

# FALL 2009 First-Year Courses

*What is this list? Courses for K students in the first term.*

**If a course is available this fall and suitable for a first-year student,  
it is on this list!**

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## INTERNATIONAL AND INTERCULTURAL PERSPECTIVES

### **Why take international or intercultural courses?**

*"Culture courses are so important to successfully studying and living in a foreign country as they provide a global snapshot from a unique angle and perspective. Through these courses one can begin practicing to develop intercultural understanding, which is a valuable tool that can help out tremendously on study abroad." –Dan, K '06*

### **AFRICAN STUDIES: Introduction to African Studies**

This course explores and explains the various concepts, methods, and scope concerned with the study of Africa. In studying Africa, students will be exposed to the major themes and current trends in the field of African studies. The themes will be concerned with contemporary and some historical African issues germane to the development of African societies. (AFST104)

### **AFRICAN STUDIES/HISTORY: Civilizations of Africa**

Study of Africa south of the Sahara including the origins of man and the emergence of food producing communities; Ancient Egypt and pre-colonial African kingdoms and federations; medieval empires of western Sudan, Ethiopia, and Bantu-speaking Africa; and the Atlantic slave trade. Emphasis on socio-political and economic history. Suitable for students with a strong background in writing and critical reading. (AFST/HIST296)

### **CHINESE: Chinese Cultural Motifs through Calligraphy**

Chinese scripts are windows to East Asia cultures. This course traces the etymology and introduces the cultural background of Chinese scripts. It also provides hands-on practice of Chinese calligraphy. This course combines aesthetic training and language learning. Students learn the Chinese scripts not only as linguistic symbols but also as cultural motifs and art forms. Learning the etymology and cultural background of the scripts helps one to understand the linguistic formation of Chinese and other Asian languages that use Chinese scripts. It further provides useful references to the value system, thinking process, and aesthetic principles behind the Chinese language. The hands-on practice of calligraphy is a unique cultural experience. Through frequent review and constant practice, the students become familiar with Chinese scripts, learn the linguistic and cultural meanings associated with these scripts, and acquire the artistic skill of creative expression. (CHIN215)

### **HISTORY: Modern China**

Survey of Chinese history from the 18th century to the present; focus on major developments in China's interaction with the modern world, its struggle in modernization, the origins of the Chinese revolution, and China's reform policies in the late 20th century and their impact on Chinese society and the world. Suitable for students with a strong background in writing and critical reading. (HIST280)

### **HISTORY: Modern Japan**

Study of Japanese history from the Meiji Restoration to the present. Topics include economic and political modernization, the rise of militarism, World War II, the American occupation, the postwar economic miracle, and the current challenges Japan is facing. Recommended for students taking Japanese language courses and planning to study abroad in Japan. Suitable for students with a strong background in writing and critical reading. (HIST285)

### **POLITICAL SCIENCE: Race, Law and U.S. Politics**

This class focuses on what Supreme Court decisions regarding race tell us about our constitution, how law and politics

are balanced, and the appropriate scope of judicial decision-making. Supreme Court decisions on race provide an illuminating lens by which to investigate core concepts in legal decision-making and their underlying implications and assumptions. The aim of this course is threefold: to introduce students to the verbal and written analysis of complex texts and concepts in law, to familiarize students with basic authors and concepts in political science, and to help students think more critically and systematically about their own political ideas. Suitable for students with a strong background in writing and critical reading. (POLS229)

### **POLITICAL SCIENCE: Politics of Latin America**

An introduction to contemporary Latin American politics. The course examines three areas crucial to a basic understanding of the region: (1) socio-economic conditions; (2) the principal actors in the Latin American political arena, including labor movements, peasants, women, indigenous groups, the Catholic Church, political parties, the military, and guerrilla movements; and (3) the resulting political structures that have characterized Latin American politics in the form of authoritarian, revolutionary, and democratic regimes. Suitable for students with a strong background in history, social science, and writing. (POLS245)

### **RELIGION/HISTORY: Introduction to Jewish Traditions**

This course explores the development of Judaism from its ancient origins until the present. We will discuss the biblical foundations of Judaism and the impact that different historical contexts have produced on its rituals and beliefs. This approach raises a number of questions, which we will keep in mind throughout the course: What is Judaism? Who are the Jews? What is the relationship between Judaism and "being Jewish?" How have historical circumstances shaped this relationship? What has changed and what has stayed the same, and why? The class will address these questions through discussions and readings. (RELG/HIST107)

