



SUMMER 2023 RECOMMENDED COURSE LIST

Saint Vincent College's summer term offers a great opportunity to get ahead by enrolling in core or degree-specific courses!

All summer sessions are equivalent to a full semester-long class (3-4 credits) or lab (1 credit).

Core-Required Course

Incoming students are highly encouraged to take this class.

CORE-1500-01 Core Writing

5/22/2023 – 6/29/2023 | Online | M/T/W/TH 10:15am–11:55am

Professor: Mallory Truckenmiller Saylor (m.truckenmiller@stvincent.edu)

Core Writing introduces students to the kinds of writing tasks and skills required by academic courses and helps you develop your skills in persuasive and analytical writing. By following the Three Stages of Good Writing Practice and applying the Six Principles of Good Writing, students will learn how to become a more self-aware and focused writer. This course works with the Writing Center, employing Writing Associates to provide support and studio time. *3 credits.*

Courses Beginning in May

Specific dates listed with each course.

BA-101-01 Financial Accounting II

5/22/2023 – 6/29/2023 | Online | M/W 8:30am–12:00pm | Prerequisite: BA-100

Professor: Christina Gibson (christina.gibson@stvincent.edu)

Students examine generally accepted accounting principles as it applies to the preparation of financial statements of corporations and partnerships. Students prepare financial statements for corporations and partnerships. Students also prepare and utilize the statement of cash flow. Students study and discuss federal payroll taxes, especially employer liabilities and all journal entries. The course covers financial ratios to be used in the analysis of financial statements. The course analyzes long-term liabilities and all associated entries and also devotes a good deal of time to accounting for investments. *Offered every semester. 3 credits.*

BA-350-01 Statistics I

5/22/2023 – 6/8/2023 | Asynchronous Online | Corequisite: BA-350A

Professor: Samuel Homan (samuel.homan@stvincent.edu)

This course is an introduction to the study of statistics emphasizing descriptive and inferential statistics. Topics include visual presentation of data, summary descriptive measures (e.g. mean, median, mode, variance and standard deviation), statistical sampling, probability, probability distributions and hypothesis testing. *Offered fall semester. 3 credits.*

BA-350A-01 Statistics I Excel Lab

5/22/2023 – 6/8/2023 | Asynchronous Online | Corequisite: BA-350

Professor: Samuel Homan (samuel.homan@stvincent.edu)

Students learn excel applications utilized in statistics. Additional advanced excel techniques will be taught to enhance their business utilization of spreadsheets. *1 credit.*

BL-150-01 General Biology I

5/22/2023 – 6/29/2023 | Synchronous & Asynchronous Online | M/T/W 11:00am-1:15pm

Professor: Kayla Uveges (kayla.uveges@stvincent.edu)

This year-long course with BL-152 is intended for science majors. The first semester addresses the biology of cells, animal physiology, development, and taxonomy. The second semester continues with plant biology, classical and molecular genetics, and ecology and evolution. At the conclusion of the course, Biology majors select cell and molecular biology, organismal biology, or population biology as an area of concentration for subsequent work. *A passing grade in BL-150 is required for BL-152. Fall semester and summer. 3 credits.*

BL-150-01 General Biology I Lab

5/22/2023 – 6/29/2023 | Synchronous & Asynchronous Online | M/W 2:00pm-5:00pm

Professor: Bertalan Papp (bertalan.papp@stvincent.edu)

This course introduces scientific method, statistics, laboratory techniques, and the use of instruments as students perform experiments that reinforce and expand upon ideas presented in BL-150. *Fall semester and summer. 1 credit.*

CA-110-01 Intro to Organizational Communication

5/22/2023 – 6/29/2023 | Asynchronous Online

Professor: Melinda Farrington (melinda.farrington@stvincent.edu)

This course introduces students to theoretical approaches to communication within organizations, whether workplace, communities of worship, school clubs, or athletic teams. Topics examined include how we communicate through leadership, conflict, decision making, ethnic and cultural diversity, and gender. Students examine historic styles and approaches to institutional organization and management from the industrial revolution through post-modernity. *Offered every semester. 3 credits.*

