It is the policy of Casady School that discrimination and/or harassment of its employees or applicants for employment, on the basis of race, color, age, disability, sex, religion, national origin, or any other status protected by applicable law, is unacceptable conduct and will not be tolerated.

UPDATED: February 5, 2019
THE MISSION OF CASADY SCHOOL

Casady School develops excellence, confidence, and integrity in students and prepares them with the skills and knowledge that serve as the foundation for success.

ACADEMIC GUIDE

The Casady School Upper Division curriculum offers over one hundred courses reflecting the school’s desire to meet students’ individual needs. With direction and support from advisors, college counselors, and administrators, students have the freedom to craft an individualized schedule.

GRADUATION REQUIREMENTS

Students must earn a minimum total of twenty (20) credits for graduation. Typically, students carry the equivalent of five full-year courses and must earn a minimum of five credits per year. Only courses taken during freshman, sophomore, junior, and senior years at Casady School count toward a Casady student’s graduation requirement and GPA calculation. Students must also meet the following distribution requirements:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>English 1, 2, 3, and 4</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>Level 3 of at least one foreign language†</td>
</tr>
<tr>
<td>History and Social Science</td>
<td>Three credits, including World History and U.S. History*</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Three credits, including Algebra 2, and four credits suggested</td>
</tr>
<tr>
<td>Science</td>
<td>Three credits, must include Biology, Chemistry, and Physics</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>One full year (or three trimesters) required</td>
</tr>
<tr>
<td>Co-Curricular Activities</td>
<td>Requirements relative to grade level</td>
</tr>
<tr>
<td></td>
<td>Please see the requirements outlined in the Handbook.</td>
</tr>
<tr>
<td>Service Learning</td>
<td>45 certified hours</td>
</tr>
</tbody>
</table>

†Exceptions may be made by the Division Director, upon consultation with the Learning Specialist, College Counselor, and Language Department Chair.

*Special exceptions may be made at discretion of Division Director for students taking multiple Foreign Languages.
SERVICE LEARNING REQUIREMENT

Casady School requires students to complete 45 hours of service, documented through the Service learning Program, to meet minimum graduation requirements.

Beginning in the 2020-21 school year, students will be required to complete their service requirements by the beginning of their senior year. The new policy will decrease procrastination and will therefore minimize the anxiety for seniors, their parents, their advisors, and school administrators.

Students will have opportunities to participate in pre-planned service activities on Immersion Days, evenings, and weekends to complete the Casady service requirement. In addition, students will have the opportunity to serve with groups and organizations familiar to them but not necessarily partnering with the school. The third opportunity to earn valuable service experience will present itself in the form of service incorporated into the curriculum (service completed within the context of classes will count toward the 45 hours required for graduation).

Student leadership opportunities will be available through the Youth Advisory Council (YAC). YAC will be a very active club on campus as they will plan and organize the service opportunities that will see students working with groups such as Habitat for Humanity and the Food Bank.

Casady School uses MobileServe to record service hours. Students create an account and are required to log service hours on their phone or retroactively on a computer or Chromebook. The supervising adult may verify service hours by signing on the student’s phone or through an email verification, which is automatically sent via MobileServe.

Ms. O’Melia, the Service Learning Director, and Casady School encourages service-oriented students to inquire about eligibility for national and regional awards. Award information, upcoming service events, and places to serve are available at: http://servicelearning.casady.org/p/about-us_10.html?m=1

GRADING SCALE

Casady School’s grading scale, based on a 4.33 GPA scale, is found below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>GPA</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.33</td>
<td>96-100</td>
</tr>
<tr>
<td>A</td>
<td>4.00</td>
<td>90-95</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
<td>85-89</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
<td>82-84</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
<td>78-81</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
<td>75-77</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
<td>72-74</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
<td>68-71</td>
</tr>
<tr>
<td>C-</td>
<td>1.67</td>
<td>65-67</td>
</tr>
<tr>
<td>D+</td>
<td>1.33</td>
<td>63-64</td>
</tr>
<tr>
<td>D</td>
<td>1.00</td>
<td>61-62</td>
</tr>
<tr>
<td>D-</td>
<td>0.67</td>
<td>60</td>
</tr>
</tbody>
</table>

ADD/DROP DATES AND PROCEDURES

Students are permitted to add and/or drop full year classes only within the first three weeks of school. Trimester classes may be dropped only within the first week of that class. Any adding or dropping of classes must be accompanied with a signed add/drop form (available from the
Academic Dean) and is subject to the approval of the Upper Division Director and, for juniors and seniors, the student’s College Counselor. Students’ transcripts may show a W and a “P” for Pass or an “F” for Fail at the time of withdrawal.

No senior student can add/drop his or her fall English course. Seniors may discuss changes to their winter and/or spring English courses with the department chair prior to the last day of the preceding trimester. The English department has a clear procedure for students to follow should they want to change their winter or spring trimester course(s).

Students may be counseled into adding and/or dropping a class based on early performance. This process is rare and takes place with the classroom teacher, department chair, and division administration working closely with the student and family involved.

**COURSE SELECTION AND COLLEGE ADMISSIONS**

Some highly selective colleges and universities (including some state schools) may require standards above Casady’s graduation requirements. Admission officers at the most selective institutions expect to see successful applicants from Casady take advantage of the deep curriculum the school offers.

The Upper Division Director and the college counseling team will be happy to discuss curriculum choices with students at any time in an effort to individualize each student’s academic schedule in search of a good fit and balance.

**CURRICULUM and WEIGHTED COURSES**

Casady School’s curriculum is college preparatory throughout. Every course is mission-appropriate, although the school recognizes and embraces the need to individualize curriculum plans for individual students.

The list of weighted courses:

<table>
<thead>
<tr>
<th>FOREIGN LANGUAGE</th>
<th>AP Statistics</th>
<th>0.33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels 2 and 3H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levels 4 AP, 5, and 5 AP</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honors Geometry</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Pre-Calculus 1</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Honors Algebra 2</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Honors Pre-Calculus 2</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>AB Calculus</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>BC Calculus</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>Multivariable Calculus</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>Linear Algebra</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>ENGLISH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 1</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>English 2</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>English 3</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>English 4</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>FINE ARTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music Theory</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>AP Studio Art Portfolio</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>SCIENCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meteorology</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Earth and Env. Science</td>
<td>0.25</td>
<td></td>
</tr>
</tbody>
</table>
Honors Biology 0.25 US History 0.25
Chemistry 0.25 AP US History 0.33
Physics 0.25 AP Government 0.33
Anatomy 0.25 AP European History 0.33
Honors Chemistry 0.33 AP Art History 0.33
Honors Physics 0.33 Senior History Seminars 0.25
AP Physics C 0.33 Advanced Senior Seminars 0.33
AP Biology 0.33 Advanced Debate 0.25
AP Chemistry 0.33

HISTORY AND SOCIAL SCIENCE
Ancient World History 0.25
Modern World History 0.25

US History 0.25
AP US History 0.33
AP Government 0.33
AP European History 0.33
AP Art History 0.33
Senior History Seminars 0.25
Advanced Senior Seminars 0.33
Advanced Debate 0.25

COMPUTER SCIENCE
OOProg - Applications 0.25
OOProg - Design 0.33
Problem-Solving Seminar 0.33

UPPER DIVISION COURSE DESCRIPTIONS

ENGLISH

English 1: Seeking Self and Others
English 2: Cultural Inquiry
English 3: American Idea(l)
English 4: College-Level Seminars

English 1: Seeking Self and Others

Students in English 1 spend the year creating a Community Literati through an exploration of poetry, novels, short stories, memoirs, essays, interviews, and films. Identity is a central focus, divided into three guiding questions: Who am I as an individual? Who am I as member of a community? Who am I as a member of the wider world? Student-led discussions provide opportunity for a widened understanding of self and others. Additionally, students delve into the local community to find stories and make connections to the literature they read in class. Teachers instruct students in the practice of active reading: underlining, writing margin notes, marking confusing passages, and cross-referencing. Students take a soft step into literary analysis; writing assignments foster introspection and help students develop the skills necessary for the construction of effective paragraphs and short essays. Students work to expand their vocabulary and improve their use of grammar, with emphasis on sentence patterns and sentence combining.

English 2: Cultural Inquiry

English 2 develops skills in critical and analytical thinking, effective verbal communication, and reading comprehension. Readings in English and European literature center on three main topic areas throughout the year: the monster and the hero, social constructs and critiques, and alienation and atonement. Students focus on readings centered on one topic area in each
trimester to promote ongoing, thoughtful, layered, and nuanced consideration of issues raised in discussion. Students also draw connections between topics and works as discussions build and thread into one another throughout the year. Additionally, we include a unit on logical argumentation and several opportunities for creative engagement. For the development of grammar skills, each student learns to proofread for and to correct the specific errors that he or she tends to make.

