

# URSULINE ACADEMY 2018-2019 Curriculum Guide

## THEOLOGY

### TH 010 CATHOLIC CHRISTIANITY

Grade: 9

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE

Description: This course provides a basic overview of Catholicism, with a focus on the changing world of the ninth grade young woman. The year begins with a unit on our Ursuline heritage.

### TH 021 THE SCRIPTURES

Grade: 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE

Description: This course explores our Judeo-Christian Scriptures. It introduces methods for the study of Scripture, the various types of literature found in Scripture, and the historical and cultural contexts in which the Bible is written. Students are given the opportunity to utilize Scripture as prayer. How the Scriptures apply to our lives is emphasized throughout the course.

### TH 031 SOCIAL JUSTICE

Grade: 11

Credit: ½ Credit

Length: 1 Semester (first semester only)

Prerequisite: NONE

Description: This course introduces Catholic Social Justice Teaching and examines the principles found in Catholic Social Teaching. Students learn the “See-Judge-Act” method of analyzing and responding to social concerns.

### TH 032 CONTEMPORARY MORAL ISSUES

Grade: 11

Credit: ½ Credit

Length: 1 Semester (second semester only)

Prerequisite: NONE

Description: This course applies Gospel value as expressed in Catholic Social Teaching to current moral issues. The course further develops the application of the principles of Catholic Social Teaching through the “See-Judge-Act” method.

### TH 041 CHRISTIAN LIFESTYLES

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course in Christian Lifestyles explores some of the ways our baptismal call to follow Jesus may affect our relationships with family members, friends, the larger world and ourselves. Various lifestyle paths are studied, including single life, vowed religious life, and marriage. Students discuss Church teachings as well as other insights with regard to our lifestyle choices.

### TH 050 WORLD RELIGIONS

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This quarter course treats religious experience as the human response to the mystery of life. In this course, students explore the major religions of the world.

### TH 051 FAITH & CULTURE

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course explores two of the major areas where faith and culture influence one another. The course addresses the impact of media, in particular film and music, on faith life and the impact of faith on media use. It also examines current societal issues such as suicide, euthanasia and the right to die from the perspective of faith.

## **TH 052 PRAYER & SPIRITUALITY**

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: Students will be exposed to, participate in, and lead the class in various methods and experiences of prayer both personal and communal. In order to deepen understanding of women's spirituality, students will also explore the role, influence, and experience of women throughout the history of our Catholic tradition, beginning with women in Scripture.

# **ART**

## **AR 110 INTRODUCTION TO ART**

Grade: 9, 10, 11, 12

Credit: ½ Credit

Length: 1 Semester (offered both semesters)

Prerequisite: NONE (This course is required for all students.)

Description: This course introduces students to the language of art. Through projects, the students will explore the elements and principles of art. An appreciation of globally focused contemporary and historical art is incorporated in these projects.

## **AR 120 DRAWING I**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester (first semester only)

Prerequisite: AR 110

Description: This course is designed to develop skills in the fundamentals of drawing and design.

## **AR 121 PAINTING I**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester (second semester only)

Prerequisite: AR 120

Description: This course provides an introduction to fundamentals of painting with watercolor, and acrylic paint. Problem-solving projects will emphasize both drawing and design skills.

## **AR 122 CERAMICS I**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: AR 110

Description: This course will introduce students to hand-building techniques, wheel throwing, and glazing ceramics.

## **AR 123 CERAMICS II**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: AR 122

Description: Students will continue to expand on the skills learned in Ceramics I.

## **AR 131 SCULPTURE**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: AR 110

Description: This course explores three-dimensional design problems and experiments with a variety of techniques and sculptural materials.

## **AR 132 PHOTOGRAPHY I**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: AR 110

Description: This course introduces the student to basic black and white photography, concentrating on understanding and using a 35mm camera, design concepts, and basic darkroom procedures. A manual 35mm camera is required.

## **AR 133 DRAWING II**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: AR 120

Description: This course teaches creative approaches to drawing using various media, including Introduction to Printmaking.

#### **AR 140 FIBER ARTS I**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: AR 110

Description: This course is an exploration of the materials and techniques of a variety of fiber arts.

#### **AR 141 FIBER ARTS II**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: AR 140

Description: Students continue their exploration of the materials and techniques of a variety of fiber arts at an advanced level.

#### **AR 148 PAINTING II**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester (first semester only)

Prerequisite: AR120/AR121

Description: This course introduces advanced techniques in painting media including oil, acrylic and/or watercolor.

#### **AR 149 HONORS ART**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (second semester only)

Prerequisite: Department recommendation

Description: Students pursue areas of personal interest in a variety of media with special emphasis on individual instruction and portfolio preparation.

## **BUSINESS AND TECHNOLOGY**

#### **BU 212 CODING I**

Grade: 9,10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This semester long course aims to teach basic programming and computational concepts to students with little or no previous coding experience. Students will develop confidence in their ability to apply programming techniques to solve problems in a broad range of scenarios. This course uses the Python programming language and an online IDE. There is no prerequisite for this course but an understanding of algebraic concepts is encouraged.

#### **BU 213 CODING II - ONLINE**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: BU 212

Description: This is an online self-paced course that goes further in-depth about the principles of computation, control structures, strings, and boolean logic. This course expands on the concepts learned in Coding I.

#### **BU 249 AP COMPUTER SCIENCE PRINCIPLES**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: BU 212 and BU 213

Description: AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. This is a college preparatory course that will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and the impact of computing innovations on their lives. This course gives students the opportunity to use current technologies to create computational artifacts for both self-expression and problem solving. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science. This is a year long course.

Special cost or materials: Fee for Advanced Placement Exam if student chooses to take it

#### **BU 145 COMPUTER GRAPHICS**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: Students will be introduced to the Adobe Suite image-editing programs, as well as various other computer graphic online-based applications and programs. While not limited to art students, this course emphasizes creativity and a willingness to explore and work independently. Final exam is a project.

**BU 247 COMPUTER GRAPHICS - ONLINE**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: None

Description: Students will be introduced to the Adobe Suite image-editing programs, as well as various other computer graphic online-based applications and programs. While not limited to art students, this course emphasizes creativity and a willingness to explore and work independently. Final exam is a project.

**BU 233 COMPUTER APPLICATIONS**

Grade: 9, 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course serves as an introduction to the Google platform. Basic and advanced skills are taught using Google. Students will learn to use the computer as both a personal and business tool. Students will also use a variety of other web-based applications to continue to develop or improve their typing skills as well as their web-based application skills, knowledge and content. This course is designed for beginning, intermediate, or advanced students to build upon and improve their skills using web-based applications to prepare them for their future education and career paths.

**BU 236 COMPUTER APPLICATIONS - ONLINE**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course serves as an introduction to the Google platform. Basic and advanced skills are taught using Google. Students will learn to use the computer as both a personal and business tool. Students will also use a variety of other web-based applications to continue to develop or improve their typing skills as well as their web-based application skills, knowledge and content. This course is designed for beginning, intermediate, or advanced students to build upon and improve their skills using web-based applications to prepare them for their future education and career paths.

**BU 231 COMPUTER APPLICATIONS - SUMMER ONLINE**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course serves as an introduction to the Google platform. Basic and advanced skills are taught using Google. Students will learn to use the computer as both a personal and business tool. Students will also use a variety of other web-based applications to continue to develop or improve their typing skills as well as their web-based application skills, knowledge and content. This course is designed for beginning, intermediate, or advanced students to build upon and improve their skills using web-based applications to prepare them for their future education and career paths.

Special cost or materials: Additional tuition costs

**BU 628 VIDEO PRODUCTION I**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course serves as an introduction to video production. Basic and advanced skills are taught using a variety of video production tools, including WeVideo, YouTube, student laptops, etc. Students will learn how to sandbox, storyboard, script, shoot, edit, reshoot, and finalize their videos they produce. Students will learn skills and techniques that are used from the most novice journalist and mobile journalist to major motion picture productions. This course is designed for beginning, intermediate, or advanced students to build upon and improve their video production skills to prepare them for their future education and/or career paths that may involve the elements of video production.

**BU 252 VIDEO PRODUCTION II - ONLINE**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: BU 628

Description: This course enhances skills acquired in Video Production I. Students will continue to sandbox, storyboard, script, shoot, edit, reshoot, and finalize their videos they produce. Students will learn new, advanced editing and filming techniques, and create videos that take their production skills to the next level. This course is designed for advanced students to elevate their current video producing abilities and skills to prepare them for their future education and/or career paths that may involve the elements of video production.

### **BU 240 PERSONAL FINANCE**

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE (This course is required for all students.)

Description: This course serves as a preparation for the real world experience. Topics to be covered will include, but not limited to, career planning, personal financial planning, banking, credit, investments, transportation, real estate and insurance.

### **BU 241 INTRODUCTION TO ACCOUNTING**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: Accounting is highly recommended to any student who is planning to pursue business in college. This course will be taught using the computer along with the text. Students will develop skills in the fundamentals of accounting and career options. Manual accounting procedures and electronic spreadsheets will be used.

### **BU 237 MARKETING**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester **Offered during the 2019-2020 academic year.**

Prerequisite: NONE

Description: This course is an overview of the important role that marketing plays in our economic system. Emphasis is on the effect of marketing on our economy; the consumer, industrial and special markets; product research and development.