### **RELIGION: Hindu Traditions in South Asia**

Exploration of the foundations of Hinduism, focusing on the textual corpus of the Vedas, Upanisads and Epics, with a focus on lineage and diversity of ritual practices. Special attention is given to practice and the roles for women. The course includes classical and contemporary traditions. (RELG162)

### **THEATRE: African American Theatre**

Survey/lecture course from an African American perspective, examining the activities and developments of Black American life as evidenced through its theatre, with emphasis on history, philosophy, dramatic creations, criticism, and socio-psychological concerns. Includes lectures in theatrical contributions of Western and African civilizations. (THEA155)

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## **ART, MUSIC, & THEATRE**

### **Why study art, music, or theatre?**

*"The arts keep your head engaged, your hands engaged, and your heart engaged. Art keeps us in balance in this hectic and crazy world."* –Lee, K '08

**Prospective Music Majors:** You should take Introduction to Music so that you may begin the Music History and Theory Sequence in winter term. If you achieved a 4 or 5 on the Music Theory AP exam, you are awarded credit for Introduction to Music and do not need to take it. All prospective music majors should not include 20<sup>th</sup> Century Western Music in their course selection as music majors are required to take a major-specific section of this course.

### **ART: Basic Drawing**

Study of drawing fundamentals, with emphasis on line, value, and shape organization as instruments of precision and expression. Students planning to major or minor in art should take this course by the spring quarter of the sophomore year. Fee \$15. (ARTX105)

### **ART: Photography I**

The objective of this studio art course is to provide the student working knowledge of, and experience with, the

fundamental creative tools used in fine art photographic practice. In addition to producing artwork, participants learn to analyze and discuss the work in critiques. When regarding the images produced in this course, discussion will be centered on technical, formal, and conceptual characteristics - along with issues of subject matter and content. In this critical "reading" of images, like that of a text, we will explore the basics of visual literacy. We will be working with both analog and digital tools - a traditional (film) or digital single-lens-reflex camera is required. Fee \$25. (ARTX116)

### **ART: Ceramic Hand Building I**

Introduction to and development of hand building techniques, including modeling, slab construction, and coil building. Assignments geared towards skill development, problem solving, and issues relevant to sculptural ceramics. Glaze technology, kiln firing, and clay making are also taught. Suitable for students with a strong background in art. Fee \$70. (ARTX120)

### **ART: Painting: Traditional Practices**

This course is designed for students that have little or no training in art or who have an interest in traditional painting techniques. In this course students will explore some of the traditional techniques of oil painting that have been used from the Renaissance into the modernist period. Students will be required to work directly from life whenever possible and will have the opportunity to work from still life, landscape and the human figure. This course will emphasize painting techniques and working methods that stress critical judgment, mark making, space, color, light and composition from direct observation. Fee \$15. (ARTX128)

### **ART: Sculpture I**

Introduction of a variety of fabrication techniques; practices may include, but are not limited to, some woodworking and metal welding. Assignments geared towards simultaneous development of technical skill and critical thinking. Discussion and critiques focus on issues prominent in contemporary art. Suitable for students planning to major or minor in art or for students with a strong background in art. Fee \$70. (ARTX135)

### **ART HISTORY: Introduction to History of Art III**

Many artistic revolutions from the 18th through the 20th centuries in Europe and America, like those in society itself, caused radical transformations: from Rococo frivolity to Neoclassical seriousness, and from Romanticism to Realism, Impressionism, Cubism, Expressionism, and all the other 20th-century movements, ending with Postmodernism. We'll see how artists interpret both the world around them and the world of their imagination, and why these interpretations change. (ARTX150)

### **ART HISTORY/CLASSICS: Introduction to Greek Art & Archaeology**

This introduction to the multidisciplinary field of Greek archaeology examines the art and architecture of the Greek world from a contextual perspective. The course traces Greek material culture from Bronze Age origins through Hellenistic transformations. Suitable for students with a strong background in writing and critical reading. (ARTX/CLAS208)

