



GSSM

RESIDENTIAL

Academic Course Catalog
2026 – 2027

Table of Contents

Introduction	2
Section 1: GSSM Course Descriptions.....	3
Biology.....	3
Chemistry	6
Chinese	8
Computer Science	8
Engineering.....	10
English.....	13
French	16
General Science	17
German.....	18
Government and Economics.....	18
History	19
Mathematics	21
Music	23
Physics	26
Psychology	27
Research & Inquiry	28
Spanish.....	29
Visual Arts.....	31
Junior Seminar Series	33
Senior Seminar Series.....	34
Section 2: Frequently Asked Questions	34

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Introduction

The GSSM Catalog with Academic Policies is a resource for students, faculty, and staff to find information about how academics work at GSSM.

It begins with a full course description for all GSSM courses by department. Use these course descriptions to understand what the range of options is for the courses you can take at GSSM. The descriptions list the prerequisites for each course. All GSSM courses are listed in this catalog, with the semester they are typically taught. For a list of courses taught each specific semester, refer to the GSSM Course Schedule published separately. Use these documents to help plan your schedule as you work with your academic advisor.

Next in the catalog comes a list of frequently asked questions about academics at GSSM. This FAQ is a great resource for understanding our curriculum and planning your courses.

All GSSM academic policies may be found in *The GSSM Student Handbook*. Students are responsible for understanding and following these policies. The catalog and handbook aren't just rulebooks, though. Students, working with faculty, staff, and their families, should use them to understand all GSSM has to offer academically. Our commitment is both to academic excellence and to helping every GSSM student get the most out of their GSSM education.

As you read through the course offerings be sure to consider the following elements:

1] Number of semesters. Some courses, like CSC 230-H Data Structures and Algorithms, are one-semester courses. Others, like SPA 201-H Spanish II, are year-long courses. Yet other courses, like CHE 201 and 202 AP Chemistry, are two-semester course sequences.

2] Level of the course. Some courses, like BIO 201 Principles of Biology I, are AP courses. These are clearly marked with the letters "AP" after the course numbers. Other courses, like SPA 703 Topics in Hispanic Culture and Linguistics, are listed as "Above AP". Above AP means that the course requires an AP course as a prerequisite or there is no AP course sanctioned by the College Board in that area. Some courses, like ECON 210 Principles of Economics: Macroeconomics, are listed as "Dual Credit". Any course not designated as AP, Above AP, or Dual Credit, is at the honors level. An example of an honors level course is MUS110 Chamber Orchestra 1.

3] Course format (in-person/virtual). Most courses are offered live in-person. However, some courses are offered in other formats. Any course offered in a different format will be designated appropriately. For example, ECON 210 Macroeconomics is listed as a virtual course.

Section 1: GSSM Course Descriptions

Biology

BIO201-AP (AP Bio)	Principles of Biology I (AP BIO) (SPRING Semester – 0.5 unit) This course covers selected topics that are fundamental to an understanding of biology. Important concepts that may have been introduced in other courses will be covered in depth and expanded with laboratory experiences and discussions of relevant research. Units covered in this course will include discussions of inheritance, evolution and mechanisms of selection, speciation, origin of life, diversity of life, animal behavior, ecology, and energy production in plants and animals. <i>Includes a 2-hour weekly lab.</i>
BIO202-AP (AP Bio)	Principles of Biology II (AP BIO) (FALL Semester – 0.5 unit) This course will examine selected topics that are fundamental to an understanding of biology. Important concepts that may have been introduced in an introductory course will be covered in depth and expanded upon with laboratory and discussions of current research findings in these areas. Units covered in this semester will include discussions of basic biochemistry, cell structure and function, mitosis, meiosis, DNA replication, transcription, translation, regulation of gene expression, and current molecular biology techniques. <i>Includes a 2-hour weekly lab.</i>
BIO302 above AP	Marine Biology (FALL Semester – 0.5 unit) About 70% of the Earth is covered by the ocean, yet most biology courses focus on understanding terrestrial processes and concepts. This course introduces students to the basics of Marine Biology, exploring the physical structure, organisms, and ecology of the oceans. Topics to be discussed include oceanography, molecular and cellular biology, marine microbiology, marine botany, marine zoology, and marine ecology. Management and conservation of marine environments will also be

	addressed. <i>Includes a 2-hour weekly lab. PREREQ: BIO201-AP (Spring semester of AP Biology or completion of AP Biology)</i>
BIO303 above AP	Molecular Biology of the Cell (FALL Semester – 0.5 units) The purpose of this course is to acquaint the student with selected topics in the molecular biology of cells with a focus on eukaryotes. The course format is a combination of lectures and discussions of current research articles with student participation as an important element. Laboratory work will emphasize important concepts and techniques used in the study of cellular components and will involve extensive hands-on manipulations. In-class tests and out-of-class problem sets will require an understanding of experimental design and interpretation of data. <i>Includes a 2-hour weekly lab. PREREQ: BIO201-AP and BIO202-AP or completion of AP Biology.</i>
BIO304 above AP	Human Anatomy and Physiology (FALL Semester – 0.5 unit) Students will investigate the functional anatomy and control mechanisms affiliated with the various organs of the human body. Cell structure and tissue specificity will be integrated with the function of these cells in their respective organ systems. Laboratory work will involve experiments designed by and performed on the students. There will be an emphasis on exercise physiology and clinical abnormalities and their effects on whole body homeostasis. The course work includes various case studies to help students understand the application of topics covered in class. New techniques involved in medicine will be studied using web-based curriculum. <i>Includes a 2-hour weekly lab. PREREQ: BIO202-AP or completion of AP Biology.</i>
BIO305 above AP	Principles of Microbiology (SPRING semester – 0.5 unit) The objective of this course is to introduce the students to the microscopic world of bacteria, algae, fungi, protozoa, and virus and their role in diseases as well as the concept of pathogenesis and host immune defense mechanisms. This course will also include microbial cellular structures, metabolic pathways, regulatory signals, and genetic exchange mechanism. In addition, evolutionary processes that led to antibiotic resistance, xenobiotic degradation and the co-evolution of hosts and parasites will also be studied. Finally, a brief look at the importance of bacteria in soil, water, food and industrial waste will also be studied. This course will include a two-hour lab/week and a group project to isolate microorganisms with unique characteristics from the natural environment. <i>Includes a 2-hour weekly lab. PREREQ: BIO202-AP with concurrent enrollment in BIO201-AP or completion of AP Biology.</i>
BIO306 above AP	Introduction to Neuroscience (SPRING Semester – 0.5 unit) This course serves as an introduction to the basics of nervous system functions and dysfunctions. The course begins with the cellular and molecular biology of neurons and glial cells, including the study of neuronal cell structure, the propagation of nerve impulses and transfer of information between nerve cells (action potentials and synaptic transmission). The course then follows the effect of drugs on this process and the development of nerve cells into the brain and spinal cord as well as how the brain receives and processes sensory information and how it acts on that information through various motor and sensory systems. Other topics covered included how behavior, emotion and memory emerge from brain function. Teaching methods included lectures, discussions, case studies and talks by renowned neuroscientists. This course will also include hands-on as well as virtual labs. <i>Includes a 2-hour weekly lab. PREREQ: BIO201-AP and BIO202-AP or completion of AP Biology.</i>
BIO307 above AP	Advanced Genetics (FALL Semester– 0.5 unit) This course builds on the basic understanding of DNA and genetics introduced in BIO 201 and BIO 202. Through class discussion, journal articles, homework problems, and lab experiments students will improve their understanding of inheritance and genomics. Topics to be discussed include patterns of inheritance, eukaryotic chromosomal mapping, gene expression, epigenetic inheritance, mutation and repair, and quantitative genetics. This is a lab course. <i>Includes a 2-hour weekly lab. PREREQ: BIO201-AP and BIO202-AP or completion of AP Biology).</i>

BIO308 above AP	<p>Botany (SPRING Semester – 0.5 unit)</p> <p>This course introduces students to the basics of Botany, including what characterizes a plant and how to identify plants in our local communities. Topics discussed will include plant diversity, structure, physiology, evolution, and ecology. Laboratory work will emphasize plant structure, function, and field identification. Field trips to various plant communities will occur. <i>Includes a 2-hour weekly lab. PREREQ: BIO202-AP with concurrent enrollment in BIO201-AP or completion of AP Biology.</i></p>
BIO311C above AP	<p>Medical Mycology (FALL Semester – 0.5 unit)</p> <p>This course will provide students with an overview of the major fungal diseases or mycoses that threaten animal and human health. The causal agents, symptoms, modes of infections, prognosis, and treatment of fungus-related illness will be discussed and explored in detail. In addition to that, the laboratory component of this class will highlight the impact of environmental fungi on human well-being linked to elements such as food spoilage, molds in buildings (sick building syndrome), among others. <i>Includes a 2-hour weekly lab. PREREQ: BIO201-AP and BIO202-AP or completion of AP Biology.</i></p>
RES405-H above AP	<p>Research in Restoration Ecology (SPRING Semester – 0.5 unit)</p> <p>In this course, we will learn the guiding theories and ethics of restoration ecology and put those principles into practice – engaging in active restoration projects in collaboration with Kalmia Gardens. Approximately one third of our instructional time will be spent in the classroom learning the discipline of restoration ecology and engaging in experimental design. The remaining two thirds will be spent in the field, conducting ecological research and directly contributing to restoration efforts. Throughout this course, students will come to intimately know the interconnectedness of organisms and environment, including human organisms. We will aim to cultivate a sense of place and purpose, practice putting this knowledge into action, and use data analysis to measure our progress. Students complete the GSSM Research & Inquiry Portfolio. <i>Includes a 2 – 3-hour weekly lab. Requires significant time spent outdoors in varying weather conditions and some manual labor. PREREQ: SCI301 or completion of BIO201-AP (Spring semester of AP Biology). Priority enrollment will be given to seniors. Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry</i></p>
RES406-H	<p>Research in Hydroponics (FALL/SPRING Semester – 0.5 unit)</p> <p>This project-based research course provides a foundational knowledge on controlled environment crop production practices and management which will be used to develop and execute a collaborative research project. Topics include the historical perspective, key principles and types of hydroponic systems, basic plant physiology, anatomy, nutrition, and disorders. Additionally, students will be introduced to soilless growing, crop response to environment factors, and new technologies inherent to controlled environment agriculture. Students will be putting these theories into practice by conducting a student-developed research project in the hydroponic research lab located on campus. Class time will be divided between classroom activities - lecture, discussion, student-inspired learning, and guest speakers - and work in the GSSM Hydroponic Research Lab, understanding, maintaining, and using the hydroponic equipment. Our purpose is to develop a theoretical knowledge and practical understanding of the science and cultural practices of hydroponic crop production. Students complete the GSSM Research & Inquiry Portfolio. <i>Includes a 2-hour weekly lab. PREREQ: One year of previous high school biology and chemistry or concurrent enrollment in BIO202 and CHE100/CHE201/CHE203. Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry</i></p>
RES407C above AP	<p>Research in Soil Microbiota (SPRING Semester – 0.5 unit)</p> <p>In this introductory project-based experience, students will be active participants in the isolation and discovery of potential antimicrobial-producing microbes. Special emphasis will be given to bacterial and fungal soil communities. Using a project-based approach permits the course to progress from a</p>

	survey of basic lab techniques to the application of current techniques in microbiology. The majority of the instructional time will be spent in a laboratory setting. Lectures will also be included to provide background and introduce new concepts. Communication skills will be encouraged by required up-to-date lab notebooks and follow-up presentations. The course will be completed with a research forum in which the students present the results of their projects. Students complete the GSSM Research & Inquiry Portfolio. <i>Includes a 2-hour weekly lab. PREREQ: BIO201-AP and BIO202-AP or completion of AP Biology.</i> Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry
SCI301-AP (AP Env Sci)	Environmental Science (AP Env Sci) (FALL Semester – 0.5 unit) This course will provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems, and to examine solutions for resolving or preventing them. Topics from geology, biology, environmental studies, chemistry, and human geography will be integrated into this course. Students may choose to take the AP environmental science exam. <i>Includes a 2-hour weekly lab. PREREQ One year of previous high school biology and chemistry. Completion of or concurrent enrollment in AP Biology is preferred. Extra readings may be assigned if deficiencies in background knowledge emerge. Seniors are given first priority. Does not count towards GSSM's lab science graduation requirement.</i>

Chemistry

CHE100-H	Principles of Chemistry (A Full Year Course – 1.0 unit) This course will examine selected topics that are fundamental to an understanding of chemistry. Students will investigate the electronic structure of atoms, chemical bonding, chemical formulas, mass/volume relationships in chemical reactions, gas laws, energy changes in chemical reactions, molecular geometry, acid/base/salt reactions, colligative properties, an introduction to organic chemistry and other selected subjects. Hands-on laboratory work will reinforce concepts as well as develop skills in using standard laboratory equipment. <i>Includes a 2-hour weekly lab.</i>
CHE101-DE 323900EW (Dual Credit with FMU) 4 hours of college credit	Dual-Enrollment Chemistry I (FALL Semester – 0.5 unit) This course covers the material typical in the first semester of college chemistry, including the states of matter; the gas laws; stoichiometry; electronic structure and bonding; periodicity; and solutions. <i>Includes a 2-hour weekly lab. PREREQ: One unit in chemistry or permission of instructor.</i>
CHE102-DE 324000EW (Dual Credit with FMU) 4 hours of college credit	Dual-Enrollment Chemistry II (SPRING Semester – 0.5 unit) This course covers the material typical in the second semester of college chemistry, including oxidation-reduction; equilibria; electrochemistry; thermodynamics; acids and bases; kinetics; chemistry of the representative elements; coordination compounds of the transition elements; and nuclear chemistry. <i>Includes a 2-hour weekly lab. PREREQ: CHE101-H or permission of instructor.</i>
CHE150-H	Molecular Spectroscopy (SPRING Semester – 0.5 unit) This course will act as an overview of molecular spectroscopy, which is the use of electromagnetic radiation to study the structure and motion of molecules. It is impossible to “see” individual molecules, but an immense amount of information can be learned by studying the frequencies and intensities that they absorb and emit. After an overview of quantum mechanics, the course will focus on ultraviolet, visible, infrared, microwave, and nuclear magnetic resonance spectroscopy. Finally, several practical and scientific applications of spectroscopy will be studied. <i>Includes a 2-hour weekly lab. PREREQ or COREQ: calculus or permission of instructor.</i>
CHE201-AP (AP Chem)	Advanced Chemistry I (AP Chem) (FALL Semester – 0.5 unit)