CH-101-01 General Chemistry I

5/22/2023 – 6/29/2023 | Online | M/T/W/TH 8:30am-10:10am

Professor: Jason Vohs (jason.vohs@stvincent.edu)

A study of chemical principles including atomic structure; chemical bonding; types of chemical reactions; stoichiometry; solution chemistry; and chemistry of the elements. *Offered fall semester. 3 credits.*

CH-103-01 General Chemistry I Lab

5/22/2023 – 6/29/2023 | In-Person (Dupre E208) | M/W 10:30am-1:30pm

Professor: Beth Bollinger (beth.bollinger@stvincent.edu)

Laboratory studies related to the principles in general chemistry with emphasis on quantitative measurements. *Must be taken simultaneously with, or after successful completion of CH 101. Offered fall semester. 1 credit.*

CH-221-01 Organic Chemistry I

5/22/2023 – 6/29/2023 | Online | M/T/W/TH 10:15am-11:55am | Prerequisite: CH-102, CH-104

Professor: Matthew Fisher (matt.fisher@stvincent.edu)

The basic principles of the chemistry of carbon compounds are developed with emphasis on nomenclature, physical properties, spectroscopy, structure, reactions, mechanisms, and synthesis. *Offered every year. 3 credits.*

CH-223-01 Organic Chemistry I Lab

5/22/2023 – 6/29/2023 | In-Person (Dupre S222) | M/W 12:15pm–3:15pm | Prerequisite: CH-102, CH-104

Professor: Jason Vohs (jason.vohs@stvincent.edu)

This laboratory complements CH-221-222 by introducing the basic organic laboratory techniques of synthesis, isolation, and analysis, including chromatography and infrared and nuclear magnetic resonance spectroscopy. Emphasis is placed on developing microscale techniques. Students are encouraged to work more independently as the year progresses. *Must be taken simultaneously with, or after successful completion of CH-221-222, respectively. Offered every year. 1 credit each semester.*

CH-223-02 Organic Chemistry I Lab

5/22/2023 – 6/29/2023 | Asynchronous Online | Prerequisite: CH-102, CH-104

Professor: Jason Vohs (jason.vohs@stvincent.edu)

This laboratory complements CH-221-222 by introducing the basic organic laboratory techniques of synthesis, isolation, and analysis, including chromatography and infrared and nuclear magnetic resonance spectroscopy. Emphasis is placed on developing microscale techniques. Students are encouraged to work more independently as the year progresses. *Must be taken simultaneously with, or after successful completion of CH-221-222, respectively. Offered every year. 1 credit each semester.*

CORE-1210-01 French Duet

5/22/2023 – 6/29/2023 | Asynchronous Online

Professor: Doreen Blandino (doreen.blandino@stvincent.edu), Thomas Octave (thomas.octave@stvincent.edu)

This course is an introduction to French language, music and culture through the historical periods and various musical and culture genres. The discussion of musical composers, forms, and French musical culture will be examined as well as the understanding of musical terminology. This course will also focus on learning key vocabulary terms and phrases related to music in English and in French. Students will also acquire basic vocabulary and linguistic structures in French to communicate their music preferences, their opinions, and engage in basic conversations that would occur in daily encounters and in relation to musical and cultural events. Etiquette will be highlighted throughout the course. *No previous knowledge of the French language is required. 3 credits.*

CORE-1203-01 Introduction to Sociology

5/22/2023 – 6/8/2023 | Asynchronous Online

Professor: Thaddeus Coreno (thad.coreno@stvincent.edu)

This class is both a general introduction to sociology for those from other disciplines and a natural beginning point for those interested in sociology as part of liberal arts education. The course explores the following topics: the theoretical and empirical nature of sociological inquiry, culture and its relationship to social life, the process of socialization, group formation, function, and change, social inequality and deviance, and the economy, politics, the family, education, and religion. *3 credits.*