### **BU 238 ENTREPRENEURSHIP**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester **Offered during the 2018-2019 academic year.**

Prerequisite: NONE

Description: This course is designed to introduce the student to the requirements of starting and operating a small business. The course focuses on how general business principles and knowledge, primarily management and marketing, pertain specifically to the small business and the entrepreneur. Students are given the opportunity to develop and analyze their management and marketing skills through realistic business start-up exercises. Students completing this course will have developed a functioning business plan or project.

### **YB 350 YEARBOOK - ONLINE**

Grade: 9, 10, 11, 12

Credit: 1 Elective Credit; this course is an elective and does not fulfill the requirement for English.

Length: 2 Semesters, Students must commit to working on the publication of *THE OAK LEAVES* for the duration of the entire year.

Prerequisite: Students must have a "B" average in English Classes. **Teacher approval required.**

**Additional time may be needed outside of class time to meet deadlines; times to be determined by the instructor.**

Description: Students will learn how to use Wallsworth Online Design to layout and design pages. They will take photographs, place digital photos, write captions, edit pages, and submit work in a timely manner.

### **BN 627 BROADCAST NEWS AND PRODUCTION**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: None

Description: Be a part of a UA Team that meets during the regular school schedule and helps produce various programs for the school broadcast. Student experiences will concentrate on in depth reporting and story development while expanding on aspects of live broadcast production introduced in prerequisite course. Students will report, write, edit, format, direct, film and anchor the school broadcast of UA Today. Each student will have the opportunity for hands-on learning with broadcast equipment. The student will learn and demonstrate effective communication and management skills as she works with others as a member of the UA Broadcast Team.

Special cost or materials: Broadcast Polo shirt (approximately \$28.00)

## **ENGLISH**

### **EN 310 ENGLISH I**

Grade: 9

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: High School Placement Test

Description: This course strengthens the student's grasp of grammar and involves the analysis of various genres such as the short story, the novel, the essay, the drama, and the biography. To develop writing skills, the student studies the paragraph as a unit of thought and practices writing various types of coherent, unified paragraphs in connection with the literature studied. This practice in writing will lead to essay writing in various discourses: description, exposition, and literary analysis. Students also become familiar with the library and basic library skills. Outside readings may be assigned according to the genre. Vocabulary is stressed and studied in conjunction with the reading of a text.

**EN 319 HONORS ENGLISH I**

Grade: 9

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: High School Placement Test

Description: English 319 involves intensive interpretation and critical study of the various genres of literature: short story, drama, poetry, the novel, and the technical, literary terms which accompany these literary types. In this close study of literature, the students develop the vital skills of critical interpretation and inferential reasoning. Students also learn to express themselves lucidly in class participation and in their weekly writing. They encounter the different writing modes: exposition, description, narration, persuasion, and analysis. Students write vivid paragraphs and then advance to the five-paragraph essay.

Homework: Approximately one hour of homework is required each evening.

**EN 320 ENGLISH II**

Grade: 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Successful completion of EN 310

Description: Building upon the foundation of composition study begun in freshman year, this course requires students to work extensively on the process of writing in the various discourses: description, narration, exposition, and persuasion. Emphasis is placed on generating ideas, developing effective thesis statements, revision strategies, and critical analysis. Continued vocabulary and grammar review is encouraged. This course will also focus on a study of representative world literature in all genres including biography, fiction, drama, and poetry. Students read and discuss selections from ancient Greece and Rome, the European continent, Asia and Africa. Emphasis is placed on effective critical reading and writing on topics about the literature both teacher-generated and student-selected.

**EN 329 HONORS ENGLISH II**

Grade: 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Department recommendation

Description: Honors English moves at a quick pace and with a larger body of required readings than EN 320. Emphasis is placed on the writing process and developing a clear voice in prose. Students complete an essay every two weeks on both teacher and student-selected topics. Vocabulary is discussed in context. Students must also be prepared to read extensively and to actively participate in class discussions.

Homework: Approximately one hour of homework is required each evening.

**EN 330 AMERICAN LITERATURE**

Grade: 11

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Successful completion of EN 320 or EN 329

Description: This class in American Literature teaches students an appreciation of the literature that nearly five centuries of America's growth have produced. This course combines a discussion of the history of our country with an enriching study of the literature accompanying the period. In conjunction with the study of American Literature students will prepare a library research paper on a student-selected topic. Further emphasis will be placed on writing as a tool students can control and develop. Writing fluency, conciseness and correctness (grammar and punctuation) will also be stressed.

**EN 339 HONORS AMERICAN LITERATURE**

Grade: 11

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Department recommendation

Description: This honors course takes an interdisciplinary approach to examining American culture through different lenses including literary, historical, political, visual, sociological, and philosophical among others. Critical thinking will be required at all stages of the course and will include outside readings at a rapid pace, a scholarly research paper, essays, enrichment exercises, projects, quizzes, and an emphasis on relevant literary terms and vocabulary and how those can be applied to our readings and discussion. This course is available for college credit through the University of Missouri – St. Louis Dual Credit Program and is taught at a college level with elevated expectations for student performance.

Homework: Approximately one to two hours per night

Special cost or materials: If taken for college credit through University of Missouri – St. Louis, there is an additional fee.

**EN 351 THE HERO IN LITERATURE**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (first semester)

Prerequisite: Successful completion of EN 330 or EN 339

Description: This course, taken as an elective during the first semester of a student's senior year, explores the beliefs, cultures, and history of societies from around the world, with a focus on gods and heroes in World Literature from ancient times to the contemporary idea of the hero. Students analyze the values and beliefs these stories communicate. Continued emphasis is placed on composition skills, particularly the critical analysis essay.

**EN 352 COMIC & TRAGIC TRADITION IN LITERATURE**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (first semester)

Prerequisite: Successful completion of EN 330 or EN 339

Description: This course, taken as an elective during the first semester of a student's senior year, explores the early period in theater through the study of comedy and drama by such writers as Johnson, Marlowe, Shakespeare, and Moliere (among others). The class encourages students to not only enjoy the works but will involve analysis of the times in which the works were created and a discussion of theatrical techniques employed in the works.

**EN 353 SATIRE & SENSIBILITY IN LITERATURE**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (first semester)

Prerequisite: Successful completion of EN 330 or EN 339

Description: This course, taken as an elective during the first semester of a student's senior year, discusses the concept of satire and reflects on its development in world literature from its beginning to the contemporary period. Students explore the connection between the satire and the elements of culture--political, social, economic, religious--that it critiques. Students will challenge themselves to write satire in the model of texts discussed in class and respond critically to the satires discussed.

**EN 354 WRITING AND LITERATURE**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (second semester only)

Prerequisite: Successful completion of EN 330 or EN 339

Description: This course, taken as an elective during the second semester of a student's senior year, aides students in creative expression as well as the honing of one's writing skills--both creative and critical. Students read and evaluate poetry and fiction of various styles and compose in a variety of styles by developing content, employing specific forms, and selecting language appropriate for a particular audience and purpose.

**EN 355 WOMEN'S VOICES IN LITERATURE**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (second semester only)

Prerequisite: Successful completion of EN 330 or EN 339

Description: This course, taken as an elective during the second semester of the student's senior year, highlights the contributions made by women writers in both fiction and nonfiction throughout history. While emphasis will be given primarily to writers of English, authors representing various traditions and ethnic backgrounds will be read. Students will read, write, and examine theories of women's literature, making relevant connections to their own lives.

**EN 356 MODERN LITERATURE**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (second semester only)

Prerequisite: Successful completion of EN 330 or EN 339

Description: This course, taken as an elective during the second semester of the student's senior year, explores literature though the study of drama, poetry and fiction from the modern and contemporary periods. The class will not only encourage students to enjoy the works, but will involve an analysis of the times in which the works were created, a discussion of literary techniques, and the development of critical connections between modern literature and contemporary life.

**EN 349 AP HONORS ENGLISH IV (Advanced Placement English, 1-8-1-8 College Level Course, St. Louis University)**

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Department recommendation

Description: This is a specialized English course. It fulfills the suggested requirements of an Advanced Placement Course. It focuses on close and analytical reading of outstanding literature; it includes explication of various prose and poetry selections and contains comprehension exercises and thematic analysis of various literary genre. Assignments include in-class, impromptu writings on the designated reading material. The assigned writing tasks fall into two categories: weekly, in-depth, but moderate length student-selected critical analysis essays on the assigned readings; and extended research papers on student-selected topics for which the student is expected to frame a thesis, marshal evidence for it, and present it as effectively as possible. In keeping with the 1-8-1-8 requirements, students spend time exploring and developing a definite writing style. It is expected this style develops as the student's ability to analyze writing matures. The class is heavily dependent upon student participation: as a result, the student's active involvement in class discussion is essential to successful completion of this course.

Homework: Approximately one hour of homework is required each evening.

Special cost or materials: Fee for Advanced Placement Exam if student chooses to take it. If taken for college credit through St. Louis University, there is an additional fee.

### **JN 346 NEWSPAPER (Zero Hour)**

Grade: 9, 10, 11, 12

Credit: 1 Elective Credit; this course is an elective and does not fulfill the requirement for English.

Length: 2 Semesters, Students must commit to working on the publication of *THE BEAR FACTS* for the duration of the entire year.

Prerequisite: Students must have a “B” average in English Classes. **Teacher approval required.**

**Additional time may be needed outside of class time to meet deadlines and cover events.**

Description: Newspaper is a less traditional class that personalizes assignments to student interests and skills. Learn by doing, not practicing. Staff of the student-run newspaper will receive instruction in journalistic concepts and skills while working on the publication of the school newspaper, *THE BEAR FACTS*. This is **not** just a writing class. Students will gain experience in the following areas: reporting, interviewing, writing (news, editorials, features, sports, headlines, etc.), computer graphics, photography, desktop publishing (Microsoft Publisher), layout and design.