	<p>This course is for students who have already taken chemistry and would like to take the AP Chemistry exam. Topics explored include the structure and properties of atoms and compounds, intermolecular forces, chemical reactions, and kinetics. Pertinent labs related to course material will be performed. <i>Includes a 2-hour weekly lab. PREREQ: One unit of Chemistry. COREQ: MAT102-H or higher.</i></p>
CHE202-AP (AP Chem)	<p>Advanced Chemistry II (AP Chem) (SPRING Semester – 0.5 unit)</p> <p>This course is a continuation of 201. Topics explored include thermodynamics, equilibrium, acids and bases, and electrochemistry. Pertinent labs related to course material will be performed. <i>Includes a 2-hour weekly lab. PREREQ: CHE201-AP</i></p>
CHE300 above AP or DC	<p>Introduction to Organic and Biochemistry (FALL and/or SPRING Semester depending on interest– 0.5 unit)</p> <p>This is a one-semester course and will provide an introduction to the fundamental concepts of organic chemistry and biochemistry. Students will explore the name, structure and properties of certain classes of organic compounds. Also to be considered are some important biological processes related to enzymes, bioenergetics, intermediary metabolism, body fluids, and nutrition. <i>Includes a 3-hour weekly lab. PREREQ: Completion of AP Chemistry or DE Chemistry.</i></p>
CHE304 above AP or DC	<p>Introduction to Analytical Chemistry (FALL Semester – 0.5 unit)</p> <p>This course will expose students to selected topics in both quantitative and instrumental analysis. The quantitative portion of the course will focus on advanced methods of volumetric analysis as well as statistics commonly used to properly analyze data. The instrumental portion of the course will focus on the theory and implementation of instruments that find widespread use in chemistry. Experiments will allow students to gain experience using various equipment that will likely be found in any standard analytical chemistry laboratory. <i>Includes a 2-hour weekly lab. PREREQ: Completion of AP Chemistry or DE Chemistry.</i></p>
CHE308 above AP or DC	<p>Introduction to Inorganic Chemistry (SPRING Semester – 0.5 unit)</p> <p>This course will expose students to selected subjects in inorganic chemistry. Topics to be explored will include metal bonding, coordination chemistry, group theory, and organometallic chemistry with a focus on transition metals. Laboratory exercises will cover different classes of qualitative analysis as well as synthesis and characterization of transition metal complexes. <i>Includes a 2-hour weekly lab. PREREQ: Completion of AP Chemistry or DE Chemistry.</i></p>
CHE401-H	<p>Research in Microwave Spectroscopy (FALL Semester – 0.5 unit)</p> <p>Students will complete a research project in microwave spectroscopy that has never been done before. The course will provide a hands-on, active-learning experience using GSSM's state-of-the-art microwave spectrometer, an instrument used to discover the shapes of molecules. Activities will include using modern instrumentation, using research software to analyze data sets, performing quantum chemical calculations, and formulating conclusions from the data. Students will undertake an original research project similar to an advanced undergraduate project. Students complete the GSSM Research & Inquiry Portfolio. <i>Includes a 2-hour weekly lab. Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry</i></p>
CHE403-H	<p>Research in Computational Drug Design (FALL and/or SPRING Semester – 0.5 unit)</p> <p>Modern pharmaceutical drug design is a multidisciplinary endeavor at the interface between medicine, chemistry, biology, and computer science. Using the tools and theory of computational biochemistry, this opportunity aims to guide the student through research-based project creation and execution to ultimately develop a novel pharmaceutical that attempts to address a real-world need. No programming experience is required. Students complete the GSSM Research & Inquiry Portfolio. <i>Includes a 2-hour weekly lab. PREREQ: BIO202-AP; CHE100-H or CHE201-AP. Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry.</i></p>

Chinese

CHI101-DE (Dual Credit with Coker) 3 hours of college credit	Introduction to Chinese I (FALL Semester - 0.5 unit) <p>This is the first half introductory course to Mandarin Chinese. It introduces the fundamentals of the Mandarin Chinese language. It emphasizes pronunciation, basic everyday conversational proficiency, principles of character formation, vocabulary and elements of grammar needed to develop communicative competence in Chinese at a basic level. In addition, it aids the students in understanding the connection between Chinese language and culture; help the students develop survival skills in an authentic Chinese setting.</p>
CHI102-DE (Dual Credit with Coker) 3 hours of college credit	Introduction to Chinese II (SPRING Semester – 0.5 unit) <p>This is the second half introductory course to Mandarin Chinese. It introduces the fundamentals of the Mandarin Chinese language. It emphasizes pronunciation, basic everyday conversational proficiency, principles of character formation, vocabulary and elements of grammar needed to develop communicative competence in Chinese at a basic level. In addition, it aids the students in understanding the connection between Chinese language and culture; help the students develop survival skills in an authentic Chinese setting. <i>PREREQ: CHI101 or previous Chinese credits.</i></p>
CHI201-DE (Dual Credit with Coker) 3 hours of college credit	Intermediate Chinese III (FALL Semester - 0.5 unit) <p>This is the first half intermediate level course in Mandarin Chinese. As the continuation of Elementary college credit Chinese, this course focuses on reinforcing four language skills: speaking, listening, reading, and writing to enhance each student's oral and written communication ability in real Chinese settings. Different aspects of Chinese culture are included. <i>PREREQ: CHI 102 or the equivalent.</i></p>
CHI202-DE (Dual Credit with Coker) 3 hours of college credit	Intermediate Chinese IV (SPRING Semester - 0.5 unit) <p>This is the second half intermediate level course in Mandarin Chinese. As the continuation of Elementary Chinese, this course focuses on reinforcing four language skills: speaking, listening, reading, and writing to enhance each student's oral and written communication ability in real Chinese settings. Different aspects of Chinese culture are included. <i>PREREQ: CHI 201 or permission of instructor.</i></p>

Computer Science

Note: Students taking CSC101, CSC110, or ENGIN302-DE are strongly advised not to take a second computer science course that same semester.

CSC101- AP/CSC102-AP (AP CS A)	Introduction to Computer Science (AP CS A) (FALL/SPRING Semester – 1 unit) <p>CSC101/102 is a two-semester sequence of computer science courses designed to prepare students to take the AP CS A exam. The sequence includes the following topics: problem solving; design strategies and methodologies; data structures and organizations; algorithmic approaches to processing data; solution analysis; and object-oriented design, including inheritance and polymorphism. Class activities include writing algorithms for specific application problems and implementing the code for these projects. The primary focus of outside-of-class work is to write functioning, efficient, well-documented, well-constructed programs. Sorting and searching algorithms will be examined in order to determine efficiency and storage considerations. Students will be assigned exercises including short answer and free response projects like those found on the AP CS A exam. No <i>PREREQ: Students enrolled in the CSC101/102 sequence are expected to complete the entire sequence to earn the 1.0 unit of AP credit. All students will be registered to take the CS A AP exam in the spring semester.</i></p>
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CSC110-DE (Dual Credit with Coker) 4 hours of college credit	Computer Science I: Python for Scientist (FALL/SPRING Semester – 1.0 unit) An Introduction to computer architecture, computer systems, number systems, logic circuits, and current software applications; fundamentals of computer programming and problem-solving using a high-level programming language applied to real-world examples; basics of program-writing environment, simple data types, expressions, control structures, iteration, functions, and arrays. CS 110 includes a one-semester hour laboratory. <i>This course will satisfy the state requirement of 1.0 units of computer science as it is dual enrolled. This course will meet 4 times a week.</i>
CSC160-H	Introduction to Computer Networking (FALL Semester– 0.5 unit) This course is a survey of the underpinnings of computer networks. It will cover the basics of network architecture, topology, protocols, and telecommunications. Students will learn how a request on a web browser is packaged and transferred over the Internet to a destination address and how the results of the request are processed and delivered back again. By the end of the course students will have demonstrated a competence in IP addressing, packet tracing, OSI and TCP/IP models, and configuring routers and switches to use networking protocols. The course is a mixture of discussion and hands-on activities.
CSC202 above AP or DC	Game Design, Prototyping, and Production (SPRING Semester – 0.5 unit) This course will focus on the rules and methods of game design, which remain fairly constant regardless of the technology used to develop a game. While technology will play a significant role in the course, technological details will not be the focus. Students will study and design games of all sorts: card games, dice games, athletic games, story games, and video games. Students will craft a game, build a video game prototype, and write a game design document detailing the workings of their creation. <i>COREQ: CSC230 or permission of instructor.</i>
CSC220 above AP or DC	Interactive Visual Programming using Processing (FALL Semester – 0.5 unit) Students will explore computer graphics, mathematics, and art using the Processing programming language. Processing is an environment for learning the fundamentals of computer programming within the context of the visual arts. Topics include creation of 2d and 3d images, animations, image processing including mathematical and data visualization, and interaction with external devices. <i>COREQ: CSC230 or permission of instructor.</i>
CSC230 above AP or DC	Data Structures and Algorithms (FALL/SPRING Semester – 0.5 unit) A second course in computer science in which students are introduced to algorithm design and analysis, big-Oh notation, and algorithm classification by efficiency and correctness. The course covers basic algorithm design, strategies, mathematical analysis, and approaches to problem solving. Topics include algorithms for searching and sorting, graph theory and graph algorithms, and other computational problems. This course is designed for students who already know a programming language and would like to continue taking advanced electives in computer science. <i>PREREQ: CSC101 and CSC102, or CSC 110, or as a COREQ: CSC102 and permission of instructor.</i>
CSC260-H	CyberSecurity Fundamentals (SPRING Semester – 0.5 unit) In the Computer and Information Systems Security/Information Assurance program, students examine the core concepts and terminology of cybersecurity and information assurance, integrating the importance of user involvement, network architecture, threats, and security; operational and system security; cryptography; contingency planning; application, data, and host security; access control and identity management; and a broad range of other topics. Students will be prepared to earn nationally-recognized industry certifications. <i>PREREQ: CSC160-H Introduction to Computer Networking or permission of the instructor.</i>
CSC270 above AP or DC	Introduction to Database Design (FALL Semester – 0.5 unit) In this course, students will learn to construct database(s) and the techniques necessary to manipulate and maintain the data stored therein. Using readily available DBMS, students will study database architecture, methods of modeling data, schemas, and query languages. By the

	end of the course students will have demonstrated a competence in writing SQL queries, applying normalization techniques to datasets, database design, manipulating and navigating relational databases, and representing an information system using an entity-relationship diagram (ERD). <i>COREQ: CSC230 or permission of instructor.</i>
CSC311DE (Dual Credit with Coker) 4 hours of college credit	Computer Science II: C/C++ Applications (FALL Semester – 1.0 unit) Students will examine the differences between operating systems and build a tiny, embedded version of UNIX system. The students will have hands-on experience of writing code to modify and enhance the xv6 UNIX kernel. Building this operating system includes the writing of concurrent processes, managing interruptions, manipulating semaphores, and additional low level programming concepts. Students will learn how to program device drivers using languages such as C/C++, assembly, and Python. They will learn how to debug their code using a modern debugger. <i>PREREQ: CSC230 or permission of instructor.</i>
CSC320-H	Introduction to Data Science This class explores key principles and techniques of data science and teaches students how to create informative data visualizations. It will cover the essential skills of a data scientist which include data collection, cleanup, transformation, analysis, and visualization. Students will write algorithms, tell data stories, create dynamic data visualizations, and build statistical models using Python libraries. They will use the same tools that data scientists use to draw meaningful insights and solve organizational problems. Basic background knowledge in statistics, linear algebra, data structures, and programming required for the course will be covered. <i>COREQ: CSC230 or permission of instructor.</i>
CSC340	Introduction to Artificial Intelligence (SPRING Semester – 0.5 unit) This course focuses on the basic algorithms of Artificial Intelligence. Problem modeling methods include data classification, regression analysis, clustering, and time series analysis. Supervised and unsupervised training as well as stochastic and deterministic training will be employed in projects. Teach paper cups to win a simple game based on Nim. Learn several methods for normalization of data and error calculation. Different methods of training are applied to classic problems such as the traveling salesperson problem and the knapsack problem. <i>PREREQ: CSC230 or permission of instructor.</i>
CSC403-H	Research in Computational Mathematics (FALL/SPRING Semester – 0.5 Unit) This is an Honors research course in computer assisted formalization of mathematics. Students will learn the LEAN programming language, the basics of mathematical proof, and proof formalization. No previous programming or proof-writing experience is required. This course will also discuss philosophy of mathematics, epistemological and sociological foundations of proof, intersections of mathematics and computer science, and implications of computer formalization for mathematics and artificial intelligence. By the end of this course students will complete the formalization of a proof in LEAN chosen with the help of the instructor and submit that proof to the LEAN mathlib library. Students complete the GSSM Research & Inquiry Portfolio. Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry.

Engineering

ENGIN101-H	Applications of Engineering Design (FALL Semester – 0.5 unit) For students interested in learning more about various engineering disciplines. If you have had the 2 PLTW courses, “Intro to Engineering Design” and “Principles of Engineering,” you might consider a more advanced engineering course. Students do projects using 3D design in SolidWorks, electronics and programming of the Arduino, robotics, and engineering design.
ENGIN102-H	Robotics (FALL Semester – 0.5 unit)

	<p>This course will give you the foundational knowledge in core engineering principles, problem-solving strategies, the engineering design process, and collaborative teamwork that you will need to advance to more advanced engineering courses (200 level and above).</p> <p>Students will employ design thinking and technical concepts in the solution of engineering design problems centered around the building, programming, and competing in the current seasons' FIRST Tech Challenge (FTC) competition. Students will gain experience in mechanical design and building, electronics, sensors, and programming required for most of the 200 level courses. They will document their work in an online engineering notebook. The culmination of this work will be participation in the GSSM Intramural FTC competition in December.</p>
ENGIN103-H	<p>What is Science, Technology, and Engineering? (0.5 credits)</p> <p>Students interested in engineering, technology, or science who don't just want to seek out solutions to the world's most challenging problems, but who want to ensure that those solutions are applied and carried out in an equitable manner, will benefit from this seminar-style course. They will develop a critical awareness of the institutions, policies, and practices that shape the making of emerging scientific knowledge and decision making, particularly in moments of uncertainty. Through case studies, lectures, short readings, research articles, and current policy briefs this course provides the opportunity for students to engage with some of today's most contested technological, political, and ethical debates around topics like establishing scientific truth, internet privacy, genetic engineering, biotechnology, artificial intelligence, drones, and energy transitions. Students will leave better equipped for their own future encounters with technoscience in our technologically, mediated society. This course is open to both juniors and seniors. <i>Typically offered every other year.</i></p>
ENGIN105C-H	<p>Introduction to Civil Engineering I (FALL Semester – 0.5 Units)</p> <p>This course introduces students to the fundamental principles, theories, and practices in the field of Civil Engineering. Emphasis is placed on understanding the interdisciplinary nature of Civil Engineering and its impact on society, economy, and the environment. Through theoretical instruction, practical case studies, and hands-on projects, students will develop critical thinking skills and problem-solving abilities necessary for addressing real-world engineering challenges. By the end of this course, students will have an overall knowledge in the principles of Civil Engineering, enabling them to pursue advanced coursework and careers in various specialized areas within the discipline.</p>
ENGIN201-H	<p>Engineering: Electronics (SPRING Semester – 0.5 unit)</p> <p>Students are introduced to the principles of analog and digital electronics. In addition to learning about simple analog circuits, the course also covers a variety of topics including Boolean algebra, basic gates, logic circuits, flipflops, registers, digital circuits, counters, interfacing with analog devices, and programming an FPGA board. <i>Includes a 2-hour weekly lab. PREREQ: MAT 103 & [(ENGIN 101 or 102), or (PLTW IED or POE)]</i></p>
ENGIN202-DE (Dual Credit with Coker) 3 hours of college credit	<p>Engineering Disciplines and Skills (FALL/SPRING Semester – 0.5 Units)</p> <p>This course provides a solid foundation of skills to solve engineering problems. Students demonstrate problem solving techniques with spreadsheets, dimensions, and units, and use modeling techniques and interpret validity of experimental results. Students design projects on multi-disciplinary teams. The course introduces professional and societal issues appropriate to engineering. Various forms of technical communication are emphasized. COREQ: MAT 102</p>
ENGIN203-H	<p>Aerospace Engineering (SPRING Semester – 0.5 unit)</p> <p>This course introduces students to the field of aerospace engineering. It integrates engineering design with core math and science concepts needed to solve problems related to aerospace engineering. Students will explore the fundamentals of flight in air and space through software simulations and hands-on experiences. They will explore the fundamentals of flight such as airfoil, propulsion systems, and rockets. In addition, students will learn orbital mechanics concepts and apply these by creating models using industry-standard software. They will also apply aerospace</p>

