

## **Elective Course Offerings**

### **SCIENCE**

**Anatomy:** *The Anatomy course at Bridgton Academy is designed to provide a broad appreciation for the structural organization of the human body and to relate the organization to regional and systems-related functions. Specific study is applied to bodily movements and the kinesiology required for physical movement. Students are provided multiple resources for study, including Netter's Atlas of the Human Body, Delevier's Strength Training Anatomy, and Netter's Anatomy Coloring Book. Coursework consists of lectures, lab activities, quizzes, two exams and an oral presentation on kinesiology.*

**Genetics (CAP):** *Genetics is a science elective that provides an understanding of the kinds of questions that science can and cannot address, while exploring topics in cellular biology, the structure and function of genes, and biotechnology. Discussions probe the bioethical implications of our growing knowledge and application of technologies involving manipulation of cellular and genetic processes. This course also includes experiences in a laboratory setting to conduct basic experiments that elucidate the structure of cells and the function of genes. Successful completion of this course may qualify a student for 4 hours of transferable college credit from Saint Joseph's College.*

**Advanced Human Nutrition (CAP)\*:** *CAP Nutrition is a college-level nutrition course, which focuses on the interrelationship between nutritional practices and human physical performance in sports and fitness. Topics include the role of carbohydrates, fats, proteins, vitamins, minerals and water on both everyday eating and physical performance. This course provides a foundational science background in chemistry, anatomy and physiology, and microbiology in the context of human nutrition, as well as hands-on lab experiences. Upon successful completion of CAP Advanced Human Nutrition, students may earn 4 credit hours from Saint Joseph's College.*

**Introduction to Environmental Issues:** *In a one-semester elective, Introduction to Environmental Issues examines the origins of and solutions to pressing current environmental issues. A comprehensive, multidisciplinary approach to environmental problem solving is stressed, and students will explore the scientific, legal, economic, and social aspects of the issues in order to better understand the complexity of these problems.*

**Meteorology:** *Meteorology is an introductory course that explores the composition, structure, and physical properties of the Earth's atmosphere. The course focuses on the basics of heat balance, atmospheric stability, precipitation processes, and understanding the importance of clouds. Cyclonic activity, weather analysis, and very basic weather forecasting techniques are also studied. Particular attention is paid to the causes, structure, and impact of tornadoes, hurricanes, thunderstorms, and other severe weather systems.*

**Principles of Human Nutrition\*:** Principles of Human Nutrition is a one-semester elective that covers the scientific principles of human nutrition in maintaining health and preventing disease. Nutrient requirements of the human body, biochemical functions, and interrelationships of nutrients are examined. Students learn how to fuel their bodies for building muscle, optimal sports performance, and for general health and well-being. Nutritional misconceptions and controversies are evaluated using readings, discussions, and hands-on lab experiences.

## **SOCIAL SCIENCE**

**American Civil War:** The American Civil War course begins with the study of the causes of the Civil War and moves through an exploration of the War, its battles, and the social climate of America during the War. As we recognize and celebrate many momentous events that occurred during this pivotal era, this class looks to put these events into a usable current context. The course format combines lectures and discussion. Reading is expected both in the text and through access to outside sources.

**Cold War Era:** World War II and the post-war economy changed virtually every aspect of American life, from labor, to industry, to the broadened perspective of citizens. As the American Dream became more attainable for many, other Americans actively sought to win their full freedoms during the following years. All of this happened against the backdrop of the Cold War - an ongoing conflict based on the fear of nuclear Armageddon and characterized by proxy wars around the globe. In this course, emphasis is given to the increasing global involvement of the United States, the rise of Communism, the conflicts in Korea and Vietnam, the Space Race, and the changing social dynamics at home.

**Cultural Anthropology:** Cultural Anthropology addresses what it means to be human by documenting human systems, institutions, and ideologies. Cultural anthropologists explore topics including social organization, economies, political and legal systems, traditions, religions, language, health, and social change. In our modern world of nationalism and climate driven migration, understanding cultural relativism helps provide tools for conflict resolution and successful cohabitation of our planet.

**History of New England:** Since its formation, the New England region has managed to maintain an identity broadly American, yet somehow also distinctly New England. This course examines the New England region's geographical, historical, cultural, and political histories. Topics include Indigenous Peoples, Plymouth Colony, witchcraft in Salem, the Minutemen and the American Revolution, 19th century industrialization and immigration, New England's contribution in the Civil War, and significant events of the 20th century and beyond. Analysis of local historical sites serves to deepen understanding of New England's enduring attachment to its past.

**Introduction to Psychology (CAP):** This course serves as an initial overview of the field of psychology and introduces students to prevalent historical and current topics in the field. Through a combination of audiovisuals, lectures, and discussions, students will better understand the foundations of psychology and its application to our world today. Topics may include motivation, memory, cognition, personality, and social behavior. Successful completion of this course may qualify a student for 4 hours of college credit through Saint Joseph's College.

**Sports Psychology:** *Sports Psychology explores the various psychological factors that influence sport performance. Students examine both the scientific theory and the practical application of this knowledge to human performance. Major topics include issues in confidence, anxiety, motivation, leadership, and personality. Students learn what is relevant to their own experiences in all achievement-related contexts, not just the athletic environment.*

## **COMPUTER SCIENCE**

**Graphic Design (CAP)\*:** *Graphic Design is a course that will introduce students to the design process as it pertains to digital imagery. Focus is placed on the creation process and the idea of storytelling through digital design. Software applications such as Adobe Photoshop and Illustrator are used to simulate real world labs and design experiences. Techniques such as layering, selecting, enhancement, composting, path and pen skills are taught, as well as the fundamentals of graphic design. Successful completion of this course may qualify a student for 4 hours of college credit through Saint Joseph's College.*

**Introduction to Computer Science\*:** *In this course, students will explore the fundamentals of problem solving through code. We will focus on process and logic development over syntactic and algorithmic efficiency. Students will learn logic structures, basic syntax, and how to break down a problem into its logical components. Students will utilize version control for source code management and storage, and provide code reviews of each other's work. The semester will culminate in a project written in javascript that exists across both the client & server side. Students will leave the class with a fundamental understanding of the realities of modern software development.*

**Please note: Courses marked with an asterisk (\*) are not NCAA-approved.**