# COURSE INFORMATION FORM

Publish in college catalog? Yes ☑ No ☐

**Course Title (*Maximum of 48 characters*)** General Physics I

**Department/Course Number** PHYS& 114 **Effective Quarter** Winter 2018

Administrative Unit Code: GP
Department: Physical Sciences

**Credits** 5 Variable No ☑ Yes ☐ _____ - _____

Multiple Versions No ☑ Yes ☐ _____ , _____ , _____ Maximum Class Size 24

**Long Course Description** (for college catalog): (***NOTE: Maximum of 995 characters)***
(NS-L) First course in a one-year algebra-based General Physics sequence (PHYS& 114-116). Topics include motion, force, momentum and energy.

**Short Course Description** (for class schedule): (***NOTE: Maximum of 240 characters)***
First course in a one-year algebra-based General Physics sequence (PHYS& 114-116). Topics include motion, force, momentum and energy.

**Prerequisites**:
Eligibility for ENGL& 101; and completion of (or concurrent enrollment in) MATH& 142 or MATH& 144 or equivalent.

**Co-requisites**: none

| | | |
|---|---|---|
| Pass/Fail Option Available? | Yes ☑ | No ☐ |
| Course Challenge Exam Available? | Yes ☐ | No ☑ |
| Can course be repeated for credit? | Yes ☐ | No ☑ |
| Number of repeats beyond initial enrollment: | One ☐ | Two ☐ |

**Course Intent** (*check all that apply)*:
☑ DTA Distribution/Skill

Area Natural Science - Lab

☑ DTA Elective *(check one only)*
- ☑ University Transfer List (A)
- ☐ Restricted Transfer (B/Gray area)

☐ Not allowable as an elective for DTA

☐ Fills requirement for _____ *(certificate/degree)*

☐ Other _____

**Workload Information**:

| | Contact Hours | | Percent of Load |
|---|---|---|---|
| Lecture | 40 | ÷ 150 = | 0.267 |
| Laboratory | | ÷ 200 = | |
| Science Lab | 20 | ÷ 180 = | 0.111 |
| Field Supervision | | ÷ 300 = | |
| Comments | | Total | 0.378 |

**Student Learning Objectives**:
Upon successful completion of this course, students will be able to:
1. Use simplifying assumptions, approximations, and estimations in describing and predicting events in the physical world.
2. Translate among various descriptive representations--graphic, analytic, and verbal--of physical phenomena.
3. Demonstrate sound problem solving strategies using graphical, verbal and analytical representations of physical phenomena.
4. Using Newton's Laws of Motion and the rules of kinematics develop and apply successful models describing the relations among forces on and motions of an object.
5. Apply the conservation energy and momentum to the description and prediction of the motion of objects.

| Core Learning Outcome | Introduced (I) or Assessed (A) | If assessed, how is outcome measured? |
|---|---|---|
| CLO #1: Engage and take responsibility as active learners | I ☐ A ☑ | Students will be actively engaged in small group self-guided lab exercises. |
| CLO #2: Think critically | I ☐ A ☑ | Students will utilize quantitative and graphical analysis to describe physical phenomena and solve problems. |
| CLO #6: Demonstrate computer and technology proficiency | I ☑ A ☐ | Students will use sensors that interface with computer hardware and software to acquire and interpret data for laboratory exercises |

| Program Specific Outcome | Introduced (I) or Assessed (A) | If assessed, how is outcome measured? |
|---|---|---|

| | | |
|---|---|---|
| Apply quantitative analysis to solve problems | I ☐<br>A ☑ | Students will utilize quantitative and graphical analysis to describe physical phenomena and solve problems. |
| Apply the scientific method | I ☐<br>A ☑ | Students will apply basic physical principles to new situations in the lab to learn about different, related phenomena. |