## **WORLD LANGUAGES**

### **FR 410 FRENCH I**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE

Description: This course develops listening, speaking, reading, and writing skills in French through thorough oral and written practice. Students will recognize and recall basic French vocabulary. Vocabulary content includes greetings and introductions, numbers, dates, telling time, weather, expressing feelings, question words, and other topics of interest to French and American teens. Students will write simple sentences in French using proper grammar. Grammatical content includes gender, subject pronouns, subject-verb agreement, word order, present tense of regular and basic irregular verbs, negation, articles and adjective agreement. Students will listen to and answer questions in French. Correct pronunciation and francophone culture are integrated into the course. The course will include TPRS (Teaching Proficiency through Reading and Storytelling). Students will utilize technology to gather and interpret information in French. Listening and pronunciation are aided by the use of online audiovisual resources featuring native speakers.

Homework: Approximately 20 to 30 minutes per day

### **FR 420 FRENCH II**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Successful completion of French I or equivalent

Description: This course continues to develop listening, speaking, reading, and writing skills acquired in the first year. Students will expand their use of basic French vocabulary such as school subjects, professions, daily life, introductions, invitations, public transportation, food and meals, sports and health, weekend activities, entertainment, and animals. Student will participate in short conversations with another person in French. Students will listen to, answer and ask questions in French in written and oral form. Grammatical content includes present and future tense verb conjugations of regular and irregular verbs, descriptive and possessive adjectives, and interrogative words. Students will continue to discuss practices of francophone cultures. Students will utilize technology to gather and interpret information in French. TPRS (Teaching Proficiency through Reading and Storytelling) will be included in this course. Listening and pronunciation are aided by the use of online audiovisual resources featuring native speakers.

Homework: Approximately 20 to 30 minutes per day

### **FR 428 HONORS FRENCH II**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of “A” or “B+” in French 1 and recommendation by the current language teacher.

Description: The pace of the honors section is accelerated. This course continues to develop listening, speaking, reading, and writing skills acquired in the first year. Students will expand their use of basic French vocabulary such as school subjects, professions, daily life, introductions, invitations, public transportation, food and meals, sports and health, weekend activities, entertainment, and animals. Student will participate in short conversations with another person in French. Students will listen to, answer and ask questions in French in written and oral form. Grammatical content includes present and future tense verb conjugations of regular and irregular verbs, descriptive and possessive adjectives, and interrogative words. Students will continue to discuss practices of francophone cultures. Students will utilize technology to gather and interpret information in French. TPRS (Teaching Proficiency through Reading and Storytelling) will be included in this course. Listening and pronunciation are aided by the use of online audiovisual resources featuring native speakers.

Homework: Approximately 30 minutes per day

### **FR 430 FRENCH III**

Grade: 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of C+ or above in French II and approval of current language teacher

Description: This course develops listening and speaking, reading, and writing skills. Students will expand their French vocabulary with increased accuracy. Content includes vocabulary related to parties and celebrations, clothing, travel, daily routine, weekend and leisure activities. Grammatical content includes irregular verb conjugations, present, past and future verb structures, direct and indirect object pronouns, and adjective agreement. Students will continue to read short dialogues and narratives in French and answer questions in written

and oral form. Students will write two to three paragraph essays using new vocabulary and grammar. Students will utilize technology to gather and interpret information in French. Students will continue to discuss various francophone countries. Students will watch and respond to educational French videos. Listening and pronunciation are aided by the use of online audiovisual resources featuring native speakers.

Homework: Approximately 30 minutes per day

### **FR 438 HONORS FRENCH III**

Grade: 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of B+ or higher in French II or Honors French II and approval of current language teacher.

Description: The pace of the honors section is accelerated. This course continues to develop listening and speaking, reading, and writing skills. Students will expand their French vocabulary with increased accuracy. Content includes vocabulary related to parties and celebrations, clothing, travel, daily routine, weekend and leisure activities. Grammatical content includes irregular verb conjugations, present, past and future verb structures, direct and indirect object pronouns, and adjective agreement. Students will continue to discuss various francophone countries. Students will continue to read short dialogues and narratives in French and answer questions in written and oral form. Students will write two to three paragraph essays using new vocabulary and grammar. Students will utilize technology to gather and interpret information in French. Students will watch and respond to educational French videos. Listening and pronunciation are aided by the use of online audiovisual resources featuring native speakers.

College credit is available through the 1-8-1-8 program at St. Louis University.

Homework: Approximately 30 to 45 minutes per day

Special cost or materials: If taken for college credit, there is an additional fee paid to St. Louis University.

### **FR 440 FRENCH IV**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "B" or above in French III and approval of current language teacher.

Description: This course continues to develop the four language skills of listening, speaking, reading, and writing. Students will expand their vocabulary concerning daily activities, describing people and objects, daily routines, expressing feelings, domestic chores, technology, professions and asking for help. Grammatical content includes, present, past and future tenses, reflexive verbs in different tenses and uses, the conditional tense, subjunctive mood and its uses, and direct and indirect object pronouns. Students will participate in conversations with the teacher and classmates in French. Students will read short stories, intermediate dialogues and narratives in French and answer questions orally and in written form. Students will utilize technology to gather and interpret information in French. Cultural information is included in each unit, as well as in videos and other materials. Listening and pronunciation are aided by the use of online audiovisual resources featuring native speakers. This class is taught primarily in French.

Homework: Approximately 30 minutes per day

### **FR 448 HONORS FRENCH IV**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "B+" or above in French III or Honors French III and approval of current language teacher.

Description: The pace of the honors section is accelerated. This course continues to develop the four language skills of listening, speaking, reading, and writing. Students will extend their vocabulary concerning daily activities, describing people and objects, daily routines, expressing feelings, domestic chores, technology, professions and asking for help. Grammatical content includes, present, past, future and reflexive verb tenses, the conditional tense, subjunctive mood and its uses, and direct and indirect object pronouns. Students will participate in conversations with the teacher and classmates in French. Students will read short stories, intermediate dialogues and narratives in French and answer questions orally and in written form. Students will utilize technology to gather and interpret information in French. Cultural information is included in each unit, as well as in videos and other materials. Listening and pronunciation are aided by the use of online audiovisual resources featuring native speakers. College credit is available through the St. Louis University 1-8-1-8 program. This class is taught primarily in French.

Homework: Approximately 45 minutes per day

Special cost or materials: If taken for college credit, there is an additional fee paid to St. Louis University.

### **FR 458 HONORS FRENCH V**

This course may not be offered every year. Interested students are encouraged to speak to their teacher or to the Department Chairperson.

Grade: 11,12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Approval of current language teacher

Description: The course will be taught mainly in French. There will be continued practice in all four language skills. The content of the course will emphasize French culture, civilization, and literature.

Homework: Approximately 45 minutes per day

### **NATIONAL SPANISH EXAM**

Spanish students will have the opportunity to compete for recognition and prizes by taking the National Spanish Exam. More information will be available in class.

**SP 411 SPANISH I**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE

Description: This course introduces the fundamentals of second-language study by allowing students to develop speaking, listening, reading, and writing skills in Spanish. Listening and pronunciation are aided by the use of audio and video clips featuring native speakers in the target language. The course will include a combination of instruction in both English and Spanish. We integrate cultural information into each chapter. This course prepares students to succeed in Spanish 2 or honors Spanish 2 the following year.

Homework: Approximately 20 to 30 minutes per day

**SP 421 SPANISH II**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Successful completion of SP 411

Description: This course continues to develop speaking, listening, reading, and writing skills acquired in the first year. Listening and pronunciation are aided by the use of audio and video clips featuring native speakers in the target language. The course will include a combination of instruction in both English and Spanish. We integrate cultural information into each chapter. This course prepares students to succeed in Spanish 3 the following year.

Homework: Approximately 20 to 30 minutes of homework per day.

**SP 429 HONORS SPANISH II**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "A" or "B+" in Spanish I and a recommendation by the current language teacher

Description: This course continues to develop speaking, listening, reading, and writing skills acquired in the first year. Listening and pronunciation are aided by the use of audio and video clips featuring native speakers in the target language. The course will include a combination of instruction in both English and Spanish, with progression to instruction primarily in Spanish. Cultural information will be integrated throughout each chapter. The pace of the honors section is accelerated. This course prepares students to succeed in honors Spanish 3 the following year.

Homework: Approximately 30 to 40 minutes of homework per day

**SP 431 SPANISH III**

Grade: 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "C+" or above in SP 421 and approval by the current language teacher

Description: This course continues to develop speaking, listening, reading, and writing skills acquired in the first two years of study. Listening and pronunciation are aided by the use of audio and video clips featuring native speakers in the target language. The course will include a combination of instruction in both English and Spanish, with progression to instruction primarily in Spanish. Cultural information will be integrated throughout each chapter. This course prepares students to succeed in Spanish 4 the following year.

Homework: Approximately 20 to 30 minutes per day

**SP 439 HONORS SPANISH III**

Grade: 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Approval of current language teacher

Description: This course continues to develop listening, speaking, reading, and writing skills acquired in the first two years of study. This class is conducted primarily in Spanish and is taught following the communicative language learning approach. Vocabulary will focus on words and expressions relevant to students' lives. Communicative themes include talking about the past, expressing interest and displeasure, expressing an opinion and disagreeing, asking about and responding to the latest news, making suggestions and recommendations, talking about challenges, and others. Readings and audiovisual activities develop students' cultural knowledge. The pace of the honors section is accelerated, and college credit is available through the 1-8-1-8 Advanced College Program through St. Louis University.