**English 3: American Idea(l)**

English 3 explores the American Idea(l), divided into three topics: 1) Freedom from, Freedom to, Freedom for 2) Connection, Conflict, & Compromise 3) Rebels, Outcasts, & Dreamers. Through routine, student-led discussions, students develop important skills, such as speaking, listening, and reflecting. Reading selections from a variety of literary movements and genres promote ongoing, thoughtful, layered, and nuanced consideration of issues. The course promotes the development of effective reading skills and strategies, including active reading and cross-referencing. Reading and class discussion provide the basis for student writing. Writing instruction provides an opportunity for students to synthesize ideas while continuing to develop clear, thesis-centered, expository writing and argumentative prose. For the development of grammar skills, each student learns to proofread for and to correct the specific errors that he or she tends to make.

**English 4: College-Level Seminars**

Each of the teachers of English 4 creates an autonomous seminar for each of the three trimesters. The topics, the types of assignments, the workload, and the expectations are all college-level, for both the teacher and the students. In the spring term of their junior year, students choose their senior English seminars, by term, from a list of trimester offerings. Once assigned, students cannot change their fall term seminar. Permission to change winter and spring seminars occurs rarely and within the guidelines of a specific departmental policy. A further stipulation is that no student can have the same teacher for all three trimesters. Every senior has the option to take the Advanced Placement Examination in English Literature and Composition. The majority of Casady students who have elected to take this exam have performed quite well.

**FOREIGN LANGUAGE**

**Chinese 1**

Chinese 1 emphasizes a thorough understanding of the Pinyin phonetic and tonal systems. Students will learn the basic structure of characters as well as their historic development. Mandarin, the official Chinese language, will be sued in practical and real-life situations. Students will learn rudimentary grammatical structures and acquire a vocabulary of 500 words. They will also become familiar with basic cultural practices of the Chinese. Tests and quizzes encompass oral dictation, and written translation from English to Chinese and Chinese to English.
Chinese 2

Honors Chinese 2 focuses on students continuing their development of fluency through speaking, reading, writing, and translating the Chinese language. Vocabulary memorization will not only include Pinyin and English but will also require the memorization of characters. Emphasis will also be given to the exploration of the Chinese culture and proficiently utilizing a Chinese dictionary. YouTube and other videos will expose students to varying accents and assist them in listening proficiency. Students will also learn to type in Chinese and will translate a series of children’s books into English. Instruction in the class will gradually move from English explanations to Mandarin with occasional English clarifiers.

Chinese 3

Honors Chinese 3 focuses on continuing development of fluency through speaking, reading, writing and translating the Chinese language. Students should have completed two years of Chinese study or the equivalent and be proficient at utilizing the Chinese dictionary. In addition, students should be comfortable both listening to basic class instruction and explanation in Chinese. Classes will be conducted almost entirely in Chinese and students are required to conduct all conversation in Chinese as well. Students will explore the Chinese culture more deeply, with discussions of idiosyncrasies and innuendos hidden within the language. The focus will shift from vocabulary to sentence patterns and more time will be devoted to the writing of Chinese characters. Other instructional methods include storytelling, Chinese songs, crafts, games, translation of children’s books, and lecture. Acquired vocabulary will be equivalent to 1200 words. Tests and quizzes will revolve around oral dictation, written questions, discussions in Mandarin, and the writing of Chinese characters.

Chinese 4 AP  B+ in level 3 and departmental permission required

Chinese 4 AP is designed to be comparable to a fourth-semester (or equivalent) college/university course in Mandarin Chinese. Students should have completed 3 years of Chinese study or the equivalent. The major course objective is to refine and develop students’ abilities in Chinese listening, speaking, reading, writing. Students will also translate written literature. Taught entirely in Chinese, the course also provides opportunities to use the Chinese language to communicate more effectively both inside and outside the school setting. Authentic materials such as newspapers, advertisements, and classic or contemporary novels are used in a student-centered classroom. Enriching students’ awareness and appreciation of the elements of the culture of Chinese-speaking people is an ongoing goal throughout the course. In order to help students attain this goal, the course introduces students to significant persons, cultural products, and practices in Chinese history. Further, they make comparisons of these elements of Chinese culture with their own. Assessment is frequent, with the goal of helping students attain the expected proficiency level and deep understanding of the Chinese culture while preparing them for the Advanced Placement exam. Students are strongly encouraged, but not required, to sit for the AP exam in May.

French 1
French 1 is an introduction to French language and culture. The fundamentals of French pronunciation, grammar, and culture are presented through a balanced development of all four skills: listening, speaking, reading, and writing. The importance of communication and cultural awareness is stressed through a wide variety of activities (video, music, audio recordings, etc.). This course is designed for students with little or no knowledge of French language or culture. Activities include crepe-making and a trip to a French restaurant to practice our “food section.”

French 2

The second level of French strengthens the patterns introduced in French 1. Conversational skills - listening and speaking - are stressed. The study of grammar is intensified, and an emphasis is placed on reading. Student understanding of French culture and civilization throughout the Francophone world is extended. Activities during the year include music, films, creating a cooking-show video, and planning a party using newly-acquired vocabulary.

Honors French 3

French 3 uses the following skills extensively: listening, speaking, reading, and writing. Students build on writing skills they acquired in French 2, using increasingly complex sentence structure and a variety of tenses. They will build their reading skills and cultural knowledge while reading two novels, *Le Petit Nicolas* and *Le Petit Prince*. Students will practice their speaking skills in class by working in pairs or in groups of four or five to conduct contextual dialogues and literature discussions, to interview each other using structures and vocabulary learned and topics covered, or to do in-class activities. Listening skills build on the skills they learned in French 2. Students will listen to authentic materials by native speakers in order to increase their processing speed and comprehension.

French 4 AP B+ in level 3 and departmental permission required

French 4 AP develops and perfects students’ skills of speaking, writing, listening and reading. A student of French at this level will practice conversational and presentational speaking, including dialogues practiced with partners on a wide variety of topics, and give presentations on the differences between the French culture and their own. Writing will center around e-mail replies and persuasive essays on a variety of topics. Listening and reading comprehension exercises will continue to increase in length and complexity. A successful student in this course is encouraged, but not required, to take the French Language and Culture Advanced Placement exam in May.

French 5 departmental permission required

French 5 is run much like a French course that students are likely to encounter at the college level. Our quest will be to understand the reasons for social unrest in today’s French suburbia, and specifically the cause for racism against minorities.

We will begin the year with a study of French colonization and focus on the 1931 Paris Colonial Exposition. This will give us a good understanding of how the institution of racism was
introduced in French society. We will then look at the history of immigration into France and read a fascinating book, and watch the corresponding movie, both called *Le Gone du Chaaba*. It’s the story of a French-Algerian politician’s childhood in a shantytown. Finally, in the third trimester we will enter into the troubled suburbs of Paris. We will read a second book, *Kiffe Kiffe Demain*, written by a 16 year-old girl about what it is like to live in the “projects”. Another movie, *La Haine*, will give us a visual account of the mundane activities of children of immigrant families, and their struggles to integrate into French society.

The year is highlighted by poetry, rap, exposés, discussions, guest speakers, food, and field trips to Downtown OKC and to a French restaurant. This is a year for students to deepen their knowledge of the French language and society and to prepare for the rigors and style of university study.

**Spanish 1**

This beginning course in Spanish stresses listening and speaking skills. The text presents words and phrases in relevant contexts that allow students to personalize the language and express their own feelings and experiences. The present, immediate future and preterite tenses are also introduced, as well as the concepts of gender/number agreement, object pronouns and commands. Cultural material includes maps and readings about Spanish-speaking areas of the world. Outside of class, students will need to practice and memorize vocabulary and basic grammar concepts. Students also do projects and short oral presentations related to the units of study. Class participation and nightly homework exercises are important parts of the grade.

**Spanish 2**

The second-year course in Spanish reinforces oral/aural skills and grammatical concepts learned in Spanish I. At this level verbal expression and listening skills continue to be the focus of the course. Students work in pairs and small groups often in order to provide a situational, personal and interactive context that promotes language learning in a familiar environment. Students will begin to practice their speaking skills in order to be able to discuss familiar topics such as themselves, their immediate families, school life, and everyday activities at home. In addition, Spanish 2 introduces more complex grammatical structures, such as narration of the past with the preterite and the imperfect tenses, and the imperative and subjunctive moods. Students begin to practice their writing skills through short compositions related to their daily lives. They will also be required to read and discuss various articles and short stories in Spanish.

**Spanish 3**

Reading and conversation are emphasized in Spanish 3, with the goal of helping students attain an intermediate level of Spanish proficiency. Students are introduced to new vocabulary on a wide range of thematic subject areas (e.g. academic life, health, automobiles and transportation) and are expected to use the new vocabulary in oral structures and to recognize it upon reading. While there is some grammar review, the majority of the class focuses on communication, with a lesser emphasis on formal grammar instruction. Readings include modern Spanish readers, newspaper articles, short stories and excerpts from classic literature.
These readings will highlight and emphasize vocabulary used inside the classroom. Daily participation in discussion and oral exercises – in Spanish – is an integral part of the course. Successful completion of the course satisfies the Casady foreign language graduation requirement, but some students may decide to continue on to Spanish 3 Honors and then eventually to Spanish 4 AP.