	concepts to alternative applications such as a wind turbine and parachute. <i>Includes a 1-hour weekly lab</i> PREREQ: [(ENGIN 101 or 102) or (PLTW IED or PED)], COREQ: PHY 161-DE or PHY 201-AP
ENGIN204-DE (Dual Credit with Coker) 3 hours of college credit	Engineering Design and Modeling (FALL Semester – 0.5 unit) Students join the 3D printing revolution in learning how to create their designs in SolidWorks, including sketching, part and assembly creations, and creating drawings with which to communicate their ideas. A final project will include 3D printing their design. This course is dual enrolled. PREREQ: MAT 103-H and [(ENGIN 101 or 102), or (PLTW IED or POE)]
ENGIN205C-H	Introduction to Civil Engineering II (SPRING Semester – 0.5 Units) This course provides an overview of Civil Engineering and more detailed and in-depth instruction to select fields including Water Resources and Harbor Engineering, Coastal and Ocean Engineering, Surveying, Remote Sensing and GIS, and Construction Engineering. Critical thinking skills are fostered by hands-on experience. Field trips are arranged to South Carolina coasts and/or construction sites. PREREQ: ENGIN105 or PERMISSION OF INSTRUCTOR
ENGIN206-H	Underwater Robotics (SPRING Semester – 0.5 unit) This course is designed for students to deepen their knowledge of marine science and technology while applying the concepts and skills developed in the introductory engineering courses to build, improve, and refine their underwater Remotely Operated Vehicles (ROVs). Their ROV designs are guided by the kits, missions, and annual themes released by SeaPerch and MATE. This course is especially valuable for students who plan to participate in and excel at national and international competitions. Introductory engineering courses such as Applications of Engineering Design (ENGIN101) and Robotics (ENGIN102) serve as prerequisites for this course. Juniors are encouraged to enroll so they can continue developing and refining their ROV designs and participate in various levels of competition throughout their time at GSSM. PREREQ: [(ENGIN 101 or 102) or (PLTW IED or POE)] or PERMISSION OF THE INSTRUCTOR.
ENGIN302-DE (Dual Credit with Coker) 3 hours of college cred	Computer Programming 1 with MATLAB (FALL/SPRING Semester – 1.0 unit) Involves programming and problem-solving using MATLAB. General concepts of sequential execution, conditional execution, iterative processes, and recursive techniques are introduced in this one-semester course with the objective of solving problems in science and engineering. Matrix manipulation, plotting of functions and data, implementation of algorithms, and creation of user interfaces comprise the curriculum for this course. The activities in class include designing and implementing computerized applications to solve problems from different disciplines. The primary focus of outside-of-class work is to design, develop, and write the commands to find these solutions. PREREQ: ENGIN 202. <i>This course will satisfy the state requirement of 1.0 units of computer science since it is dual enrolled.</i>
ENGIN303-H	Engineering: Product Design (Project Design) (SPRING Semester – 0.5 unit) Students research and develop a new product or process. The product can be either an invention or innovation and should include the building of a prototype. The process should be a new way of doing something of a technical nature. Students will communicate their solutions to their peers and members of the professional community. This course is intended for students with advanced knowledge of engineering techniques and the design process. Ideally, they will have taken at least one engineering course at GSSM, as well as the two PLTW courses Introduction to Engineering Design and Principles of Engineering. Students work in groups to identify and define a problem, need, or desire that requires a technical solution, and then spend the semester working on a prototype, while using the design process to guide their work. Students share and explore their ideas, with frequent cross-fertilization occurring between groups. One outcome of this course might be that students enter their design in the MIT-Lemelson Inventeams Design Competition. PREREQ: [(ENGIN 101 or 102) or (PLTW IED or POE)] AND PERMISSION OF INSTRUCTOR

ENGIN304-H	<p>Research in Multimodal Transportation Systems (FALL/SPRING Semester – 0.5 unit)</p> <p>The aim of this research course is to teach students how to advocate for specific infrastructure and policy solutions aimed at making Hartsville’s transportation systems more sustainable, equitable, and accessible. Students gain background knowledge about the political, social, and technological procedures involved in creating and maintaining sustainable transportation systems and livable communities through reading and analysis of both current research and historical texts. Students also interview stakeholders involved in infrastructure developments such as elected officials, engineers, architects, city planners, academic experts, and advocates. Students engage in participant observation, actively traveling on and using pedestrian and cycling infrastructure locally and regionally to understand the user experiences directly. Learning from these experiences, students will define and execute a policy, outreach, or project. Students complete the GSSM Research & Inquiry Portfolio. <i>PREREQ: PERMISSION OF INSTRUCTOR AND DIRECTOR OF RESEARCH & INQUIRY</i></p>
ENGIN305-H	<p>Engineering Mechanics: Statics (SPRING Semester – 0.5 unit)</p> <p>This course studies the mechanics of static structures. Topics covered in this course include vector force systems, systems in equilibrium, structural analysis of trusses and frames, friction, distributed forces, center of gravity, and moment of inertia. Technical drawing and design skills will be used to build a bridge structure out of bass wood and test its strength. <i>PREREQ: PHY161-DE or PHY201-AP. Includes a 2-hour weekly lab. This course may or may not be offered depending on the availability of an instructor.</i></p>

English

Junior English

<p>ENG111-DE (Dual Credit with Coker)</p> <p>3 hours of college credit</p>	<p>English Composition and Rhetoric I (FALL Semester – 0.5 unit)</p> <p>English 111 is the first half of the required two-course sequence in composition. This course introduces students to the modes of writing, with an emphasis on exposition and argumentation. The course also reviews basic processes of composing: inventing, planning, drafting, and revising. Students will learn how to develop ideas in a clear and logical manner, communicate their ideas coherently to their intended audience, and write in a correct and effective way. In addition to writing several in-class essays and short papers, students will learn the techniques and conventions of academic research. They will participate in at least one session on library and information technology. Fiction and nonfiction readings will provide discussion material and starting points for their writing.</p>
<p>ENG112-DE (Dual Credit with Coker)</p> <p>3 hours of college credit</p>	<p>English Composition and Rhetoric II (SPRING Semester – 0.5 unit)</p> <p>English 112 is the second half of the required two-course sequence in composition. This course advances students’ critical reading and writing skills by exploring how writing creates knowledge and shapes meaning. The course also reviews basic processes of composing: inventing, planning, drafting, and revising. Students will learn how to develop ideas in a clear and logical manner, communicate their ideas coherently to their intended audience, and write in a correct and effective way. In addition to writing several in-class essays and short papers, students will learn the techniques and conventions of academic research. They will participate in at least one session on library and information technology. Fiction, poetry, and nonfiction readings will provide discussion material and starting points for their writing. <i>PREREQ: ENG 111.</i></p>

Senior English

<p>ENG201-DE (Dual Credit)</p> <p>3 hours of college credit</p>	<p>World Literature I (Coker ENG 207) (FALL Semester – 0.5 unit)</p> <p>A study of literary works covering a diverse range of cultures, time periods, and genres. Students will consider how and why cultures produce literature, while learning to interpret and understand different types of texts. By the end of each course, students will describe how literature builds</p>
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	social, cultural, and ideological understanding. This first course in the sequence covers works from the ancient and pre-modern periods Prerequisite: ENG 111 or equivalent. <i>PREREQ: ENG112.</i>
ENG202-DE (Dual Credit) 3 hours of college credit	World Literature II (Coker ENG 209) (SPRING Semester – 0.5 unit) A study of literary works covering a diverse range of cultures, time periods, and genres. Students will consider how and why cultures produce literature, while learning to interpret and understand different types of texts. By the end of each course, students will describe how literature builds social, cultural, and ideological understanding. This second course in the sequence covers works starting with the early modern period <i>PREREQ: ENG201.</i>

Electives

ENG208-H	AI and the Future of Writing (0.5 unit) Language permeates our social, political, and personal life; it enables our marvelous complexity of thought, and it shapes our values and conceptions of self-identity. It's been argued that language is what makes us human, and that writing is our most fundamental human technology. Yet OpenAI's public release of ChatGPT in late 2022 has challenged this notion, revealing that humanity can no longer lay exclusive claim to language and writing. In this course, we explore the far-reaching implications of AI technology's intervention in language and writing. We will work with AI tools to produce writing in creative, practical, and academic contexts, exploring the technology's potential as well as its limitations. While doing so, we critically examine key questions posed by AI tools like ChatGPT. How does human-AI collaboration challenge established notions of authorship, identity, and originality? How can we address issues of bias and fairness in AI algorithms? What social and political consequences arise from the widespread dissemination of AI-generated work? Ultimately, our work with ChatGPT and similar technologies will make us consider how AI is reshaping the world and our place within it, in ways both promising and perilous.
ENG 215C-DE (Dual Credit with Coker) 3 hours of college credit	Writing in STEM (FALL Semester - 0.5 unit) In this course, students will investigate the circumstances and genres in which STEM professionals communicate. The course combines readings that examine the social, political, economic, and ethical impacts of scientific, engineering, and mathematics knowledge in society. Such readings will serve as the basis of writing and addressing specific audiences in the disciplines. This course builds on what was previously learned in Junior Writing and Composition by allowing students more freedom to dive deeper into individual topics, texts, and issues. <i>PREREQ: ENGLISH 112 Typically offered every other year.</i>
ENG220-DE Virtual Course (0ENG220C) (403600EW) (Dual Credit with Coker) 3 hours of college credit	Truth and Consequences (FALL semester – 0.5 unit) Literature explores the great moral and ethical questions and this course combines historical and contemporary readings to examine the importance of this inquiry. Students will read works of fiction and non-fiction to explore the ways cultures at particular moments in time have determined what is right, good and appropriate. Moreover, students will explore how writers have addressed the ways individuals and groups have resisted or revered cultural constructions of stigmatized, demonized or vilified behaviors in various contexts and situations. This section of ENG 220 examines the intersection of dystopian fiction and ethics. Students will analyze how writers in this genre employ literary techniques to both diagnose social ills and offer potential remedies.
ENG304-H	Introduction to Film (SPRING Semester – 0.5 unit) This elective is devoted to the understanding and appreciation of the art of film. Students will watch milestones of cinema history, learning to analyze the various language systems involved such as mise en scene, of editing, acting, screenwriting, camera angles, and cinematography, as well as the ideological underpinnings of films. The course is writing intensive and includes a response journal, movie analyses, and reviews. Students will become better observers and writers as they gain cineliteracy. <i>COREQ: ENG112.</i>
ENG305	Studies in Creative Writing: Fiction (SPRING Semester – 0.5 unit)

above AP or DC	This course will serve as an introduction to the craft of fiction writing in a traditional workshop setting. The aim is to help students hone their fiction reading, writing, and analytical skills by examining the history of the short story, giving special emphasis to contemporary short story writers from around the globe. Through careful reading of the chosen texts, students will gain a clearer sense of what makes successful stories and use that knowledge to then write their own. Students will be expected to engage in the writing and revision process as well as peer workshops. At semester's end, participants will have an opportunity to share their work in a public reading. <i>PREREQ: ENG 112 or permission of instructor.</i>
ENG306 above AP or DC	African American Literature (FALL Semester – 0.5 unit) In this course, we will examine how African American writers determinedly inserted themselves into the national discourse from earliest days, using language to fight for the recognition of personhood as well as the extension of rights. From there, we will follow the elaboration of a rich and complex artistic tradition as various writers wrestle with the question of what it means to be a person of color in America. As we consider texts from many genres, we will think about the ways in which other categories, such as gender and class, have pressed on that question. Look forward to good conversation, along with writing projects, short presentations, and archival research. <i>PREREQ: ENG112 or permission of instructor.</i>
ENG307 above AP or DC	Studies in Creative Writing: Nonfiction (FALL Semester – 0.5 unit) This course will serve as an introduction to the craft of creative nonfiction writing in a traditional workshop setting. The aim is to help students hone their nonfiction reading, writing, and analytical skills by examining the history of the short essay and focusing more specifically on contemporary writers of the bestselling genre of writing being published today. Through a careful reading of the chosen texts, students will gain a clearer sense of what makes successful creative nonfiction and use that knowledge to write their own. Students will be expected to engage in the writing and revision process as well as peer workshops. At semester's end, participants will have an opportunity to share their work in a public reading. <i>PREREQ: ENG112.</i>
ENG308 above AP or DC	Introduction to Philosophy (0.5 unit) What does it mean to be human? What should we do in life? What really matters? Philosophy asks questions about these deep and important matters of human concern. It helps you come to understand yourself, your community, and your world in a clearer way. Philosophy is not limited to any one place or time, as it is an expression of the universal human desire to make sense of things. But human beings may make sense of things differently in different places and times. For this reason, this course draws readings from diverse traditions across the globe, from ancient civilizations to the current moment. Though you may not have the answers when this class ends, you will hopefully have a better grasp of your questions and of ways of thinking that might help you find some answers. <i>PREREQ: ENG112 or permission of instructor.</i>
ENG309-H	Introduction to Science Fiction: Literature (0.5 unit) In this class, we will examine the history and influence of science fiction, a genre defined by Robert A. Heinlein as “realistic speculation about possible future events.” The class will explore the genre foundation works written by H.G. Wells, H. P. Lovecraft, and George Orwell, and then study novels and short stories that depict post- apocalyptic and cyberpunk themes, dystopias, time travel, alternate history, aliens, and others. In the midst of these readings, we will consider how science fiction often reflects the sociological, philosophical, and environmental concerns of the period in which it was written. Students will keep a journal of reading reactions, make class presentations, and write several short essays. <i>COREQ: ENG111.</i>
ENG310 above AP or DC	Gender Studies (SPRING Semester—0.5 units) This course examines the central role of language in the social construction of gender. We will consider how a wide range of American thinkers, utilizing diverse media, have attempted to critique and revise conventional notions of femininity and masculinity and, more recently, legitimize nonbinary identities. Throughout, we will ask how these efforts have intersected with other struggles for rights and power within our society. Students will read intensively in order to prepare