Homework: Approximately 45 minutes per day

Special cost or materials: If taken for college credit, an additional fee is paid to St. Louis University.

**SP 441 SPANISH IV**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "B" or above in SP 431 and approval of current language teacher

Description: This course continues to develop the four language skills with an emphasis on conversation. This class is conducted primarily in Spanish. Vocabulary will focus on words and expressions relevant to students' lives. Themes include travel, nature and the environment, hobbies, jobs, and professions. Grammatical concepts introduced in Spanish III will be reviewed and reinforced. In addition, students will continue to explore the subjunctive mood. New grammatical concepts include the future, present perfect, and conditional tenses, the *nosotros* commands, *por* vs. *para*, the impersonal *se*, and past participles used as adjectives. Students will expand their cultural knowledge

through readings and special projects. Listening and pronunciation are aided by the use of online audiovisual resources featuring native speakers.

Homework: Approximately 30 minutes per day

#### **SP 449 HONORS SPANISH IV**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Approval of current language teacher

Description: This course deepens the four language skills of listening, speaking, reading, and writing. This class is conducted primarily in Spanish. Students discuss in Spanish contemporary cultural themes while extending their vocabulary and increasing their understanding of previously introduced grammatical concepts. In addition, advanced grammatical concepts will be introduced. Composition in Spanish will strengthen students' writing skills. The pace of the honors section is accelerated, and college credit is available through the 1-8-1-8 Advanced College Credit Program through St. Louis University.

Homework: Approximately 45 minutes per day

Special cost or materials: If taken for college credit, an additional fee is paid to St. Louis University.

#### **SP 459 HONORS SPANISH V**

This course may not be offered every year. Interested students are encouraged to speak to their teacher or to the Department Chairperson.

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Approval of current language teacher

Description: This course will be taught mainly in Spanish. There will be continued practice in all four language skills of listening, speaking, reading, and writing through the study of literature and film. The content of the course will emphasize Hispanic culture and civilization.

Homework: Approximately 45 minutes per day.

#### **LT 413 LATIN I**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE

Description: This course offers an opportunity to study a classical language by introducing the fundamentals of Latin grammar, syntax, vocabulary, and composition. The basic skills of language learning—reading, writing, listening, and, to a lesser degree, speaking—are practiced. The study of English derivatives from Latin and Greek words is an important component of learning vocabulary. The storyline of most of the textbook readings follows the daily life of a typical Roman family of 79 A.D. in Pompeii and Britannia. Through these readings, as well as other activities and projects, the history, culture, and mythology of the ancient Greeks and Romans are thoroughly integrated into the classes.

Homework: Approximately 20 minutes per day

Special cost or materials: Each student is required to pay a registration fee of approximately \$10.00 for website access.

#### **LT 423 LATIN II**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Latin I and signature of present language teacher

Description: The aim of Latin II is a continued, deepening study of Latin grammar and syntax, a broadening of vocabulary, and an awareness of word relationships. Further understanding of Roman life as part of our cultural heritage is developed. Study of derivatives, mottoes and expressions, history, culture, mythology, and art continues, but with an emphasis on items pertinent to the readings. Writers and literary themes of Latin prose and poetry are introduced as students continue to develop their ability to read and understand the Latin language. The course concludes with a brief survey of Latin literature.

Homework: Approximately 20 minutes per day

Special cost or materials: Each student is required to pay a registration fee of approximately \$10.00 for website access.

#### **LT 427 HONORS LATIN II**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Grade of "A" in Latin I and/or approval of present language teacher

Description: The aim of Honors Latin II is a continued, in-depth study of Latin grammar and syntax, a broadening of vocabulary, and an awareness of word relationships between the classical languages (Latin and Greek) and English. A greater understanding of Roman life as part of our cultural heritage is developed. Study of derivatives, mottoes and expressions, history, culture, mythology, and art continues, but with an emphasis on items pertinent to the Latin readings. Writers and literary themes of Latin and Greek prose and poetry are introduced as students continue to develop their ability to read and understand the Latin language through its literature and through its Greek roots. The course concludes with a brief but thorough survey of Latin literature. Honors students are expected to attain greater proficiency in the language, are required to do more reading and writing in the language, and are graded accordingly.

Homework: Approximately 30 minutes per day

Special cost or materials: Each student is required to pay a registration fee of approximately \$10.00 for website access.

**LT 446 HONORS LATIN III/IV: PROSE**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "B" or higher in Honors Latin II and/or approval of Latin teacher

Description: This course provides a continued growth in the mastery of the Latin language and a further study of the humanistic insights which are the end products of a secondary classical education. Emphasis is placed on the reading of Latin prose writers and on the study of their contributions to Latin literature and Western civilization. Included are selections from Sallust, Caesar, Livy, Pliny the Younger, the Gospel writers, and early Church Fathers, and Medieval Latin, as well as a more detailed study of the life and works of Cicero. Review of Latin syntax, grammar, and correct usage continues, and vocabulary development focuses on the words and expressions employed by the authors read. The study of Roman history and culture continues, especially as revealed through the literature that is studied. By taking this course, third-year Latin students may earn college credit during the second semester through the 1-8-1-8 program at St. Louis University; fourth year Latin students may earn college credit during both semesters.

Homework: Approximately 30 minutes per day

Special cost or materials: 1) If taken for college credit, an additional fee is paid to St. Louis University. 2) Each student is required to pay a registration fee of approximately \$5.00 for website access..

**LT 447 HONORS LATIN III/IV: POETRY**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisites: A grade of "B" or higher in Honors Latin II and/or approval of Latin teacher

Description: This course provides a continued growth in the mastery of the Latin language and a further study of the humanistic insights that are the end products of a secondary Classical education. Emphasis this year is placed on reading Latin poets and on the study of their contributions to Latin literature and Western civilization. Included are selections from Catullus, Horace, and Ovid, as well as a more detailed study of the life and works of Vergil, especially the Aeneid, and the epic tradition. Special topics, such a mythology, ancient theater, literary figures of speech, and scansion of Latin poetry, are also studied. Review of Latin syntax, grammar, and correct usage continues, and vocabulary development focuses on the words and expressions employed by the poets are read. The study of Roman history and culture continues, especially as revealed through the literature that is studied. By taking this course, third-year Latin students may earn college credit during the second semester through the 1-8-1-8 program at St. Louis University; fourth year Latin students may earn college credit during both semesters.

Homework: Approximately 30 minutes per day

Special cost or materials: 1) If taken for college credit, an additional fee is paid to St. Louis University. 2) Each student is required to pay a registration fee of approximately \$5.00 for website access.

**GR 432 GREEK I**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Two consecutive years of any foreign language and approval from a language teacher

Description: This course is designed to introduce students to the language of Ancient Greece. Students will learn how to write and pronounce the Ancient Greek alphabet, develop a skill in reading a different language, and identify English words based upon Greek roots. This course will also touch on the mythology and history associated with the Ancient Greek language through translation of Homer's *Odyssey* and the Bible.

Homework: Approximately 20 to 30 minutes each day

**GR 442 GREEK II**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Greek I

Description: This course develops reading and vocabulary skills learned in the first semester. Students will learn more grammatical constructions through reading short excerpts of Homer's *Odyssey* as well as the basic formation of epic poetry. This course will also focus on the process of using Greek roots to decipher cognates and derivatives in the English language. Mythology and cultural themes from antiquity will be interspersed throughout the course.

Homework: Approximately 20 to 30 minutes each day

## MATHEMATICS

**MT 510 MATHEMATICAL STRATEGIES**

Grade: 9

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Department recommendation

Description: This course is designed to improve the students' understanding of algebraic concepts

**MT 511 ALGEBRA I**

Grade: 9

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE; placement is based on elementary school records and the placement test.

Description: After a brief review of operations with real numbers, the student solves and graphs linear equations and inequalities in one variable; solves and graphs linear equations and inequalities in two variables; writes linear equations; solves and graphs systems of equations; applies properties of exponents; factors polynomials; adds, subtracts, multiplies and divides polynomials; simplifies radical expressions; and solves simple quadratic equations. Emphasis is placed on increasing math confidence, using algebra as an aid to solving real-life problems and appropriately using the required graphing calculator as a problem-solving tool.

Homework: An average of 30 to 45 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

**MT 519 ADVANCED HONORS ALGEBRA I**

Grade: 9

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE; placement is based on elementary school record and the placement test.

Description: After a brief review of real number operations and solving advanced linear equations and inequalities in one variable, the student writes linear equations; solves and graphs linear equations and inequalities in two variables; solves systems of linear equations and inequalities in two variables; applies properties of exponents, solves and graphs quadratic equations; factors polynomials; and adds, subtracts, multiplies, and divides polynomials, rational expressions, and radical expressions. A strong emphasis is placed on abstract concepts, using algebra as an aid to solving real-life problems and using the required graphing calculator as a problem-solving tool.

Homework: Approximately 30 to 45 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

**MT 521 GEOMETRY**

Grade: 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Algebra I; department recommendation

Description: Students develop logical thinking skills as they learn the geometric concepts involving points, lines, planes, angles, parallel lines, triangles, quadrilaterals, other polygons, circles, area, transformations, and solid geometry. Algebraic connections are emphasized. The required graphing calculator is used as a tool.