**Honors Spanish 3**  
A- in level 2 and departmental permission required

Reading, composition and conversation continue to be stressed as in previous years. Students are introduced to new vocabulary on a wide range of thematic subject areas (e.g. academic life, health, automobiles and transportation) and are expected to use the new vocabulary both orally and in written form. While there is some grammar review, several new structures (perfect tenses, continued study of the subjunctive mood, conditional sentences) are introduced in the second and third trimesters. Readings include modern Spanish poetry, newspaper articles, short stories and excerpts from novels. Daily participation in discussion and oral exercises – in Spanish – is an integral part of the course.

**Spanish 4 AP**  
B+ in level 3 and departmental permission required

The Advanced Placement Spanish Language course encompasses aural/oral skills, reading comprehension, and composition. Students enrolling in this course should already have attained a reasonable proficiency in these areas, particularly in listening and speaking, and be comfortable with a class conducted in Spanish. Content is based on the College Board’s global themes for world language study: families and communities, global challenges, contemporary life, beauty and aesthetics, science and technology, and personal and private identities. These topics are supplemented by periodic vocabulary and grammar review and selections from Don Quijote de la Mancha. Assessments include oral presentations, take-home and in-class writing pieces, group projects, recordings in the language laboratory, quizzes and class participation. A successful student in this course is encouraged, but not required to take the Advanced Placement exam in May.

**Spanish 5 AP**  
departmental permission required

Spanish 5 AP is a literature course that consists of reading works from Spanish and Latin American authors selected from the Advanced Placement syllabus. It will serve to prepare students: (1) to understand a lecture in Spanish and to participate actively in discussions on literary topics in Spanish; (2) to do a close reading of literary texts of all genres in Spanish; and (3) to analyze critically the form and content of literary works – including poetry – orally and in writing, using appropriate terminology. Another key objective of the course is to encourage students to relate the content of texts they read to literary, historical, sociocultural, and geopolitical contexts. Students should expect to read for at least 30 minutes per night. Discussion and written work will be based almost entirely on the literature being read, and papers will be expected of each student approximately once a month. Students who do well in this course are encouraged – but not required – to sit for the Advanced Placement Spanish Literature examination in May.
Latin 1

The aims of this course are to help the student develop the ability to read and comprehend simple Latin and to understand the general structure of language. It covers the same material as the Middle Division’s Latin 7 and 8, but at a slightly faster pace. Emphasis is placed on vocabulary development in both English and Latin, and the attention of students is drawn constantly to the similarities between English and Latin and related derivatives. Roman mythology, government, and customs are among the discussion topics and material for individual and group projects. Students are introduced to the five cases and declensions and to all the tenses.

Latin 2

This course begins with a review of all the basic Latin forms and grammar learned in Latin 1 (or Latin 7-8). The subjunctive, gerunds, and gerundives are studied. Students will continue readings with Part 3 of the Oxford Latin Course and will continue the study of the life of Horace and the history of Rome around the time of Augustus. Students will read selections of prose and poetry in order to develop an understanding and appreciation of different literary styles. Students will be asked to give project reports in English on various cultural and historical aspects of Ancient Rome.

Honors Latin 3 departmental permission required

This course begins with a rapid review of the grammatical concepts presented in Latin 2. The course will also introduce the more complicated constructions of Latin Syntax, which will be found at the A.P. level in the following year. In the fall and winter term students will begin substantial readings in Cicero, Caesar and other Latin prose writers. Students will study the highlights of Roman history from the period of the Punic Wars to the rise of Augustus Caesar as the first emperor of Rome. In the spring students will learn from passages of Roman poets like Ovid and Vergil. They will learn how to mark the meter of poetry in Dactylic Hexameter. Some passages from Caesar and Vergil that will be assigned in the A.P. course will be read so the students will be a step ahead when they start the demanding A.P. syllabus in the following year.

Advanced Classical Studies

In Advanced Classical Studies, students will progress to the next level of Latin (reading a variety of excerpts from the works of Roman authors), begin elementary studies of Ancient Greek, and explore several historical/cultural topics that help tell the stories of these two civilizations.

The course starts with a complete review of the advanced grammatical concepts covered in Latin 3. Topics will include the subjunctive mood, indirect statements, gerunds/gerundives, conditional clauses, and sentence translation techniques. On alternating cycles in the Fall term, students will learn the Greek alphabet and the basics of Greek grammar. In the Winter and Spring terms students will begin reading excerpts of original, unmodified Latin literature, as well as move on to Intermediate Greek grammar and stories. Interspersed with this grammar will be projects, through which students will examine exciting episodes in Greco-Roman history and
Classical mythology.

This course is designed for students who enjoy Latin/Roman culture and wish to begin Ancient Greek. It is also designed for students who prefer more project-based learning and a more moderate pace of study than would be necessary for the AP Latin IV class.

**Latin 4 AP**  
B+ in level 3 and departmental permission required

The *Aeneid* of Vergil and selections of Caesar’s *Gallic Wars* are the main works studied. This course in general follows the Advanced Placement syllabus, which includes translating passages from the more famous selections of the *Aeneid* and *De Bello Gallico*. The students will learn scansion, literary devices and interpretations of plot and character, and will do close readings in translation of certain sections not read in Latin. Additionally, there is intensive study of the principles of contemporary literary criticism and their application to Vergil’s and Caesar’s styles of writing. The age of Augustus and the change from the Roman Republic to the Roman Empire are covered to show the historical context of these writings.

**Latin 5**  
departmental permission required

Students in this course will read Latin from poets like Horace, Catullus, Ovid, and Martial, as well as Latin from prose writers like Livy, Cicero, and Sallust. The interests of the students enrolled will, to some degree, guide the curriculum, but the curriculum will stress the Latin culture and history from the times of Augustus and the Empire because we have covered pre-Empire history previously.

**HISTORY and SOCIAL SCIENCE**

**Ancient World History and Introduction to Historical Methods** (freshmen)

This course serves as an introduction to historical methodologies and follows the historical developments and patterns from hunter gatherers and the earliest civilizations through the Renaissance. Emphasis is placed on developing those research and study skills that are critical for success in future humanities courses. Students are provided with a wide variety of activities such as analyzing primary and secondary sources and conducting scholarly research to demonstrate their learning. The course requires students to complete a formal research paper during the winter term.

**Modern World History and Historical Methods** (sophomores)

This course examines the major themes and events in World History from the Renaissance to the present. We will explore the history of Europe, Russia, India, China, Japan, Africa, the Middle East, and Latin America. The course encourages students to examine patterns and progressions in world political, economic, and cultural history. Major course themes include: cross-cultural encounters, technological innovations, industrialization, the emergence of the
nation-state, the emergence of the capitalist world economy, European imperialism, and the relationship between the individual and the state. Over the course of the year, students refine close reading, critical thinking, and analytical writing skills through a variety of assignments and projects. This course also emphasizes geographic literacy and requires students to produce a formal research paper.

**United States History (juniors)**

This course examines the major social, cultural, economic, and political developments that have shaped the United States from the time of the arrival of the first native peoples through the late 20th Century. Students participate in a challenging college-preparatory course which uses a variety of primary and secondary source readings. As careful analytical reading, thorough research, and precise writing skills are necessary for success in college, each student will be required to research and write a formal history paper complete with footnotes and a comprehensive bibliography. (Beginning in 2017-18, juniors will be invited to submit their research paper for consideration to receive a special mark of distinction which will appear on Casady's secondary school report.)

**AP United States History (juniors; minimum of A- in previous World History courses and departmental permission required)**

This is a college-level course on American History from pre European contact to the present. The Advanced Placement program in U.S. History makes demands upon students that are equivalent to those made by full-year introductory college survey courses. This class requires a level of participation, diligence, commitment, effort, and autonomy beyond the ordinary high school level. The class uses an in-depth college level textbook, supplemental readings, and historical documents to help students explore the major social, political, and economic developments that helped shape present day America. Students learn to assess historical materials and their relevance to a given interpretive problem, to weigh the evidence and interpretations presented in historical scholarship, and to present their findings in clear, compelling historical essays. Students are required to write a formal research paper in the spring trimester. (Beginning in 2017-18, juniors will be invited to submit their research paper for consideration to receive a special mark of distinction which will appear on Casady's secondary school report.)

**AP United States Government and Politics (seniors; departmental permission required)**

This is an advanced level course in U.S. Government and Politics. Students will be introduced to the various institutions, groups, beliefs, and ideas that shape our political system. Topics examined include the Constitution, federalism, the separation of powers, civil rights, civil liberties, Congress, the Presidency, the Federal Courts, political parties, interest groups, public opinion, the media, elections, and an introduction to public policy. Contemporary issues and debates in American politics and elections will be discussed throughout. Students will be
introduced to legal analysis with landmark court cases. Sources used include: the textbook; *The Federalist Papers*; historical and current political commentary; SCOTUS; print and electronic media; and readings on current legislative and public policy.

