

STANDLEY LAKE HIGH SCHOOL



**“A School With A Vision”
Registration Course Selection Guide
2018-2019**

**9300 West 104th Avenue • Westminster, Colorado 80021
303-982-3311**

MISSION STATEMENT

SLHS is a comprehensive high school dedicated to academic excellence, inspiring lifelong learners prepared to engage the world with empathy and pride.

TABLE OF CONTENTS

Administration	Page 3
Graduation Requirements	Page 4
NCAA Eligibility	Page 6
Art	Page 7
Career Technical Education	Page 15
Family & Consumer Sciences	
Technical Education - STEM	
Computer Programming	Page 23
English/Language Arts	Page 24
Math	Page 28
Music	Page 32
Physical Education	Page 36
Science	Page 38
Social Studies	Page 42
World Languages	Page 45
International Baccalaureate Program	Page 51
Special Courses	Page 59
Warren Tech	Page 60
Planning for College	Page 61
College Planning Timeline	Page 62

INSTRUCTIONS

This registration course selection guide has been compiled for you and your parents to use in planning your academic program at Standley Lake High School. It is important to formulate and periodically review your educational goals with your parents and your counselor. They are the resources that can best assist you in the development of an educational plan that will meet your needs.

1. The courses listed in this guide will be offered only when sufficient numbers of students request them through our course selection process and that we have adequate staffing. Therefore, it is important to fill out the worksheet completely to accommodate any needed changes.
2. You will register for classes once a year. Carefully read the description, grade level and prerequisites to insure accurate placement in your classes.
3. Provide yourself adequate time to carefully consider and plan your selections. The scheduling process is computerized. Schedule changes will not be made for personal reasons, and will not be adjusted to accommodate jobs, teacher preferences, transportation problems, or personal preferences, but only for legitimate educational reasons, i.e., improper prerequisites, improper level placement, failure of a course.

ADMINISTRATION

Principal: Mr. Jeff Pierson

Assistant Principals: Mr. Joe Generose
Mr. Chris Gould
Mrs. Sarah Roberts
Mr. Trip Sargent

Counselors:	Mr. Dennis Morgan	A-E
	Mrs. Sarah Puff	F-L
	Mrs. Angie Green	M-R
	Mrs. Lisa Moore	S-Z

IB Coordinator: Mr. Ben Thompson

Social Worker: Ms. Diana Rarich

HIGH SCHOOL GRADUATION REQUIREMENTS

CLASSES 2018, 2019 and 2020 ONLY

English	4.0 credits
Social Studies	3.5 credits (<i>Govt, Geog., Am Hist, World Hist, Econ</i>)
Mathematics	3.0 credits (<i>At the level of Algebra I or above.</i>)
Science	3.0 credits
Physical Education	.5 credit
Elective Courses	8.5 credits
Fine/Practical Arts	<u>.5 credit</u>
TOTAL CREDITS	23.0

***You must have earned all graduation requirements in order to walk at graduation.**

CLASS 2021 AND BEYOND

Jeffco School's mission is to ensure all students reach their learning potential and are prepared for career and/or college. The Board of Education has established the following graduation requirements.

The following criteria shall entitle a student to a high school diploma from Jefferson County Public Schools;

- 1) Successful completion of **23 credits** in the categories listed below. A unit of credit is defined as the amount of credit earned toward graduation following demonstration of district identified criteria.
 - a. Achievement in Colorado Academic Standards as demonstrated by mastery of appropriate coursework.
 - b. Minimum requirements for a high school diploma
 - i. English – 4 credits
 1. Core classes that address all English language arts standards are required.
 2. Additional English classes may be required by the school if a student is not proficient in reading and/or writing.
 - ii. Math – 3 credits
 1. A minimum of three credits are required in senior high school. Courses must include algebra 1, geometry and one additional course at or above the level of geometry.
 2. Algebra 1 and geometry credits may be earned in middle school. Those credits are not included in the 23 credits required for graduation from senior high school.
 3. A computer science course with a pre-requisite of at least algebra 1 is permissible as fulfilling a mathematics requirement.
 - iii. Science – 3 credits
 1. Three credits of laboratory classes in science that meet both process and content standards are required.
 2. Required classes may include courses in three of the four areas of science standards including earth science, biology, chemistry, and physics.
 - iv. Social Studies/Social Sciences – 3.5 credits

1. Three and a half credits that must include civics, geography, American history, world history, and economics for seniors are required.
- v. Physical Education – 0.5 credit
 1. One half credit in physical education and/or health and wellness in a course aligned with physical education standards is required.
- vi. Fine/Practical Arts – 0.5 credit
 1. One half credit in either the fine arts defined as music, visual arts, or drama or one half credit in a career and technical education course is required. Fine/Practical Arts classes will be designated with a “+”.
- vii. Electives – 8.5 credits
 1. Electives include the fine arts, technology, career and technical education, physical education, and core content electives in English language arts, mathematics, science, social studies, and world languages.

- 2) For the classes of 2021 and beyond, demonstration of Career and college readiness in English and Math through one or more of the approved options in the menu below;

Measure	English	Math
Accuplacer assessment	62	61
American College Testing (ACT)	18	19
ACT WorkKeys	Bronze or higher	Bronze or higher
Advanced Placement (AP)	2	2
Armed Services Vocational Aptitude Battery (ASVAB)	31	31
International Baccalaureate (IB)	4	4
Scholastic Aptitude Test (SAT)	470	500
Concurrent enrollment	Passing Grade	Passing Grade
Industry certificate	Individualized	Individualized
District capstone	Individualized	Individualized
Collaboratively-developed, standards-based performance assessment (in development)	Statewide scoring rubric	Statewide scoring rubric

- 3) A student who has an Individual Education Plan (IEP) may be granted a diploma based on completion of the goals listed in the IEP and on the basis of modified content standards and modified course requirements.