Homework: An average of 30 minutes per class period

Special cost or materials: The required graphing calculator from Algebra I and Math XL

**MT 529 HONORS GEOMETRY**

Grade: 9, 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "A" or "B" in Algebra I; department recommendation

Description: Students study in depth the geometric concepts involving points, lines, planes, angles, vectors, parallel lines, triangles, quadrilaterals, polygons, circles, areas, transformations, and solid geometry. In addition, students study and work with the logic involved in deductive proofs. Algebraic connections are emphasized. The required graphing calculator is used as a tool.

Homework: Average of 30 to 45 minutes per class period

Special cost or materials: The required graphing calculator from Algebra I and Math XL

**MT 531 ALGEBRA II**

Grade: 11

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Algebra I; Geometry; department recommendation

Description: After a review of Algebra I topics, the student solves and graphs absolute value equations and inequalities, linear equations and inequalities in two variables, and quadratic equations over the complex number system; solves systems of linear equations; applies the properties of exponents; factors polynomials; and applies the four basic operations to polynomials, rational expressions, and radical expressions. Continued emphasis is placed on using algebra as an aid to solving real-life problems and appropriately using the required graphing calculator as a problem-solving tool.

Homework: Approximately 30 to 45 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

**MT 532 ACCELERATED ALGEBRA II**

Grade: 11

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "A" or "B" in Algebra I and Geometry; department recommendation

Description: In addition to the topics listed in MT 531, the student is introduced to the six trig functions and solving right triangles. Continued emphasis is placed on abstract concepts and solving real-life problems by appropriately using algebraic skills and the required graphing calculator.

Homework: Approximately 30 to 45 minutes per class period  
Special cost or materials: The required graphing calculator and Math XL

### **MT 538 HONORS PRECALCULUS - A**

Grade: 11

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Department recommendation

Description: This course provides the honors math student with the opportunity to begin the study of college-level mathematics through the study of Algebra II, College Algebra and College Trigonometry. Algebraic topics include linear, quadratic, polynomial, rational, radical, exponential, and logarithmic functions, and systems of equations. Concepts are presented visually using the required graphing calculator. Heavy emphasis is placed on solving application problems, both algebraically and graphically.

Homework: 45 to 60 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

### **MT 539 HONORS ALGEBRA II/TRIGONOMETRY**

Grade: 10, 11

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "A" or "B" in MT 519 and Geometry; department recommendation

Description: The student solves and graphs linear equations and inequalities in one and two variables; adds, subtracts, multiplies, and divides polynomials, rational expressions, complex numbers, exponential logarithmic functions, and radical expressions; solves quadratic equations over the complex number system; and solves systems of equations in two and three variables. A strong emphasis is placed on real-life problems. Topics in Trigonometry include right triangle and unit circle definitions of the trigonometric functions, graphs, identities, formulas, trigonometric equations, and the Laws of Sines and Cosines.

Homework: Approximately 30 to 45 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

### **MT 540 MATH IV**

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Algebra II, department recommendation

Description: This class is designed for students who need additional explanation, practice, and confidence before taking college mathematics. Topics may include fundamental concepts of algebra, geometry, elementary concepts of trigonometry, and personal finance, probability and statistics.

Homework: An average of 30 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

### **MT 541 ALGEBRA III**

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Algebra II and department recommendation

Description: Topics may include polynomial operations and functions, powers, roots and radicals, rational functions and operations, logarithms and an introduction to probability and statistics, and personal finance.

Homework: Approximately 30 to 45 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

### **MT 542 STATISTICS & PROBABILITY**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Algebra II or teacher recommendation.

Description: This class is designed for students who want to expand their knowledge of mathematics in statistics and probability. Topics include graphic display of data, analysis of data, measures of central tendency, variation, the normal curve, probability, an introduction to hypothesis testing, and other topics as time permits.

Homework: Varies

Special cost or materials: The required graphing calculator and Math XL

### **MT 552 STATISTICS & PROBABILITY - ONLINE**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Algebra II or teacher recommendation.

Description: This class is designed for students who want to expand their knowledge of mathematics in statistics and probability. Topics include graphic display of data, analysis of data, measures of central tendency, variation, the normal curve, probability, an introduction to hypothesis testing, and other topics as time permits.

Homework: Varies

Special cost or materials: The required graphing calculator and Math XL

### MT 543 ADVANCED TOPICS IN MATH

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Successful completion of Algebra II or teacher recommendation

Description: This course is designed for students who want to expand their knowledge of mathematics and study mathematics topics more in depth. Topics would include but not be limited to Conics, Sequences/Series, Linear Programming, Polar coordinates, Matrices, and Parametrics.

Homework: 30 to 45 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

### MT 544 PRECALCULUS

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "B" or better in Algebra II and department recommendation

Description: This course is an introduction to College Algebra and College Trigonometry. Topics include linear, quadratic, polynomial, rational, radical, exponential, logarithmic, and trig functions; conic sections; right triangle and unit circle trigonometry; basic trig identities; and the Laws of Sines and Cosines. Concepts are presented visually using the required graphing calculator. Emphasis is placed on solving application problems, both algebraically and graphically.

Homework: Approximately 45 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

### MT 545 CALCULUS

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Department recommendation

Description: This course provides the student with the opportunity to begin the study of college-level mathematics. The topics include: review of selected algebra topics, limits, continuity, derivatives and their applications, anti-derivatives, definite integrals and their applications, and the Fundamental Theorem of Calculus. Emphasis is placed on solving application problems, both algebraically and graphically.

Homework: 45 to 60 minutes per class period

Special cost or materials: The required graphing calculator and Math XL

### MT 548 HONORS PRECALCULUS

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "A" or "B" in MT 539 or "A+" in MT 532, and department recommendation

**NOTE:** Students from MT 532 **will need tutoring** during the summer to be fully prepared for this course. This course is designed for students who may be interested in math- or science-related careers.

Description: This course provides the honors math student with the opportunity to begin the study of college-level mathematics through the study of College Algebra and College Trigonometry. Algebraic topics include linear, quadratic, polynomial, rational, radical, exponential, and logarithmic functions, and systems of equations. Concepts are presented visually using the required graphing calculator. Heavy emphasis is placed on solving application problems, both algebraically and graphically.

College credit is offered through Missouri Baptist University.

Homework: 45 to 60 minutes per class period

Special cost or materials: The required graphing calculator and Math XL; fee for college credit is payable to Missouri Baptist

### MT 549 HONORS CALCULUS I

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Department recommendation

Description: This course is designed for students with a strong interest in a math or science-related career. Honors Calculus provides the student with the opportunity to begin the study of college-level mathematics. This course will include a substantial review of Precalculus topics. The topics covered include: limits, continuity, derivatives and their applications. If there is time, integration and derivatives of logarithmic, exponential, and other transcendental functions will be covered. Emphasis is placed on solving application problems, both algebraically and graphically.

Homework: 45 to 60 minutes daily

Special cost or materials: The required graphing calculator and Math XL

### MT 550 AP/HONORS CALCULUS AB

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Department recommendation

Description: This course will follow the College Board Advanced Placement Calculus AB syllabus and will prepare students for the Advanced Placement Calculus AB exam. Topics include: concepts, skills and applications of limits, derivatives, and integrals. The course

teaches students how to approach calculus problems when they are represented graphically, numerically, analytically and verbally. Students learn how to use technology to solve problems, experiment, interpret results and support conclusions. College credit is offered through St. Louis University.

Homework: 45 to 60 minutes per class period

Special cost or materials: The required graphing calculator and Math XL; fee for college credit is payable to St. Louis University; fee for Advanced Placement Exam if student chooses to take it

### **MT 559 AP/HONORS STATISTICS**

Grade: 11,12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Department recommendation

Description: This course extends the concepts and activities of statistics and probability with an emphasis on hypothesis testing, mode line and inferential statistics. College credit is offered through Missouri Baptist University.

Homework: 45 to 60 minutes per class period

Special Cost or materials: The required graphing calculator and Math XL; fee for college credit is payable to Missouri Baptist University; fee for Advanced Placement Exam if student chooses to take it

## **PERFORMING ARTS**

### **MU 612 CHORUS I**

Grade: 9, 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This performance-oriented course focuses on the basics of good choral singing (posture, breathing, articulation and meaning) and the fundamentals of music (rhythm, pitch, intensity and tone color). The fundamentals of music reading are also emphasized. A variety of music from different cultures and traditions are studied and performed. This course prepares students for the other UA choirs. The Christmas or Spring Concerts serve as the main portion of the final exam.

Special cost or materials: Concert attire

### **MU 622 ADVANCED CHORUS**

Grade: 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters (may be repeated)

Prerequisite: Instructor approval or successful completion of MU 612

Description: Performance-oriented course with emphasis on good vocal and choral techniques. Challenging choral literature from a wide range of cultures and traditions is studied and performed. There will be several performances each semester with the Christmas and Spring Concerts forming the major portion of each semester's final exams.

Special cost or materials: Concert attire and festival fees

### **MU 629 CONCERT CHOIR**

Grade: 9, 10, 11, 12

Credit: ½ Credit per semester

Length: 1 or 2 Semesters (may be repeated)

Prerequisite: Instructor approval

Description: Concert Choir is a performance oriented course. This is a group for students who wish to explore choral repertoire in a large ensemble. Ideally students should have some prior musical background, although extensive choral experience is not necessary. Anyone who wishes to improve their vocal skills is welcome to take this course. The knowledge and skills needed for successful choral singing will be emphasized through the study of a diverse repertoire. There will be several performance opportunities each semester with the Christmas and Spring Concerts forming the major portion of each semester's final exams.