**Note:** Indicate an alternate selection in the event this course cannot be scheduled.

**AP European History (seniors; departmental permission required)**

This is an advanced-level survey of European history from the Renaissance to the present day. The course is structured around five themes: the interaction of Europe and the world, poverty and prosperity, objective knowledge and subjective visions, states and other institutions of power, and the individual and society. Students practice the historical thinking skills of chronological reasoning, analyzing historical sources and evidence, creating and supporting an argument, and making historical connections. Class discussions and assessments are designed to prepare students for the Advanced Placement European History examination and for future college-level humanities courses.

**Note:** Indicate an alternate selection in the event this course cannot be scheduled.

**Senior History Seminar**

Students will take an autonomous seminar for each of the three trimesters. The topics, the types of assignments, the workload, and the expectations are all college-level, for both the teacher and the students. In the spring term of their junior year, students choose their senior seminars, by term, from a list of trimester offerings. Tentative courses include:

- *The History of Modern Africa*
- *Cold War History*
- *21st Century American History*
- *The Captive in History*
- *Genocide and Mass Violence in the 20th Century*
- *Food Matters: The History and Philosophy of What We Eat*

The Advanced Seminar option follows the same curriculum as Senior History Seminar, but it is weighted the same as an AP course and thus requires additional coursework and requirements on each of the trimester research papers. Students choose this option shortly after each trimester begins.

**Note:** Indicate an alternate selection in the event this course cannot be scheduled.

**AP Art History (juniors and seniors)**

The objective of this course is to prepare the students for the Advanced Placement test by developing an understanding of styles and concepts expressed in the major art forms from
prehistory through the present. Emphasis is placed on developing critical and analytical skills as well as acquiring an appreciation of the interaction between art and society from a global perspective. Students will be evaluated via quizzes, tests, and short take home essay questions. This is a lecture-discussion class so students are encouraged to participate in class discussions about the artwork being studied.

Textbook reading assignments are coordinated with the class lectures and average 60 minutes a week. Students are encouraged to attend the AP Exam study sessions that are offered, outside of regular class time, three weeks prior to the exam.

**Note:** Indicate an alternate selection in the event this course cannot be scheduled.

**Beginning Debate**

This course will develop student’s ability to think critically, research, and speak publicly. Students will be taught in an interactive environment that teaches students through participation. Cross-examination debate is the format taught in this course. Upon completion, students will be able to understand principles and techniques of argumentation along with an ability to research and analyze any topic. While this course is targeted towards freshman, anyone who is interested in debate is encouraged to enroll in this course.

**Note:** Indicate an alternate selection in the event this course cannot be scheduled.

**Advanced Debate (prerequisite: permission of instructor)**

This course will teach students an in-depth understanding of competitive debate practices and arguments. Students master foundational concepts and practices of debate in a “hands-on” environment. Upon completion, students will be able to apply critical thinking skills across multiple settings and have a strong understanding of the topics covered in debate. To take this course, students must have completed Introduction to Debate or have competed in debate for at least a semester.

**Note:** Indicate an alternate selection in the event this course cannot be scheduled.

**Additional Debate Notes:**
Participation in Casady’s Debate program requires a commitment that includes considerable prep/practice time outside of class and considerable travel. All participants must agree to the expectations that will be sent to participants after final course selections are completed.

**MATHEMATICS**

Please Note: Every course in the Math curriculum is college preparatory. A student will generally follow a path represented by solid lines, **provided that said student performs well in each prerequisite course, not only in terms of grades but also in terms of work ethic (e.g. completing homework consistently and asking for help when necessary), class attendance, and participation.** A student will especially need departmental permission to progress along
a dotted line. The Math Department Chair and the Upper Division Administration will consider the same factors given above to determine whether to grant a student permission to follow a path represented by a dotted line. The goal is for each student to progress each year through the course best suited to his or her level of interest and ability.

Graphing calculators can be an extremely valuable tool in discovering and learning mathematics and will be used extensively throughout our curriculum. However, there will be a strong distinction between “when” and “when not” appropriate. In general, calculator use will be discouraged for basic arithmetic operations. Casady Math teachers will use and highly recommend the use of the TI-84+. Please check with your teacher or the Math department chair if considering an alternative calculator.
Algebra 1

Algebra 1 is the first step in the math sequence. This course provides a thorough introduction to the language of algebra, including its symbols and the axioms and laws that govern its structure. Emphasis is placed on learning to manipulate all manner of algebraic expressions,
from performing standard operations to factoring polynomials and simplifying radical expressions. Among the primary goals are competence in solving linear equations and inequalities in one variable, systems of linear equations in two variables, and simple quadratic equations. Experience is provided in graphing in the Cartesian plane and in applying algebraic methods to the solution of practical problems. The majority of the work in Algebra is done without the use of a calculator.

Students are expected to complete regular homework assignments that will require 20-30 minutes per assignment. Homework will not be assigned every day, but the students should expect 3-4 assignments per week.

**Geometry prerequisite: Algebra I; departmental permission required for freshmen**

This course is devoted to learning the principles of applied plane geometry through activity-based learning using an investigative approach to geometry. It includes a study of the relationships between length, angle, area, and volume to better understand how these concepts behave on their own terms, and, also, how they work together to form shapes. The course introduces students to reasoning strategies that help them explain their discoveries and enable them to justify their conjectures verbally. There will be a strong emphasis on reinforcing the rules of Algebra, and we will review algebraic concepts extensively even previewing some basic algebra 2 and trigonometry. Calculators will be used extensively in this class, and the TI-84+ will be used in class for demonstrations.

Students are expected to complete regular homework assignments that will require 20-30 minutes per assignment. Homework will not be assigned every day, but the students should expect assignments 3-4 times per week.

**Honors Geometry prerequisite: Algebra 1; departmental permission required**

This course is devoted mainly to theoretical and applied plane geometry with some extensions into solid geometry, particularly the surface area and the volume of solids. Algebra continues to play an important role in the course and is used to demonstrate an understanding of the theoretical concepts discussed. Rigorous geometric proofs are a major focus in the course and are used to link concepts between different units. Formal definitions, postulates, and theorems are emphasized and serve as the building blocks for deductive thinking. Geometry is treated as a structured system with great emphasis placed on students learning to use logic and sound reasoning. Students are also taught to construct geometric figures using only a compass and a straightedge. While most of the coursework can be completed without the use of a calculator, they are allowed. Graphing calculators are not necessary.

Students are expected to complete regular homework assignments that require 20–30 minutes per assignment. Homework will not be assigned everyday, but students should expect 3-4 assignments per week.

**Intermediate Algebra prerequisites: Algebra 1 and Geometry**
This course encompasses and extends concepts of elementary algebra. It is designed to focus attention on mathematical ideas which are appropriate for study by college-bound students. The course offers a preview of many of the topics which will be encountered in the Algebra 2 course. Students are advised to consult their current and former teachers as to whether they should take advantage of the review and additional practice that this course provides.

Students are expected to complete regular homework assignments that will require 20-30 minutes per assignment. Homework will not be assigned every day, but the students should expect assignments 3-4 times per week.

**Algebra 2 prerequisites: Algebra 1 and Geometry or Honors Geometry**

This course focuses on developing and strengthening the algebraic skills necessary to be successful in subsequent mathematics courses. Students will become proficient in simplifying expressions and solving a variety of equations, including quadratic equations, radical equations, polynomial equations, rational equations, exponential equations, and logarithmic equations. The family of functions is also covered, and students have their first of many discussions about transformations. Towards the end of the course, students will be introduced to trigonometric functions with an emphasis on right triangle trigonometry and unit circle trigonometry. The major differences between this course and Honors Algebra 2 are both the pacing of the material and the amount of material covered. A TI-84 Plus graphing calculator is required for Algebra 2, and students will be taught how to use it in order to solve problems.

Students are expected to complete regular homework assignments that will require 20-30 minutes per assignment. Homework will not be assigned every day, but the students should expect 3-4 assignments per week.

**Honors Algebra 2 prerequisites: Algebra 1 and Honors Geometry; departmental permission required**

Honors Algebra 2 is the first of two challenging steps designed to prepare students of high mathematical aptitude for AP Calculus.

In this course the algebraic properties of the real number system and methods for finding solutions to equations and inequalities of the first degree are reviewed. Quadratic equations and quadratic functions are studied in depth, and students investigate the complex number system and conic sections. The students will be introduced to the study of trigonometric functions, involving right and oblique triangles, inverses, equations, graphs of trigonometric functions, identities, and applications including both degrees and radians. Permutations, combinations, sequences, series, and mathematical induction are included in the course if time permits. The TI-84+ Graphing Calculator will be used for class demonstrations. The graphing calculator can be a useful tool in this course. However, student use is limited and there will be a strong distinction between “when” and “when not” appropriate. In general, calculators will not be encouraged for arithmetic operations.
Students are expected to complete regular homework assignments that will require 30-45 minutes per assignment. Homework will not be assigned every day, but students should expect 3-4 assignments per week.