***You must have earned all graduation requirements in order to walk at graduation.**

SUMMARY OF THE PRE-COLLEGIATE CURRICULUM (HEAR)

In October, 2003, the Colorado Commission on Higher Education approved revisions to its Admissions Standards Policy that include the addition of a pre-collegiate curriculum requirement. The curriculum revision applies to students who graduate from high school in spring 2008 and later and seek to qualify for admission to Colorado's four-year public institutions. This means that the current minimum requirements for a high school diploma will not qualify your student for admission into one of these institutions.

Academic Area	Number of Credits
English	4
Mathematics (Algebra I level and higher)	4
Natural Sciences (two credits must be lab-based)	3
Social Studies (at least one credit of U.S. or World History)	3
World Language (varies by college)	1
Academic Electives	<u>2</u>
TOTAL	17

*NCAA ELIGIBILITY

The NCAA has approved courses at Standley Lake High School for use in establishing initial eligibility certification for potential college student athletes. These core courses are identified in this booklet with an asterisk (*) beside the course title along with the description in the Department section. Be aware that the revised NCAA Division I requirement is 16 core credits (10 of which must be completed prior to the seventh semester) and Division II is 14 core credits. Types of core courses required vary between Division I and Division II schools. Application for initial eligibility can be obtained in the Counseling Office or online at eligibilitycenter.org and our school code is 060151. Division III can be through NCAA or NAIA, depending on the school. Please see your counselor in the Counseling Center with any questions regarding NCAA.

ART

(All fees are subject to change)

All fees cover consumable materials used in classroom.

CERAMICS/POTTERY +

Length: Semester

Grades: 9-12

Prerequisite: None

Fee: \$35 includes tools, clay, glazes

Ceramics/Pottery is an introduction to clay consisting of both hand and wheel thrown methods of construction. The course will include an examination of clay, glaze, decoration methods, and firing process. The emphasis of this course focuses on understanding and applying the aesthetics, processes, form, and function of the ceramics art form. Competencies will include technique, craftsmanship and the expressive potential of clay, related to the ceramic processes and aesthetics of the finished object. Students will develop a vocabulary specific to the medium and be aware of the safety issues involved in working with ceramic materials and techniques.

CERAMICS/POTTERY INTERMEDIATE +

Length: Semester

Grades: 9-12

Prerequisite: Ceramics

Fee: \$35 includes tools, clay, glazes

Ceramics/Pottery Intermediate is a continued exploration of basic hand building and wheel throwing techniques. Emphasis on developing proficiency in clay use, surface applications, and kiln firings. Emphasis is on continuing development of personal expression, aesthetic, technical competency and craft in the functional and sculptural ceramic art form. Safety issues continue to be addressed.

CERAMICS/POTTERY ADVANCED +

Length: Semester

Grades: 10-12

Prerequisite: Ceramics Intermediate

Fee: \$35 includes tools, clay, glazes

Ceramics/Pottery Advanced is a continued exploration of basic hand building and wheel throwing techniques. Emphasis is on continuing development of personal expression, aesthetic, technical competency and craft in the functional and sculptural ceramic art form. Students will analyze their own work as well as study the merits and meaning of contemporary and historical works of art. Safety issues continue to be addressed.

CREATIVE ART SCULPTURE – BEGINNING +

Length: Semester

Grades: 9-12

Prerequisite: None

Fee: \$45 includes resin, plaster, foam, adhesives

In this semester long class students will learn methods and materials used to create 3D works of art as they make their way through a game-like series of levels. Specific skills will be taught and implemented in 3 to 5 projects as they relate to the 5 realms of art. Each realm offers a new concept to create a meaningful piece of artwork around. The objective of the class is to complete all 5 realms, reaching the highest level, before the end of the semester. Along the way there will be challenges and rewards just like in a board game. Skills will build upon each other and students will learn additive and subtractive techniques to create their work. Some techniques include mold making, resin casting, and different modeling techniques in a variety of mediums.

CREATIVE ART-DRAWING +

Length: Semester

Grades: 9-12

Prerequisite: None

Fee: \$25 includes pencils, erasers, blending stick, sketchbook, drawing paper, graphite and chalk pastels.

Creative Art-Drawing is an introduction to the fundamentals of drawing. Students will focus on work with a pencil, but will also explore other mediums such as graphite, pastel, and charcoal. Realism skills will be developed through perspective, figure drawing, and portrait drawing, and abstract skills will be developed through a series of projects as well. Contemporary and historical art trends will be incorporated in the course work.

CREATIVE ART-DRAWING INTERMEDIATE +

Length: Semester

Prerequisite: Drawing

Grades: 9-12

Fee: \$25 includes pencils, erasers, blending stick, sketchbook, drawing paper, graphite, pens, inks

Creative Art-Drawing Intermediate will allow students who completed Beginning Drawing to expand their skills, specifically in the areas of color and texture application. Students will explore new mediums and techniques such as colored pencil, ink, printmaking, and large scale, while focusing on further development of observation and compositional elements. Contemporary and historical trends in art will be integrated within this course to enrich student knowledge and awareness.

CREATIVE ART-DRAWING ADVANCED +

Length: Semester

Prerequisite: Drawing Inter and Teacher Approval

Grades: 10-12

Fee: \$25 includes pencils, erasers, blending stick, sketchbook, drawing paper, graphite and chalk pastels.

Creative Art-Drawing Advanced is designed to provide the student with an in-depth and individualized approach to drawing. Students will continue to explore a wide range of new mediums while having the opportunity to revisit and extend on skills and mediums from previous drawing courses. Students will strengthen drawing techniques, analyze their own work, and study the merits and meanings of contemporary and historical works of art.

JEWELRY +

Length: Semester

Prerequisite: None

Grades: 9-12

Fee: \$55 includes supplies, copper, brass, silver, stone, sketchbook.

Beginning Jewelry places an emphasis on The Elements and Principles of Design. Students explore the basics of metalwork processes: sawing, riveting, soldering, and finishing as they relate to the creation of jewelry.

