATH1020 |
| Corequisites: | |
| Pre/Corequisites*: | |
| Competencies: | <ol style="list-style-type: none"> 1. Demonstrate an understanding of scientific theories and the scientific method. 2. Demonstrate an understanding of the major topics listed in the description section of this course. 3. Demonstrate significant proficiency with mathematical treatment of scientific data, including the use of algebra to manipulate and analyze equations of physics. 4. Create a graph of a data set and apply appropriate mathematical treatment to compute a result. 5. Demonstrate a working knowledge of numerical uncertainty and be able to recognize sources of error in measurements. 6. Demonstrate an ability to use dimensional analysis for problem-solving. 7. Analyze many different physics word problems, translate them to a mathematical form and solve them. 8. Write a detailed solution to a physics problem in the form of a report. 9. Analyze many different physics word problems, translate them to a mathematical form and solve them. |
| MnTC goal areas: | 3. Natural Sciences |

*Can be taking as a Prerequisite or Corequisite.