CORE-1303H-01 Film Studies

5/22/2023 – 6/8/2023 | Asynchronous Online

Professor: David Safin (david.safin@stvincent.edu)

In this course, students will broaden their knowledge of the film industry and its language via a variety of selected readings and screenings. They will explore the history of film as an art form and media industry and analyze and critique film artifacts using a variety of film theories. *3 credits.*

CORE-1304H-01 Logic and Theory of Knowledge

5/22/2023 – 6/8/2023 | Asynchronous Online

Professor: Carl Vater (carl.vater@stvincent.edu)

This course is an introduction to the liberal art of logic, teaching you how to reason effectively, analyze arguments, and question assumptions in the pursuit of knowledge. The focus is on syllogistic logic, and thus will help you learn the methods of reasoning at the heart of a liberal arts education. While logic can be used, and often abused, by those who seek power or to persuade others to accept their point of view, its true aim is to help one form the habits necessary for pursuing the Truth that alone can set one free. In order to focus on this liberating objective of logic, the course will structure study around the three acts of the mind by which one obtains knowledge. *3 credits.*

CORE-1503-01 Music and the Soul

5/22/2023 – 6/29/2023 | Synchronous & Asynchronous Online | T/TH 6:00pm–7:15pm

Professor: Michael Krom (michael.krom@stvincent.edu)

“Without music, life would be a mistake” (Friedrich Nietzsche). We lovers of music know exactly what Nietzsche means here: we have been moved, disturbed, made joyous, or despairing, by the muse of melody and poetic verse. Why does music have this effect on us? What does it MEAN for us? Can music be good or bad for us? Is there a moral aspect to creating music or to listening to it? Such are the questions that inspire this course, which offers a reflection on music as a liberal art and in relation to our Catholic and Benedictine mission. *3 credits.*

CORE-1304H-01 Logic and Theory of Knowledge

5/22/2023 – 6/8/2023 | Asynchronous Online

Professor: Carl Vater (carl.vater@stvincent.edu)

This course is an introduction to the liberal art of logic, teaching you how to reason effectively, analyze arguments, and question assumptions in the pursuit of knowledge. The focus is on syllogistic logic, and thus will help you learn the methods of reasoning at the heart of a liberal arts education. While logic can be used, and often abused, by those who seek power or to persuade others to accept their point of view, its true aim is to help one form the habits necessary for pursuing the Truth that alone can set one free. In order to focus on this liberating objective of logic, the course will structure study around the three acts of the mind by which one obtains knowledge. *3 credits.*

CORE-1511-01 Musical Theatre History

5/22/2023 – 6/29/2023 | Asynchronous Online

Professor: Gregory Brandt (greggory.brandt@stvincent.edu)

This course explores the history, development, creators, and composers of musical theater. We will discuss the major elements from the mid-18th century to the present of a musical production; the book, lyrics, score, dance and set design. We will trace the musical's evolution through the colorful eras of Minstrel Shows, Vaudeville, Burlesque, Revue, and the Golden Era up through the British Invasion and to the present day. You will learn the techniques and contributions from such great composers and lyricists as Irving Berlin, Jerome Kern, Cole Porter, Rodgers and Hammerstein II, and Stephen Sondheim's influences on the present-day musical theater. Through this study, you will be introduced to one type of effective and charitable communication. *3 credits.*

CORE-1522-01 Intro to Creative Writing

5/22/2023 – 6/29/2023 | Hybrid | M/T/W/TH 12:15pm–3:45pm

Professor: Michelle Gil-Montero (michelle.montero@stvincent.edu)

This creative writing course introduces the fundamentals of creative writing craft in three genres: poetry, fiction, and creative nonfiction. Students read and discuss short contemporary texts and respond to in-class writing prompts. In the workshop element of the course, students give and receive peer feedback on their drafts and collaboratively explore strategies for revision. Students produce a final portfolio of revised work in all three genres. This course is a prerequisite for advanced courses in Creative Writing and may not be taken after students have enrolled in advanced courses in Creative Writing. *3 credits.*