JEWELRY INTERMEDIATE +

Length: Semester

Prerequisite: Jewelry

Grades: 9-12

Fee: \$55 includes supplies, copper, brass, silver, stone,

sketchbook.

Intermediate Jewelry students expand their skills in metalwork. Students explore new techniques while focusing on observation and compositional elements. Forging, metal clay, glass, and other techniques will be explored. Contemporary trends in jewelry will be integrated within this course to enrich student knowledge and awareness.

JEWELRY ADVANCED +

Length: Semester

Prerequisite: Jewelry Inter and Teacher Approval

Grades: 10-12

Fee: \$55 includes supplies, copper, brass, silver, stone, sketchbook.

Advanced Jewelry is designed to provide the student with a more in-depth approach to jewelry design work. Students will explore a wide range of media while strengthening their skills, focusing on a high level of expressiveness. Students will analyze their own work as well as study the merits and meanings of contemporary and historical works of art.

CREATIVE ART-PAINTING +

Length: Semester

Prerequisite: None

Grades: 9-12

Fee: \$35 includes acrylic and watercolor paint, sketchbook, paintbrushes, canvas, varnish.

Students can expect to gain a strong foundation in painting in this beginning level class. Composition, the visual elements, the principles of design, and the basic techniques and concepts of painting will be covered. The end goals are to increase artistic self confidence, increase one's understanding of the basics of painting and to produce successful works. Media used could be various like watercolor, tempera, and acrylic. Students explore art theories, aesthetics, and art history.

CREATIVE ART-PAINTING INTERMEDIATE +

Length: Semester

Prerequisite: Painting

Grades: 9-12

Fee: \$35 includes acrylic and watercolor paint, sketchbook, paintbrushes, canvas, varnish.

This second level course builds upon the experiences of Painting 1. Students who choose to take this course should be confident with their skills and ready to produce more complex finished paintings. An emphasis will be on the development of a more personal style, sophisticated approaches to the development of ideas, development of a greater awareness to art beyond school, and the introduction of new techniques. Artists and contemporary trends will be integrated within this course to enrich student knowledge and awareness.

CREATIVE ART-PAINTING ADVANCED +

Length: Semester

Prerequisite: Painting Intermediate

Grades: 10-12

Fee: \$35 includes acrylic and watercolor paint, sketchbook, paintbrushes, canvas, varnish.

This upper level class builds upon the painting experiences of *Painting Intermediate. The class will provide opportunities to expand painting and related skills; to develop a personal style; to develop creative ideas; to expand one's awareness to art beyond school, and to provide instruction based on a student's particular art or career goals when desired. Proficiency in basic skills will be expected. Artists, artistic movements and cultures may be studied as aesthetics, art history and art criticism are addressed. Some media possibilities are watercolors, mixed media, acrylic, and printing inks.

INTERACTIVE MEDIA – ADOBE PHOTOSHOP + (Front Range Community College Credit Available)

Length: Semester

Grades: 9-12

Prerequisite: None

Fee: \$15 include photo paper, printer ink, matboard, Exacto blade.

The purpose of the class is to introduce the computer generated art program Adobe Photoshop, which specializes in photo editing/manipulation and computer generated painting. It is a beginning level art class that focuses on building foundational graphic design skills, and is designed so everyone can have success regardless of their current level of artistic skill or computer knowledge. All projects are designed to mirror the kind of commercial artwork that we see on a daily basis. In this class students will learn basic design skills to help develop promotional posters, digital photography, packaging art, computer generated drawing/painting, etc...All while using Adobe Photoshop as the medium for creation. Students who complete paperwork and plan to attend Front Range Community College can receive free college credit at Front Range Community College.

INTERACTIVE MEDIA – ILLUSTRATOR +

Length: Semester

Grades: 9-12

Prerequisite: None

Fee: \$15 includes photo paper, printer ink, matboard, Exacto blade

The purpose of the class is to introduce the computer generated art program Adobe Illustrator, which specializes in vector illustrations and type design. It is a beginning level art class that focuses on building foundational graphic design skills, and is designed so everyone can have success regardless of their current level of artistic skill or computer knowledge. All projects are designed to mirror the kind of commercial artwork that we see on a daily basis. In this class students will learn basic design skills to help develop posters, logos, typography, computer generated illustration, etc...All while using Adobe Illustrator as the medium for creation.

COMPUTER GRAPHICS-PRODUCTION DESIGN +

Length: Semester

Grades: 10-12

No Prerequisite but a previous class of Interactive Media-Illustrator or Interactive Media-Adobe Photoshop is encouraged

Fee: \$15 includes photo paper, printer ink, matboard, Exacto blade

The purpose of the class is to introduce the computer generated art program Adobe InDesign, which specializes in layouts and desktop publishing. This is an intermediate level art class that focuses on building foundational graphic design skills, and is designed so everyone can have success regardless of their current level of artistic skill or computer

knowledge. All projects are designed to mirror the kind of commercial artwork that we see on a daily basis. In this class students will continue to develop design skills through the creation of magazine layout, brochure layout, portfolio design, product development, product branding, etc...All while using Adobe InDesign, Photoshop, and Illustrator as the medium for creation.

INTERACTIVE MEDIA MULTIMEDIA +

Length: Semester

Prerequisite: None

Grades: 9-12

Fee: \$15 includes photo paper, printer ink, matboard, Exacto blade

The purpose of the class is to introduce the computer generated art program Adobe Flash, which specializes in motion graphics, computer animation, and non-linear navigation. It is a beginning level art class that focuses on building foundational graphic design skills, and is designed so everyone can have success regardless of their current level of artistic skill or computer knowledge. All projects are designed to mirror the kind of commercial artwork that we see on a daily basis. In this class students will learn basic design skills to help develop frame by frame animations, short movies, promotional clips, motion typography, etc...All while using Adobe Flash as the medium for creation.

