SCIENCE (SC)

SC-100 Discovery and Thinking in Natural Sciences **Credits: 3**
Term Offered: All Terms
Course Type(s): NS
The development of major concepts in the biological, chemical, and physical sciences; their importance today.

SC-103 Physical Geography **Credits: 3**
Term Offered: All Terms
Course Type(s): NS
A survey of the Earth sciences from a spatial perspective. We will use maps, diagrams, simulations, and computer mapping software to learn about the systems of the Earth. Students will gain an understanding of physical processes and patterns of the Earth's atmosphere, climate, landforms, and biosphere. Understanding of these systems will be used to examine the ways in which humans influence and adapt to Earth systems. The learning outcomes of this course satisfy a general education requirement for the Natural Sciences. Also listed as GO-103.

SC-110 Nutrition Science **Credits: 3**
Term Offered: All Terms
Course Type(s): NS
An overview of the science of human nutrition, including the basics of protein, carbohydrate, lipid, vitamin, mineral, water, and alcohol metabolism. An analysis of the relationship of diet to various health issues and current controversies in nutrition will be covered. Students will learn the elements of nutritional analysis by evaluating their personal diets. Emphasis will be on the manner in which nutrition knowledge is acquired, including a nutrition study conducted by the students.

SC-120 The Science of Food and Cooking **Credits: 3**
Term Offered: All Terms
Course Type(s): NS
This course covers concepts from chemistry, biology and physics that underpin the principles of food science and the transformations that occur during food preparation and cooking. Students will develop a scientific understanding of food preparation, cooking techniques, and recipes. Cooking demonstrations and experiments will be used to illustrate the scientific concept involved. Note: This course involves the preparation and (optional) consumption of food. If you have specific fool allergies or needs, contact the instructor to discuss any necessary arrangements.

SC-130 Climate Science for 21st Century Citizens **Credits: 3**
Term Offered: All Terms
Course Type(s): SUS, NS
Earth's climate has changed in the past and will change in the future. Climate science and hypotheses about climate change and man's effects on climate figure prominently in the news and popular culture. However, forces and feedbacks impacting climate are poorly understood by the general public. This lack of understanding originates partially because climate science is complicated and interdisciplinary, and partially because addressing climate change requires significant changes in the global energy economy, turning it into a political issue with skewed and un-scientific public discourse. This course aims to cover parts of climate science that are well established, differentiate them clearly from parts of climate science where genuine uncertainty exists and use these contrasts to illustrate the scientific methods, culture of science and science practices of the 21st Century.

SC-140 Forensic Science **Credits: 3**
Term Offered: All Terms
Course Type(s): NS
An introductory course in which scientific principles will be applied to the methods used to investigate and solve crimes. The course will focus on the principles and methods utilized in the traditional sciences of biology, chemistry, and physics. The scientific techniques used to collect and analyze evidence will be covered.

SC-150 Drug Discovery **Credits: 3**
Term Offered: All Terms
Course Type(s): NS
Concepts of biology, chemistry and pharmacology are used to examine aspects of drug discovery from early recorded history to modern treatments for disease. Additionally, students will understand the impacts of key drug discoveries on society/public health. Note: No prior biology/chemistry knowledge is assumed.

SC-160 Science of Energy **Credits: 3**
Term Offered: All Terms
Course Type(s): NS
Energy consumption is a key aspect of society that has been profoundly impacted by abundant low-cost energy. What does the future of energy look like in terms of abundance and cost? This course examines energy sources, energy needs, and the transition from geologically stored energy sources (fossil fuels) to ecologically available energy sources and conservation. It also explores the potential environmental consequences of such transition in the immediate future and long-term.

SC-170 Oceanography **Credits: 3**
Term Offered: All Terms
Course Type(s): NS
Oceanography provides a survey of physical, biological, chemical, and geological resources and the processes that define and affect ocean basins, coasts, beaches, estuaries, offshore waters and marine species. Environmental considerations include the role of oceans in global climate change issues, coastal development, exploitation of marine resources, and marine pollution. Students in the Marine and Environmental Biology and Policy (MEBP) program should take PH-270, Physical Oceanography, for elective credit.

SC-198 Special Topics in Science **Credits: 3**
Term Offered: Spring Term
Course Type(s): NS
Study of a particular subject or problem in science to be announced prior to registration. May be conducted on either a lecture-discussion or seminar basis. Courses would meet General Education requirements in the natural sciences. If a prerequisite is required it will be announced in the course schedule.

SC-233 Climate Science: Understanding our Changing Climate Credits: 3
Prerequisite(s): BY-109 or permission of the instructor
Course Type(s): NS, SUS
Climate Change is arguably the most important problem of the 21st century. Climate Science Understanding Our Changing Climate provides students with a quantitatively rigorous treatment of basic climate science as well as a scientific exploration of impacts caused by human-mediated climate change. This course aims to cover climate science from an explicitly interdisciplinary perspective, because climate science depends on chemistry, physics, biology, mathematics, computer modeling and geology for complete understanding of the climate system and because workable climate solutions are almost always interdisciplinary in nature. Climate modeling and assessment of future climate conditions and risks will be stressed.