	for class discussions and writing projects; in addition, they will use digital humanities resources to complete an original archival research project. <i>PREREQ: ENG112 or permission of instructor.</i>
ENG312-H	Shakespeare (0.5 unit) <p>“All the world’s a stage”: this, one of Shakespeare’s most well-known insights, gets to the heart of why Shakespeare matters to us today. His plays offer deep insight into the ways we act—in all senses of that word— day in and day out as we navigate life, trying to make sense of the world we inhabit. When we take our seats for a Shakespeare play, we thrill to watch witches, fairies, ghosts, and gods mix it up with kings, fools, warriors, lovers, and scoundrels in some of the most entertaining, funny, tragic, and moving plays ever written. This course helps us experience the joy and wisdom these plays have to offer by exploring several of Shakespeare’s most enduring plays in depth. We will also study the historical, cultural, and political context of the Elizabethan theater, watch traditional and contemporary film and stage productions (including, when possible, field trips to live productions), and produce our own dramatic interpretations of key scenes. Students will come away from the course with a deep understanding of several of Shakespeare’s richest and most well-loved plays and an appreciation for his enduring legacy. <i>COREQ: ENG111.</i></p>
ENG313 <i>Virtual Course</i> above AP or DC	Eco-Fiction (SPRING Semester – 0.5 unit) <p>In this course, we will explore how artists use language to influence our feelings towards, and understandings of, the natural world. We will track down answers to questions like: What is “the environment” and how is it shaped by processes of representation? How has environmental writing changed throughout history, from the Industrial Revolution to Chernobyl to now: the Anthropocene? We will pay particularly close attention to climate change fiction, a burgeoning genre that emphasizes the increasingly precarious relationship between human beings and their environments. After surveying some of the foundational texts in environmental studies, we will transition to more contemporary works: Octavia Butler’s <i>Parable of the Sower</i>, Samanta Schweblin’s <i>Fever Dream</i>, and Jeff VanderMeer’s <i>Annihilation</i>. Students can also expect to view films like <i>Eating Animals</i>, <i>Racing Extinction</i>, and, at the end of the semester, the eco-comedy <i>Wall-E</i>. Students will write a close reading paper, an ethical reasoning paper, and a final research paper on an environmental humanities topic of their choosing. <i>PREREQ: ENG112 or permission of instructor.</i></p>

French

FRE101-H	French I (A Full Year Course – 1.0 unit) <p>In this course, we cover the French alphabet, numbers, and phonetic system before covering the present tense of most verb types and touching briefly on the present perfect tense. In addition to learning basic grammar and vocabulary, we explore French culture through texts and videos about music, travel, fashion, food, sports, etc. as well as engaging in some discussion of Francophone societies outside France. We spend the majority of our time in class practicing our spoken French. By the end of the year, students should achieve a communicative proficiency in written and spoken French equivalent to the Novice Mid or Novice High level as described by the American Council on the Teaching of Foreign Languages (ACTFL).</p>
FRE201-H	French II (A Full Year Course – 1.0 unit) <p>In this course, we quickly review the grammar of the present indicative before covering the present perfect, imperfect, and pluperfect tenses (also of the indicative mood) and touching briefly on the subjunctive mood. In addition to learning basic grammar and vocabulary, we explore French culture through texts and videos about music, travel, fashion, food, sports, etc. as well as engaging in some discussion of Francophone societies outside France. We spend the majority of our time in class practicing our spoken French. By the end of the year, students should achieve a communicative proficiency in written and spoken French equivalent to the Intermediate Low or Intermediate Mid-level as described by the American Council on the Teaching of Foreign Languages (ACTFL). <i>PREREQ: FRE101 or permission of instructor.</i></p>

FRE301-H	<p>French III (A Full Year Course – 1.0 unit)</p> <p>In this course, we quickly review the grammar of the present indicative, present perfect, and imperfect tenses before studying the pluperfect and future tenses (also of the indicative mood) as well as the present subjunctive and conditional moods. In addition to learning grammar and mid-level vocabulary, we explore Francophone cultures in Europe, North America, Africa, and the Pacific through texts and videos about music, travel, fashion, food, sports, etc. We spend the majority of our time in class practicing our spoken French. By the end of the year, students should achieve a communicative proficiency in written and spoken French equivalent to the Intermediate High or Advanced Low level as described by the American Council on the Teaching of Foreign Languages (ACTFL). <i>PREREQ: FRE201 or permission of instructor.</i></p>
FRE401-H	<p>French IV (A Full Year Course – 1.0 unit)</p> <p>In this course, we quickly review the grammar of the major tenses and moods of the French language before spending the rest of the class adding to vocabulary and improving paragraph-length communication skills. In addition to learning grammar and mid-level and advanced vocabulary, we explore Francophone cultures in Europe, North America, Africa, and the Pacific through texts and videos about music, travel, fashion, food, sports, etc. We spend the majority of our time in class practicing our spoken French. All texts and language use are in French, except when comparisons between English and French are studied; and analysis, synthesis, and evaluation are stressed. Advanced modes of communication (interpersonal, interpretive, and presentational) are used in accordance with state and national standards. Clear effective communication within the language is expected from the students. By the end of the year, students should achieve a communicative proficiency in written and spoken French equivalent to the Advanced Low or Advanced Mid-level as described by the American Council on the Teaching of Foreign Languages (ACTFL). <i>PREREQ: FRE301 or permission of instructor.</i></p>
FRE601-AP	<p>French VI (A Full Year Course – 1.0 unit each)</p> <p>An advanced, intensive course will be agreed upon by the students and the instructor. Weekly and/or twice weekly meetings will occur, but work assigned and time in class will equal that of three meetings a week. Intense practice for the French Language Advanced Placement test (French language only) will be the major emphasis for second semester. Requirements from the College Board for AP Certification have been met by the instructor and the class will follow those guidelines. All texts and language use are in French; and analysis, synthesis, and evaluation are stressed. Advanced modes of communication (interpersonal, interpretive and presentational) are used in accordance with state and national standards. Clear effective advanced-level communication within the language is expected from the students. Students are encouraged to use French outside of the classroom and native speakers are occasionally invited to class or called by telephone or interactive internet to communicate with students. Outside interactive Internet activities in the target language are encouraged. Assessments of students use the best of traditional methods and the best of recent standards-based assessment approaches in an effort to produce an advanced-level speaker able to use the language in real-world performance tasks. Students in the class will take the French AP Language test given by the College Board. <i>PREREQ: FRE401 or permission of instructor.</i></p>

General Science

Note: This course does not count towards the GSSM's Lab Science Graduation Requirements.

SCI301-AP (AP Env Sci)	<p>Environmental Science (AP Env Sci) (FALL Semester – 0.5 unit)</p> <p>This course will provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems, and to examine solutions for resolving or preventing them. Topics from geology, biology, environmental studies, chemistry, and human geography will be integrated into this course. Students may choose to take the AP environmental science exam. <i>Includes a 2-hour weekly lab.</i> <i>PREREQ One year of previous high school biology and chemistry. Completion of or concurrent</i></p>
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enrollment in AP Biology is preferred. Extra readings may be assigned if deficiencies in background knowledge emerge. Seniors are given first priority. Does not count towards GSSM's lab science graduation requirement.

German

Note: These courses are taught online via live instruction through the Governor's School for Arts and Humanities.

GER200-H <i>Synchronous Virtual Course</i>	Honors German II (A Full Year course – 1.0 unit) This course is based on linking language skills of listening, reading, writing, and speaking. It also (offers insights into the) addresses German culture. Since the class is a multi- level class, ranking from German II learners with basic skills to upper-level students, various themes and grammatical structures will be (covered) studied in order to ensure that every student can improve his individual level of proficiency. <i>PREREQ: German I</i>
GER300-H <i>Synchronous Virtual Course</i>	Honors German III (A Full Year course – 1.0 unit) This course is based on linking language skills of listening, reading, writing, and speaking. It also (offers insights into the) addresses German culture. Since the class is a multi- level class, ranking from German III learners with basic skills to upper-level students, various themes and grammatical structures will be (covered) studied in order to ensure that every student can improve his individual level of proficiency. <i>PREREQ: German II</i>
GER400-H <i>Synchronous Virtual Course</i>	Honors German IV (A Full Year course – 1.0 unit) This course is based on linking language skills of listening, reading, writing, and speaking. It also (offers insights into the) addresses German culture. Since the class is a multi- level class, ranking from German III learners with basic skills to upper-level students, various themes and grammatical structures will be (covered) studied in order to ensure that every student can improve his individual level of proficiency. <i>PREREQ: German III</i>
GER-AP <i>Synchronous Virtual Course</i>	German-AP (A Full Year course – 1.0 unit) This course is based on linking language skills of listening, reading, writing, and speaking. It also (offers insights into the) addresses German culture. Since the class is a multi- level class, ranking from German III learners with basic skills to upper-level students, various themes and grammatical structures will be (covered) studied to ensure that every student can improve his individual level of proficiency. <i>PREREQ: German IV</i>

Government and Economics

HIS201-H <i>Virtual Course</i>	US Government /Economics (FALL/SPRING Semester or during summer or interim – 0.5 unit) This one semester course is an overview of the structure of U.S. government and its basic functions. Various theories of government are incorporated into the course curriculum. The primary emphasis of the course is a study of public policy at all levels of government, integrating government and fundamental principles in economics. Specific areas of emphasis include taxation, fiscal policy, monetary policy, and business regulation. <i>This class will meet the state graduation requirement for both government and economics. This course is offered on-campus or online during the fall and spring semesters, depending on instructor availability. It is offered online during the interim term for students taking on-campus courses. It is offered online during the summer for rising seniors.</i>
HIS210 514100CH	Personal Finance (FALL/SPRING Semester or during summer – 0.5 unit) Using experiential activities, students will learn the basic principles of personal finance and how to manage their money in a global economy, which include budgeting, banking, insurance, mortgages, savings, investments, inheritance, retirement, tax, and estate planning. Students will also learn about consumer protection laws, internet safety, and cyber security, enabling them to safeguard financial information against technology-based attacks. This class will meet the state graduation requirement

	for personal finance. This course is offered on-campus or online through VirtualSC during the fall and spring semesters, depending on instructor availability. It is offered online during the summer for incoming juniors and rising seniors.
HIS202-AP (AP US Gov)	AP US Government (0.5 unit) This course provides students with an analytical perspective on governmental processes and politics in the United States. This course includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific “real world” examples. The course requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. government and politics. Students will be introduced to a variety of theoretical perspectives and explanations for given behaviors and outcomes relative to public policy. <i>Note: If a student takes this course and either ECON210 (Macroeconomics) or ECON211 (Microeconomics) the state graduation requirement for government and economics will be satisfied.</i>
HIS203-AP	AP Comparative Government (0.5 unit) Introduces the field of comparative politics, stressing comparative concepts and approaches to the cross-national study of politics and government, with examination of political systems, ranging from democratic to nondemocratic.
ECON210-DE (Dual Credit with FMU) 3 hours of college credit	Principles of Economics: Macroeconomic Concepts (SPRING Semester- 1.0 unit) <i>This course is taught online with synchronous instruction.</i> Macroeconomics gives students a thorough understanding of the principles of economics that apply to an economic system as a whole. Such a course places particular emphasis on the study of national income and price determination, and also develops familiarity with economic performance measures, economic growth, and international economics.
ECON211-DE (Dual Credit with FMU) 3 hours of college credit	Principles of Economics: Microeconomic Concepts (FALL Semester- 1.0 unit) <i>This course is taught online with synchronous instruction.</i> Microeconomics gives students a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the economic system. It places primary emphasis on the nature and functions of product markets and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy.

History

HIS101-AP (AP US His)	History of the United States from 1607 to the Present (A Full Year Course – 1.0 unit) This full-year advanced placement course traces the major events, trends, and themes of American life from the colonial era to the present. Outside reading assignments, including primary sources, enhance the understanding of America’s past while showing its connection to our present time. The fall semester includes a study of the Constitution and the origins and functions of the federal government. <i>If this course has not already been taken, then it must be taken during junior year.</i>
HIS202-AP (AP US Gov)	AP US Government (0.5 unit) This course provides students with an analytical perspective on governmental processes and politics in the United States. This course includes both the study of general concepts used to interpret U.S. government and politics and the analysis of specific “real world” examples. The course requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. government and politics. Students will be introduced to a variety of theoretical perspectives and explanations for given behaviors and outcomes relative to public policy. <i>Note: If a student takes this course and either ECON210 (Macroeconomics) or ECON211 (Microeconomics) the state graduation requirement for government and economics will be satisfied.</i>
HIS203-AP	AP Comparative Government (0.5 unit) Introduces the field of comparative politics, stressing comparative concepts and approaches to the cross-national study of politics and government, with examination of political systems, ranging from democratic to nondemocratic.
HIS302-H	Colonial Latin America (FALL Semester; Offered even numbered years – 0.5 unit)

	<p>This one-semester elective course requires no prerequisites and is open to juniors and seniors. The class will explore the political, cultural, and social developments within the Americas from the pre-Columbian period through the Age of Revolution in the early 19th century. Assigned readings will expose students to indigenous literature and art, the role of ethnicity and gender in the colonial period, and the creation of new American identities. A final project is required.</p>
HIS303-H	<p>Native American Studies (FALL Semester; Offered odd numbered years – 0.5 unit)</p> <p>This one-semester elective course studies Native American history and culture through linking the native past with the present. Topics include native spirituality and traditions, environmental perspectives, federal policies, the reservation concept, native adaptation and survival, and current events. Course activities include field trips to federal recognized tribes, native guest speakers, common readings of native authors, and study of primary documents. A final project is required.</p>
HIS306-H	<p>Ethics, Beauty, and the Environment (FALL Semester; Offered even numbered years – 0.5 unit)</p> <p>This one-semester history course requires no prerequisites and is open to juniors and seniors. This course explores America's connection to the natural world through the study of writing, art, activism, laws, and impacts of exploitation. Readings include indigenous perspectives and the classic works of conservation. Activities include field trips to public lands and other natural areas relevant to the course material. Our focus on current issues points us to future paths of ethical management of our natural resources. A final project is required.</p>
HIS309-H	<p>The Civil War and Reconstruction (SPRING Semester; Offered odd numbered years - 0.5 unit)</p> <p>This course studies social, economic, cultural, and political forces that led to the Civil War, and how these forces determined the course and outcome of the war. The course intensively studies the successes and failures of the Reconstruction, and how the legacy of the post-war period still affects America. Themes include military strategies and problems, the African American experience, the role of women, and the home front. Course requirements include extensive reading and discussion of primary documents that help explore related themes and problems. A term paper is required.</p>
HIS313-H	<p>The Sizzling Sixties (SPRING Semester; Offered odd numbered years – 0.5 unit)</p> <p>This one-semester elective requires no prerequisites and is open to juniors and seniors. The class studies the 1960s through historical context. The tumultuous decade challenged post-World War II values and ideologies, and it left a permanent imprint on American society, government, and culture. The decade also left unresolved questions that continue into our own time. Course topics include the Cold War, civil rights, the Great Society, the Vietnam War, science and technology, and shifting politics. The course examines the complexity, ideology, and legacy of the 1960s through study of primary and secondary sources, film, music, literature, and students' presentation of their own research.</p>
HIS314C-H	<p>The First World War and the Modern World (SPRING Semester; Offered even numbered years – 0.5 units)</p> <p>This one-semester elective course requires no prerequisites and is open to juniors and seniors. The class will introduce students to one of the defining moments of the modern era, The First World War. Throughout the semester, students will be exposed to the political, social, cultural, and economic issues that influenced, thrived or died during, or were born from this global experience. This class will pay special attention to how European states used colonial resources, how the United States entered and experienced an ongoing global conflict, and how the war was remembered and interpreted. A final project is required.</p>
HIS316C-H	<p>The American Revolution (SPRING Semester; Offered even numbered years – 0.5 unit)</p> <p>The American Revolution is often mythologized and misunderstood, but this one semester elective course studies the American Revolution in historical context, revealing its complexities and ideologies. The course includes military aspects, but we will also study the era through themes of</p>

	gender, race, social class, the culture of revolution, global connections, the problem of loyalties, and questions of freedom and liberty. Field trips will help us understand the South Carolina war experience. Students will also explore the Revolution's legacy, the crafting of the Constitution, and the questions that continue in our own time. This course requires no pre-requisites. Students will present a final project to the class.
HIS315C-H	The History of Science (FALL Semester; Offered odd numbered years – 0.5 units) This one-semester elective course requires no prerequisites and is open to juniors and seniors. The class will introduce students to the history of science from antiquity to the present day. Themes include the development of Observation and Experimentation, the relationship between Science and Technology, Science and Politics, and pop culture. Readings include selections from scientists and intellectuals from various cultural backgrounds over the past few centuries, studies of scientific bodies and institutions, and historical fiction. A final project is required.