**Pre-Calculus 1** prerequisite: Algebra 2 or Honors Algebra 2; departmental permission required

In this course the polynomial, rational, exponential, and logarithmic functions which were introduced in Honors Algebra 2, are explored in depth. A major portion of the course will involve the study of the trigonometric functions, involving inverses, equations, and graphs of the functions, identities, and applications. Topics in analytic geometry, polynomial equations, and series are also included. However, the topics covered will be less abstract and the teaching less theoretical than in Honors Pre-Calculus 2. A TI-84 Calculator is recommended. Demonstrations in class will be done with a TI-84+ calculator. Students are advised to consult their current teachers as to whether this course, or Honors Pre-Calculus 2, would be the more suitable.

Students are expected to complete regular homework assignments that will require 20-30 minutes per assignment. Homework will not be assigned every day, but the students should expect 3-4 assignments per week.

**Honors Pre-Calculus 2** prerequisite: Honors Algebra 2 or Pre-Calculus 1; departmental permission required

This course puts into focus the material learned in arithmetic, algebra, geometry, and trigonometry with special emphasis on concepts and uses of mathematical functions. The functions studied include absolute value, polynomial, algebraic, rational, trigonometric, exponential, and logarithmic. Other topics are quadratic inequalities, polar coordinates, conic sections from an advanced standpoint, and curve sketching. One of the aims of the course is competence in problem solving in all of the areas described. A second aim is competence in the mathematical language and techniques used in the study of calculus. A TI-83 or TI-84 graphing calculator will be required for each student. Demonstrations in class will be done with a TI-84+ calculator.

Students are expected to complete regular homework assignments that will require 30-45 minutes per assignment. Homework will not be assigned every day, but the students should expect 3-4 assignments per week.

**Probability and Statistics** prerequisites: Algebra 2 and departmental permission or Pre-Calculus 1

In this course students will develop the foundational tools for understanding both probability and statistics. Using data from a variety of sources, students will learn how to create and
interpret graphs, calculate measures of central tendency and spread, determine the probability of independent and conditional events, explore and utilize normal distributions and the Central Limit Theorem, and test hypotheses about approximately normally distributed data sets. The course culminates with a final project in which students will gather information about themselves and their peers to test a hypothesis and interpret the data.

**AP Statistics prerequisite: Pre-Calculus 1 or Honors Pre-Calculus 2; departmental permission required**

In colleges and universities, the number of students who take a statistics course is almost as large as the number of students who take a calculus course. An introductory statistics course is typically required for majors such as social sciences, health sciences, and business. This course is equivalent to a one-semester college course in introductory statistics. The course covers four major topics: exploring data, planning a study, anticipating patterns, and statistical inference. Upon completion of this course, students will be prepared for the AP statistics exam if they wish to take it. A graphing calculator (TI-84) will be required for each student.

Students are expected to complete regular homework assignments that will require 30-45 minutes per assignment. Homework will not be assigned every day, but the students should expect 3-4 assignments per week.

**Calculus AB prerequisite: Honors Pre-Calculus 2; departmental permission required**

This course is intended for students who have a thorough knowledge of algebra and trigonometry. Students will gain insight into the theory of limits and continuity. Topics in differential calculus that are covered include derivatives of sums, products, and quotients, derivatives of the elementary functions, and applications. Topics in integral calculus include anti-derivatives, simple differential equations, applications, and techniques of integration. Students will find this course gives ample preparation for the Advanced Placement AB examination if they desire to take it. A TI-84 graphing calculator will be required for each student. Demonstrations in class will be done with the TI-84+.

Students are expected to complete regular homework assignments that will require 30-45 minutes per assignment. Homework will not be assigned every day, but the students should expect 3-4 assignments per week.

**Calculus BC prerequisite: Honors Pre-Calculus 2 with preference given to students with an 85 average or higher in Honors Pre-Calculus 2; departmental permission required**

This course covers a full year of college calculus and extends well beyond the subject matter covered in Calculus AB. Additional topics included in this course are the epsilon-delta definition of a limit, L’Hopital’s Rule, integration by parts, partial fractions, sequences and series (convergent, power, Taylor and Maclaurin), polar coordinates, parametric equations, improper
integrals, and length of an arc. Students are encouraged to take the Advanced Placement BC examination, but it is not mandatory that they do so. A TI-84 graphing calculator will be required for each student. Demonstrations in class will be done with the Ti-84+.

Students are expected to complete regular homework assignments that will require 30-45 minutes per assignment. Homework will not be assigned every day, but students should expect 3-4 assignments per week.

**Multivariable Calculus** *prerequisite: BC Calculus; departmental permission required*

The study of functions in several variables harkens back to the 19th century, and was simultaneously developed through the extension of single variable function theory and attempts to understand the behavior of curves and surfaces. This course focuses on classical theory to include partial derivatives, tangent planes to surfaces, and directional derivatives. The first part of the course leads to solutions of optimization problems via Lagrange multipliers. We will also consider the value in changing coordinates with polar, cylindrical, and spherical coordinates. The extensions of integration lead one to Green’s Theorem, Gauss’s Theorem, and the Divergence Theorem all of which are a version of Stoke’s Theorem. The material in this course has wide applications to physics and engineering.

Once we have completed the multivariable portion of the course, we will dive into a study of differential equations. They arise quite naturally out of problems in engineering, physics, and function theory. Possible topics are: separable equations, homogeneous and nonhomogeneous linear equations, and Fourier problems.

Students should expect to spend 30-45 minutes per homework assignment. One day per week will be dedicated to problem solving, discussing homework problems, and thinking about extensions to the current topic.

**Linear Algebra:** *prerequisite: BC Calculus, department recommendation*

Linear algebra studies linear spaces and the mappings between them. The study of these ideas reaches back to the work of Fermat and Descartes in analytic geometry. The concepts were extended and brought into their current form by Cayley, Sylvester, and Grassmann. Almost every area of mathematics uses the tools of linear algebra in some form or fashion. Basic examples include $n$-dimensional space, rotations, and reflections. Spaces such as the polynomials of degree less than or equal to $n$ and the continuous functions on a closed interval are studied as well.

The first half to two-thirds of the course cover traditional topics such as matrices, solving systems of linear equations in $n$ unknowns, rank, dimension, determinants, linear transformations, inner-products spaces, and matrices with complex entries. Other topics that could be covered dependent on student interests and background are canonical forms, application to multivariable calculus and differential equations, and bilinear / quadratic forms.
SCIENCE COURSES

Please Note: Every course in the Science curriculum is college preparatory. A student will generally follow a path represented by solid lines, **provided that said student performs well in each prerequisite course, not only in terms of grades but also in terms of work ethic (e.g. completing homework and labs conscientiously and asking for help when necessary) and class attendance and participation.** A student will especially need departmental permission to progress along a dotted line. The Science Department Chair and the Upper Division Administration will consider the same factors given above to determine whether to grant a student permission to follow a path represented by a dotted line. The goal is for each student to progress each year through the course best suited to his or her level of interest and ability.
**Biology** (freshmen and sophomores)

The course in General Biology is meant to introduce and reinforce the major concepts of the biological sciences. Where appropriate, these biological processes are related directly to the human organism. There is also an ecological component emphasizing the human’s relationship to the rest of the living world. The Science Department will determine whether this course or Honors Biology is more appropriate for each student.

**Honors Biology** (freshmen and sophomores) **co-requisite: Geometry; departmental permission required**

The course in Honors Biology is meant to elaborate on the most important biological concepts and processes. Through class lectures, text readings, laboratory exercises, and other enhancements, students gain literacy in the “big picture” themes of the biological sciences. The end objective is to
send students on to college, and the wider world, armed with the knowledge to engage intelligently with these themes as they affect their lives and thinking. Upon completion of Honors Biology, successful students who have acquired the basic lab skills, and have fulfilled the science and math requirements will be allowed to matriculate into Honors Chemistry.

**Chemistry** (sophomores, juniors, and seniors) **prerequisites:** Biology or Honors Biology and Algebra 1

This is an introductory, basic course covering such topics as atomic structure and its relationship to the chemical properties of matter. This course is intended to provide a rudimentary knowledge of chemistry. Descriptive chemistry and its relationship to our present world are emphasized. Laboratory work gives practical experience in the methods of classical chemistry and in writing laboratory reports. This course covers less material and in less depth than Honors Chemistry.

**Honors Chemistry** (sophomores, juniors, and seniors) **prerequisites and grade requirements:** Honors Biology (A-) and Honors Geometry (A-); recommended co-requisite: Honors Algebra 2; departmental permission required

This course covers such topics as atomic structure and its relationship to the chemical properties of matter. This accelerated course is for students who are responsible in completing work in a timely manner and who also will seek assistance from the teacher when necessary. Analytical skills and problem solving are emphasized. Homework that applies concepts discussed in class is assigned almost daily. Two periods per cycle of laboratory work give practical experience in the methods of classical chemistry and in writing laboratory reports. This course is different from Chemistry in that it is intended for those students who have the ability, motivation and desire to pursue future, advanced studies in the sciences in general and/or fields such as engineering and medicine. This course is a prerequisite for all AP science classes and for Honors Physics.

