2022-23
ACADEMIC CATALOG



Midway University Course Catalog - Physical Science

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Physical Science

Physical Science

Courses

PSC 105 - Exploring Dynamic Connections on Earth

This course is a study of the connections among processes in different Earth systems. Students will explore the complex interactions among the atmosphere, oceans, freshwater systems, land surfaces and extraterrestrial influences as well as the physical forces driving these interactions.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

PSC 106 - Exploring Dynamic Connections on Earth Laboratory

This course provides laboratory experiments to accompany PSC 105. Two hours per week are required. Concurrent enrollment in or previous completion of PSC 105 required.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- PSC 105 - Exploring Dynamic Connections on Earth

PSC 210 - Introductory Astronomy

A study of astronomical phenomena, instrumentation, and methods used in astronomy, the physical laws that governs the universe, and basic mathematical models used to investigate the cosmos. This course focuses on planetary systems, structures, celestial motion, and stellar formations and life times.

Upon completion, students will be able to:

- Identify environmental factors, which affect the outcome of an experiment or observation and apply basic error analyses techniques.
- Collect, report and analyze data obtained in a laboratory and/or observatory setting in a manner exhibiting organization, proper documentation and critical thinking.
- Demonstrate a basic understanding of the use of standard astronomical instruments.
- Accurately use and define astronomical vocabulary terms.
- Perform calculations using common astronomical and physical equations.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- MTH 140 - College Algebra

PSC 240 - Physics I

Course is the first of a two-semester sequence in general physics, including mechanics, heat, thermodynamics, sound and wave motion. Four hours lecture/recitation per week is required. Prerequisite: MTH 140 or MTH 220, ACT Math score of 27 (minimum) or equivalent SAT Math score.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- MTH 140 - College Algebra
- MTH 220 - Calculus I

PSC 241 - Physics Laboratory I

Course provides laboratory experiments to accompany Physics I PSC 240. Two hours per week are required. Concurrent enrollment in or previous completion of PSC 240 required.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- PSC 240 - Physics I

PSC 245 - Physics II

This course is a continuation of general physics, including electricity, magnetism, optics, relativity, quantum mechanics, the nucleus and elementary particles. Four hours lecture/recitation per week are required. Prerequisite: PSC 240.

Grade Basis: L
Credit hours: 3.0
Lecture hours: 3.0

Prerequisites:

- PSC 240 - Physics I

PSC 246 - Physics Laboratory II

Lab experiments to accompany Physics II PSC 245. Two hours per week are required. Concurrent enrollment in or previous completion of PSC 245 required.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- PSC 245 - Physics II

PSC 250 - Physics for Engineers I

Analytical and quantitative development of principles of mechanics. Emphasis on consequence of the same. Prerequisite: MTH 220.

Grade Basis: L

Credit hours: 4.0
Lecture hours: 4.0

Prerequisites:

- MTH 220 - Calculus I

PSC 251 - Physics for Engineers I Lab

Lab experiments to accompany PSC 250. Prerequisites: concurrent PSC 250.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- PSC 250 - Physics for Engineers I

PSC 252 - Physics for Engineers II

Continuation of PSC 250, including electricity, magnetism, optics, etc. Prerequisites: PSC 250-251: concurrent MTH 223.

Grade Basis: L
Credit hours: 4.0
Lecture hours: 4.0

Prerequisites:

- MTH 223 - Calculus III
- PSC 250 - Physics for Engineers I
- PSC 251 - Physics for Engineers I Lab

PSC 253 - Physics for Engineers II Lab

Lab experiments to accompany PSC 252. Prerequisite: concurrent PSC 252.

Grade Basis: L
Credit hours: 1.0
Lab hours: 1.0

Prerequisites:

- PSC 252 - Physics for Engineers II

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