INTERACTIVE MEDIA-WEB DESIGN +

Length: Semester

Prerequisite: None

Grade: 10-12

Fee: \$15 includes photo paper, printer ink, matboard, Exacto blade

The purpose of the class is to introduce the computer generated art program Adobe Dreamweaver, which specializes in web design. It is an intermediate level art class that focuses on building foundational graphic design skills, and is designed so everyone can have success regardless of their current level of artistic skill or computer knowledge. The course is taught in an artistic/visually friendly way. All projects are designed to mirror the kind of web layouts that we see on a daily basis. In this class students will learn how to build basic websites in Adobe Dreamweaver that incorporate navigation, interactivity, banners, motion graphics, file structure, and code basics. All websites will be enhanced using other Adobe programs such as Photoshop and Illustrator.

PHOTOGRAPHY +

Length: Semester

Prerequisite: Students furnish their own 35 mm camera

Grades: 9-12

Fee: \$45 include rolls of film, 2 matboards, photo paper, chemicals.

In Photography, students will receive a fundamental course covering selection, care, maintenance, handling of cameras, film types, light metering, and compositional techniques. Emphasis will be on 35mm SLR camera techniques. Basic darkroom procedures such as film processing, contact printing, and enlarging will be covered.

PHOTOGRAPHY INTERMEDIATE +

Length: Semester

Prerequisite: Photography (1 semester)
Students must furnish their own 35mm camera

Grades: 9-12

Fee: \$45 includes sketch book, rolls of film, photo paper, chemicals.

Intermediate Photography emphasizes photography as an art form. Students will be encouraged to use photography as a creative and expressive tool through experimental darkroom techniques, multiple image exposure, hand coloring, and other expressive processes which are used to produce strong visual images.

PHOTOGRAPHY ADVANCED +

Length: Semester

Prerequisite: Photography Inter

Students must furnish their own 35mm

Camera

Grades: 10-12

Fee: \$45 includes sketch book, rolls of film, photo paper, chemicals.

Advanced Photography is designed to provide students with a more in-depth approach to photography. Instruction regarding the creative process becomes focused upon students developing their own artistic style. Historic styles and techniques and contemporary photographic trends will be analyzed as students critique their own work and begin to develop professional portfolios.

DIGITAL PHOTOGRAPHY +

Length: Semester

Grades: 10-12

Fee: \$15 includes ink, photo paper.

Students must furnish their own digital camera

Digital Photography will introduce students to the use of digital cameras and digital image-ending software, primarily using Adobe Photoshop. The roles of scanning processes and equipment, image picture-taking modes and printing preparation, and various out-put devices will be explored in producing the photographic image.

DIGITAL PHOTOGRAPHY INTERMEDIATE +

Length: Semester

Grades: 10-12

Prerequisite: Digital Photography

Fee: \$15 includes ink, photo paper

Students must furnish their own digital camera

Students will continue to learn **complex** digital camera and image editing techniques, including the use of the Camera Raw file format. Computer software, scanning equipment and out-put devices will be employed in the learning and printing process. As well as continuing to investigate the history of photography and contemporary trends, students will critique and display their photographic work.

DIGITAL PHOTOGRAPHY ADVANCED +

Length: Semester

Grades: 11, 12

Prerequisite: Digital Photography Inter

Fee: \$15 includes ink, photo paper

Students must furnish their own digital camera.

Students will explore advanced digital camera and image editing techniques and applications, as the creative process becomes focused upon students developing their own artistic style. Students will gain mastery of such concepts/processes as camera file formats, computer software, scanning equipment and out-put devices. As well as

continuing to investigate the history of photography and contemporary trends, students will critique and display their photographic work and assemble entry-level portfolios.

IB VISUAL ARTS +

Length: Year

Prerequisite: Teacher approval

Grades: 11-12

Fee: \$110 includes sketchbook, drawing paper, pen/Sharpie, pencils and additional art supplies determined by medium of student emphasis. Pay for IB exam.

NOTE: For the 2018-19 school year, this will be an Independent Study and must be a 7th class. The class will still meet on a regular basis.

IB Visual Arts prepares students to take the International Baccalaureate Visual Arts exams at either the Subsidiary or Higher level. The IB Visual Arts course helps develop students' aesthetic and creative faculties, offers training in awareness and criticism of art, and enables students to create quality works of art of their own. Students perform both studio and research work; the research component is designed to investigate particular topics or concepts of interest in further detail.

AP STUDIO ART – 2D DESIGN +

Length: Year

Prerequisite: At least one beginning 2D art class

Grades: 10-12

Fee: \$45 per semester includes: sketchbook, pencils, erasers and additional supplies determined by medium of student emphasis.

Designed for students with a serious interest in art, the AP Studio Art— 2D Design course enables students to refine their skills and create artistic works to be submitted to the College Board for evaluation. Students are asked to demonstrate proficiency in 2D design using a variety of art forms. These could include, but are not limited to, graphic design, typography, digital imaging, photography, collage, fabric design, weaving, illustration, painting or printmaking. This type of design involves purposeful decision making about how to use the elements and principles of art in an integrative way with the entire spectrum of ideas.

AP STUDIO ART – 3D DESIGN +

Length: Year

Prerequisite: 1 year successful completion of 3D courses (listed below).

Grades: 12

Fee: \$45 per semester

Designed for students with a serious interest in art, the AP Studio Art – 3D Design course enables students to refine their skills and create artistic works to be submitted to the College Board for evaluation. Given the nature of the AP evaluation, the course typically emphasizes quality of work and attention to issues in depth and space. These may include mass volume, form plane, light and texture. Such elements and concepts may be articulated through additive, subtractive and/or fabrication processes. These might include traditional sculpture, architectural models, apparel, ceramics, three-dimensional fiber arts, or metal work, among others. Students must complete one of the following combinations to enroll in the 3D Design class.