Special cost or materials: Concert attire and festival fees

### **MU 610 INTRODUCTION TO INSTRUMENTAL MUSIC**

Grade: 9, 10, 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE

Description: This course is designed for students with little or no prior experience on a standard orchestral wind instrument (flute, oboe, clarinet, bassoon, horn, trumpet, trombone, tuba, or percussion). The fundamentals of instrumental technique and basic musicianship are studied through the medium of a diverse instrumental literature. Smart Music technology is used to enhance student progress and to tailor practice assignments to each student's level of ability. The Christmas and Spring Concerts form the major portion of each semester's final exams.

Special cost or materials: Smart Music subscription \$40.00 per year and instrumental rental or purchase (most instruments can be rented from UA for a modest fee.)

### **MU 613 MUSIC – INDEPENDENT STUDY**

Grade: 10, 11, 12

Credit: ¼ Credit per semester

Length: 1 or 2 Semesters (may be repeated)

Prerequisite: Instructor approval

Description: This course, which meets twice weekly, enables the student to receive one-on-one instruction on their chosen instrument or voice. Vocal students will be required to develop their skills on piano or guitar as well as their voice, in order to increase their understanding of the fundamental aspects of music and their overall musicianship. Music for study will be selected from a diverse range of cultures and traditions.

### **MU 615 INSTRUMENTAL ENSEMBLE**

Grade: 9, 10, 11, 12

Credit: ½ Credit per semester

Length: 1 or 2 Semesters (may be repeated)

Prerequisite: Instructor approval or successful completion of MU 610

Description: This course is designed to give students the opportunity to develop their instrumental skills. Instrumental technique and musicianship are studied through the medium of a diverse instrumental literature. The Christmas and Spring Concerts form the major portion of each semester's final exams.

Special cost or materials: Smart Music subscription \$40.00 per year and instrumental rental or purchase (most instruments can be rented from UA for a modest fee).

### **MU 616 MUSIC THEORY – INDEPENDENT STUDY**

Grade: 10, 11, 12

Credit: ¼ credit per semester

Length: 1 or 2 Semesters (may be repeated)

Prerequisite: Instructor approval

Description: This course meets twice weekly. While it is specifically designed to prepare students for college level music theory course, it is open to any student who wants to understand more about how music is created. Students will study vocabulary, ear training, and analyze music from various musical traditions. Students will complete composition exercises in order to put their knowledge into practice. Assessments will also include listening quizzes, written quizzes, and arranging and/or composition projects.

### **SH 621 INTRODUCTION TO PUBLIC SPEAKING**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course is an exploration of the value of public speaking. Students will learn about public speaking by engaging in a variety of speech experiences that are based in real-life contexts. Emphasized skills include topic selection, creative writing, research, outlining, speech writing, and speech delivery.

### **TH 644 DIRECTING FOR THE THEATRE**

Grade: 11, 12

Credit: ½ credit

Length: 1 semester

Prerequisite: NONE

Description: This course provides students the opportunity to develop skills associated with theater production specifically in the realm of stage management and directing. Students enrolled in this course will actively engage in student directed productions.

### **TH 645 THEATRE EXPLORATIONS**

Grade: 9, 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course is an exploration of theatrical productions. The focus of Theatre Explorations is to increase students' understanding, appreciation, and critical perceptions of the theatrical event. The student will write, read, participate in small group work, discuss, create theatrical designs, and present to achieve the goals of this class. Designing will offer avenues to explore students' individual theatrical interests.

### **TH 646 ACTING FOR THE THEATRE**

Grade: 9, 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: TH 645

Description: "Acting is believing" and this course is designed for the student who wants to use her creative talents, tap her inner resources, and strengthen her self-confidence as she learns to present a believable character of stage. The student will be introduced to the actresses' lingo, basic stage movement and direction, and learn vocal skills needed in theatrical performance. The student will have the opportunity to be part of improvisations, group comedic and dramatic scenes, and participate in a children's theatre performance as well as other acting experiences.

### **DA 712 DANCE**

Grade: 9, 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: Students will learn fundamental and terminology of various dance styles while developing strength, confidence, balance, and flexibility. Dance styles will include ballet, tap, jazz, hip hop, lyrical and modern. Students will perform the skills learned from class in the dance recital at the end of the semester.

Special cost or materials: \$75.00

### **DA 716 ADVANCED DANCE**

Grade: 9, 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: DA 712

Description: Students will refine dance skills, moving beyond the fundamental levels while incorporating advanced steps, rhythms, patterns, and combinations. Class technique will focus on faster and more intricate footwork. The dancer at this level will develop speed, clarity, dynamics, and the ability to execute complex combinations. A variety of dance styles will be introduced and students will perform skills learned from class in the dance recital at the end of the semester.

Special cost or materials: \$75.00

### **DA 718 CHOREOGRAPHY**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: DA 712 or instructor approval

Description: Students will be introduced to a practical experience focusing on the process of creating dance choreography. Emphasis will be placed on identifying, selecting and utilizing a variety of source material. Student choreography skills will be developed through use of critical evaluation, use of choreographic devices, use of improvisation for generating movement, and creating meaning through the use of time, space, energy/force, and weight. Students will perform the skills learned from class in the dance recital at the end of the semester.

Special cost or materials: \$75.00

## **PERSONAL DEVELOPMENT**

### **CR 651 CONFLICT RESOLUTION**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course provides students with the opportunity to improve their conflict resolution skills. Covered topics include commitment, assertiveness, listening skills, difficult conversations, negotiation, and conflict resolution. Because the course is geared toward experiential learning, assignments will include participation in role plays, class discussions, and projects.

### **SH 660 COMMUNICATIONS**

Grade: 9, 10

Credit: ½ credit

Length: 1 semester

Prerequisite: NONE

Description: Students will gain an understanding of communication, with an emphasis on interpersonal, verbal and non-verbal, and listening skills. They will develop skills in writing and presenting speeches as well as applying developed communication skills in group work and presentations.

## **PHYSICAL EDUCATION**

### **PE 721 PHYSICAL EDUCATION**

Grade: 10, 11

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: The beginning course in physical education enables the student to learn basic skills necessary for participation in the team sports of softball, floor hockey, volleyball, soccer, basketball, and pickleball. The importance of lifetime physical fitness is also stressed through aerobic activities. The course involves beginning skills, strategies, rules, and game play. Students are graded on participation, dressing out, written tests.

### **PE 710 INTRODUCTION TO HEALTH**

Grade: 9

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course gives the student an awareness of physical, mental, social, and emotional health. Topics include physical and mental health and wellness, disease and its prevention, human sexuality, alcohol, tobacco and drug use.

### **PE 731 WOMEN'S ISSUES IN HEALTH**

Grade: 11, 12

Credit: ½ Credit (Note: This course does not fulfill the PE requirement.)

Length: 1 Semester

Prerequisite: PE 710

Description: This course provides the student with an awareness of various issues in health and how these issues directly impact the lives of women.

### **PE 733 EXERCISE TECHNOLOGY**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: PE 721

Description: This course is designed to study human muscular movement as applied in performance of training as well as developing the body and mind. The emphasis will be on proper weight lifting and exercise utilizing the Ursuline weight room. Students are graded on participation, quizzes, articles and journals.

### **PE 733A EXERCISE TECHNOLOGY (Zero Hour)**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: PE 721

Description: This course is designed to study human muscular movement as applied in performance of training as well as developing the body and mind. The emphasis will be on proper weight lifting and exercise utilizing the Ursuline weight room. Students are graded on participation, quizzes, articles and journals.

### **PE 740 ADVANCED PHYSICAL EDUCATION**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: PE 721

Description: The course is a combination of these activities: archery, floor hockey, volleyball, pickleball, badminton. The course involves skills, strategies, rules, and competition. Students are graded on dressing out, participation and written tests.

## **SCIENCE**

### **PS 810 CONCEPTUAL PHYSICS**

Grade: 9

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE

Description: Students learn basic principles of physics, including applications to everyday life. Topics may include scientific method, measurement, forces and motion, atomic structure, waves, sound, light, color, static and current electricity. Graphing and problem-solving skills are integrated into all topics, as well as use of lab equipment (analog and digital) and online simulations. Presentations of lab results and problem solutions within each topic will occur.

Special cost or materials: Calculator that is required for math courses

### **PS 819 HONORS CONCEPTUAL PHYSICS**

Grade: 9

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Placement of students is based upon a composite score on the math and English placement tests, as well as performance in sixth, seventh, and eighth grade science and math.

Description: This course has the same objectives and content as PS 810. Content, as well as mathematical applications, are considered at greater depth. Presentations of lab results and problem solutions within each topic will occur.

Homework: An average of 30 minutes per night

Special cost or materials: Calculator that is required for math courses

### **BL 820 BIOLOGY**

Grade: 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: NONE; limited to no more than 20 students per section

Description: This course provides a foundation of basic ideas in using the scientific method, elementary chemistry, cell (structure,

function and division), genetics, cellular respiration/photosynthesis, and human reproduction. Students apply this knowledge to their bodies, the organisms around them, and their place in the environment. This foundation provides a basis for student awareness of biological principles in careers, politics, literature, recreational activities, and the advanced courses. Hands-on lab activities are an important part of this course.

### **BL 829 HONORS BIOLOGY**

Grade: 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "A+" in PS 810; "B+" or better in PS 819; science department recommendation;

Description: Honors biology focuses on major concepts, on the nature and methods of science, and on inquiry-based learning. The unifying principles studied in developing biological literacy are:

- Biology and the molecular perspective
- Energy, Matter, and Organization
- Growth, Development, and Differentiation
- The Cell: Homeostasis and Development
- Heredity: Continuity of Life
- Evolution: Patterns and Products of Change

All of these are studied with a focus on molecular biology. Hands-on lab activities are an important part of this course. Each student will be required to write a report and give an oral presentation on a topic that is pertinent to the course. Four hours of college credit from Missouri Baptist University are available.

