

Grayson College Course Catalog

Overview

For students planning to pursue a Physics major and transfer to a four-year institution, as a general rule, students should follow the **Associate of Science Degree in General Studies** at Grayson College as part of the **Science and Technology Career Pathway**. All students are advised to counsel with the university/college of their choice to determine which courses offered at Grayson College are applicable to that institution's bachelor's degree in their desired major.

PHYS 1101 - College Physics I (lab)

This laboratory-based course accompanies PHYS 1301, College Physics I. Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; emphasis will be on problem solving.

Grade Basis: L

Credit hours: 1.0

Lab hours: 3.0

Prerequisites:

- [PHYS 1301](#) - College Physics I

Restrictions:

- College readiness in reading and math required.
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PHYS 1102 - College Physics II (lab)

This laboratory-based course accompanies PHYS 1302, College Physics II. Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving.

Grade Basis: L

Credit hours: 1.0

Lab hours: 3.0

Prerequisites:

- [PHYS 1302](#) - College Physics II

Restrictions:

- College readiness in reading and math required.
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PHYS 1103 - Stars and Galaxies

Laboratory in the study of stars, galaxies, and the universe outside our solar system.

Grade Basis: L

Credit hours: 1.0

Lab hours: 2.0

Prerequisites:

- [PHYS 1303](#) - Stars and Galaxies

Restrictions:

- College readiness in reading and math required.
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PHYS 1104 - Solar System

Laboratory in the study of the sun and its solar system, including its origin.

Grade Basis: L

Credit hours: 1.0

Lab hours: 2.0

Prerequisites:

- [PHYS 1304](#) - Solar System

Restrictions:

- College readiness in reading is required.
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PHYS 1115 - Physical Science Laboratory I

Course, designed for non-science majors, that surveys topics from physics, chemistry, geology, astronomy, and meteorology.

Grade Basis: L

Credit hours: 1.0

Lab hours: 2.0

Prerequisites:

- [PHYS 1315](#) - Physical Science I

Restrictions:

- College readiness in reading is required.
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PHYS 1301 - College Physics I

Fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, physical systems, Newton's Laws of Motion, and gravitation; with emphasis on problem solving, constant acceleration.

Grade Basis: L

Credit hours: 3.0

Lecture hours: 3.0

Prerequisites:

- [MATH 1314](#) - College Algebra

Restrictions:

- College readiness in reading and math required.
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PHYS 1302 - College Physics II

Fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, and optics; with emphasis on problem solving, capacitance and resistance, superposition of waves.

Grade Basis: L

Credit hours: 3.0

Lecture hours: 3.0

Prerequisites:

- [PHYS 1301](#) - College Physics I

Restrictions:

- College readiness in reading and math required.
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PHYS 1303 - Stars and Galaxies

Study of stars, galaxies, and the universe outside our solar system.

Grade Basis: L

Credit hours: 3.0

Lecture hours: 3.0

Restrictions:

- College readiness in reading and math required.
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PHYS 1304 - Solar System

Study of stars, galaxies, and the universe outside our solar system.

Grade Basis: L

Credit hours: 3.0

Lecture hours: 3.0

Restrictions:

- College readiness in reading and math required.
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PHYS 1315 - Physical Science I

Course designed for non-science majors that surveys topics from physics, chemistry, geology, astronomy, and meteorology.

Grade Basis: L

Credit hours: 3.0

Lecture hours: 3.0

Restrictions:

- College readiness in reading and math required.
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PHYS 2125 - University Physics Laboratory I

Basic laboratory experiments supporting theoretical principles presented in PHYS 2325 involving the principles and applications of classical mechanics, including harmonic motion and physical systems; experimental design, data collection and analysis, and preparation of laboratory reports.

Grade Basis: L

Credit hours: 1.0

Lab hours: 3.0

Prerequisites:

- [MATH 2413](#) - Calculus I
- [PHYS 2325](#) - University Physics I

Restrictions:

- College readiness in reading, and math required.
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PHYS 2126 - University Physics Laboratory II

Laboratory experiments supporting theoretical principles presented in PHYS 2326 involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics; experimental design, data collection and analysis, and preparation of laboratory reports.

Grade Basis: L

Credit hours: 1.0

Lab hours: 3.0

Prerequisites:

- [PHYS 2326](#) - University Physics II

Restrictions:

- College readiness in reading, and math required.
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PHYS 2325 - University Physics I

Fundamental principles of physics, using calculus, for science, computer science, and engineering majors; the principles and applications of classical mechanics, including harmonic motion, physical systems and thermodynamics; and emphasis on problem solving.

Grade Basis: L

Credit hours: 3.0

Lecture hours: 3.0

Prerequisites:

- [MATH 2414](#) - Calculus II

Restrictions:

- College readiness in reading and math required.
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PHYS 2326 - University Physics II

Principles of physics for science, computer science, and engineering majors, using calculus, involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics.

Grade Basis: L

Credit hours: 3.0

Lecture hours: 3.0

Prerequisites:

- [PHYS 2325](#) - University Physics I

Restrictions:

- College readiness in reading and math required.
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Last updated: 03/28/2018

Grayson College

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