CORE-1523-01 (EL-103-01) Principles of Literary Studies

5/22/2023 – 6/8/2023 | Hybrid | M/T/W/TH 8:30am-12:00pm

Professor: Dennis McDaniel (dennis.mcdaniel@stvincent.edu)

This literature course is an introduction to college-level literary studies. Students will become familiar with a variety of literary texts drawn from the genres of short fiction, poetry, drama, and creative nonfiction, and will learn the formal features that distinguish these genres. Just as importantly, students will develop the reading and analytical skills needed to appreciate more fully the intellectual and emotional rewards that literary writing offers to its active, interested readers. Such readers will be able to apply these skills to other disciplines and will find reading literature to be not merely a dry academic exercise, but a means by which they can more richly understand themselves and their world. *3 credits.*

CORE-1524-01 Reading Short Fiction

5/22/2023 – 6/29/2023 | Asynchronous Online

Professor: Lea Delcoco-Fridley (lea.delcoco-fridley@stvincent.edu)

| TBA. *3 credits.*

CORE-1605-01 Introduction to Ethics

5/22/2023 – 6/29/2023 | Synchronous & Asynchronous Online | M/W 6:00pm-7:15pm

Professor: Michael Krom (michael.krom@stvincent.edu)

Ethics is a reflective attempt to answer the question 'How should I live?' By grounding ourselves in an analysis of some of the most important thinkers who have given shape to, as well as challenged, our Catholic, Benedictine, and Liberal Arts mission, this course will inquire into the nature of the ethical life. *3 credits.*

EC-102-01 Principles of Macroeconomics

5/22/2023 – 6/8/2023 | Asynchronous Online

Professor: Andrew Herr (andy.herr@stvincent.edu)

An analysis of the functioning of the entire economy, in particular the forces that influence the level of production, unemployment, and prices. Also included are the nature and role of governmental intervention in changing these variables. *Offered every semester. 3 credits.*

HI-263-01 Play Ball

5/22/2023 – 6/29/2023 | Asynchronous Online

Professor: Timothy Kelly (tim.kelly@stvincent.edu)

This course examines the history of sports in 20th century America, with particular attention paid to the development transition from amateur to professional athletics, the emergence of women's participation in sports, and the fitness focus of the most recent three decades. Students will approach this study through class discussions based on readings and video documentaries. *3 credits.*

MA-109-01 Calculus with Applications I

5/22/2023 – 6/29/2023 | Asynchronous Online

Professor: Daniele Arcara (daniele.arcara@stvincent.edu)

The elementary functions, limits, the derivative, and its applications, the definite integral, techniques of integration. Applications are presented from the areas of biology and the social sciences. *4 credits.*

MA-111-01 Analytical Calculus I

5/22/2023 – 6/29/2023 | Asynchronous Online

Professor: Daniele Arcara (daniele.arcara@stvincent.edu)

The real number system. Limits and continuity. The concepts of differentiation and integration. Differentiation of algebraic and trigonometric functions and applications. The Mean Value Theorem. The definite integral and the Fundamental Theorem of Calculus. Applications of the definite integral. *4 credits.*

PH-109-01 College Physics I

5/22/2023 – 6/29/2023 | Asynchronous Online | Prerequisite: MA-109

Professor: David Grumbine (david.grumbine@stvincent.edu)

This is the basic course for those majoring in the biological sciences and allied health fields. Kinematics, Newton's Laws of Motion, Energy, Momentum, and Rotation are introduced and treated with methods of algebra and calculus. Problem solving with algebra is emphasized. *Offered fall semester. 3 credits.*

PH-111-01 General Physics I

5/22/2023 – 6/29/2023 | Asynchronous Online | Prerequisite: MA-111

Professor: David Grumbine (david.grumbine@stvincent.edu)

This is the basic course for those majoring in the physical sciences, mathematics, and engineering. Kinematics, Newton's Laws of Motion, Energy, Momentum, and Rotation are introduced and treated with applications of calculus. *Offered every semester. 3 credits.*