Homework: An average of 35 minutes per night

Special cost or materials: Fee for college credit is payable to Missouri Baptist University.

### **BL 835 ECOBIOLOGY**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Any biology and chemistry course (chemistry must be taken concurrently by juniors)

Description: This general level course is recommended for students who would like to learn more about ecology, classification of organisms, anatomy and physiology of plants and animals, evolution, animal behavior, population studies and the geologic history of the earth and global climate issues. The plants and animals of the biogeographical regions of Missouri are emphasized along with the ecology of Ursuline's pond, trees, prairie and wildlife. A field trip to Powder Valley Conservation Nature Center is required. Hands-on lab activities including dissections (both real and virtual) along with lab write ups are an important part of the course. Each student will be required to write a report and give an oral presentation on a topic that is pertinent to the course.

### **BL 843 ECOLOGY**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester (1st Semester only)

Prerequisite: Any biology and chemistry course (chemistry must be taken concurrently by juniors)

Description: This general level course is recommended for students who would like to learn more about ecology, classification of organisms, anatomy and physiology of plants and animals, evolution, animal behavior, population studies, the geologic history of the earth and global climate issues. The plants and animals of the biogeographical regions of Missouri are emphasized along with the ecology of Ursuline's pond, trees, prairie and wildlife. A field trip to Powder Valley Conservation Nature Center is required. Hands-on lab activities along with lab write ups are an important part of the course. Each student will be required to write a report and give an oral presentation on a topic that is pertinent to the course.

### **BL 846 HONORS MICROBIOLOGY**

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: An overall grade of "B+" in any biology and chemistry; science department recommendation;

Description: This honors level course prepares students who are considering careers in medicine, nursing, medical technology, biotechnology, or other health-related fields by providing an in-depth study of the following topics: bacteria structure, function, and reproduction; cultivation and control of bacteria; biochemical identification of bacteria; interrelationships of bacteria and the environment; economic and medical aspects of microorganisms. Hands-on lab activities with lab write-ups are an important part of this course. Each student will be required to write a report and give an oral presentation on a topic that is pertinent to the course. Four hours of college credit from Missouri Baptist University are available.

Homework: An average of 30 minutes per night

Special cost or materials: Fee for college credit is payable to Missouri Baptist University

### **BL 844A GENERAL ANATOMY I**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Any biology and chemistry course (chemistry must be taken concurrently by juniors)

Description: This course is aimed at students who wish to learn more about their anatomy and physiology but do not require the more in-depth information that is covered in BL 847 Human Anatomy and Physiology. The course is a generalized, less in-depth study of the human body. Integumentary, skeletal, muscular, nervous (including the senses), and endocrine systems are covered. No dissections by students are a part of this course. Each student will be required to write a report and give an oral presentation on a topic that is pertinent to the course.

## **BL 844B GENERAL ANATOMY II**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Any biology and chemistry course (chemistry must be taken concurrently by juniors); **GENERAL ANATOMY I** is not a prerequisite for this course.

Description: This course is aimed at students who wish to learn more about their anatomy and physiology but do not require the more in-depth information that is covered in BL 847 Human Anatomy and Physiology. The course is a generalized, less in-depth study of the human body. Circulatory (including blood), lymphatic, respiratory, digestive, urinary, and reproductive systems are covered. No dissections by students are a part of this course. Each student will be required to write a report and give an oral presentation on a topic that is pertinent to the course.

## **BL 847 HONORS ANATOMY AND PHYSIOLOGY**

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A overall grade of "B+" in any biology and chemistry; science department recommendation

Description: This honors-level course is an intensive, in-depth study of the systems of the human body: integumentary, skeletal, muscular, nervous, cardiovascular, respiratory, digestive, excretory, endocrine, reproductive, and immune. Many lab experiments occur, including dissections and a field trip to the Practical Anatomy Workshop at St. Louis University. Each student will be required to write a research paper and give an oral presentation on topic that is pertinent to the course. Four hours of college credit from Missouri Baptist University are available.

Homework: An average of 35 minutes per night

Special cost or materials: Fee for college credit is payable to Missouri Baptist University; fee for field trip

## **CH 831 CHEMISTRY**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: None

Description: This course is intended to be an introduction to the fundamental principles of chemistry for students not planning to major in chemistry in college. Topics may include scientific method, mathematics of science, data analysis, atomic structure, periodicity and the main-group elements, nomenclature, formulas, chemical equations and reaction types, stoichiometry, solutions, gas laws, acids and bases. Experiments and problem-solving are utilized to enhance comprehension of chemistry concepts.

Homework: An average of 45 minutes per night

Special cost or materials: Calculator that is required for math courses

## **CH 839 HONORS CHEMISTRY**

Grade: 11, 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Concurrent enrollment in MT 532, MT538 or MT 539 or senior math and science department recommendation

Description: This honors-level course presents a challenging approach to the fundamental principles of chemistry. Topics may include scientific method, mathematics of science, data analysis, atomic structure, periodicity and the main-group elements, nomenclature, chemical equations and reaction types, stoichiometry, solutions, oxidation-reduction reactions, nuclear chemistry, thermodynamics, gas laws, acids and bases. Emphasis is placed on experimental aspects and mathematical relationships. College credit is available through the 1-8-1-8 program at St. Louis University.

Homework: An average of 45 minutes per night

Special cost or materials: Calculator that is required for math courses; if taken for college credit, a fee is payable to St. Louis University

## **CH 858 AP/ADVANCED HONORS CHEMISTRY**

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: CH 839 Honors Chemistry and science department recommendation

Description: This honors-level course completes the second semester of college chemistry and gives students the requisite information for the Advanced Placement Exam. First semester topics include thermodynamics, kinetics, solution equilibrium, oxidation-reduction, electrochemistry, molecular geometry and bonding theories, coordination compounds, organic chemistry, and nuclear chemistry. Second semester topics include a review of those covered during the first three semesters with a more in-depth study of states of matter and qualitative chemistry. Second semester is lab-intensive and includes qualitative and quantitative analysis experiments. This course is recommended for anyone interested in majoring in science, engineering, or health/medical science, including pharmacy, optometry, dentistry, and veterinary medicine. College credit is available through the 1-8-1-8 program at St. Louis University.

Homework: An average of 45 minutes per night

Special cost or materials: Calculator that is required for math courses; fee for college credit (St. Louis University) and/or for the Advanced Placement Exam

## **CH 859 ADVANCED CHEMISTRY**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (first semester only)

Prerequisite: CH 839 Chemistry and science department recommendation

Description: This honors-level course completes the second semester of college chemistry. Topics include thermodynamics, kinetics, solution equilibrium, oxidation-reduction, electrochemistry, molecular geometry and bonding theories, coordination compounds, organic chemistry, and nuclear chemistry. This course is recommended for anyone interested in majoring in science, engineering, or health/medical science including pharmacy, optometry, dentistry, and veterinary medicine. College credit is available through the 1-8-1-8 program at St. Louis University.

Homework: An average 45 minutes per night

Special cost or materials: Calculator that is required for math courses; fee for college credit is payable to St. Louis University

### **PS 840A PHYSICS I - MECHANICS**

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Grade of "C" or better in any chemistry course and concurrent enrollment in MT 541, 544 or above

Description: This course is recommended for anyone interested in physical or occupational therapy, pharmacy, optometry, dentistry, veterinary medicine, engineering, or education. The course reviews the concepts of physics introduced during freshman year and develops them further into the Laws of Physics. Topics covered in this course include mechanics, Newton's laws, momentum, and energy. Emphasis is placed upon experimentation and problem solving.

Homework: An average of 30 to 45 minutes per night

Special cost or materials: Calculator that is required for math courses

### **PS 840B PHYSICS II – WAVES, ELECTRICITY, AND MAGNETISM**

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Grade of "C" or better in any chemistry course and concurrent enrollment in MT 541, 544 or above; completion of Physics I is recommended but not required

Description: This course is recommended for anyone interested in physical or occupational therapy, pharmacy, optometry, dentistry, veterinary medicine, engineering, or education. The course reviews the concepts of physics introduced during freshman year and develops them further. Topics may include waves, optics, electricity and magnetism, relativity, and nuclear physics. Emphasis is placed upon experimentation and problem solving.

Homework: An average of 30 to 45 minutes per night

Special cost or materials: Calculator that is required for math courses

### **PS 849 HONORS PHYSICS**

Grade: 12

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: CH 839 Chemistry; concurrent enrollment in MT 544 or above and science department recommendation

Description: This honors-level course is recommended for anyone interested in science majors, medicine, physical or occupational therapy, pharmacy, optometry, dentistry, veterinary medicine, engineering, or education. This course is a mathematical introduction to the concepts and laws of physics. Topics covered include mechanics, Newton's laws, momentum, energy, heat and kinetic theory, waves, optics, electricity and magnetism, relativity, and nuclear physics. Emphasis is placed upon experimentation and problem solving skills. College credit is available through the 1-8-1-8 program at St. Louis University.

Homework: An average of 45 to 60 minutes per night

Special cost or materials: Calculator that is required for math courses; fee for college credit is payable to St. Louis University

### **SC 841 ENGINEERING**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester (first semester only)

Prerequisite: Grade of "C" or better in all science and math courses and concurrent enrollment in MT 541, 544 or above.

