PHYSICS (PHYS)

PHYS G110 **3 Units (54 lecture hours)**
Conceptual Physics
Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU; UC.

A course designed for non-science majors which considers the everyday applications of physics. This course is a non-mathematical approach to the basic concepts of physics. Open to students with or without high school physics, but not open to those who have credit for any college physics course. It covers the subjects of motion, energy, waves, music, electromagnetism, relativity and nuclear energy. Graded or Pass/No Pass option. UC credit limitations: No credit for PHYS G110, PHYS G111 if taken after PHYS G120 or PHYS G185.

PHYS G111 **1 Unit (54 lab hours)**
Conceptual Physics Lab
Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU; UC.

This course is designed to supplement PHYS G110. The student will do laboratory exercises which illustrate some of the phenomena discussed in PHYS G110. Graded or Pass/No Pass option. UC credit limitations: No credit for PHYS G110, PHYS G111 if taken after PHYS G120 or PHYS G185.

PHYS G120 **4 Units (54 lecture hours; 54 lab hours)**
Algebra Based Physics: Mechanics
Prerequisite(s): MATH G120 or achieve qualifying score on Math Placement.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

This is an algebra/trigonometry based physics course in mechanics, heat and sound. Topics studied include force, motion, energy, heat transfer, effects of heat and the nature and properties of waves. Three hours lecture and demonstration, three hours laboratory a week. Graded. UC credit limitations: PHYS G120, PHYS G125 and PHYS G185, PHYS G280, PHYS G285 combined – maximum credit, 1 series. Deduct credit for duplication of topics. **C-ID:** PHYS 105, 100S.

PHYS G125 **4 Units (54 lecture hours; 54 lab hours)**
Algebra Based Physics: Electricity/Magnetism
Prerequisite(s): PHYS G120.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

This is an algebra/trigonometry based general physics course in the areas of electricity, magnetism, light and modern physics. Topics studied include electric charges and fields, DC circuits, magnetic fields, electromagnetic induction, reflection, refraction, interference of light, quantum theory, matter waves, radioactivity and nuclear reactions. Three hours lecture and demonstration, three hours laboratory a week. This course may not be offered each semester. Graded. UC credit limitations: PHYS G120, PHYS G125 and PHYS G185, PHYS G280, PHYS G285 combined – maximum credit, 1 series. Deduct credit for duplication of topics. **C-ID:** PHYS 110, 100S.

PHYS G185 **4 Units (54 lecture hours; 54 lab hours)**
Calculus Based Physics: Mechanics
Prerequisite(s): MATH G180 or achieve qualifying score on Math Placement.

Advisory: MATH G185.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

This is an introductory course in physics using calculus. Topics studied include vectors, motion, forces, energy, momentum, oscillators and properties of waves. PHYS G185, PHYS G280 and PHYS G285 are required for students majoring in physics, chemistry or engineering. Graded. UC credit limitations: PHYS G120, PHYS G125 and PHYS G185, PHYS G280, PHYS G285 combined – maximum credit, 1 series. Deduct credit for duplication of topics. **C-ID:** PHYS 205.

PHYS G280 **4 Units (54 lecture hours; 54 lab hours)**
Calculus Based Physics: Electricity/Magnetism
Prerequisite(s): MATH G185 and PHYS G185.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

This is a calculus based physics course which covers the topics of electric charge, electric fields, potential dielectrics, DC circuits, magnetic fields, magnetic forces, electromagnetic induction, electromagnetic oscillators, and waves. Graded. UC credit limitations: PHYS G120, PHYS G125 and PHYS G185, PHYS G280, PHYS G285 combined – maximum credit, 1 series. Deduct credit for duplication of topics. **C-ID:** PHYS 210.

PHYS G285 **4 Units (54 lecture hours; 54 lab hours)**
Calculus Based Physics: Modern
Prerequisite(s): MATH G185 and PHYS G185.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

This is a calculus based physics course including the topics of measurement of heat and temperature, effects of heat, kinetic theory of gases, thermodynamics, propagation of light, reflection, refraction, interference, diffraction, relativity, quantum theory and matter waves. Graded. UC credit limitations: PHYS G120, PHYS G125 and PHYS G185, PHYS G280, PHYS G285 combined – maximum credit, 1 series. Deduct credit for duplication of topics. **C-ID:** PHYS 215.