## Curriculum Committee

## Change of Course Proposal

FLORIDA SOUTHWESTERN STATE COLLEGE

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|---|---|
| **School or Division** | School of Pure and Applied Sciences |
| **Program or Certificate** | General Education Program |
| **Proposed by (faculty only)** | Dr. Yadab Paudel |
| **Presenter (faculty only)** | Dr. Yadab Paudel |
| Note that the presenter (faculty) listed above must be present at the Curriculum Committee meeting or the proposal will be returned to the School or Division and be resubmitted for a later date. | |
| **Submission date** | 2/10/2016 |
| **Current course prefix, number, and title** | PHY2053, College Physics I |

### Section I, Proposed Changes

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| **Change to course prefix and number** Lecture/lab course combined must include "C" / lab course must include "L" | |
| **Change to course title** | |
| **Change of School, Division, or Department** | |
| **Change to course prerequisite(s) and minimum grade(s) (must include minimum grade if higher than a "D")** | |
| **Change to course corequisites** | |
| **Is any corequisite for this course listed as a corequisite on its paired course?** (Ex. CHM 2032 is a corequisite for CHM 2032L, and CHM 2032L is a corequisite for CHM 2032) | Choose an item. |
| **Change to course credits or clock hours** | |
| **Change to contact hours (faculty load)** | |
| **Change to grade mode** | |
| **Change to credit type** | |
| **Change to course description** (provide below) | |
| | |
| **Change to general topic outline** (type in entire new outline below) | |
| • Systems of measurement, and dimensional analysis<br>• Motion in one, two, and three dimensions<br>• Newton's Laws and their applications<br>• Work, energy, and conservation of energy<br>• Systems of particles, collisions, center of mass, and conservation of linear momentum<br>• Rotational motion and centripetal acceleration<br>• Conservation of angular momentum<br>• Gravity | |

- Static and rotational equilibrium, and elasticity
- Fluids, Archimedes' principle, and Bernoulli's equation
- Oscillations and waves

**Change to Learning Outcomes:** For information purposes only.

## IV. Course Competencies, Learning Outcomes and Objectives

### A. General Education Competencies and Course Outcomes

1. Integral *General Education Competency or competencies*:
   **Evaluate**
   *Course Outcomes or Objectives Supporting the General Education Competency Selected:*

| Learning Outcomes | Assessments | General Education Competencies |
|---|---|---|
| • Examine the principle of dimensional analysis and use it to derive approximate expressions of physical laws.<br>• Identify the SI system of units and analyze the differences between base and derived units.<br>• Interpret the laws of motion and apply them to solve problems in one and two dimensions.<br>• Differentiate between and among the concepts of work, power, energy, and conservation of energy; examine the applications of these concepts, and use them to interpret and explain natural phenomena.<br>• Use the concept of center of mass and use it to analyze the motion of a system of particles.<br>• Describe the law of conservation of momentum, examine its applications, and use it to interpret and explain natural phenomena.<br>• Apply the concepts of momentum and energy to explain collisions.<br>• Describe the concept of circular motion and use it to solve problems. | Homework and/or quizzes and/or tests and/or assignments/classroom tasks. | Evaluate and utilize mathematical principles, technology, scientific and quantitative data. |

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| • Use the laws of rotational kinematics to compare linear motion with rotational motion.<br>• Explain the law of gravitation as it relates to natural phenomena; combine this law with the laws of motion to explain planetary orbits.<br>• Analyze the conditions for static and rotational equilibrium and use the concept of torque to explain natural phenomena.<br>• Describe the concepts related to fluid pressure and buoyancy and use Bernoulli's equation to explain natural phenomena.<br>• Explain the properties of oscillations, waves and the Doppler effect; apply these concepts to natural phenomena. | | |

2. Supplemental *General Education Competency or competencies*:
   None

**B. In accordance with Florida Statute 1007.25 concerning the state's general education core course requirements, this course along with PHY 2053L meets the general education competencies for *science.***

1. Students will demonstrate the ability to critically examine and evaluate scientific observation, hypothesis, or model construction, and to use the scientific method to explain the natural world.
2. Students will successfully recognize and comprehend fundamental concepts, principles and processes about the natural world

**C. Other Course Objectives/Standards**
**None**

## Section II (must complete each item below)

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| **Should any major restrictions be listed on this course? If so, select "change" and list the appropriate major restriction codes or select no change.** | No change |
| **Change course to an "International or Diversity Focus" course?** | No, not International or Diversity Focus |
| **Change course to a General Education course?** | No |
| **Change course from General Education to non-General Education?** | No |

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| **Change course to a Writing Intensive course?** | No |
| **Change course from Writing Intensive to non-Writing intensive?** | No |
| **Change course to repeatable?**<br>(A repeatable course may be taken more than one time for additional credits. For example, MUT 2641, a 3 credit hour course can be repeated 1 time and a student can earn a maximum of 6 credits).<br>*Not the same as Multiple Attempts or Grade Forgiveness | No |

| **Impact of Change of Course Proposal** | |
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| **Will this change of course proposal impact other courses, programs, departments, or budgets?** | No |
| **If the answer to the question above is "yes", list the impact on other courses, programs, or budgets?** | |
| **Have you discussed this proposal with anyone (from other departments, programs, or institutions) regarding the impact? Were any agreements made? Provide detail information below.** | |
| No | |

## Section III, Justification for proposal

| **Provide justification (below) for each change on this proposed curriculum action** |
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| The removed topics from topic outline are covered in PHY 2054 and should not appear in the topic outline for PHY 2053. |

## Section IV, Important Dates and Endorsements Required

| **List all faculty endorsements below. (Note that proposals will be returned to the School or Division if faculty endorsements are not provided).** |
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| Prof. George Manacheril, Dr. Marius Coman |

**NOTE:** Course and Program changes must be submitted by the dates listed on the published Curriculum Committee Calendar. Exceptions to the published submission deadlines must receive prior approval from the Provost's Office.

VPAA: Revised 11/11, 6/12, 6/13, 7/14, 8/15, 8/16

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| **Term in which approved action will take place** | Fall 2017 |
| **Exception to term (other than Fall 2016)** | Choose an item. |
| **Provide an explanation below for the requested exception to the Fall 2016 term effective date.** | |
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| **Any exceptions to the term start date (other than Fall 2016) requires the signatures of the Academic Dean or Associate Vice President and the Provost and Vice President of Academic Affairs prior to submission to the Dropbox.** | | |
|---|---|---|
| **Dean or Associate Vice President** | **Signature** | **Date** |
| | | |
| **Provost and VPAA** | **Signature** | **Date** |
| Dr. Jeff Stewart | | |

| **Required Endorsements** | **Type in Name** | **Select Date** |
|---|---|---|
| **Department Chair or Program Coordinator/Director** | George Manacheril | 2/10/2016 |
| **Academic Dean or Associate Vice President** | Dr. Martin McClinton | 10/7/2016 |

All Curriculum proposals require approval of the Curriculum Committee and the Provost. Final approval or denial of a proposal is reflected on the completed and signed proposal.

☑ Approve ☐ Do not approve

Dan Ramsdell — 11/09/2016

*Curriculum Committee Chair Signature* — Date

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☒ Approve ☐ Do not approve

Jeff Stewart — 11/9/16

*Provost Signature* — *Date*

VPAA: Revised 11/11, 6/12, 6/13, 7/14, 8/15, 8/16