### **MUSIC: Program Music: Stories in Sound**

Program music is instrumental music influenced by an extramusical source. In other words, the music contains a "program" or story. The program can be drawn from any source but is usually taken from literature, myths, legends, landscapes, paintings, or personal dramas. Therefore, in addition to studying the music, this course will examine the extramusical influences associated with the music. The further enhance your understanding and appreciation of this genre, you will produce four programmatic works of your own by creating PowerPoint presentations utilizing music and images in support of an original story or borrowed program. No prior training or experience in music is assumed or necessary. The cultivation of intelligent and perceptive responses to programmatic music will be the primary focus as we explore the many aspects of this genre, be they cultural, mechanical, or expressive. (MUSC100)

### **MUSIC: Introduction to Music**

Study of the language, power, and communicative properties of music in the Western tradition. Selected works, both popular and classical and ranging in time from the Middle Ages to the present, will be listened to and discussed with an emphasis on their musical style and cultural-social context. Students will also acquire basic skills in music literacy, theory, and aural comprehension. Class activities will include guest performances, concert attendance (on and off campus), and

behind-the-scenes looks at what goes into making music. Aural comprehension will be reinforced in a required lab, meeting for one hour a week outside of class, time to be arranged. (MUSC105)

**MUSIC: 20<sup>th</sup>-Century Western Music**

Study of influential 20th-century musical styles in cultural context with analysis of representative works. Students will explore analytical technique appropriate to impressionism, free atonality, pandiatonicism, and serialism. Suitable for students with a knowledge of reading music. (MUSC 335)

**THEATRE: Activating Theatre Techniques for Community Dialogue**

A workshop course based on the Activating Theatre techniques of Augusto Boal. A developmental skills course in creating forum theatre for community and social change, and for moderating effective group dialogue. Interdisciplinary links with psychology, sociology, and education with a focus on both experiential education and interpersonal communications. (THEA115)

**THEATRE: Fundamentals of Acting I**

Introduction to the skills necessary for performing on stage. This course is an exploration of the fundamental techniques necessary for beginning scene and monologue study in modern and contemporary realism. Through physical and vocal exercises, text and character analysis, and scene studies, the student is introduced to the process of acting preparation and performance. Excellent course for majors and non-majors seeking an introduction to the art of acting. (THEA120)

**THEATRE: Design I**

Conceptual study of design, commencing with play analysis and historical research, followed by costume and scenery sketches, decor, drafting, color renderings, and lighting. Focus upon the principles of movement, scale, color, light, silhouette, environment, and composition. Over the quarter, fifteen production lab hours required. Suitable for students planning to major or minor in theatre or for students who have a strong interest in scenic design. (THEA240)

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## HUMANITIES

**Why study humanities?**

*“Studying the humanities means exploring the ideas and stories that cultures are based on. It is through humanities that we can begin to understand who we are and who others are.” –Laurel, K '08*

**AMERICAN STUDIES/HISTORY: History of the United States I**

America from colonial times to 1865, with emphasis on economic, social, intellectual, and political developments. (AMST/HIST110)

**CLASSICS/HISTORY: Women in Classical Antiquity**

A literary, historical, and cultural survey of social structures and private life in ancient Greece and Rome. Issues covered include constructions of sexuality, cross-cultural standards of the beautiful, varieties of courtship and marriage, and contentions between pornography and erotica. Students will examine sources from medical, philosophic, lyric, tragic, comic, and rhetorical writers as well as representative works from vase painting, the plastic arts, graffiti, etc. Suitable for students with a strong background in writing and critical reading. (CLAS/HIST230)

**ENGLISH: Journalism I**

This writing-intensive course introduces students to the basic reporting and writing skills essential to creating “hard news” stories for newspapers. In this class, students will learn the craft and read each other’s work in a helpful arena. Students will write and re-write regularly to master key types of news stories. (ENGL105)

**ENGLISH: Introduction to Creative Writing**

An introduction to the process of writing both poetry and prose, pairing the study of published work with the workshopping and development of student writing. (ENGL107)

**ENGLISH: Reading Autobiography**

An introductory study of personal narrative as a literary form—its particularities, its purposes, and something of its history—with the goal of fostering fundamental skills of reading, discussing, and writing about prose nonfiction. (ENGL125)

**ENGLISH: Reading Film**

An introduction to the language of cinema, foregrounding historical and theoretical contexts of classical Hollywood cinema (1930-1945) and various international alternatives. Requires a weekly film screening outside of class. (ENGL130)