**Conceptual Physics** (juniors and seniors) **prerequisite:** Chemistry or Honors Chemistry

This course provides students with an introductory level of understanding physics. The students will focus on developing the ability to communicate the ideas of physics, and how they are applied in society. There will be some use of algebra and geometry, with the understanding that some of the math will need to be taught to the students, rather than applying past math knowledge to physics. The class will include discussion, problem solving, lab activities, lab projects, and writing papers. The topics that will be covered are the nature of science, motion and forces, momentum, energy, gravity and satellites, the nature of matter, heat, waves, electricity and magnetism, and nuclear physics.

**Physics** (juniors and seniors) **prerequisites:** Chemistry or Honors Chemistry; co-requisite: Pre-Calculus 1

This lab course provides students with knowledge of physics. Students are encouraged to learn about the relationships in their physical world through experiments and problem solving. The students should expect to use algebra, geometry and trigonometry in problem solving and labs.
Topics covered are the nature of the scientific method, motion and force, static equilibrium, energy, momentum, pressure and buoyancy, gases, kinetic theory and heat, thermodynamics, waves, electrostatics, electric circuits, and magnetism.

**Honors Physics (juniors and seniors)** prerequisites: Honors Chemistry (A-) and Honors Algebra 2 (A-); co-requisite: Honors Pre-Calculus II; departmental permission required

This hands-on, inquiry-based course enables students to build a strong foundation in physics and provides the necessary preparation for college-level science courses. Emphasis is on visualizing complex physical and mathematical principles in action to make abstract concepts concrete. To this end, numerous demonstrations and collaborative experiments are continuously offered throughout the course to promote the development of higher-ordered critical thinking skills. Moreover, students are consistently challenged to implement experimental designs using sophisticated technology and to relate physical and mathematical principles in thoughtful laboratory reports. Critical analysis of experimental results, visualization of the laws of physics in action, and resulting calculations will inspire student curiosity and increased confidence in the interpretation of natural phenomena occurring all around us.

**AP Biology (seniors)** prerequisite and grade requirements: Physics (A-) and Honors Chemistry (A-); departmental permission required.

This is a chemically-oriented biology course that emphasizes such topics as molecular biology, cell biology, heredity, structure and functions of plants and animals, human physiology, and ecology. Students should expect intensive lab work, as required by the AP curriculum. Students in this course prepare for the Advanced Placement examination in Biology. **Indicate an alternate selection in the event this course cannot be scheduled.**

**AP Chemistry (seniors)** prerequisites and grade requirements: Honors Physics (A-) and Honors Chemistry (A-); co-requisite: Calculus AB or BC; departmental permission required. **Indicate an alternate selection in the event this course cannot be scheduled.**

This course corresponds to a traditional first-year university chemistry course. It gives the student a deeper insight into the mathematical basis of chemical principles and a more theoretical look at the phenomena of chemistry. Topics covered are periodic relationships, molecular and atomic structure, kinetics, equilibrium, electrochemistry, and descriptive chemistry. Students will also be required to do lab work and keep a lab notebook. This course prepares the student to take the Advanced Placement examination in Chemistry.

**AP Physics C: Mechanics and Electricity & Magnetism (seniors)** prerequisites and grade requirements: Honors Physics (A) and Honors Pre-Calculus (A); co-requisite: Calculus BC; departmental permission required. **Indicate an alternate selection in the event this course cannot be scheduled.**

This advanced calculus-based physics course corresponds to a traditional first-year university physics course concentrating in Newtonian mechanics, electricity, and magnetism. It provides a strong foundation for the student thinking of pursuing a career in engineering, the physical sciences, or
medicine. This is a collaborative, hands-on, laboratory intensive course that consistently applies
differential and integral calculus throughout the course. Particularly robust emphasis is applied to
student-centered learning, via guided inquiry, to foster the development of keen critical thinking skills
within the context of higher-ordered mathematics. The course concludes with a capstone research
final project that challenges students to apply renewable energy technology to the design and
implementation of an apparatus capable of successfully performing a useful function, such as charging
a cell phone or laptop. This course prepares students for the Advanced Placement Physics C:
Mechanics and Electricity & Magnetism exams.

**Human Anatomy and Physiology** (seniors; juniors may enroll only in years when there is room)
prerequisite: three credits of Science, one may be concurrent. **Indicate an alternate selection in the
event this course cannot be scheduled.**

This course is an introduction to the anatomy and physiology of the human body. Subject matter will
include anatomical terminology, basic biochemistry, cells, tissues, and the body’s organ systems
including integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic,
respiratory, digestive, urinary, and reproductive. This course will also touch on the inner workings of
these systems and communication between each of them. Students will observe a variety of
professions in the medical field via guest speakers, dissection, and surgical demonstrations. Upon
completion of this course the students will be prepared for advanced anatomy and physiology courses
at the undergraduate level.

**Earth and Environmental Science** (seniors; juniors may enroll only in years when there is room)
prerequisite: three credits of Science, one may be concurrent. **Indicate an alternate selection in the
event this course cannot be scheduled.**

This course explores the multidisciplinary science of the environment by bringing the outside world
into the classroom in a way that engages, involves, empowers students, and helps prepare them for
similar courses at the University level. Focus will be on important current issues such as human
population dynamics, global climate change, air and water pollution, and hazardous and solid waste,
along with traditional and alternative energy resources. Other topics include the overharvesting of
dynamic biological resources, biodiversity, soil management, deforestation, and endangered species.
An extensive, hands-on field study with lab component is a core part of the course, as well as projects,
guest speakers, and field trips. Some of the field trips may require an extra cost to the student. The
number of students taking the course and the location of the trip determine the actual cost.

**Meteorology** (seniors; juniors may enroll only in years when there is room) prerequisite: three credits
of Science, one may be concurrent. **Indicate an alternate selection in the event this course cannot be
scheduled.**

This course is a broad introduction to the physical and chemical processes that regulate Earth’s
weather and climate. The objective of the course is to provide students with a deeper understanding of
how our atmosphere responds to dynamic influences ranging from astronomical to anthropogenic. The
course begins with an exploration of atmospheric content and structure and the sources for transfer of
energy. Dynamic atmospheric responses to energy transfer including circulation, stability,
precipitation, and pressure systems ranging from global to local scales will be analyzed. Mid-latitude cyclones, hurricanes, severe thunderstorms, and tornadoes are among the most prominent atmospheric dynamical systems to be covered in the course. In addition, the role of pollutants and their influence on air quality, weather, and climate will also be assessed. Laboratory experiments and weather forecasting techniques will accompany analyses of atmospheric processes so students may identify the fascinating interaction of physical and chemical laws resulting in weather in the short term and climate in the long term. Moreover, field trips and guest speakers will complement the class lessons, discussions, and experiments with opportunities to observe atmospheric phenomena and gain a broadened perspective shared by professionals in the field.

COMPUTER SCIENCE COURSES

Computer Science Bring Your Own Device (BYOD) Policy

Casady School recognizes that access to technology and the tools it provides is an essential component to a 21st century education. With the opportunity to pursue computer science courses (and to take MSON courses), the School wants to ensure that all interested students have access to the tools required to be successful. Therefore, students will be able to bring their own devices from home or use a device loaned to them by the school. Students will need access to a device that will allow them to work on their projects throughout the school day, at home, and while traveling.

The device will need to meet some minimum requirements regarding Internet access, storage capacity, and speed. Other than these requirements, the choice of a device is up to each student’s family. Students will be responsible for securing their own device(s) while on campus. Students who use a device loaned to them by the school will of course be responsible for securing the device at all times. We continue to be cognizant of digital citizenship, and students are bound by the Computer Use Agreement to conduct themselves appropriately when connected to the School’s network.

Here are some minimum requirements for the Computer Science courses:

- Operating System: Windows 7, Mac OS X 10.9, Linux
- Screen: 14”
- Memory: 4GB RAM
- Storage: 50 GB free on hard drive
- Wireless: 802.11 a,g
- USB: 2.0 or 3.0

Required Software:

- Antivirus Software
- Acrobat Reader
- Web Browser

Homework assignments will be submitted via the cloud. However, open source software will be used throughout the computer science courses. Students will set up their devices for computer science
courses on the first lab day.

Some Items to Keep in Mind:

A student’s device should have a working rechargeable battery. Classrooms have a limited number of outlets for charging laptops and other devices. Further, cords are a trip hazard to others. Part of being prepared for class is having a properly charged device at the beginning of class.

It is difficult to write programs and impossible to do the kind of work required in computer science courses with netbooks and chromebooks. Netbooks tend to be too small and lead to eye fatigue and cramped fingers. The chromebooks do not allow for software to be installed.

Students should not depend on a secondary device for their computer science courses. Devices, such as a cell phone or tablets, are convenient and can be great multipurpose tools. However, they are not up to the task of writing, editing, and debugging the kind of projects students will be working with.