PH-113-01 Physics I Lab

5/22/2023 – 6/29/2023 | Asynchronous Online | Corequisite: PH-109 or PH-111

Professor: David Grumbine (david.grumbine@stvincent.edu)

Laboratory to accompany PH-109 and PH 111. Laboratory experiments include applications to kinematics, Newton's Law of Motion, and Energy. Emphasis is placed on learning to take notes in a laboratory setting. *Offered every semester. 1 credit.*

SP-203-01 Intermediate Spanish I

5/22/2023 – 6/8/2023 | Online | Date/Time TBA | Prerequisite: SP-105*

Professor: Doreen Blandino (doreen.blandino@stvincent.edu)

Systematic grammar review and vocabulary building, with stress on nouns, adjectives, pronouns, and on the common tenses of regular and irregular verbs. Introduction to reading techniques suitable for college level study. *Offered fall semester. 3 credits.*

**Prerequisites: 6-8 credits of college Elementary Spanish, SP-105, or appropriate score on the College's language placement examination.*

Courses Beginning in June

Specific dates listed with each course.

CORE-1215-01 (HI 107-01) US History Since 1865

6/12/2023 – 6/29/2023 | Asynchronous Online

Professor: Timothy Kelly (tim.kelly@stvincent.edu)

This class is a survey of American history from the Reconstruction through the early 2000s. It focuses on some major themes and then within those themes on specific periods. These themes include gender, class, race, culture, war, and politics. This social history approach can best help us to understand those forces, developments, or disjunctions that created the society in which we live today.
3 credits.

EC-101-01 Principles of Microeconomics

6/12/2023 – 6/29/2023 | Asynchronous Online

Professor: Zachary Davis (zachary.davis@stvincent.edu)

The course introduces the student to economic reasoning, terminology, and fundamental concepts. Emphasis is placed on individual economic units such as the household and the firm and how they affect and are affected by the various market structures existing in American capitalism. *Offered every semester. 3 credits.*

SP-204-01 Intermediate Spanish II

6/12/2023 – 6/29/2023 | Online | Date/Time TBA | Prerequisite: SP-203*

Professor: Doreen Blandino (doreen.blandino@stvincent.edu)

Further understanding of Spanish syntax with emphasis on the subjunctive, complex grammatical structures, and idiomatic usages. Reading, compositions, and oral exercises. Both courses build an awareness and appreciation of the variety of Spanish cultures.
Offered spring semester. 3 credits.

**Prerequisite: satisfactory completion of SP 203 or appropriate score on the Colleges language placement examination.*

Courses Beginning in July

Specific dates listed with each course.

BL-152-01 General Biology II

7/3/2023 – 8/10/2023 | Synchronous & Asynchronous Online | M/T/W 11:00am–1:15pm | Prerequisite: BL-150, BL-151

Professor: Kayla Uveges (kayla.uveges@stvincent.edu)

This year-long course with BL-150 is intended for science majors. The first semester addresses the biology of cells, animal physiology, development, and taxonomy. The second semester continues with plant biology, classical and molecular genetics, and ecology and evolution. At the conclusion of the course, Biology majors select cell and molecular biology, organismal biology, or population biology as an area of concentration for subsequent work. *A passing grade in BL-150 is required for BL-152. Fall semester and summer. 3 credits.*

BL-153-01 General Biology II Lab

7/3/2023 – 8/10/2023 | Synchronous & Asynchronous Online | M/W 2:00pm–5:00pm | Prerequisite: BL-150, BL-151

Professor: Bertalan Papp (bertalan.papp@stvincent.edu)

This course introduces scientific method, statistics, laboratory techniques, and the use of instruments as students perform experiments that reinforce and expand upon ideas presented in BL-150 and B-152. *Spring semester and summer. 1 credit.*

CH-101-01 General Chemistry I

7/3/2023 – 8/10/2023 | Online | M/T/W/TH 8:30am-10:10am | Prerequisite: CH-101, CH-103

Professor: Jason Vohs (jason.vohs@stvincent.edu)

A study of chemical principles related to quantitative chemical analysis. Topics include the nature of liquids and solids; chemical kinetics; equilibrium; thermodynamics; acids and bases; precipitation reactions; electrochemistry; and nuclear reactions. *3 credits.*

CH-104-01 General Chemistry II Lab

7/3/2023 – 8/10/2023 | In-Person (Dupre E208) | M/W 10:30am-1:30pm | Prerequisite: CH-101, CH-103

Professor: Beth Bollinger (beth.bollinger@stvincent.edu)

Laboratory studies related to the principles covered in CH 102.