**HISTORY: Introduction to the World of Antiquity**

A survey of ancient societies, politics and religio-philosophic systems. These will include ancient Egypt, classical India, Israel, classical Greece and Rome, and China through the Han Empire. Emphasis on comparative institutions and the character and expansion of ancient empires. (HIST100)

**HISTORY: French Revolution and Napoleon**

Study of France from Louis XIV to Napoleon with emphasis on structure and problems of the ancient regime, origins of the revolution itself, and the Napoleonic period. Suitable for students with a strong background in writing and critical reading. (HIST244)

**HISTORY: Germany and Central Europe since 1890**

Investigation of such topics as the German Empire under William II, expansionism and the origins of World War I, impact of the conflict upon German society, early years of the Weimar Republic, Hitler and the rise of national socialism, the Nazi seizure of power, the emergence of two separate German states, and transformations since the late 1980s. Suitable for students with a strong background in writing and critical reading. (HIST247)

**PHILOSOPHY: Ethics**

Introduction to fundamental concepts and problems in ethical theory. This involves a concentration on abstract issues about the nature of morality and moral concepts, and the answers to questions about what makes actions and people good. Classical and contemporary theoretical views including utilitarianism, deontology, virtue ethics, natural rights, contractarianism, egoism, relativism, and feminist ethics will be explored. Readings from Plato, Aristotle, Mill, Hume, Kant, Rawls, Fienberg, and others. (PHIL105)

**PHILOSOPHY: 19th Century Philosophy: Kant to Nietzsche**

Historical survey of central figures of early 19th-century European philosophy. The course traces how Kant's revolutionary views on knowledge, time, space, self, morality, freedom, action, God, and art were criticized and transformed by Schiller, Fichte, Schelling, Hegel, Marx, Kierkegaard, and Nietzsche. Recommended for education, psychology and literature students. Suitable for students with a strong background in writing and critical reading. (PHIL208)

**PHILOSOPHY: Philosophy and Literature**

An exploration of the complex and historically evolving relationship between the discipline of philosophical analysis and the art of literary depiction. Classical philosophical analysis of issues such as personal identity, the experience of time, the relation between self and society, and moral reciprocity are paired with literary works sensitive to the same issues. Schools of literary interpretation are also surveyed, along with various attempts to develop an historical taxonomy of literary forms. Suitable for students with a strong background in writing and critical reading. (PHIL213)

**RELIGION: Liberation Theology**

Intensive study of the history and theory of modern liberation theologies, focusing on Latin American, African-American, and feminist theologies. (RELG135)

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## LANGUAGES

### Why study a foreign language?

*"A language is the key to a culture. Remember, most languages have words for things (feelings, emotions, abstract concepts, types of snow) that we couldn't begin to explain in English." –Eric, K'05*

The study of a foreign language is an integral part of a college education. Understanding—real understanding—of a foreign language offers a variety of benefits. Whether a student intends to major in a foreign language or not, the intellectual and perceptual skills that such study offers will be valuable assets throughout a student's life. Some groups of students should absolutely begin their language studies during their first year, including:

- Students interested in majoring or minoring in language, those who wish to take more than one language, or who know they want a higher level of proficiency than the 201 level
- Students who hope to participate in a sophomore-year Great Lakes Colleges Association term in New York or Philadelphia and thus may need to work with the appropriate language department to explore options for completing the 101, 102, 201 sequence.

Most students at Kalamazoo College will choose to study abroad. The language level requirement for each program differs. You can discuss study abroad options and requirements with your advisor or the Center for International Programs once you arrive on campus.

**You must take a placement exam for any language you have previously studied or have spoken at home. To access these tests, visit the First-Year Program Moodle site (<http://moodle.kzoo.edu>).**

### CHINESE

Placement determined by department. (CHIN101)

### FRENCH

Placement determined by department. (FREN101, 102, 202)

### GERMAN

Placement determined by department. (GERM101, 201)

### ANCIENT GREEK

Placement determined by department. (GREK101)

### JAPANESE

Placement determined by department. (JAPN101)

### LATIN

Placement determined by department. (LATN101)

### SPANISH

Placement determined by department. (SPAN101, 102, 201, 202)

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## SOCIAL SCIENCES

### Why study social science?

*"The social sciences are an excellent way to take your natural desire to analyze and discuss people and put it to constructive use. Study social science because people are fascinating and our society and others are more complex than you might think." —Tim, K '07*