Students in Need of a Device:

Casady School does not want the potential financial burden of buying a device to deter students from taking courses that require technology. Students in this situation can get a loaner device from the school. The device will be loaned to the student only for the duration of the course.

Responsibility for Student-Owned Devices:

Casady School is not responsible for the theft or damage of a student owned device incurred at school. Students are solely responsible for their privately owned devices.
CS - 0: The goal of the CS Principles courses is to answer the question: What is computer science? This is accomplished by introducing students to major topics in the field. **No prior knowledge is assumed of students taking CS-0 courses.**

**Homework Expectations:** The homework in the CS Principles courses typically consists of two parts. The written homework is meant to have students think about the big picture, or reinforce a concept that is taught in class. The programming homework allows students the opportunity to learn how to write code. Programming requires iteration. The first attempt doesn’t always work, but the payoff is joy and comprehension. Homework is assigned weekly, and students need to begin early, in order to ask effective questions, and mitigate any tech issues that may be encountered.

**Corequisite:** Honors Geometry

**CS Principles: Web Page Design**

**Language:** HTML / CSS
This course will introduce students to the basic ideas behind designing web pages with HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets). We will cover what makes a web page effective, how to enhance a page’s layout, and integrating images into their pages. By the end of the course, students will be able to design, make, and release a multipage website, with a consistent look across the pages. Web sites can be valuable for students who are looking to put a digital portfolio on the web, have a public space to talk about their passion projects, or

CS Principles: Informatics
Language: R

We live in the age of information. With data swirling all around us, how can we hope to gain knowledge from raw data? Yet, we know that large entities have managed to organize data and process it to influence our experience. How have they done it? We will explore how devices work, how to organize, process, and analyze data, and the processes that underlie networking. This course will contain introductory programming in R. This language is used to process data, and do basic statistical analysis. Students should expect to encounter topics such as information theory, data mining, or the development and history of the use of processing data.

CS Principles: Introduction to Python

The Python programming language will be our vehicle for building our toolbox of programming constructs. This course serves as an introduction to control structures, commenting code, debugging, and the basic ideas behind the object - oriented programming paradigm. Students will develop the confidence to write functions, small programs, and the implementation of basic algorithms, as well as development of oral and written communication skills. Students who are interested in taking the AP Computer Science A exam should take this course their Freshman or Sophomore year.

CS Principles: Information Security & Error Correcting Codes
Language: Haskell

The course begins by thinking about how to mitigate errors and correct for errors that occur during transmission. We then proceed to develop the ideas behind cryptographic protocols. It isn’t just our credit card information that we wish to protect. The fate of nations has rested on keeping secrets undiscovered. Students will explore various aspects of information security through the history of ciphers. Throughout the course, students use discrete mathematics and algorithm implementation to understand how these processes work. This course contains a reading and writing component in order for students to develop the skills needed to communicate across the disciplines. Students will explore aspects of information security, in the context of current events. Such topics could include ransomware, digital forensics, cybercrime, or the perceived conflict between law enforcement and privacy.

CS - 1 courses are meant to introduce students to a programming paradigm, and develop the skills needed to work on more extensive projects. Students who complete both courses will be prepared to sit for the AP Computer Science A exam.
**Homework Expectations:** There are two types of assignments given in these courses. There are the “shorts” which give students the needed practice when learning a new concept or programming construct. These problems are assigned on a weekly basis as needed. The other assignments take the form of labs and projects that require a collaborative effort to complete. These assignments take significant time and iteration, to complete. At least two or three class days are devoted to working on these assignments. Students use GitHub as a collaboration tool, and to submit assignments.

**Object-Oriented Programming: Applications** prerequisite: One of the CS Principles courses (excluding Web Page Design), or concurrently enrolled in Honors Precalculus 2, or department recommendation.

This is a course developed to ease the transition from Python to Java. Students will develop their programming skills by using Tkinter or the Python bindings to Qt to develop graphical user interfaces (GUIs), in the first portion of the course. In the second half of the course, we will use Java to build some basic games. These projects develop student’s programming skills in a context that is lab based. Students should expect to work on projects collaboratively and that assignments will be done iteratively, over a period of a week or two.

**Object-Oriented Programming: Design** prerequisite: OOP: Applications, or concurrently enrolled in Honors Precalculus 2, or department recommendation.

The course delves into some of the theory in computer science needed for software development. Students should expect projects that are assigned to be completed over the course of a couple weeks. This course has the following goals in mind:

1. Using the OOP paradigm to implement a solution to a problem.
2. An introduction to basic data structures, algorithms, and run-time analysis.
3. The basic concepts behind collaborative software design.

Further, students will need to be willing to develop communication skills and work collaboratively with their peers. Students interested in taking the AP Computer Science A exam should take this course.

CS - 2 courses are meant to allow students to explore some aspect of computer science in detail. A large part of these courses involves students doing independent explorations, tinkering, and research guided by the instructor.

**Advanced Problem-Solving Seminar (new 2019-20)** prerequisite: OOP: Design or department recommendation

This year-long course will allow students to engage in the exploration of a topic in computer science. The course is split approximately into thirds:

1. An introduction to the topic for the year
2. Applications and some theoretical underpinnings of the topic

3. Student projects

The seminar allows students to develop technical research skills, oral and written communication, as well as explore a topic and/or application of interest. Possible topics: Data Structures, Logic/Math for Computer Science, Cryptography, Artificial Intelligence, Engineering based projects using the Raspberry Pi, Arduino, BeagleBone Black, or FPGAs. The course will rotate topics in a 3-4 year cycle.

**FINE ARTS COURSES**

*A fee may be charged for items that would be impractical for the student to furnish. Students will be expected to purchase or be charged for supplies such as paints and sketch pads per faculty requests.*

**Music Theory** (juniors and seniors) *instructor permission required*

This course in Music Theory develops students' abilities to recognize, understand, and describe the basic elements and processes of music as they are heard and/or presented in a musical score. This goal will be achieved by using listening, performance, written, creative, and analytical exercises to develop aural, sight-singing, written, compositional, and analytical skills. The course is designed to instill the mastery of musical terminology and rudiments, including notation, intervals, scales, keys, chords, meters, and rhythmic patterns, among others. These concepts will be addressed by listening to many musical examples, based not only on traditional Western harmonies, but also jazz, blues, pop and music of non-Western cultures. (A studio or performing arts course must be taken in addition to this course to satisfy the graduation requirement.

**Note: Indicate an alternate selection in the event this course cannot be scheduled.**

**VISUAL ART COURSES** (trimester) are studio classes. *There are no quizzes, tests, or assigned homework. Student evaluation is based on classwork therefore it is important for students to attend class and fully utilize their time in class each day.*

Note: In all cases, indicate alternate selections in the event your course(s) of choice cannot be scheduled.

**Art Fundamentals**

This course introduces students to the design principles and elements through projects intended to stimulate their curiosity. Students learn how to generate ideas, visually communicate with an audience using a variety of art media, as well as understand when and how they experience visual communication. (This course will be a prerequisite for several other visual art courses in upcoming years.)
Clay 1

This introductory course offers the students the opportunity to explore a variety of ways to work with clay. All students learn hand-building techniques, which can be incorporated into functional and nonfunctional pieces. Learning to throw clay on the wheel is optional.

Clay 2 and 3 prerequisite: Clay 1

This course will allow the student to expand upon Clay 1. More emphasis will be placed on idea development, surface decoration, and the construction of larger pieces, including individual and group work.

Computer Graphics

This course will use Adobe Photoshop and InDesign to teach the basic concepts of graphic design and image manipulation. Students will learn how to create and modify graphics by using scanners, digital cameras, drawing, and computer-generated graphics. Basic editing of photographic images and some layout design will be covered. Special effects editing and layering of images will be introduced. A combination of lecture, demonstration, and lab activities will be used in learning the course material. Students will develop portfolio images.

Drawing 1

Drawing 1 is the prerequisite for Drawing 2, Painting, and Printmaking. This basic course in drawing introduces a series of exercises to develop confidence in drawing, while creating the illusion of space on a two-dimensional surface. Observational and technical skills will be emphasized. A wide variety of media and approaches will be explored. Some of the drawing media that may be introduced in this course include, but are not limited to, pencil, charcoal, chalk pastel, and pen and ink.

Drawing 2 and 3 prerequisite: Drawing 1

This course builds on concepts studied in Drawing I, with increased emphasis on composition and idea development. Students will expand their experiences with media and techniques, with the possibility of determining a media focus. Students can be expected to become increasingly sophisticated in self-expression.

Mixed Media prerequisite: Drawing 1

Through this course, students will explore a wide variety of art-making experiences. Both traditional and nontraditional approaches are taught by using a variety of two-dimensional media that may include collage, printmaking, and ordinary objects that can be transformed into creative works of art. An in-depth study of how materials from drawing, printmaking, and found art can be combined to create new art forms will be explored. Students will become acquainted
with art by contemporary artists as they develop an experimental approach to thematic projects.