- 1) Beginning and Intermediate Jewelry class
- 2) Beginning and intermediate Ceramics class

CAREER TECHNICAL EDUCATION

Family and Consumer Sciences, and Technical Education

(All fees are subject to change)

Family Career and Community Leaders of America (FCCLA) is a leadership opportunity that is a curricular component of the Family and Consumer Sciences. Students will have the opportunity to promote personal growth and leadership development through this student lead organization.

TEEN CHOICES +

Length: Semester

Prerequisite: None

Grades: 9, 10

Fee: \$25 includes guest speaker fees, nutritional snack lab, and a student activity book.

This course focuses on social, emotional and physical wellness through emphasizing personal power and success, wellness, personal relationships, understanding human sexuality, and teens and the law. The course will also include methods of handling social pressures, advocating for self & others, and developing and maintaining healthy relationships. During the physical wellness component of this course students will design, implement, and evaluate a personalized physical fitness and nutrition plan.

LIFE MANAGEMENT +

Length: Semester

Prerequisite: None

Grades: 11, 12

Fee: \$25 includes guest speaker fees, cooking labs, meal lab.

Students in Life Management will demonstrate problem solving, communication skills, computation/estimation, career choice, paycheck management and decision making skills for living on their own. Students will apply knowledge to real world situations like managing resources and finances, paying bills, using credit, applying for loans, selecting apartments and cars, and balancing checkbooks to meet their short and long term goals. Becoming an effective consumer will be emphasized. In addition, topics covered may include investment planning, taxes, personal wellness, and time management.

FASHION (Semester One) +

Length: Semester

Prerequisite: None

Grades: 9-12

Fee: \$35 includes poster board, sewing project pattern, jewelry making supplies, knitting supplies, scrapbooking supplies.

Fashion students will experience the traits, characteristics and influences that determine clothing choices and image as well as researching and identifying various fads, fashions, and careers throughout the industry. Students will identify the principles of line, design and color in addition to an understanding of pattern and fabric selection. They also will acquire basic sewing skills/techniques necessary for clothing construction.

FASHION ADVANCED (Semester Two) +

Length: Semester

Prerequisite: Completion of one semester of Fashion

Grades: 9-12

Fee: \$50 includes poster board, sewing project pattern jewelry making supplies, knitting supplies, scrapbooking supplies, and Natl. FCCLA Affiliation

Fashion exposes students to the traits, characteristics and influences that determine clothing choices and image as well as researching and identifying various fads, fashions, and careers throughout the industry. Students will identify the

principles of line, design and color in addition to an understanding of pattern and fabric selection. They also will acquire basics sewing skills/techniques necessary for clothing construction.

CHILD DEVELOPMENT/PARENTING +

Length: Semester

Prerequisite: None

Grades: 10-12

Fee: \$25 includes guest speaker fees, Baby Think It Over, Pre-School art consumables and Pre-School snacks

This Child Development/Parenting course provides students with knowledge about the physical, mental, emotional, and social growth and development of children from conception to adolescence. Course content typically includes topics such as prenatal and birth processes; responsibilities and difficulties of parenthood; fundamentals of children's emotional and physical development; and the appropriate care of infants, toddlers, young children and school-aged children. Students interested in careers with children and/or psychology will find this class an excellent experience.

CULINARY NUTRITION +

Length: Semester

Prerequisite: None

Grades: 9-12

Fee: \$65 includes food supplies

Optional Fee: \$15 for SLHS Gator Gourmet Cookbook

The purpose of this course is to develop lifelong, healthy individuals with an understanding of healthy and nutritious preparation techniques utilizing various resources and skills. Emphasis is placed on implementing healthy nutritional choices, preparing nutrient-dense seasonal foods, sports nutrition, exploring careers related to culinary nutrition, and practicing wise consumer decisions.

CULINARY ART SPECIALTY/CREATIVE +

Length: Semester

Prerequisite: Introductory Foods & Nutrition
Or Culinary Nutrition

Grades: 10-12

Fee: \$75 includes food supplies.

Optional Fee: \$15 for SLHS Gator Gourmet Cookbook.

This is an upper level preparation class that takes an advanced look at culinary skills. Students work in kitchen teams to develop skills through lab experiences which may include breads, appetizers, soups, salads, sandwiches, cake decorating, candy making, event planning and much more. This course gives students the opportunity to use creativity in preparing and serving food.

CULINARY ART SPECIALTY/FOREIGN AND GOURMET +

Length: Semester

Prerequisite: Culinary Arts Specialty/Creative or
Culinary Nutrition

Grades 10-12

Fee: \$75 includes food supplies

This advanced foods class explores the world of gourmet cuisine by first looking at French and haute cuisine foods and then exploring other regions of the world, their culture, history, food, and learning how those cultures influenced the food in the different regions of the U.S. Throughout the class, students develop and refine advanced culinary skills.

PRO START CULINARY +

Length: Year

Prerequisite: Any foods class

Grades: 11, 12

Fee: \$180 includes food supplies & Natl. FCCLA Affiliation

Pro Start is a food service/hospitality management program. This program was developed by the national Restaurant Education Association. This course combines culinary skills with business management skills, along with guest speakers and field trips in the hospitality industry. Students will develop skills in nutrition, breakfast foods, sandwiches, salads, menu development, cost planning, inventory control, and customer service. This course is designed as part of a two-year program to help students prepare for a career in the hospitality industry. Students who wish to obtain national Pro Start certification must complete a 400 hour guided paid internship and pass the National Restaurant Association Exam for Pro Start. Students will have the option of also receiving 3 college credits for this course second semester through Metro State University. The cost of these credits is approximately \$40 per credit hour.

PRO START OJE +

Length: Year

Grades: 11, 12

Prerequisite: First semester Pro Start and

Teacher Permission – See Counselor

(Concurrent Enrollment in Pro Start Culinary)

The Pro Start OJE is a program where students receive credit for working. Students will be required to work an average of 15 hours per week for a minimum of 250 hours per semester in a restaurant or hospitality related industry and receive at least minimum wage. Students will be required to use skills as an effective communicator, complex thinker, responsible citizen, a self-directed learner, ethical worker, and a quality worker. Students must concurrently pass the Pro Start class to earn OJE credit.