### **ANTHROPOLOGY & SOCIOLOGY: Introduction to Cultural Anthropology**

Survey of world cultures from foraging to industrial societies, with an emphasis on how specific cultures exemplify problems central to the anthropological study of humanity. (ANSO105)

### **ANTHROPOLOGY & SOCIOLOGY: Introduction to Sociology**

Introduction to the study of contemporary industrial societies, primarily the United States: basic perspectives, methods, and concepts; fundamental social institutions; and areas of social change. (ANSO107)

### **ECONOMICS: Principles of Economics**

An introduction to the concerns and methods of economics, covering both microeconomic and macroeconomic principles. This course analyses how markets work and how economic decisions are made. It considers the interactions of firms and households in individual markets as well as the workings of national and international economies. The class will examine current economic issues and study how policy can be used to address economic problems. (ECON101)

### **POLITICAL SCIENCE: Introduction to American Government**

Introduction to the structure and functioning of the American government; introductory analysis of the processes of policy formation, the relationship of the state and the individual, and the degree and nature of popular control. (POLS105)

### **POLITICAL SCIENCE: Introduction to International Politics**

An introduction to the study of international relations that focuses on the core issue of international war and peace. The issue is used as a means to explore how political scientists analyze international relations. The course examines different approaches to analyzing international relations (the system, state, and individual levels of analysis), as well as the ongoing controversy between the paradigms of realism, liberalism, radicalism, and feminism. (POLS107)

### **POLITICAL SCIENCE: Introduction to Political Theory**

This course will serve as a foundation for understanding the major concepts, dilemmas, and theoretical traditions underlying the study of politics. We will explore questions such as: What makes authority legitimate? Who should rule? What is the purpose of government? What is the proper balance between liberty and equality? Thinkers discussed may include Plato, Aristotle, Machiavelli, Locke, Rousseau, Marx, Hamilton, Madison, and other. (POLS108)

### **PSYCHOLOGY: General Psychology**

Survey of major theories, methods, and findings related to understanding behavior and experience; examination of such topics as learning, memory, perception, personality, and psychotherapy through the case study approach; emphasis on the role of the central nervous system in normal and abnormal behavior. This course is a prerequisite for all courses in the psychology department. (PSYC101)

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## **NATURAL SCIENCE *for Prospective Science Majors***

### **Why study science?**

*"Science actually explains how the world works and why it is the way it is. It's useful. It's interesting. It's enlightening."* —Burt, K'07

**Prospective Biology Majors:** Evolution and Genetics is the first course in the Introductory Biology sequence. If you haven't taken a biology course since your freshman year of high school, take Introductory Chemistry I with Lab (also required for the Biology major) fall term and Evolution and Genetics during the winter term. Include Calculus in your fall or winter course selection.

**Prospective Chemistry Majors:** Begin the Introductory Chemistry sequence during the fall term with Introductory Chemistry I with Lab. Include Calculus in your fall or winter course selection.

**Prospective Physics Majors:** Introductory Physics I with Lab (the first course in the Introductory Physics sequence) is not

offered until winter term. Completing Calculus I or testing into a higher level of Calculus is required to begin the Introductory Physics sequence, so include Calculus in your fall course selections.

**Prospective 3/2 Engineering Majors:** You will develop a unique, specific plan for your course of study once you arrive on campus. Introductory Physics I with Lab (the first course in the Introductory Physics sequence) is not offered until winter term. Completing Calculus I or testing into a higher level of Calculus is required to begin the Introductory Physics sequence, so include Calculus in your fall course selection. If you are thinking of pursuing chemical engineering, Chemistry I with Lab is recommended.

**If you are interested in taking Chemistry, you must take the online Chemistry Placement Exam, even if you have taken an AP exam or if you didn't take Chemistry in high school. To access the test, visit the First-Year Program Moodle site (<http://moodle.kzoo.edu>).**

#### **BIOLOGY: Evolution and Genetics with Lab**

An introduction to principles of evolution and genetics. Includes a comprehensive overview of genetics from molecular, classical, and population perspectives, as well as in-depth treatment of evolutionary mechanisms, phylogenetic analysis, and the history of life on Earth. Laboratories include the purification and analysis of DNA, *Drosophila* and bacterial genetics, and computer simulations of evolutionary processes. (BIOL112)

#### **CHEMISTRY: Introductory Chemistry I with Lab**

Fundamental principles of chemistry: chemical calculations and symbolism; atomic and molecular structure and bonding; periodic properties; intermolecular interactions and the solid state. Laboratory work includes introduction to chemical instrumentation. (CHEM110)

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## **NATURAL SCIENCE *for Non-Science Majors***

### **Why study science if you don't intend to major in it?**

*"Science is all around us. From the food you eat to the pen you write with, everything can be traced back to science." –Matt, K '07*

Natural Science non-majors courses are designed for students who do not plan to be science majors but are interested in specific areas of science at an introductory level.