Mathematics

Precalculus Courses

MAT101-H	Essentials for Calculus (A Full Year Course – 1.0 unit) This course meets four days each week and will provide a directed approach to prepare students for calculus. Topics covered will include coordinate geometry, rules of exponents, factoring, logarithmic and exponential functions, and an introduction to trigonometry.
MAT102-H	Foundations 1 for Calculus (FALL Semester – 0.5 unit) The first course of a two-semester sequence that meets four days each week and is designed to prepare students for the study of calculus. Topics include linear functions, polynomial functions, rational functions, exponential functions, logarithmic functions, function composition and transformations.
MAT103-H	Foundations 2 for Calculus (SPRING Semester – 0.5 unit) This is the second course of a two-semester sequence that meets four days each week. Topics include trigonometry, polar equations, and vectors. <i>PREREQ: MAT102</i>
MAT111-H	Concepts 1 for Calculus (FALL Semester – 0.5 unit) The first course of a two-semester sequence that meets three days each week and is designed to prepare students for the study of calculus. Topics include linear functions, polynomial functions, rational functions, exponential functions, logarithmic functions, function composition and transformations.
MAT112-H	Concepts 2 for Calculus (SPRING Semester – 0.5 unit) This is the second course of a two-semester sequence that meets three days periods each week. Topics include trigonometry, parametric and polar equations, and partial fractions. <i>PREREQ: MAT111</i>

Calculus Courses

MAT200-H	Calculus with Applications (A Full Year Course – 1.0 unit) This is an introductory course in differential and integral calculus. This course is not dual-enrolled and is not designed to prepare students for either of the AP Calculus Exams. The course examines limits including L'Hôpital's Rule, as well as derivatives and their applications during the Fall semester. In the Spring semester, Riemann sums, definite and indefinite integrals, the Fundamental Theorem of Calculus, integration by substitution, and applications such as area and volume are covered. This course is open to seniors only. <i>PREREQ: MAT 101, MAT103 or MAT112</i>
MAT230-H	Prep for DE Calculus I (FALL Semester – 0.5 unit)

	The first course of a two-semester sequence that meets three days each week and is designed to cover the topics in a Calculus 1 course. Topics covered over the fall and spring semester include limits and continuity, derivatives, max-min theory, optimization and related rates, the Mean Value Theorem and Rolle's Theorem, L'Hôpital's Rule, and antiderivatives. Other topics include Riemann sums, the definite integral, the Fundamental Theorem of Calculus, and u-substitution. Integral calculus will also focus on the applications of area and volume. Students enrolled in this class are expected to complete the spring semester MAT 231 class to fulfill their calculus graduation requirement. <i>PREREQ: Placement by the math department.</i>
MAT231-DE (Dual Credit with Coker)	Calculus I (SPRING Semester – 0.5 unit) This is the second course of a two-semester sequence that meets four days each week. The topics covered in this course are listed in the MAT230 course description. <i>PREREQ: MAT230</i>
MAT231-DE (Dual Credit with Coker)	Calculus I (FALL Semester – 0.5 unit) The first course of a two-semester sequence that meets four days each week. Topics include limits and continuity, derivatives, max-min theory, optimization and related rates, the Mean Value Theorem and Rolle's Theorem, L'Hôpital's Rule, and antiderivatives. Other topics include Riemann sums, the definite integral, the Fundamental Theorem of Calculus, and u-substitution. Integral calculus will also focus on the applications of area and volume. Students enrolled in this class are expected to take MAT 232 in the spring semester to complete the GSSM graduation requirement. <i>PREREQ: MAT 101, MAT103, MAT112 or placement by the math department.</i>
MAT232-DE (Dual Credit with Coker)	Calculus II (SPRING Semester – 0.5 unit) This is the second course of a two-semester sequence that meets four days each week. This course covers areas of regions bounded by polar graphs, the calculus of parametric equations, integration by parts, partial fractions, trigonometric substitution, improper integrals, and arc length. Other topics include series and sequences, tests of convergence, absolute and conditional convergence, power series, and Taylor and Maclaurin series. <i>PREREQ: Fall semester MAT231</i>

Upper-Level Math Electives Offered Every School Year

MAT232-DE (Dual Credit with Coker)	Calculus II (FALL Semester – 0.5 unit) This course meets four days a week and is intended for students who completed the MAT230/231 sequence as juniors or have completed AP Calculus AB. This course covers areas of regions bounded by polar graphs, the calculus of parametric equations, integration by parts, partial fractions, trigonometric substitution, improper integrals, and arc length. Other topics include series and sequences, tests of convergence, absolute and conditional convergence, power series, and Taylor and Maclaurin series. <i>PREREQ: Spring semester MAT231 or placement by the math department.</i>
MAT304-AP (AP Stat)	Probability and Statistics (FALL Semester – 0.5 unit) This is an introductory course in probability and statistics. Topics include exploratory data analysis, regression & correlation, experimental design, probability, and random variables. This is the first course of a two-semester sequence that prepares students for the AP Statistics exam. <i>COREQ: Must have completed Calculus or be taking Calculus to enroll.</i>
MAT305-AP (AP Stat)	Applied Statistics (SPRING Semester – 0.5 unit) This course focuses on inferential statistics. Topics include sampling distributions, confidence intervals and hypothesis testing for both means and proportions involving one-sample and two-sample studies. Other topics include inference on regression and chi-square tests. The MAT304/305 sequence prepares students for the AP Statistics exam. <i>PREREQ: MAT304</i>

Upper-Level Math Electives Typically Offered in Even Numbered School Years

MAT301 above AP or DC	Linear Algebra (FALL Semester; Offered even numbered years – 0.5 unit) This course includes solving systems by matrix methods, matrix operations, matrix algebra, determinants, Cramer's rule, vector algebra, the dot and cross products used in projections and geometric applications, lines and planes in 3-space, vector spaces, linear independence, linear transformations, eigenvalues, and eigenvectors. <i>PREREQ: Completion of MAT231 or MAT232 or permission of instructor.</i>
MAT302 above AP or DC	Abstract Algebra (SPRING Semester; Offered odd numbered years – 0.5 unit) This is an introductory course to abstract algebra and will cover sets, groups, equivalence relations, rings, and fields with an emphasis on group theory. Students will learn the basics of writing a mathematical proof. <i>PREREQ: Completion of MAT231 or MAT232 or permission of instructor.</i>
MAT312 above AP or DC	Ordinary Differential Equations (SPRING Semester; Offered odd numbered years – 0.5 unit) This course includes the study of first order differential equations beginning with separable equations and their applications, exact equations with integrating factors, and homogeneous equations. Also investigated are second order linear equations, including homogeneous equations with constant coefficients and non-homogeneous equations solved by using the method of undetermined coefficients, the method of variation of parameters, Laplace transforms, and power series solutions. <i>PREREQ: Completion of MAT231 or MAT232 or permission of instructor.</i>

Upper-Level Math Electives Typically Offered in Odd Numbered School Years

MAT306 above AP or DC	Multivariable Calculus (SPRING Semester; Offered even numbered years – 0.5 unit) This course examines the calculus of real functions of two or more variables. Differential calculus topics include continuity, directional derivatives, tangent planes, and max-min theory. Integral calculus topics include double integrals in the Cartesian and polar coordinate systems, surface area, and triple integrals in the Cartesian, cylindrical, and spherical coordinate systems. Topics in curvilinear motion including velocity, acceleration, and curvature are also covered. <i>PREREQ: Completion of MAT232 or permission of instructor.</i>
MAT307 above AP or DC	Discrete Mathematics (FALL Semester; Offered odd numbered years – 0.5 unit) This course is a survey of logic and set theory. Topics include propositional and predicate logic, the algebra of sets including mappings, relations and functions, counting principles and probability, and the introduction of the concept of the mathematical proof including induction. <i>PREREQ: Completion of MAT231 or MAT232 or permission of instructor.</i>
MAT310 above AP or DC	Number Theory (SPRING Semester; Offered even numbered years – 0.5 unit) This course covers fundamental principles of number theory, including primes and composites, divisors and multiples, divisibility, and number bases. Other topics include calculations with modular arithmetic, linear and quadratic congruences, arithmetic involving Legendre symbols, Fermat's little theorem and its generalization by Euler, Pythagorean triples, primitive roots and indices, systems of linear congruences, and the Chinese Remainder Theorem. Applications that will be discussed include public key cryptography and the RSA algorithm. <i>PREREQ: Completion of MAT231 or MAT232 or permission of instructor.</i>

Music

0MUS110C-H	Chamber Orchestra 1 (FALL/SPRING Semester – 0.5 unit) The Chamber Orchestra course will provide students with the opportunity to commit to performance growth and development on their instruments as ensemble performers. Operating in a focused, high energy learning environment, we will set monthly goals that will encourage positive and consistent motivation. The orchestra will perform for several campus and community events, festivals, and will
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	perform 2-3 concerts per year. A variety of orchestral literature that will be studied and performed includes music from the Baroque, Classical, Romantic and Contemporary periods, as well as modern, multi-cultural, and pops compositions. Orchestra members will have the opportunity to participate in the SC Region and All-State orchestras under the sponsorship of Mrs. Averill. Students may also continue private lessons from their private instructors via Zoom or Skype or may pursue private lessons from local string studios. <i>PREREQ: Students must be able to read music well and must be able to proficiently play an orchestral string instrument, woodwind instrument, brass instrument, or percussion.</i>
0MUS111C-H	Chamber Orchestra 2 (FALL/SPRING Semester – 0.5 unit) Chamber Orchestra 2 will provide students with the opportunity to commit to performance growth and development on their instruments as ensemble performers. Advanced ensemble students will be able to demonstrate mastery in musicianship including, but not limited to: tone quality, intonation, rhythmic accuracy, and sight reading. In addition to playing orchestral literature, emphasis is placed on solo and chamber ensemble performance skills. Operating in a focused, high energy learning environment, we will set monthly goals that will encourage positive and consistent motivation. The orchestra will perform for several campus and community events, festivals, and will perform 2-3 concerts per year. A variety of orchestral literature that will be studied and performed includes music from the Baroque, Classical, Romantic and Contemporary periods, as well as modern, multi-cultural, and pops compositions. Orchestra members will have the opportunity to participate in the SC Region and All-State orchestras under the sponsorship of Mrs. Averill. Students may also continue private lessons from their private instructors via Zoom or Skype or may pursue private lessons from local string studios. <i>PREREQ: MUS110</i>
0MUS112C-H	Advanced Chamber Orchestra 3 (FALL/SPRING Semester – 0.5 unit) Chamber Orchestra 3 is a continuation of Chamber Orchestra 1 and 2, for students planning to continue their musical studies during the fall semester of their senior year. In addition to orchestral repertoire, students will have the opportunity to study advanced solo literature and pedagogies that improve advanced skills on their instruments. Grade 5 is the maximum difficulty level of orchestral repertoire for this course. Advanced ensemble students will be able to demonstrate mastery in musicianship including, but not limited to: tone quality, intonation, rhythmic accuracy, and sight reading. In addition to playing orchestral literature, emphasis is placed on solo and chamber ensemble performance skills. Operating in a focused, high energy learning environment, we will set monthly goals that will encourage positive and consistent motivation. The orchestra will perform for several campus and community events, festivals, and will perform 2-3 concerts per year. A variety of orchestral literature that will be studied and performed includes music from the Baroque, Classical, Romantic and Contemporary periods, as well as modern, multi-cultural, and pops compositions. Orchestra members will have the opportunity to participate in the SC Region and All-State orchestras under the sponsorship of Mrs. Averill. Students may also continue private lessons from their private instructors via Zoom or Skype or may pursue private lessons from local string studios. <i>PREREQ: MUS111</i>
0MUS113C-H	Advanced Chamber Orchestra 4 (FALL/SPRING Semester – 0.5 unit) Chamber Orchestra 4 is a continuation of Chamber Orchestra 1, 2, and 3, for students planning to continue their musical studies during the spring semester of their senior year. In addition to orchestral repertoire, students will have the opportunity to study advanced solo literature and pedagogies that improve advanced skills on their instruments. Grade 6 is the maximum difficulty level of orchestral repertoire for this course. Advanced ensemble students will be able to demonstrate mastery in musicianship including, but not limited to: tone quality, intonation, rhythmic accuracy, and sight reading. In addition to playing orchestral literature, emphasis is placed on solo and chamber ensemble performance skills. Operating in a focused, high energy learning environment, we will set monthly goals that will encourage positive and consistent motivation. The orchestra will perform for several campus and community events, festivals, and will perform 2-3 concerts per year. A variety of orchestral literature that will be studied and performed includes music from the Baroque, Classical, Romantic and Contemporary periods, as well as modern, multi-cultural, and pops compositions. Orchestra members will have the opportunity to participate in the SC Region and All-State orchestras