WORKPLACE EXPERIENCE +

Length: Semester

Grade: 11, 12

Prerequisite: Must be enrolled in

FACS Course – See Counselor

Workplace Experience courses provide students with work experience in a field related to their interests. Goals are typically set cooperatively by the student, teacher and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace. Credit is awarded based on completion of required paperwork and supervisor(s) evaluation(s).

TEACHER CADET +

Length: Year

Grades: 11, 12

Prerequisite: Teacher Approval and 3.0 Cumulative GPA Fee: \$55 includes professional nametag, field trip costs, end of the year reception & Natl. FCCLA affiliation

This full year course is designed for students who have a strong interest in, or who are considering, a career related to the occupation of “teacher” at any age or grade level. Students will complete self-assessments, participate in individual and group projects, complete observations at various ages and stages of learning, and increase their understanding of themselves and others as “learners.” The culminating event to this class is a 12-week mini- teaching experience during

second semester at an area school where students will plan and deliver lessons under the supervision of a cooperating teacher. This academic elective course is fast paced and students may apply for college credit with a "B" or higher in the class.

TEACHER CADET II – INTERNSHIP +

Length: Year

Prerequisite: Teacher Cadet

Grade: 12

Fee: \$35 includes professional name tag, end of the year reception and Natl. FCCLA Affiliation

This course is designed to provide additional field experience for those students who have completed the Honors Teacher Cadet course. For students who know they want to enter the education profession, this field experience will enhance their experience and understanding of classroom instruction and the challenges facing education today. Field time will include field contact hours working with a mentor plus seminar time at the home high school. Field experience placement will consist of two sites, a different site each semester, to provide a variety of experiences. These will be documented in a culminating portfolio.

STEM

Science, Technology, Engineering, Mathematics

(All fees are subject to change)

Program Description

The STEM (Science, Technology, Engineering, and Math) program has been designed to prepare high school students for careers in engineering and other related STEM related fields. Students will be given specific problems that require the application of concepts from their "academic" courses in order to be solved. There are two Engineering program pathways offered at SLHS.

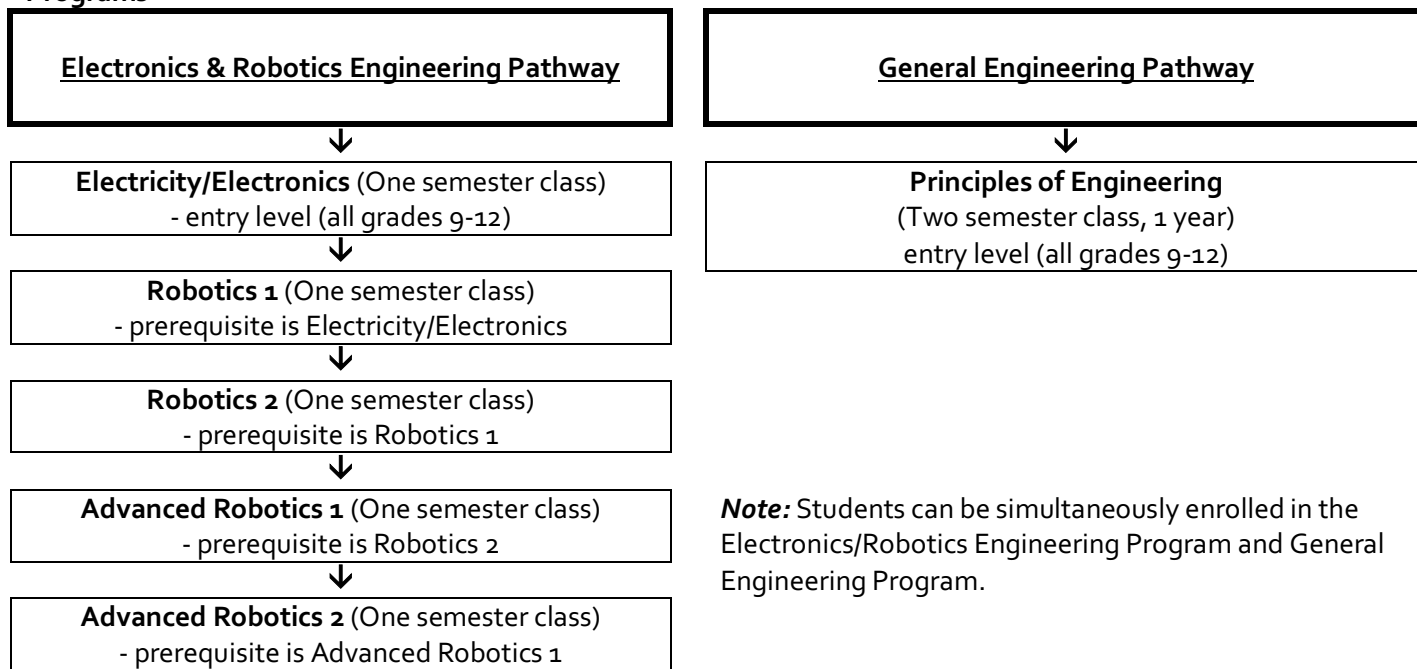
Vision

To provide students with skills for solving real problems using current technology as a tool to support the application of science, engineering, and math concepts. The Standley Lake STEM program strives to be the leader in Jeffco STEM education.

Mission

To develop a STEM program that provides students with the skills required for both career and college opportunities.

Programs



Resources

Standley Lake High School is fortunate to have many resources at its disposal, some equipment available for both programs.