Must be taken simultaneously with, or after successful completion of CH 102. 1 credit.

CH-222-01 Organic Chemistry II

7/3/2023 – 8/10/2023 | Online | M/T/W/TH 8:30am-10:10am | Prerequisite: CH-221, CH-223

Professor: Matthew Fisher (matt.fisher@stvincent.edu)

The basic principles of the chemistry of carbon compounds are developed with emphasis on nomenclature, physical properties, spectroscopy, structure, reactions, mechanisms, and synthesis. *Offered every year. 3 credits.*

CH-224-01 Organic Chemistry II Lab

7/3/2023 – 8/10/2023 | In-Person (Dupre S222) | M/W 11:30am-2:30pm | Prerequisite: CH-221, CH-223

Professor: Jason Vohs (jason.vohs@stvincent.edu)

This laboratory complements CH 221-222 by introducing the basic organic laboratory techniques of synthesis, isolation, and analysis, including chromatography and infrared and nuclear magnetic resonance spectroscopy. Emphasis is placed on developing microscale techniques. Students are encouraged to work more independently as the year progresses. *Must be taken simultaneously with, or after successful completion of CH 221-222, respectively. Offered every year. 1 credit each semester.*

CH-224-02 Organic Chemistry II Lab

7/3/2023 – 8/10/2023 | Asynchronous Online | Prerequisite: CH-221, CH-223

Professor: Jason Vohs (jason.vohs@stvincent.edu)

This laboratory complements CH 221-222 by introducing the basic organic laboratory techniques of synthesis, isolation, and analysis, including chromatography and infrared and nuclear magnetic resonance spectroscopy. Emphasis is placed on developing microscale techniques. Students are encouraged to work more independently as the year progresses. *Must be taken simultaneously with, or after successful completion of CH 221-222, respectively. Offered every year. 1 credit each semester.*

CORE-1218-01 (HI-103-01) Medieval Europe, C. 500-1500

7/3/2023 – 8/10/2023 | Asynchronous Online

Professor: Gilbert Bogner (gil.bogner@stvincent.edu)

This course surveys the history of Europe during the period called 'medieval', beginning with the disintegration of the Roman Empire, ca.AD 500, and ending with a movement known as the 'Renaissance', ca.AD 1500. Topics include: the legacy of the classical world; the culture of the Germanic migrants; the importance of the Bible and the Christian faith; monasticism; Charlemagne and the Carolingian world; the development of secular and papal monarchy; social class; the Crusades; the Twelfth-Century Renaissance; the Black Death; and the seeds of the modern world. *3 credits.*

CORE-1306N-01 Astronomy to Astrophysics

7/3/2023 – 8/10/2023 | Asynchronous Online

Professor: Daniel Vanden Berk (daniel.vandenberk@stvincent.edu)

In this course, which includes an integrated laboratory component, students will develop an introductory understanding of the development of earth's place in the universe (both in space and time) and other major theories central to 21st century astrophysics including, the structure of matter, electromagnetic radiation, gravity, stellar structure, the life cycle of stars, and the big bang theory. Students will apply the methods of astronomy and astrophysics to conduct inquiry-based investigation using astrophysical data, and to critically evaluate new research presented in the media. *3 credits.*

HI-219-01 WWII in the Pacific

7/3/2023 – 8/10/2023 | Asynchronous Online

Professor: Nicholas DeWitt (nicholas.dewitt@stvincent.edu)