Description: This class is designed for students who may be interested in majoring in engineering or who are interested in learning about engineering. Students will study different aspects of engineering through the design process. Emphasis will be placed upon applying the design process to various topics and projects including robotics.

Homework: An average of 30 to 45 minutes per night

Special cost or materials: Calculator that is required for math courses

### **SC 845 FORENSIC SCIENCE**

Grade: 12

Credit: ½ Credit

Length: 1 Semester (second semester only)

Prerequisite: Any Biology and Chemistry course

Description: This is a course in which students will be working in teams to solve "crime" scenarios using scientific knowledge and critical thinking. It will involve all areas of science, including biology, anatomy, chemistry, physics, and earth science. Using the available technology, the students will record data, draw conclusions, and formulate the best method for communicating their results to propose crime scene solutions. Hands-on lab activities with lab write-ups are an important part of this course. Each student will be required to write a report and give an oral presentation on a topic that is pertinent to the course.

## **SC 850 ROBOTICS**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester (second semester only)

Prerequisite: Grade of "C" or better in all science and math courses and concurrent enrollment in MT 541, 544 or above.

Description: This course is for those students who would like to be immersed in the FIRST Robotics Competition experience. The design and build of the competition robot gives students an unparalleled opportunity in engineering and computer science. This design and build process will include computer aided design, fabricating and assembling, wiring, and programming. Students in this course will be expected to take lead roles in this process as they will also mentor students who join the team through the extracurricular Robotics Club. Responsibilities beyond the engineering and computer science of the robot will include implementing a fundraising plan, developing and balancing the team's annual budget, creating promotional designs, designing and updating the team's web page, and presenting information about the robot and team to various groups.

Homework: 1-2 hour after school meetings with Robotics Club (3 times per week during robot build season, 1 time per week after robot build season)

Special cost or materials: No special materials

# **SOCIAL STUDIES**

## **SS 912 WORLD HISTORY I**

Grade: 9

Credit: ½ Credit

Length: 1 Semester

Prerequisite: Required for all freshmen

Description: This course is arranged into two periods or themes, which focus on the developments made in human societies around the globe from the Paleolithic Period to about 600 C.E. Students will focus on developing the skills necessary for learning history, for example: reading, writing, map skills, critical thinking and evaluation of sources.

## **SS 920 WORLD HISTORY II**

Grade: 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: SS 912

Description: This course traces the development of World History via themes from the Ancient to the Modern World. This course is arranged into four themes which focus on the changes occurring in human civilization around the globe from 600 C.E. to the present day. The thematic approach encourages students to make connections between the people and places we study within each theme, allowing students more time for learning essential concepts and helping them to develop critical historical, geographical, reading, writing and thinking skills. The themes and key concepts discussed are intended to provide foundational knowledge for future college-level study of history.

## **SS 929 HONORS WORLD HISTORY II**

Grade: 10

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: Teacher recommendation and SS 912

Description: This is the initial honors-level course in the social studies curriculum. The class traces the development of World History via themes from the Ancient to the Modern World. This course is arranged into four themes which focus on the changes occurring in human civilization around the globe from 600 C.E. to the present day. The thematic approach encourages students to make connections between the people and places we study within each theme. Honor students are expected to make connections between political, economic, geographic, and cultural developments of the cultures studied. Students should expect to be challenged to participate in class discussion, read and write at an honors-level, and to work independently.

## **SS 930 UNITED STATES HISTORY: CIVIL WAR TO THE PRESENT**

Grade: 11

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: SS 920/SS 929

Description: This course traces the development of the United States from the pre-Civil War period to the modern day. Students will explore the political, economic, geographic, and cultural development of the United States.

## **SS 931 SOCIOLOGY**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course focuses on society and will discuss the relationships between people in diverse cultures. Students will study the methods that social institutions use to define cultural "norms" (i.e. values, principles morals, and ethics). This course will also study the methods which various cultures use to define "social problems" (poverty, delinquency, racism, sexism, crises in education and health care, and urban/environmental issues). Understanding cultural diversity is a key objective, the ultimate goal for the course is for students to understand how all cultural norms are relative.

### **SS 935 PSYCHOLOGY**

Grade: 11 or 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course is an introduction to the study of psychology, the science of human behavior. We will examine the five major areas (or schools) of psychology, psychoanalytic theories, behaviorism, social learning theories, trait theories, and humanistic psychology. This course will also evaluate abnormal psychology, thereby examining the major categories of psychological disorders and the various theories on the respective psychological treatments. The students are encouraged to become involved through class discussion and debate, as well as through the readings, research, and written assignments.

### **SS 950 AP/HONORS PSYCHOLOGY**

Grade: 11, 12

Credit: 1

Length: 2 Semesters

Prerequisite: Seniors taking the class shall have achieved at least a grade of "B" in AP US History, or an "A" in US History and the approval of the instructor. Juniors taking the class must be enrolled in sophomore Honors World History and have at least an "A" in the class.

Description: The AP Psychology is an honors-level, full year course designed to help students understand the study of the behavior and mental processes of people. Through this course students are exposed to the psychological facts and principles associated with the major subfields of psychology. They also learn about the ethics and methods psychologists use in their science and practice.

This class will expose students to the history of psychology (beginning with Sigmund Freud) as well as the expanding schools (or approaches) of psychological thought. The various psychological research methods are a key component of understanding the historical context of this field. The students will be exposed to various biological and behavioral approaches to understanding the acquisition of personality (i.e. learning, cognition, motivation, and emotion). Through this course students will also be exposed to developmental psychology-beginning at infancy and moving throughout the lifespan. Through the course the student will understand the various causes of abnormal behavior and the array of treatments associated with the various categories of abnormal psychology. Ultimately, students will be shown how psychological thought can help one better understand social behavior. This is an AP/Honors course designed for students who seek a more rigorous course of study than that provided by the one-semester, non-honors option. The class will be taught at a college level and pace, and students may achieve college credit by taking the Advanced Placement test in May (there is no 1-8-1-8 option for this course).

Special cost or materials: Fee for taking the AP test/cost of AP review book

### **SS 936 THE HOLOCAUST – THEN AND NOW**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: "The Holocaust – Then and Now" is a class that will look at the genocide perpetrated against the Jews by the German government in World War II. We will look at the motives, actions, and results of the Holocaust. We will then move on to a more general discussion of other genocides that have occurred in the world- for example, Rwanda, Bosnia, and Darfur-in an attempt to assess why such tragedies occur and how they can be prevented in future.

### **SS 939 AP/HONORS UNITED STATES HISTORY: A SURVEY OF AMERICAN HISTORY**

Grade: 11

Credit: 1 Credit

Length: 2 Semesters

Prerequisite: A grade of "A" in SS 920; "B+" in SS 929; teacher recommendation

Description: This is an honors-level course which may be taken for college credit, either through the 1-8-1-8 program through St. Louis University or by taking the Advanced Placement exam in May. **This class is taught at a college level and pace.**

The class is a **rigorous** survey of American history from the colonial period to the Reagan administration. Students will pursue a course of study which involves large amounts of reading (of text, documents, and other sources), research, and writing. Students will be encouraged to participate in class discussion and debate, and are challenged to become independent and critical thinkers.

Special cost or materials: Fee for college credit and/or for the Advanced Placement exam.

### **SS 942 MODERN AMERICAN HISTORY**

Grade: 10, 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course explores American history and popular culture in the modern age. Beginning with the end of World War II, this class focuses on telling history via the films, television, and music of the post-war era. Using films and television, as primary sources, the students will investigate such topics as the Baby Boom, the rise of Suburbia, the invention and influence of television, the birth of the American teen, as well as Civil Rights, the Sixties Anti-War Movement, and the fight for Women's rights in the seventies. The class will focus on using modern media, music, television, and film to teach the history of the time, and to encourage students to "think like historians," as they explore these sources.

### **SS 943 UNITED STATES GOVERNMENT AND POLITICS**

Grade: 12

Credit: ½ Credit, **required for all seniors**

Length: 1 Semester

Prerequisite: SS 930

Description: This class is meant to give the students an understanding of the American Constitution and political process. We will study the Constitution, bringing in current issues that challenge our government today. All Missouri high school students are required to pass a Constitution test for graduation; that test is given as the final examination for this class.

### **SS 946 YOU AND THE LAW**

Grade: 11, 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: NONE

Description: This course will help students to understand how the legal system in the United States works. Students will study the different kinds of crime, police investigation procedures, as well as looking at the role of the courts and law in our state. This class would be beneficial for any student with an interest in criminal justice, police work, or the law.

### **SS 949 AP/HONORS UNITED STATES GOVERNMENT AND POLITICS**

Grade: 12

Credit: ½ Credit

Length: 1 Semester

Prerequisite: The student shall have achieved at least a grade of "B" in AP United States History/SS 939

Description: This course is an honors-level course taken for one semester at the senior level. **Students who wish to get college credit for this class may do so by taking the AP exam in May. (1-8-1-8 credit is not available for this class.)** This class is taught at a college level and pace. Advanced Placement (AP) Government and Politics is a review of the American government and political process. Students will gain an in-depth understanding of the individuals and institutions that shape the American political system. Students will pursue a course of rigorous study which will include large amounts of reading (of the text, documents, and other materials) research, and writing. Students will be encouraged to participate in classroom discussion and debate, and will be challenged to become independent and critical thinkers. Out-of-the-classroom review sessions will be offered to help prepare students for the AP Examination if they choose to take it.

Special cost or materials: Fee for the Advanced Placement exam /Advanced Placement review book