- Kit of parts (KOP) – Each level of Electronics & Robotics Engineering has a specific KOP
- 12 Soldering stations, 19 Digital Multi-meters, and wire strippers
- Mobile Robotics Trainers (driving platform) to build 45 independent behaviors
- Arduino Uno Microprocessors & 'C' programming
- 22 seat Mac Lab with SolidWorks (CADD Software)
- Lulzbot 3D Printer - MIG Welder
- ShopBot Desktop CNC Router - Horizontal Metal Bandsaw
- Epilog Laser Engraver
- Full size Wood Shop/Engineering Shop with Dual table saws, two band saws, two drill presses, table router two belt sanders, three scroll saws, sanding planner, oscillating sander, 8 maple-top workbenches, toolboxes and all the hand tools needed to build projects.
- This program has over 3,500 sq. ft. of usable space, allowing students to spread out and build projects.

Electricity/Electronics

Length: Semester

Grades: 9-12

Prerequisite: None (Entry level, all grades 9-12)

Fee: \$7 - includes 9V Battery & Soldering Blinking Kit

The Electricity/Electronics course offers instruction in the theory of electricity and in the terminology, skills, and safety procedures common to careers involving electricity and electronics. Topics include (but not limited to) Ohm's law, electrical equipment, wiring system, and so on; career exploration is often (but not always) an integral part of these courses. During the semester students will learn about the following; electron current flow theory, reading schematic symbols, metric prefix notation for electronics, reading electronic schematics, build an alternating current (AC) circuit, engineering breadboard usage, use troubleshooting skills, use discrete electronic components, Digital Multi-Meter usage (DMM), use a soldering iron (solder a kit together), series, parallel & combination circuits, electronics language, and using wire strippers for 22g wire.

- *Labs:* Using engineering breadboards, batteries, battery snaps, fixed resistors, light emitting diodes (LED's), diffused super bright light emitting diodes, mini-light bulbs, wire switches, normally open push buttons, normally closed push buttons, SPST mini-toggle switch, SPDT slide switch, bipolar light emitting diodes, AC 3-way switch, PCBA – printed circuit board assembly soldering iron kit, variable resistors, dc motors, and photo-resistors. Students will have the opportunity to build 42 separate circuits.
- *Equipment:* Each student is assigned a kits of parts (KOP) with electronics components, battery, and breadboard. Autodesk Circuits software, and using an Arduino Uno Microcontroller.

Robotics 1

Length: Semester

Grades: 9-12

Prerequisite: Electricity/Electronics

Fee: None

This lab-based course is an introduction to robotics and related scientific and engineering topics. Students will learn the physics of how motors, moving parts, and sensors work. They will also design, build, program and test robots to carry out specific tasks. The class will culminate with an extended robotics challenge.

- *Labs:* Electrolytic capacitors, fast switching diodes, NPN transistors, PNP transistors, super bright light emitting diodes (SLEDs), speakers, disc capacitors, silicon controlled rectifiers, limit "lever" switches, voltage regulator, single-pole double-throw (X2) relay. Students will have the opportunity to build 47 separate circuits.
- *Equipment:* Each student is assigned a kits of parts (KOP) with electronics and robotics 1 components to complete the labs. Students will use a mobile robotics trainer, Autodesk Circuits software, and using an Arduino Uno Microcontroller.

Robotics 2

Length: Semester

Grades: 9-12

Prerequisite: Robotics 1

Fee: None

This lab-based course is an introduction to robotics and related scientific and engineering topics. Students will learn the physics of how motors, moving parts, and sensors work. They will also design, build, program and test robots to carry out specific tasks. The class will culminate with an extended robotics challenge.

- *Labs:* Infrared receiver module (IRM's), NE555 timer integrated circuit (IC), buzzer, condenser microphone, infrared light emitting diode, phototransistor, optical detector, LM386 operational amplifier, voltage regulator, slotted optical interrupter switch and how these components form the backbone of robotics. Students will have the opportunity to build 41 separate circuits.

- *Equipment:* Each student is assigned a kits of parts (KOP) with electronics, robotics 1, and robotics 2 components to complete the Labs. Using the mobile robotics trainer, Autodesk Circuits software and Arduino Uno Microcontroller ('C' programming).

Advanced Robotics 1

Length: Semester

Grades: 9-12

Prerequisite: Robotics 2

Fee: None

This lab-based course is a continuation of Robotics. Students will learn and apply principles of mechanics, electronics, and pneumatics. They will apply engineering principles as they design and build robots, construct their own sensors and connect them, and program the robots in the programming language. The class will incorporate several extensive projects.

- *Labs:* 4013B Dual D Flip-Flop, RGB LED, generator, coil (electromagnet), solenoid, fan, digital & logic gates, quad DIP switches, 4029 binary/decade, up/down counter, 10-segment bar graph, 4511 binary to 7-segment decoder/driver, standard servo, tilt switch, ultrasonic sensor, magnetic reed switch, and motor driver. Students will have the opportunity to build 33 separate circuits.
- *Equipment:* Each student is assigned a Mobile Robotics Trainer, a kits of parts (KOP) with electronics, robotics 1, robotics 2, and advanced robotics 1 components to complete the Labs. Using Autodesk Circuits software and Arduino Uno microcontroller ('C' programming).

Advanced Robotics 2

Length: Semester

Grades: 9-12

Prerequisite: Advanced Robotics 1

Fee: None

This lab-based course is a continuation of Robotics. Students will learn and apply principles of mechanics, electronics, and pneumatics. They will apply engineering principles as they design and build robots, construct their own sensors and connect them, and program the robots in the programming language. The class will incorporate several extensive projects.

- *Labs:* On the Mobile Robotics Trainer, students will finish the set of 45 behaviors with discrete electronic components and then use the Arduino Uno microcontroller to design a program for each of the 45 behaviors on their own.
- *Equipment:* Each student is assigned a Mobile Robotics Trainer, a kits of parts (KOP) with electronics, robotics 1, robotics 2, advanced robotics 1 and advanced robotics 2 components to complete the Labs. Using Autodesk Circuits software and Arduino Uno microcontroller ('C' programming).