	under the sponsorship of Mrs. Averill. Students may also continue private lessons from their private instructors via Zoom or Skype or may pursue private lessons from local string studios. <i>PREREQ: MUS112</i>
0MUS120C-H	Concert Choir 1 (FALL/SPRING Semester – 0.5 unit) The GSSM Concert Choir is open to all students who have previous experience in choir. The Concert Choir program offers opportunities for students to grow and develop their vocal skills while studying music of various cultures, languages, and eclectic literature of western music. Through using different warm-up methods, effective rehearsal strategies, and integrating music theory into sight-singing and ear training, students' musical literacy will greatly improve, resulting to a well-developed choir with a strong characteristic and mature sound. During their membership in the concert choir, students will have several performance opportunities for the school and community. Students will also be eligible to audition for Region and All-State Choir clinics during the spring semester. <i>PREREQ: The student needs to have a well-trained ear, a strong and confident voice, and proficient music reading skills to be successful in this ensemble.</i>
0MUS121C-H	Concert Choir 2 (FALL/SPRING Semester – 0.5 unit) The Concert Choir 2 is open to all students who have previous experience in choir. The program offers opportunities for students to grow and develop their vocal skills while studying music of various cultures, languages, and eclectic literature of western music. Specific advanced fundamentals include, but not limited to: music notation, tone, dynamic variance, vocal production, body alignment, proper breathing, resonance, diction, blend, balance, ear training, musical interpretation and analytical preparation of a piece. During their membership in the concert choir, students will have several performance opportunities for the school and community. Students will also be eligible to audition for Region and All-State Choir clinics. <i>PREREQ: MUS120.</i>
0MUS122C-H	Advanced Concert Choir 3 (FALL/SPRING Semester – 0.5 unit) Concert Choir 3 is a continuation of Concert Choir 1 and 2, for students planning to continue their musical studies during the fall semester of their senior year. In addition to choral repertoire, students will have the opportunity to study advanced solo literature and pedagogies that improve advanced vocal skills. Grade 5 is the maximum difficulty level of choral repertoire for this course. The program offers opportunities for students to grow and develop their vocal skills while studying music of various cultures, languages, and eclectic literature of western music. Specific advanced fundamentals include, but not limited to: music notation, tone, dynamic variance, vocal production, body alignment, proper breathing, resonance, diction, blend, balance, ear training, musical interpretation and analytical preparation of a piece. During their membership in the concert choir, students will have several performance opportunities for the school and community. Students will also be eligible to audition for Region and All-State Choir clinics. <i>PREREQ: MUS121.</i>
0MUS123C-H	Advanced Concert Choir 4 (FALL/SPRING Semester – 0.5 unit) The Concert Choir 4 is a continuation of Concert Choir 1, 2, and 3, for students planning to continue their musical studies during the spring semester of their senior year. In addition to choral repertoire, students will have the opportunity to study advanced solo literature and pedagogies that improve advanced vocal skills. Grade 6 is the maximum difficulty level of choral repertoire for this course. The program offers opportunities for students to grow and develop their vocal skills while studying music of various cultures, languages, and eclectic literature of western music. Specific advanced fundamentals include, but not limited to: music notation, tone, dynamic variance, vocal production, body alignment, proper breathing, resonance, diction, blend, balance, ear training, musical interpretation, and analytical preparation of a piece. During their membership in the concert choir, students will have several performance opportunities for the school and community. Students will also be eligible to audition for Region and All-State Choir clinics. <i>PREREQ: MUS122</i>
MUS301-AP	AP Music Theory (A Full Year Course – 1.0 unit) This is a yearlong course that covers a broad range of basic to advanced musical concepts. Students will learn and enhance their skills in composition and will learn how to analyze music using harmonic analysis along with other various concepts of analysis. Aural skills including rhythmic and harmonic dictation and sight-singing will also be covered. This course will give students the opportunity to broaden their skills and understanding of music and deepen their appreciation for music as an

	expression and academic. After completing this course, students will also have the knowledge to sharpen their performance skills. <i>PREREQ: Must be able to read musical notation and must obtain permission from instructor.</i>
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Physics

PHY161-DE (Dual Credit with FMU) 4 hours of college credit	General Physics I (FALL Semester – 0.5 unit) An algebra-based introduction to Newtonian mechanics. Topics include 1D and 2D motion, Newton's laws of motion, gravity, work, energy, heat, momentum, and rotational motion. Students will develop analytical thinking, reasoning, and scientific critical thinking skills through in-class activities, weekly experiments, and regular homework assignments. This course is dual enrolled with Francis Marion University and will be taught by GSSM faculty. <i>Includes a 2-hour weekly lab. COREQ: Initial math placement in MAT111-H or above. See "College Credit Hours for GSSM Courses."</i>
PHY162-DE (Dual Credit with FMU) 4 hours of college credit	General Physics II (SPRING Semester – 0.5 unit) An algebra-based continuation of Newtonian mechanics and introduction to waves, electricity, and magnetism. Topics include oscillations, mechanical waves, sound, electrostatics, DC circuits, magnetism, and optics. Students will develop analytical thinking, reasoning, and scientific critical thinking skills through in-class activities, weekly experiments, and regular homework assignments. This course is dual enrolled with Francis Marion University and will be taught by GSSM faculty. <i>Includes a 2-hour weekly lab. PREREQ: PHY161-E or PHY201-AP. See "College Credit Hours for GSSM Courses."</i>
PHY201-AP (AP Physics C)	Calculus-Based Physics I (AP Physics C: Mechanics) (FALL Semester – 0.5 unit) An extension of the generally accessible topics covered in General Physics but with the use of basic integral and differential calculus. Topics include particle kinematics and dynamics; Newton's laws of motion, including circular motion; work; kinetic energy; potential energy; energy conservation; power; linear momentum, its conservation, and impulse of particles and systems of particles; rotational Newtonian kinematics and dynamics of rigid bodies; angular momentum and its conservation; equilibrium of a rigid body; gravitation; and oscillation. <i>Includes a 2-hour weekly lab. COREQ: MAT230 Prep for DE Calculus or above.</i>
PHY202-AP (AP Physics C)	Calculus-Based Physics II (AP Physics C: Electricity & Magnetism) (SPRING Semester – 0.5 unit) Primary topics include electric charge; electric field; Gauss's Law for Electricity; potential; capacitance and dielectrics; conductors and insulators; current; resistance; emf; DC circuits; magnetic field; Gauss's Law for Magnetism; magnetic forces; sources of magnetic field; displacement current and Ampere's Law; electromagnetic induction and Faraday's Law; inductance; and electromagnetism as synthesized in Maxwell's equations. <i>Includes a 2-hour weekly lab. PREREQ: PHY201-AP. COREQ: MAT231 Calculus I or above.</i>
PHY204 above AP	Computational Physics (FALL Semester – 0.5 unit) This course is an introduction to computational methods to solve physics problems. Robust numerical methods to estimate derivatives, find roots of polynomials, and the Monte Carlo method will be studied in their application to physics problems. Students will study realistic projectile motion, chaos theory, planetary orbits, and phase transitions of ferromagnetic materials. Mastery of Newtonian Mechanics, familiarity with the concept and definition of the derivative and integral, as well as the ability to do procedural programming are expected to be successful in this course. <i>Includes a 2-hour weekly lab. PREREQ: CSC110-DE or both CSC101-AP and CSC 102-AP; and either PHY161-DE or PHY201-AP. This course may or may not be offered depending on the availability of the instructor.</i>
PHY205 above AP	Astrophysics (SPRING Semester – 0.5 unit) This course is an introduction to astrophysics and will emphasize how physics is applied to astronomy. Topics covered include orbital mechanics, astronomical detection of light, stellar structure

	and evolution, interstellar medium, galaxies, and cosmology. The physics in this course includes mechanics, gravitation, kinetic theory of gases, radiation, energy transport, quantum mechanics, magnetic fields, special relativity, and general relativity. Mastery of Newtonian mechanics and the ability to solve physics problems, including calculus applications, are expected to be successful in this course. Includes a 2-hour weekly lab. <i>PREREQ: PHY161-DE or PHY201-AP. This course may or may not be offered depending on the availability of the instructor.</i>
PHY211-H	Physics in the Arts (FALL Semester – 0.5 unit) This course studies physical phenomena found in music and the visual arts; also known as the scientific fields of acoustics and optics. Topics covered in this course include light waves, color mixing, lenses, mirrors, photography, sound waves, sound perception, musical scales, and musical instruments. These topics will be further studied through observation and experimentation during the weekly lab. <i>Includes a 2-hour weekly lab. COREQ: Initial math placement in MAT111-H or above, or permission of instructor. Does not count towards GSSM's lab science graduation requirement.</i>
PHY212-H	Physics of Sports (SPRING Semester – 0.5 unit) This course examines applications of physics principles in sports such as baseball, basketball, football, soccer, volleyball, golf, tennis, bowling, gymnastics, track and field, etc. Concepts of kinematics, force, energy, power, momentum, rotational motion, and fluid dynamics will be used to understand the motion and spin of balls that have been thrown/kicked/hit, the sliding and rolling motion of objects on various surfaces, historical engineering advancements in sporting equipment, etc. These same physics concepts will also be applied to the human body to understand the mechanics and anatomy involved in throwing, swinging, running, jumping, spinning, somersaulting, etc. Includes a 2-hour weekly lab. <i>PREREQ: PHY 161, or PHY 201, or physics from your previous high school. Does not count towards GSSM's lab science graduation requirement.</i>
PHY203 above AP or DC	Fluids, Thermodynamics, and Optics (SPRING Semester -- 0.5 unit) This course is a third semester of physics meant to complement the 161/162-E or 201/202-AP classes. Students will study some of the classical physics topics not emphasized in those courses, namely, fluid mechanics, thermodynamics, and optics. Other topics may include high energy physics and cosmology as time permits. This course also includes a weekly laboratory experience. <i>PREREQ: PHY162 or PHY202-AP or completion of AP Physics.</i>
PHY301 above AP or DC	Modern Physics (FALL Semester – 0.5 unit) This course is a continuation of PHY 161/162 or PHY 201/202. It focuses on the implications and applications of the topics covered in these courses beyond the Newtonian scale and introduces some of the extraordinary developments that irrevocably altered our understanding of physics. Following a historical outline, the topics include special and general relativity, atomic structure, quantum mechanics, and nuclear and particle physics. Although the course is geared to the mathematical ability of the class, some calculus should be expected. <i>Includes a 2-hour weekly lab. PREREQ: PHY162 or PHY202-AP or completion of AP Physics.</i>

Psychology

PSY301-AP	AP Psychology (SPRING Semester – 0.5 unit) This class can be taken as a social studies 0.5 credit or an elective. This class will be a basic introduction to the discipline of psychology in the 19th and 20th centuries. Major figures in the development of theories and the evolution of those theories through the years will be discussed. Some case studies may also be used to more effectively focus on the different directions taken by modern psychology. Taught in one 3-hour class session each week.
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SCI303-H	<p>Social Science Research Methods (FALL Semester – 0.5 unit)</p> <p>This course is intended to introduce students to the research process. The focus will be on quantitative social science research logic and critical thinking. Research terms will be explained and applied; as students engage in the research process through the associated activities for designing and constructing a project, and developing writing skills, while incorporating principles of research ethics. Students will construct an effective research proposal which may serve as the launching point for a study they may execute in Research in Quantitative Social Science. Special Approval: Instructor and Director of Research & Inquiry</p>
RES408C	<p>Research in Quantitative Social Science (SPRING Semester – 0.5 unit)</p> <p>Students will advance their study of social science research methods through execution of a research project of their own design. The course offers a hands-on opportunity for students' data collection, analysis, and interpretation in keeping with a solid grounding in relevant social science literature. In addition to a review of introductory research concepts, students will engage in the application of descriptive, relational, and inferential statistics to their original data. The main written product for this course will result from the implementation of the research project proposed in Introduction to Social Science Research – in accordance with related American Psychological Association (APA) Version 7 style. This course fulfills the Research & Inquiry Requirement. <i>PREREQ: SCI303-H</i> Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry</p>

Research & Inquiry

RES401-H	<p>Mentored Summer Research & Inquiry (SUMMER/FALL – 0.5 unit)</p> <p>Students will conduct a six-week research & inquiry project under the guidance of a research mentor with experience & expertise in their field. Students are responsible for meeting any requirements of the project site (e.g., documentation, participating in a poster presentation, etc.). The mentor and project must be approved or assigned by GSSM. Students prepare their GSSM Research & Inquiry Portfolio prior to the start of the Fall Semester. During the Fall semester, students work at a seminar level with a GSSM Research Advisor to complete preparation to present at the GSSM Annual Research Colloquium. This presentation is required to receive credit. The course does not count toward course load for the Fall Semester of the senior year. This course fulfills the Research and Inquiry Requirement at GSSM. <i>PREREQ: LLS107B</i> Special Category: Fulfills GSSM Research & Inquiry Requirement. Does not count toward course load for the Fall Semester of the senior year.</p>
CHE401-H	<p>Research in Microwave Spectroscopy (FALL Semester – 0.5 unit)</p> <p>See course listing in Chemistry for full description. <i>PREREQ: CHE100-H, CHE201-AP, or CHE203</i> Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry.</p>
CHE403-H	<p>Research in Computational Drug Design (FALL Semester – 0.5 unit)</p> <p>See course listing in Chemistry for full description. <i>PREREQ: CHE100-H, CHE201-AP, or CHE203</i> Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry.</p>
CSC403-H	<p>Research in Computational Mathematics (FALL/SPRING Semester - 0.5 Unit)</p> <p>See course listing in Computer Science for full description. Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry.</p>

ENGIN401-H above AP or DC	Research in Multimodal Transportation Systems (FALL/SPRING Semester – 0.5 unit) The aim of this research course is to teach students how to advocate for specific infrastructure and policy solutions aimed at making Hartsville's transportation systems more sustainable, equitable, and accessible. Students gain background knowledge about the political, social, and technological procedures involved in creating and maintaining sustainable transportation systems and livable communities through reading and analysis of both current research and historical texts. Students also interview stakeholders involved in infrastructure developments such as elected officials, engineers, architects, city planners, academic experts, and advocates. Students engage in participant observation, actively traveling on and using pedestrian and cycling infrastructure locally and regionally to understand the user experiences directly. Learning from these experiences, students will define and execute a policy, outreach, or project. Students complete the GSSM Research & Inquiry Portfolio. PREREQ: PERMISSION OF INSTRUCTOR AND DIRECTOR OF RESEARCH & INQUIRY
RES408C	Research in Quantitative Social Science (SPRING Semester – 0.5 unit) See course listing in Psychology for full description. PREREQ: SCI303-H Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry.
RES405-H	Research in Restoration Ecology (SPRING Semester – 0.5 unit) See course listing in Biology for full description. Priority enrollment will be given to seniors. PREREQ: SCI301 or completion of BIO201-AP (Spring semester of AP Biology) Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry.
RES406-H	Research in Hydroponics (FALL/SPRING Semester – 0.5 unit) See course listing in Biology for full description. PREREQ: One year of previous high school biology and chemistry or concurrent enrollment in BIO 202 and CHE 100/CHE 201/CHE 203 Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry.
RES407C	Research in Soil Microbiota (SPRING Semester – 0.5 unit) See course listing in Biology for full description. Includes a 2-hour weekly lab. PREREQ: BIO201-AP and BIO202-AP or completion of AP Biology. Special Category: Fulfills GSSM Research & Inquiry Requirement. Special Approval: Instructor and Director of Research & Inquiry