This course examines the history of the war in the Pacific, on land, on the sea, and in the air, from diverse perspectives with the goal of understanding and analyzing the ways in which the war was fought and experienced from as many angles as possible. *3 credits.*

HI-263-01 Play Ball

7/3/2023 – 8/10/2023 | Asynchronous Online

Professor: Timothy Kelly (tim.kelly@stvincent.edu)

This course examines the history of sports in 20th century America, with particular attention paid to the development transition from amateur to professional athletics, the emergence of women's participation in sports, and the fitness focus of the most recent three decades. Students will approach this study through class discussions based on readings and video documentaries. *3 credits.*

MA-110-01 Calculus with Applications II

7/3/2023 – 8/10/2023 | Asynchronous Online | Prerequisite: MA-109

Professor: Daniele Arcara (daniele.arcara@stvincent.edu)

| Probability, vectors, partial differentiation, multiple integration, sequences and series. *Offered spring semester. 4 credits.*

MA-112-01 Analytical Calculus II

7/3/2023 – 8/10/2023 | Asynchronous Online | Prerequisite: MA-111

Professor: Daniele Arcara (daniele.arcara@stvincent.edu)

Various techniques of integration: integration by substitution, integration by parts, trigonometric integrals, trigonometric substitution, partial fractions. Improper integrals. Approximations of definite integrals. Differential Equations: separation of variables, first order linear. Parametric functions. Polar coordinates. Sequences. Series. Geometric series. Telescoping series. Series tests for convergence. Taylor series. Maclaurin series. *Offered spring semester. 4 credits.*

NSCI-247-01 Life and the Universe

7/3/2023 – 8/10/2023 | Asynchronous Online

Professor: Daniel Vanden Berk (daniel.vandenberk@stvincent.edu)

Are we alone in the universe, or is the universe teeming with life? This course will explore the unknown but possible answers to that question from a variety of perspectives. The physical, astronomical, chemical, and geological conditions necessary for life on a planet will be investigated. We will examine historical and modern searches for life outside of Earth, including the search for extraterrestrial intelligence. We will also consider some of the social, philosophical, and religious implications of the possibility of life elsewhere. Classes will utilize the Taiani Planetarium to enhance our exploration of this subject. *Formerly PH-131. 3 credits.*

NSCI-248-01 Life and the Universe Lab

7/3/2023 – 8/10/2023 | Asynchronous Online

Professor: Daniel Vanden Berk (daniel.vandenberk@stvincent.edu)

The origins of life on this planet and the possibility of life elsewhere will be explored with a variety of experiments and observations. Labs will include topics in astronomy, biology, physics, and geology, that are related to the search for extraterrestrial life. Some of the labs will utilize the Taiani Planetarium and the Physics Department telescopes. *This laboratory course accompanies NSCI 247. Formerly PH-133. 1 credit.*

PH-110-01 College Physics II

7/3/2023 – 8/10/2023 | Asynchronous Online | Prerequisite: PH-109

Professor: David Grumbine (david.grumbine@stvincent.edu)

A continuation of PH-109. Electricity, Magnetism, Optics, and Wave Motion are introduced and treated with methods of algebra and calculus. Problem solving with algebra is emphasized. *Offered spring semester. 3 credits.*

PH-112-01 General Physics II

7/3/2023 – 8/10/2023 | Asynchronous Online | Prerequisite: PH-111

Professor: David Grumbine (david.grumbine@stvincent.edu)

A continuation of PH 111. Electricity, Magnetism, Optics, and Wave Motion are introduced and treated with applications of calculus. *Offered every semester. 3 credits.*

PH-114-01 Physics II Lab

7/3/2023 – 8/10/2023 | Asynchronous Online | Corequisite: PH-110 or PH-112

Professor: David Grumbine (david.grumbine@stvincent.edu)

Laboratory to accompany PH-110 and PH-112. Laboratory experiments include applications to optics, electricity, magnetism, and wave mechanics. Emphasis is placed on learning to take notes in a laboratory setting. *Offered every semester. 1 credit.*