#### **BIOLOGY: Environmental Science**

In this course you will (1) build a basic understanding of the physical and natural systems that make up the biosphere on Earth (land, water, atmosphere, and life) stressing the dynamics of these interconnected systems; (2) develop a scientific understanding of the causes and consequences of several of the major environmental problems facing today's society; (3) acquire the tools to enable you to think critically about other current and future environmental challenges you will face as a member of contemporary society. One weekend field trip is required. (BIOL115)

#### **CHEMISTRY: Chemistry of Antibiotics**

General description of the biochemical basis of infectious diseases, emphasizing the chemical nature of antibiotics and how they work. This course explores the various means of contracting infection and the agents that cause it. It gives an understanding of the world of bacteria, viruses, parasites, and fungi and addresses natural vs. acquired immunity. Intended for students who are not majoring in the natural sciences. (CHEM107)

#### **PHYSICS: Energy and the Environment**

A study of the concepts of energy and entropy and the societal implications that follow from alternative modes of energy production, amount of energy consumption, and the ways energy is used. Efficiency of energy conversion and the environmental impact of energy production and use will be discussed. Designed primarily for students not majoring in the physical sciences; especially appropriate for those in the environmental studies concentration. This course may not be counted toward the physics major. Students cannot receive credit for both this course and PHYS 150 (Introductory

## MATHEMATICS

### Why study math?

*"Math is the one common language in the universe." –Mithil, K '09*

Calculus is required for the major in Chemistry, Physics, Computer Science, and Mathematics. It meets the calculus requirement for Economics majors (the Economics Department also offers a course for majors that fulfills the calculus requirement).

**If you are interested in taking Calculus, you must take the online Calculus Placement Exam, even if you have taken an AP exam or didn't take Calculus in high school. To access the test, visit the First-Year Program Moodle site (<http://moodle.kzoo.edu>).**

### MATH : Calculus

Placement determined by exam. (MATH110, 112, 113, 214)

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## COMPUTER SCIENCE

### Why study computer science?

*"Computers are everywhere. If you want to fully comprehend how the world works today, it helps to understand computers. Plus there are tons of career opportunities!" –Alice, K '06*

**Prospective Computer Science Majors:** All Computer Science majors and minors are required to take Introduction to Computer Science. Students with a score of 4 or 5 on the AP Computer Science A exam are awarded credit for COMP 110 (Introduction to Programming) and are eligible to take COMP 210 (Data Structures). Students with a score of 4 or 5 on the AP Computer Science AB exam are awarded credit for COMP 110 and COMP 210. It is recommended that you include Calculus in your course selection.

### COMPUTER SCIENCE: Introduction to Computer Science

An overview of the field of computer science. Typical topics may include the history of computers, what computers can and cannot do, the basic concepts of computer programming, program and user interface design, how computers represent information internally, an introduction to artificial intelligence, and the ethical and societal issues raised by the widespread use of computers. (COMP105)

### COMPUTER SCIENCE: Cryptography

An introduction to cryptography. Through a historical framework, students will build their mathematical and computational understanding of how and why computer cryptography works. We will examine some of the social and ethical implications of cryptography, as well as discuss the roles of the government, the companies, and the people who have had an impact on the world of cryptography. This course is offered jointly with COMP483/MATH450, the major's special topics course in cryptography, to allow for exploration of the same topics with different perspectives and less mathematical rigor. (COMP183)

### COMPUTER SCIENCE: Data Structures

Provides students an opportunity to refine programming and design skills. Emphasis is on techniques of data abstraction, including encapsulation and inheritance; implementation and appropriate use of common data structures (such as lists, stacks, queues, trees, and graphs); recursion; and the close relationship between data structures and algorithms. Suitable for students who have completed a course in computer programming or who scored a 4 or 5 on the AP Computer Science