**Photography 1**

Students learn to use a 35mm camera, develop black and white film, enlarge photographs, and prepare photographs for presentation. The art of photography is emphasized, with an introduction to the history, aesthetics, and techniques of the medium. Other techniques such as photograms and use of a pinhole camera may be explored as time allows. Students may borrow a 35mm SLR film camera from the school or use their own. While taking photographs outside of class time is not required, students are permitted to take cameras home so they can expand their subject matter beyond our campus. A quiz may be given midway through the trimester that covers darkroom and camera techniques.

**Photography 2 and 3** prerequisite: Photography 1 or departmental permission

Special effects, manipulation of film and image, exploration of concepts, media alternatives, and size possibilities are presented to students for consideration. Students will have greater freedom to structure their own assignments and pursue their own photographic interests.

**Video Production 1**

As students write, shoot, and edit their footage, they learn how to tell a story effectively through this medium. Techniques of video production and post-production may be explored through film shorts and stop motion techniques.

**Video Production 2** prerequisite: Video Production 1 or departmental permission

This is a more in-depth exposure to making videos. More emphasis will be placed on story development, lighting, and shooting techniques.

**Painting 1** prerequisite: Drawing 1

This introductory course in painting emphasizes watercolor, oil and/or acrylic paints. The goal is to teach the student how to paint, with emphasis on color theory, composition, and techniques. Students will focus on developing ideas from the sketch to painting on a variety of surfaces.

**Painting 2 and 3** prerequisite: Painting 1

This course builds on concepts studied in Painting I, with increased emphasis on composition and idea development. Students will expand their experiences with media and techniques, with the possibility of determining a media focus. Students can be expected to become increasingly sophisticated in self-expression.
**Printmaking 1** prerequisite: Drawing 1

This course introduces the student to a variety of ways to create images on printing plates, which are then transferred onto paper. The students will explore such techniques as linoleum block printing, monoprinting (painting on Plexiglas), collography, and drypoint (incising on metal plates).

**Printmaking 2 and 3** prerequisite: Printmaking 1

This course builds on concepts studied in Printmaking 1, with increased emphasis on composition and idea development. Students will expand their experiences with media and techniques, with the possibility of determining a media focus. Students can be expected to become increasingly sophisticated in self-expression.

**Sculpture**

The focus of this course is to develop the student’s ability to solve sculptural problems by expressing ideas as three-dimensional forms. Traditional and contemporary techniques will be explored using a variety of media.

**Sculpture 2** prerequisite: Sculpture 1

This extension of Sculpture 1 will stress more sophistication in technique, idea development and expression.

**Independent Study**

Advanced art students can choose to work with a teacher on an individual basis by selecting a media, process, or technique as a focus of study. Teacher permission and preliminary coursework are required.

**AP Studio Art Portfolio** Teacher permission and preliminary coursework are required.

The AP Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. AP Studio Art is not based on a written exam; instead, students submit portfolios for evaluation at the end of the school year. Students create work within one of three possible portfolios: 2-D Design, 3-D Design and Drawing, each corresponding to common college foundation courses. *As in an introductory college course, students will often need to work outside the classroom, as well as in it, and beyond scheduled periods. Quality artwork from previous courses may be included into the portfolio.*

**COMMUNICATION ARTS**

**Publications:** *Twister Yearbook*
Publications: *Twister* Yearbook is a hands-on, production-based course designed to provide the skills and environment necessary to produce the Casady School yearbook publication, *Twister*. The *Twister* is a student-produced, full-color, 300+ page book that provides an annual record of the life of the school, in which students document and celebrate the people, activities, traditions, events, and endeavors that make up Casady School across all divisions in mind, body, and spirit. Students work together as a staff under the guidance of the adviser and editors-in-chief. They develop skills in: communication, organization, project management, time management, journalism and photojournalism, graphic design, writing, problem solving, public relations, interpersonal communications, customer service, marketing, mass communications, theme development and more. Students become deeply engaged in the life of the school throughout all divisions, and as they do so, they strive to represent the ideals and mission of the school to the best of their ability. This is a full-year course and fulfills the fine art requirement. Students interested in yearbook must submit an application and attend a summer workshop.

**Advanced Journalism: Twister Yearbook EIC**
This course is an honors-level independent study reserved for the yearbook Editor(s)-in-Chief. Students meet during the Publications class and on a flexible but regular basis outside of class, including in the summer and on deadline weekends, in order to plan and oversee the production of the yearbook. Editor(s)-in-Chief receive advanced instruction and experience in graphic design, copy editing, public relations and business operations.

**PERFORMING ART COURSES**

**The Casady Choir (full year)**

The Casady Choir is open to all students in grades 9-12; no audition is required. While the class is performance oriented, attention is paid to the basic techniques of good choral singing, the basic rudiments of music, and understanding the performer’s craft within a historical framework. They also take part in district and state contests and various music festivals throughout the year.

**String Ensemble (full year) prerequisite: prior experience and departmental permission**

This course is a performing group made up of students who play the violin, viola, cello and bass at intermediate and advanced levels. Students will work to improve technical and musical skills. Players will have opportunities to perform individually, in ensembles, in the orchestra for school musicals, in the Casady Chamber Orchestra at school and community events, and at the ISAS Fine Arts Festival.

**Concert Band (full year) prerequisite: prior experience and departmental permission**

This course is a performing group made up of students who play woodwind, brass, and percussion instruments at intermediate and advanced levels. Students will work to improve
technical and musical skills. Students will have opportunities to perform in concert band, drumline, orchestra, school musicals, and individually. Performance venues may include school concerts, festivals, competitions, community events, and the ISAS Fine Arts Festival.

This ensemble prepares music for eight to twelve performances per year, on and off campus, which include a fall concert, the annual Lessons and Carols service, district and state music contests, the ISAS Arts Festival, and Baccalaureate.

**Theater**

**Technical Theater (trimester - may be repeated for credit)**

This class is comprised of learning the technical skills needed to bring stage productions to life. Students learn the skills needed to construct scenery and props, hang and focus lighting instruments, and implement a sound system. Students are trained in the usage of power tools, lumber, theatrical rigging system, and other machinery. Students will play an active role in the current production.

**Acting (trimester - may be repeated for credit)**

Upper division Acting is a year-long ensemble class that provides students with enhanced perception, interpretation, and performance of written text. Acting will help with stage presence, speaking with others, and how to carry oneself properly. These tools are essential in both the student who wishes to pursue theater in college and for non-theater majors in interview and public speaking situations.

Students will be graded on daily written journals, scene and monologue performances, and a written analysis of live theatre they have watched. A final evaluation assignment will be given for each unit of study, be it a written examination or a performance. In the first term students will work scenes and monologues, as well as basics of the stage, performance, and memorization. Second term will study the history of theater, TV, film, and performing for the camera while continuing mastering stage presence. In the third term, students will write and perform a play based on a children’s book for the lower division.

**Theater Appreciation (trimester - may be repeated for credit)**

Students will learn how to appreciate, analyze, and produce theater. Students will study theater history, dramaturgy, how to put on a play, and how to write critical analyses of productions. Each term the students will put on a production of some sort: one act, improv, clown soiree, children's play, etc. Note: this class meets during a rotation, not during Performing Arts time.

**MALONE ONLINE COURSES** (Juniors and Seniors; preference given to Seniors)

The Malone Schools Online Network (“MSON”) provides upper level students at registered
Malone Schools with a variety of superior online post-AP courses that enhance each member school’s existing curriculum. These courses promote the values of the Malone Family Foundation and are conducted by teaching professionals who are experts in their fields, have experience with independent school education, and share a commitment to excellence, small class sizes, and personal relationships. Course offerings target the most talented high school juniors and seniors who demonstrate sufficient independence and commitment to succeed in a virtual discussion seminar setting. Each course takes a blended approach, combining synchronous instruction and real-time video conferencing seminars with asynchronous instruction, recorded lectures, and exercises students complete outside of the class. The result is somewhere between a “flipped classroom” and a “virtual Harkness table.” Each course has a minimum of 6 students and a maximum of 16 students, which allows for a virtual discussion seminar that is delivered in high-definition classroom set-ups. See Miss Infantino for further information and an application packet.

Tentative course offerings for 2019-2020 - semester courses unless otherwise indicated

Arabic 1 (full year)
Advanced Applied Math Through Finance
Advanced Macroeconomics
Advanced Topics in Chemistry
American Democracy and Civil Engagement
American Voice, American Speech
Are We Rome?
Bob Dylan’s America
Building Utopia
Captivity in History and Contemporary Contexts
CSI: MSON - Forensic Science
Diversity in a Global Comparative Perspective
Environmental Bioethics
The Ethics of Biomedical Advancements
Excursions in France’s Gastronomic Library (full year/conducted in French)
Explorations in Computer Science (full year)
The Fiction of James Joyce
Genetics and Genomics
Introduction to Organic Chemistry
The Place of Narrative on the North American Prairie (full year)
Philosophy in Pop Culture
Positive Psychology
Robotics
Think Global, Debate Local
Wartime Dissent in American History

Note: MSON courses count towards the student’s GPA with a weight of .33