Spanish

SPA201-H	Spanish II (A Full Year Course – 1.0 unit) SPAN II is a fast-paced introductory language course intended for students with little or no knowledge of Spanish. Informed by the ACTFL Proficiency Guidelines, this course uses a communicative methodology in an effort to promote the five 'Cs' of second language acquisition: Communication, Cultures, Connections, Comparisons and Communities. By the end of the academic year, students should have a greater understanding of cultural and historical topics from a variety of countries and regions in the Spanish-speaking world. Students should expect to discuss basic topics and cultural events in the present, past, and future; describe people and places; and talk about daily activities. In addition, through frequent attention to a variety of artistic expressions (music, painting, literature, folklore and performance), students will enhance their knowledge of the Spanish speaking world and increase their ability to formulate coherent and critical thoughts in the target language. PREREQ: Spanish I or permission of instructor.
SPA301-H	Spanish III (A Full Year Course – 1.0 unit) SPAN III is an interactive, proficiency-oriented and student-centered course that builds on the language proficiency and cultural knowledge/awareness acquired in Spanish II. Informed by the ACTFL Proficiency Guidelines, this course uses a communicative methodology in an effort to

	<p>promote the five 'Cs' of second language acquisition: Communication, Cultures, Connections, Comparisons and Communities. Students will develop the tools necessary to execute some of the following communicative tasks in the target language: discuss events in the past, present and future; talk about hypothetical and conditional situations; and discuss topics of daily life (current events, the environment, urban life, travel, job market, communications, etc.). In addition, through frequent attention to a variety of artistic expressions (music, painting, literature, film, and performance), students will enhance their knowledge of the Spanish speaking world and increase their ability to formulate coherent and critical thoughts in the target language. <i>PREREQ: Spanish II or permission of instructor.</i></p>
SPA401-H	<p>Spanish IV (A Full Year Course – 1.0 unit)</p> <p>SPAN IV is an interactive, proficiency-oriented, and student-centered course, designed to build on the language proficiency and cultural knowledge/awareness acquired in Spanish III. In this course, students will work on the five skills necessary to develop and deliver effective communication in Spanish at a higher, more sophisticated level of performance. Students will focus on enhancing their ability to execute complex communicative tasks in the target language: discuss events in the past, present and future; talk about hypothetical and conditional situations; and analyze, discuss, and reflect on abstract topics. In addition, through frequent analysis of literary and artistic works intended for native audiences (such as plays, poetry, short stories, films, newspaper articles, podcasts, etc.) students will increase their knowledge of the Spanish speaking world and improve their ability to formulate coherent and critical thoughts about important global issues in the target language. After successful completion of this course, students should be well prepared for AP Spanish at GSSM. <i>PREREQ: Spanish III or permission of instructor.</i></p>
SPA601-AP (AP Span Lang)	<p>Spanish VI (AP Span Lang) (A Full Year Course – 1.0 unit)</p> <p>The goal of this course is to improve written and oral proficiency in the target language through the study, analysis, and discussion of a diverse body of authentic contemporary texts selected from throughout the Spanish-speaking world. Primary sources include works of fiction (literature, film, popular sitcoms, and music), and nonfiction (newspaper articles, essays and podcasts). The class is divided into six units dealing mostly with cultural identity and contemporary sociopolitical conflicts challenging communities across the globe. All topics discussed in class correlate directly with those evaluated on the AP Spanish Language and Culture Exam. Apart from a very brief, but intense, grammar review at the beginning of each semester, minimal class time will be dedicated to explicit grammar instruction. Students who are in this class are strongly encouraged to take the AP Spanish Language and Culture exam in May. This course is conducted exclusively in Spanish. <i>PREREQ: Spanish IV or permission of instructor.</i></p>
SPA704 above AP or DC	<p>Advanced Spanish Studies (FALL Semester - 0.5 unit)</p> <p>This course focuses on Hispanic Studies to expand the student's cultural awareness and knowledge, to serve as a tool to improve listening, reading, and speaking comprehension skills, and to promote discussion in the target language. The course focuses on different areas: Culture, Literature, Film, History, Art, Spanish for the Professions, Advanced Grammar, etc. It also serves as a tool to explore the diversity of Hispanic Culture across the world. In addition to the improvement of language skills, the course will promote cultural awareness by exposing students to unique and actual cultural objects, historical processes, and issues and challenges global citizens face today. Class discussions and secondary readings cover topics such as literature, sociology, history, political science, and cultural studies. Classroom discussions and written assignments are in the target language. (Spanish). <i>COREQ: SPA601-AP Spanish or permission of instructor.</i></p>
SPA703 above AP or DC	<p>Topics in Hispanic Culture and Linguistics (SPRING Semester - 0.5 unit)</p> <p>This course studies Hispanic Culture and/or Linguistics as a tool to improve listening, reading, and speaking comprehension skills in Spanish and to promote discussion in the target language. The course focuses on two main areas: Culture and/or Linguistics. The Culture topic focuses on globalization, marginalized communities, national identity, political conflicts in Central and South America, and the role of art in the creation of collective memory. The Linguistics topic focuses on themes central to the study of linguistics such as introductory Spanish linguistics, first and second language acquisition, dialectal variation in Spanish, and the development of Spanish from a</p>

	historical perspective. This course covers a varied selection of cultural objects, genres and/or regional diversity from the Spanish speaking world and therefore exposes students to a multiplicity of linguistic registers, colloquial expressions, and accents. In addition to the improvement of language skills, the topics will promote cultural awareness by exposing students to unique and actual cultural objects, historical processes, and issues and challenges facing global citizens. Class discussions and secondary readings focus on both formal elements of linguistics and culture, as well as their sociopolitical, historical, and cultural contexts. Classroom discussions and written assignments are in the target language. (Spanish). <i>COREQ: SPA601-AP Spanish or permission of instructor</i>
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Visual Arts

ART120-H	Painting I (FALL/SPRING Semester – 0.5 unit) This course provides beginning instruction to oil painting typically explored at the undergraduate university level. The mechanics of painting including composition, light, and color theory are applied through observational practices. Students learn about contemporary and historical artists through the exploration of their ideas and methods.
ART121-H	Painting II (FALL/SPRING Semester – 0.5 unit) This course provides continuing instruction in painting typically explored at the undergraduate university level. Students continue to paint from observational practices while learning to use conceptual practices, methods, and theories within their artwork. Students learn about contemporary and historical artists through the exploration of their ideas and methods. Students are required to present their work & ideas to the class during the semester. Additionally, students are required to create a project proposal outlining their goals, ideas, artists/scholars of influence, and plan of action. <i>Prerequisites: ART 120-H.</i>
ART140C-H	Drawing I (FALL/SPRING Semester – 0.5 unit) This course provides introductory instruction in drawing typically explored at the undergraduate university level. Line, perspective, value, space, and human anatomy are discussed and applied through observational drawing practices. Additionally, students are introduced to the field or Neuroaesthetics and Neuroarts, while exploring how we perceive, capture, ideate, and imagine the world around us.
ART141C-H	Drawing II (FALL/SPRING Semester – 0.5 unit) This course provides continuing instruction in drawing typically explored at the undergraduate university level. While Drawing I introduces students to the fundamentals of drawing, Drawing II offers an expanded exploration of drawing as both a contemporary practice and an observational skill essential to all academic disciplines. During this course, students expand on depth and breadth of drawing practices through independent and directed study. Drawing II students are expected to act as leaders and studio technicians in the Art Studio. <i>PREREQ: ART XXX-H Drawing 1</i>
ART201-H	Advanced Studio Art 1 (Fall and Spring Semester - 0.5 unit) This course provides upper-level instruction in Studio Art typically explored at the undergraduate university level. Advanced Studio Art offers students the opportunity to create a focused body of artwork while working closely with peers that have similar goals. This course requires that students think critically, analytically, creatively, and conceptually about their own artwork. <i>Prerequisites: One year (1 Credit) of Studio or Visual Art, or by instructor permission.</i>
ART 202-H	Advanced Studio Art 2 (Fall & Spring Semester – 0.5 unit) This is the second course in the Advanced Studio Art sequence. This course provides upper-level instruction in Studio Art typically explored at the undergraduate university level. Advanced Studio Art

	offers students the opportunity to create a focused body of artwork while working closely with peers that have similar goals. This course requires that students think critically, analytically, creatively, and conceptually about their own artwork. <i>Prerequisites: ART 201-H Advanced Studio Art or by instructor permission.</i>
ART 203-H	Advanced Studio Art 3 (Fall & Spring Semester – 0.5 unit) This is the third course in the Advanced Studio Art sequence. This course provides upper-level instruction in Studio Art typically explored at the undergraduate university level. Advanced Studio Art offers students the opportunity to create a focused body of artwork while working closely with peers that have similar goals. This course requires that students think critically, analytically, creatively, and conceptually about their own artwork. <i>Prerequisites: ART 202-H Advanced Studio Art or by instructor permission.</i>
ART 204-H	Advanced Studio Art 4 (Fall & Spring Semester – 0.5 unit) This is the fourth course in the Advanced Studio Art sequence. This course provides upper-level instruction in Studio Art typically explored at the undergraduate university level. Advanced Studio Art offers students the opportunity to create a focused body of artwork while working closely with peers that have similar goals. This course requires that students think critically, analytically, creatively, and conceptually about their own artwork. <i>Prerequisites: ART 203-H Advanced Studio Art or by instructor permission.</i>
ART301-AP (AP Art His)	AP Art History (AP Art His) (A Full Year Course – 1.0 unit) In this course, students will learn how art and architecture have shaped human culture across the globe, from Paleolithic cave paintings to postmodern video art. We will analyze and appreciate artworks' aesthetic qualities and cultural significance. This course fosters curiosity and confidence, encouraging greater empathy for diverse cultures and histories. We will engage with art through print and digital reproductions and visit local and regional museums. <i>This course fulfills GSSM's 1.0-unit fine arts requirement.</i>
ART401C-H	Western Art History (FALL Semester – 0.5 unit) This course is the first semester of AP Art History. It can be taken on its own for honors credit. If you wish to take Western Art History (fall) together with Global Art History (spring), sign up for AP Art History instead, which prepares you to take the AP exam. In this course, students will learn how art and architecture have shaped human culture in traditions commonly grouped as Western art. We will study prehistoric cave painting, Mesopotamian and Egyptian monuments. Greek and Roman sculpture and temples, and major developments in European art through the modern era, alongside related traditions in West Asia and North Africa. We will analyze and appreciate artworks' aesthetic qualities and cultural significance within their historical and religious contexts. This course fosters curiosity and attentive observation, encouraging greater empathy for the diverse peoples and belief systems that shaped these visual traditions. We will engage with art through print and digital reproductions and visit local and regional museums. <i>This course satisfies 0.5 units of GSSM's 1.0-unit fine arts requirement.</i>
ART402C-H	Global Art History (Spring Semester – 0.5 unit) This course is the second semester of AP Art History. It can be taken on its own for honors credit. If you wish to take Western Art History (fall) together with Global Art History (spring), sign up for AP Art History instead, which prepares you to take the AP exam. In this course, students will learn how art and architecture have shaped human culture in non-Western traditions and the global modern era, studying works from Africa, Oceania, East and South Asia, and the Indigenous Americas, as well as modern and contemporary art from both Western and non-Western contexts. We will analyze and appreciate artworks' aesthetic qualities and cultural significance, with particular attention to issues of colonialism, globalization, and cross-cultural exchange. These dynamics reveal themselves in a wide range of media, including painting, sculpture, photography, installation, and video. The course fosters empathy, critical insight, and attentive observation, enabling students to more fully appreciate the complexity of modern and contemporary art and architecture. We will engage with art through print and digital reproductions and visit local and regional museums. <i>This course satisfies 0.5 units of GSSM's 1.0-unit fine arts requirement.</i>

Junior Seminar Series

Note: Students are automatically registered for these seminars.

LLS101	<p>Life and Leisure Skills (FALL and SPRING Semester, Graduation Requirement)</p> <p>This seminar is designed to provide juniors with the necessary skills for making the transition to residential living and to a school curriculum that is frequently intense. The course formally addresses many of the academic as well as emotional and social demands that are placed on students in their new environment. It provides them with an arena where positive life skills are encouraged and fostered. This seminar meets once a week.</p>
LLS102	<p>Academic Transition (FALL Semester, Graduation Requirement)</p> <p>This seminar is designed to assist students with the academic transition to GSSM, so that you can take full advantage of the resources and opportunities available at this wonderful school. We will work together so that you have the opportunity to develop the skills and mindset necessary to thrive in the fast-paced and challenging GSSM academic environment. While we recognize that you have been selected to attend GSSM because of your academic excellence thus far, experience has taught us that additional support for the entering class is a necessary and welcome addition to students' schedules. This seminar meets once a week.</p>
LLS103	<p>College Planning Seminar I (SPRING Semester, Junior Year, Graduation Requirement)</p> <p>The College Planning Seminar I course is designed to teach students how to navigate both the college search and college application processes. The course will emphasize the importance of self-awareness and reflection in the process. Students will also learn how to identify college/universities that match what they are looking to gain in a collegiate experience. The tools and resources shared in the course will allow students to have a thoughtful and guided college search experience. This seminar meets once a week.</p>
LLS105	<p>Everyday Survival Skills (SPRING Semester for four weeks, Junior Year, Graduation Requirement)</p> <p>Life is a contact event and can be stressful. Having an understanding of that and some basic skills can help you overcome stress and survive contact. While it is our hope that you will never be in danger or need to use these survival skills, we want you to have them. This 4-week seminar will provide practical hands-on exercises and online learning. Students will be exposed to a) situational awareness training, b) emergency first aid procedures, c) self-defense strategies and methods, and d) physical and mental stress reduction and personal focus techniques.</p>
LLS106	<p>Public Speaking (SPRING Semester for four weeks, Junior Year, Graduation Requirement)</p> <p>This 4-week seminar will provide a brief introduction to the art and science of public speaking. Students should anticipate a fast-paced, hands-on experiential learning environment as we explore the classical roots of public speaking, the basic elements of a speech, various organizing strategies, managing speech anxiety, effective delivery, and persuasion. We will be crafting a variety of short speeches each day, so students will quickly and continually practice what is learned.</p>
LLS107	<p>Preparing for Research Experiences (SPRING Semester for four weeks, Junior Year, Graduation Requirement)</p> <p>This 4-week seminar series will introduce skills and concepts central to student research experiences and completing the GSSM Research & Inquiry Portfolio. Special Category: Part of Spring Junior Seminar Series Graduation Requirement with LLS105 & LLS106</p>

Senior Seminar Series

Note: Students are automatically registered for this seminar.

LLS104	<p>College Planning Seminar II (FALL Semester, Senior Year, Graduation Requirement)</p> <p>The College Planning Seminar II course continues the college application process for the fall of senior year. Students will confirm their college application list, complete college applications and essays, and submit requests to have official documents sent to colleges. Completion of financial aid forms (FAFSA and CSS Profile) will also be covered. This fall seminar focuses on time management skills, organizational skills, submission of college applications and communication with colleges as an applicant. The seminar meets once a week; students may be excused from attending once their applications have been submitted to colleges.</p>
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Section 2: Frequently Asked Questions

1. How many courses do I need each semester?

All students must have a minimum of 5 courses per semester. Many students take 6 courses per semester, and some take 7 or more (beginning spring of their junior year). Juniors also take two one-hour seminar courses per semester, and seniors also take a one-hour seminar course during the fall semester. Students should work with their academic advisors to come up with the schedule that best meets their academic goals and abilities.

2. What if I want to take more than 5 courses in a semester?

Students may take a sixth course during a semester with approval of their advisor. After their first semester, students may take a seventh course with the approval of their advisor in consultation with the Dean of Curriculum and Instruction. In general, only consider requesting more than 6 courses if you are earning 90s or above in all current courses. When considering taking more courses, it is important to consider the demands of an additional course. It is very important for college admissions that you perform well in the courses you take. Taking more courses and not performing well in all courses is not advisable.

3. What science courses do I need?

It is important that you have a solid foundation in the core sciences: biology, chemistry, and physics. Therefore, you must take a full credit (one year) in each of these three sciences at the honors level or above to graduate from GSSM. Discuss with your advisor taking GSSM's foundational lab sciences in order to ensure a strong background in all three sciences.

4. Which chemistry course should I take, Principles of Chemistry, Dual Enrollment (DE) Chemistry, or AP Chemistry?

If you have not taken a high school chemistry class, you must take Principles of Chemistry. GSSM requires all students to take at least one chemistry course either at their previous school or at GSSM. Note that students who take Principles of Chemistry as a junior will be well-prepared to take DE or AP Chemistry as a senior if they choose to do so.

If you have taken chemistry before but feel you do not have a strong background, you should take Principles of Chemistry instead of DE or AP Chemistry if you choose to take a chemistry course. Principles will prepare you well for further (DE, AP, or college) courses in chemistry.

If you have taken chemistry before and feel you have a strong background, you may take DE or AP Chemistry, which are of similar rigor. If you choose DE Chemistry, a passing grade will earn college credit that will likely transfer to any public South Carolina university and some private and out-of-state colleges and universities. If you choose AP Chemistry, a score of 3 or higher on the AP Chemistry Exam will provide you with college credit at many colleges and universities. Colleges and universities typically list the credits awarded for AP scores on their websites.

5. Which physics course should I take, General Physics (dual-enrolled) or AP Physics C?

If you haven't taken a high school physics class, you can take either General Physics or AP Physics C to fulfill the GSSM graduation requirement. If you have already taken a high school physics class, you are welcome to continue your physics studies and earn college credit by taking either General Physics or AP Physics C. Because physics has a heavy math component, to take General Physics (algebra-based, dual-enrolled) you must be in MAT111-H or above, and to take AP Physics C (calculus-based), you must be in MAT230 Prep for DE Calculus 1 or above. Taking General Physics as a junior does not preclude you from also taking AP Physics C as a senior. General Physics or AP Physics C is required for physics electives PHY 203 and PHY 301.

6. Which math course should I take?

As is the case for all GSSM courses, the courses in mathematics are designed to teach mastery of the subject area. Based on our professional opinion and experience, we work to place students in the best course for their individual backgrounds. We want each student to take the course that will challenge them at an appropriate level. Recognizing that the mathematical ability of students varies despite having taken similar courses, we take proper placement very seriously. Once a student is at GSSM, we may see that they could and should be placed in a different level (higher or lower) class. Because we encourage students to challenge themselves and strive to reach their full potential in all academic areas, we will switch a student to a different mathematics class if we see that our initial placement was incorrect. The math department will reassess placements near the beginning of the semester, after the first major assessment, and once again at mid-term.

For Incoming Juniors

During the registration process, all rising juniors are asked to select the math courses, along with their other courses, that they want to take. During May, all rising juniors are given placement assessments, which are used in addition to their placement request, transcripts, PSAT/SAT math scores and previous grades in mathematics, to place them in the proper math courses.

For Rising Seniors

Math placement is determined by you and your current math instructor. After spring midterm grades are reported, you will meet with your math instructor to decide which math course is appropriate for you. Final semester grades will determine your ultimate placement. Placement is determined by the general guidelines below:

All GSSM students must complete 1.0 credit of calculus at the honors level or higher during high school. Students who took MAT 101, MAT 102/103 or MAT 111/112 as juniors will be placed into a calculus class as follows:

- For students currently enrolled in MAT 101, an average grade of 90 is needed for MAT 231 (Calculus I) and permission of the instructor is needed for MAT 231/232 (Calculus I and II).
- For students currently enrolled in MAT 102/103, an average grade of 86 is needed for MAT 231 (Calculus I) and 93 for MAT 231/232 (Calculus I and II).
- For students currently enrolled in MAT 111/112, an average grade of 80 is needed for MAT 231 (Calculus I) and 90 for MAT 231/232 (Calculus I and II).

7. Can you explain the different Pre-Calculus and calculus classes?

- Pre-Calculus: These courses are all pathways to prepare for calculus. Each of the following bullet points constitutes a single pre-calculus curriculum.
 - MAT 101 (Essentials for Calculus, yearlong) is designed for students who have a weaker mathematical background. This course begins with a review of algebra topics to help fill in the gaps in students' mathematical backgrounds. The course prepares students for calculus. Meets 4 days a week.
 - MAT 102 (Foundations 1 for Calculus, Fall) & MAT 103 (Foundations 2 for Calculus, Spring) are designed to move at a pace that allows students additional time for extra practice on key problems related to the algebraic foundations of calculus. Meets 4 days a week.

- MAT 111 (Concepts 1 for Calculus, Fall) & MAT 112 (Concepts 2 for Calculus, Spring) are designed to provide foundational instruction to prepare students for calculus and move at a faster pace than the MAT 102/103 sequence. Meets 3 days a week.
- Calculus: These calculus sequences all count towards the calculus graduation requirement.
 - MAT 200 (Calculus with Applications, yearlong) is a senior only class designed to move at a pace that allows additional time to practice fundamental problems in elementary calculus. Meets 3 days per week.
 - MAT 230 (Fall) & MAT 231 (Spring) (Calculus I) are designed to present more advanced problems and provide greater depth in the theoretical foundations of calculus than the Math 200 course. These two courses form a single calculus sequence that provides students with college credit for a calculus I course. MAT 230 meets 3 days per week, and MAT 231 meets 4 days per week.
 - MAT 231 (Fall) & MAT 232 (Spring) (Calculus I & II) are designed to present more topics, more advanced problems, and greater depth than the MAT 230/231 sequence. Students completing this sequence of courses receive dual enrolled credit for Calculus I and II. Meets 4 days per week.

8. What English courses should I take?

The ability to write with clarity and precision is critical for success in all fields. Studying literature opens us up to new experiences, increases empathy and understanding, and develops critical and analytical thinking skills. For these reasons, GSSM requires all incoming juniors to take our two-semester rhetoric and composition course sequence, ENG111 and ENG112. Students must earn a C or higher in each of these courses in order to earn a GSSM diploma. ENG 111 and ENG 112 together count as one unit of high school English credit. They also earn students six hours of college writing credit, required at most colleges and universities in the United States.

For senior year, your choice of English courses will depend on how many total years of high school English you have completed prior to senior year. If you have completed 3 years of English, you will need to take the ENG250/252 course sequence to earn your 4th unit of English, thus fulfilling the South Carolina high school diploma requirements. ENG250/252 will earn you six additional hours of college English credit, which will typically count either towards core or elective requirements at most colleges and universities.

If you have completed 4 years of English prior to your senior year, you are highly encouraged to continue taking English your senior year. You may choose to take the ENG250/252 course sequence, or you may take one or more of the many electives offered by the English department.

9. Which computer science course should I take?

GSSM considers computer science to be an indispensable tool for almost every discipline. If you have not taken a computer science course, you may select one of these options to fulfill the SC graduation requirement:

- CSC100 and CSC102 AP CS A are a sequence of courses designed to prepare students for the AP Computer Science A exam. Students enrolled in CSC101/102 are expected to complete the entire year and then sit for the AP exam in the spring. To earn 1 unit of AP graduation credit both courses must be completed successfully.
- CSC110 Computer Science 1: Python for Scientists which is a general-purpose object-oriented language that is used by many disciplines. This one-semester course earns 1.0 unit. This course is dual-enrolled.
- The sequence ENGIN202 Engineering Disciplines and Skills followed by ENGIN302-DE Computer Programming with MATLAB. MATLAB is a programming language tailored for engineering and science. Refer to the description in the engineering section of the course catalog. NOTE: Only ENGIN302 Computer Programming with MATLAB counts as 1.0 unit of credit of computer science.
- CSC100 Introduction to Computer Programming (AP CS A) (0.5 unit) followed by CSC160 Introduction to Computer Networking (0.5 unit) for a total of 1.0 unit of credit.
- CSC 160 Introduction to Computer Networking (0.5 unit) and CSC260 CyberSecurity Fundamentals (0.5 unit) for a total of 1.0 unit of credit.

If you have taken a computer science course that fulfills the SC graduation requirements, you may enroll in a computer science elective course(s). Work with your academic advisor and the computer science department faculty to make sure you have completed the prerequisites for these courses.

10. Which engineering course should I take?

ENGIN202-DE and ENGIN 302-DE are the equivalent to the general engineering sequence at Clemson University, in which students are introduced to analytical and computational approaches for solving engineering and scientific problems, (in ENGIN202) and using MATLAB 9(in ENGIN302).

ENGIN204, in which students learn how to 3D model in SolidWorks, is also required by some engineering departments at Clemson. Students choosing to attend Clemson may receive university credit for these courses.

If you have the PLTW courses IED and POE, you are well-prepared to take any of the intermediate courses, ENGIN 201-H, ENGIN 202-DE, ENGIN 203-H, ENGIN 204-DE, and ENGIN 206-H, as well as any of the introductory courses.

11. What is an independent study?

Independent study at GSSM is designed to provide additional opportunities for highly motivated students to pursue areas of their special interest. Please see the Other Academic Information section "Independent Studies" for more information about how to register for an independent study course.

12. If there is more than one teacher for a course, can I select the teacher I want?

Students cannot select instructors. It is important to learn how to learn in all situations and from different teaching styles. Learning from our diverse and talented instructors will prepare you for learning in the college setting and beyond.

13. Why does my schedule change sometimes during the year, especially between semesters?

To provide the best educational experience, we try to balance classes as best possible (i.e., a similar number of students in each section of a course). Since a number of our courses are taught in one semester and since we allow students to add and drop courses at the beginning of semesters, we sometimes need to rebalance classes for instructors at the beginning of each semester and sometimes after a few weeks into a semester.

14. How do I complete the research and inquiry graduation requirement?

Completion of a GSSM-approved, mentored research and inquiry program is required for all students. Students complete the research and inquiry graduation requirement by taking and passing RES401 or a research and inquiry designated course. Most students complete this requirement through RES401 involving six weeks of mentored summer research in an external research group with which they are matched by GSSM, completion of a portfolio, and presentation at GSSM's Research Colloquium.

Enrollment in an on-campus, school-year research and inquiry designated course requires approval of the academic advisor, instructor, and Director of Research & Inquiry on an RIDC form.

15. How does RES401 count in regard to the classes I take?

Mentored Summer Research & inquiry (RES401) does not count as one of your required 5 courses in the fall of your senior year but will show up on your fall schedule on Thursdays at 4PM because RES401 students will work at a seminar level with a GSSM research advisor to finish their research and inquiry portfolio before the Annual Research Colloquium. The final grade and credit for research is not awarded until the end of the fall semester.

16. What do I need to do if I have not met the physical education State graduation requirement prior to coming to GSSM?

The combination of your Life and Leisure seminar and working with the athletic department on a physical activity plan will meet the State PE requirement.

17. What do I do if I need a fine arts credit?

All GSSM visual arts, art history, music, and drama courses fulfill the fine arts requirement. If these courses do not fit into your academic program during your two years at GSSM, you can take fine-arts courses during the summer.

18. If a course is listed in the course catalog, will it definitely be offered?

Ideally, yes. However, depending on student demand for the course, and what other courses faculty are teaching, some courses may not be offered each year. Because some courses have limits to enrollment, not all students who register for a course are guaranteed to be able to take it. Therefore, when signing up for courses, you should think about other elective courses you might want to take if your initial choices cannot be met.

19. How does the one-semester Gov/Econ (HIS 201) class at GSSM fit with State social studies requirements? How do I meet the State Advance Personal Finance Requirement?

If you take the one-semester Gov/Econ course at GSSM, it satisfies both the government and economics State requirements, reducing the total State social-studies requirement from 3 credits (US History – 1.0 credit, Government – 0.5 credit, Economics – 0.5 credit and one other Social Studies credit – 1.0 credit) to 2.5 credits total (US History – 1.0 credit, GSSM Gov/Econ – 0.5 credit and one other Social Studies credit – 1.0 credit). GSSM's one-semester Gov/Econ course may be offered on-campus or online during the fall and spring semesters, depending on instructor availability. It is offered online during the interim term for students taking on-campus courses. It is also offered online during the summer.

Students who haven't fulfilled their SC advanced personal finance requirement can fulfill it by taking VirtualSC's Personal Finance. Students who need this requirement should ideally take it through their home high school during the summer before they enroll at GSSM. If they don't, they can take it fall, spring, or summer semesters, but it will not count as 1 of their 5 required academic courses.

20. Do students and parents have access to grades through PowerSchool like they did in their previous high school?

GSSM is a high school that operates in many academic ways like a college. Our courses are on a college schedule; mastery of the subject is the goal; and student ownership of their academic success is promoted. We ask students to keep track of their grades throughout their courses. At any point during a course, students or parents can ask teachers about their grades. Ideally, students would know their grades based on the grades they have received, and the grade breakdown provided in the course syllabus. Since we are still a high school, mid-semester report cards and end of semester report cards are given to the students and sent home.

21. For which GSSM courses can I get college credit?

GSSM has a dual-enrollment agreement with Coker University and Francis Marion University. Students receive Coker University or Francis Marion University credit for certain courses. See "College Credit Hours for GSSM Courses" for more information about dual enrollment.

22. Can I get credit at GSSM for courses I take over the summer?

Students should work with their academic advisors to decide whether to take summer courses. Incoming juniors typically do not take summer courses, except fine-arts courses. GSSM's one-semester government/economics class is usually taught online every summer. Rising seniors who have not met their government and economics requirement may take this course. Note that this course is also typically taught every semester and during interim (for students who are not traveling during interim). Students may take summer fine-arts courses at accredited schools (such as Virtual SC, local high schools, or technical colleges) that will provide GSSM a written transcript. Students who want to take other summer classes should talk to their advisor about it and must get permission from the Dean of Curriculum and Instruction to do so.