Principles of Engineering

Length: 1 year

Grades: 9-12

Prerequisite: None

Fee: None

This course is designed to help students understand the field of engineering and engineering technology, and its career possibilities. Students will solve various engineering problems using CAD software, 3D printer, the engineering design process, and basic fabrication equipment. STEM concepts will be applied to develop and calibrate a catapult that will be used to launch a projectile to specific positions that vary with distance and trajectory. The main purpose of this course is to experience what engineering is all about through theory and hands-on problem-solving activities, and to answer the question, "Is a career in engineering or engineering technology for me?"

- *Projects:* Build a catapult to launch a tennis ball 65 feet accurately. As a class, students will design, fabricate, assemble, test and compete with a human powered vehicle (HPV) for the University of Colorado HPV League. Winner, 1st and 2nd place in 2017.
- *Equipment:* Everything in the Engineering/Wood Shop & Mac Computer Lab.

COMPUTER PROGRAMMING

All fees for Computer Programming provide students with a flash drive, printing privileges, equipment, and circuit components. All fees are subject to change.

COMPUTER PROGRAMMING +

Length: Semester

Prerequisite: Completion of Algebra
With B or better

Grades: 9-12

Fee: \$10 includes study guides, reference manuals,
and storage drives.

In Computer Programming, students learn how to write computer programs using a variety of programming languages. Possible computer programming languages include: C++, C#, Java, Flash ActionScript 3, Python and JavaScript.

Students also learn how to use industry-standard Interactive Development Environment (IDE) software such as Microsoft Visual Studio, Eclipse and Flash or Flex. Learning objectives include: types, variables and standard I/O, truth and branching, for loops, strings and arrays, standard template library, functions (methods in Java), references, pointers, classes, advanced classes and dynamic memory, inheritance and polymorphism.

COMPUTER PROGRAMMING ADVANCED

Length: Year

Grades: 10-12

Prerequisite: Computer Programming

Fee: \$10 includes study guides, reference manuals, and storage drives.

In Computer Programming Advanced, students learn advanced programming topics such as Windows or Mac programming, game development, iPhone and Droid application development and advanced Web development topics using a variety of industry-standard languages such as C++, C#, Java, Flash ActionScript 3 (AS3) and JavaScript.

Optional advanced programming topics may include:

Scripting using industry-standard scripting languages such as Perl, Ruby, and Python

Database programming using extended Markup Language (XML) and Structured Query Language (SQL)

WEB PAGE DESIGN BEGINNING +

Length: Semester

Grades: 9-12

Prerequisites: Completion of Algebra I with a C or better

Fee: \$10 includes Adobe licenses.

Students will learn the history of the Internet, email principles, HTML coding, and FTP. Hand coding of HTML programming will be required to build a strong knowledge of how this language works before moving to WYSIWYG (what you see is what you get) program use. Students will learn to create solid navigation architecture, address a target audience as well as information planning and usability analysis. Beginning graphic design for the Web will address site look, feel and voice and creation of GIF and JPEG images. Multimedia MIDI sound files will also be introduced.

BUSINESS COMPUTER APPS +

Length: Semester

Grades: 9-12

Prerequisite: None

Fee: \$10 includes Software Licensing and Program Subscriptions

Business Computer Apps introduces computer concepts and components as well as application suite software and the Internet. Included are hands-on experiences with word processors, spreadsheets, databases, presentation software, operating environments, and other common applications packages.

ENGLISH

(All fees are subject to change)

Summer Reading: Every student must read the specific works selected by the English Department for his/her particular class before the first day of class.

ENGLISH/LANG ARTS 9*

Length: Year

Grade: 9

Prerequisite: None

English/Language Arts 9 incorporates the five aspects of Language Arts: reading, writing, speaking, listening, and viewing. Study of genres leads to written compositions that build upon students' prior knowledge of grammar, vocabulary, word usage, and mechanics. Students apply comprehension and critical reading skills to both literature and nonfiction.

ENGLISH/LANG ARTS 9 HONORS*

Length: Year

Grade: 9

Prerequisite: Teacher Recommendation

Fee: \$7 includes online vocabulary program

English/Language Arts 9 Honors incorporate the five aspects of Language Arts: reading, writing, speaking, listening, and viewing. Study of genres leads to written compositions that build upon students' prior knowledge of grammar, vocabulary, word usage, and mechanics. Students apply comprehension and critical reading skills to both literature and nonfiction. The Honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex test/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the Honors course.

Students will be required to purchase additional texts on their own which will be used throughout all Honors English, Pre IB, IB, and AP classes for four years. Texts cost approximately \$100.

ENGLISH/LANG ARTS 10*

Length: Year

Grade: 10

Prerequisite: None

English/Language Arts 10 offers a balanced focus on composition and literature. Students read widely to improve their reading rate, vocabulary, and comprehension and develop skills to determine the author's intent and theme and to recognize the techniques used by the author to deliver his or her message. Students apply knowledge of purposes and audiences by studying and producing various genres. Oral communication is practiced in group settings as well through presentations.

ENGLISH/LANG ARTS 10 HONORS*

Length: Year

Grade: 10

Prerequisite: Application Required

Fee: \$7 includes online vocabulary program

English/Language Arts 10 Honors offers a balanced focus on composition and literature. Students read widely to improve their reading rate, vocabulary, and comprehension and develop skills to determine the author's intent and theme and to recognize the techniques used by the author to deliver his or her message. Students apply knowledge of purposes and audiences by studying and producing various genres. Oral communication is practiced in group settings as well through presentations. The Honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

Students will be required to purchase additional texts on their own which will be used throughout all Honors English, Pre IBM, IB and AP classes for four years. Texts cost approximately \$100.

ENGLISH/LANG ARTS 11*

Length: Year

Grade: 11

Prerequisite: None

English/Language Arts 11 develops students' writing skills, emphasizing clear, logical writing patterns, word choice, and usage, which students apply to compositions that utilize research and rhetoric. Students read nonfiction and literary works as a means to understand the world and to inform their writing. Literary conventions and stylistic devices may receive greater emphasis than in previous courses. Participation in class dialogue and delivering presentations are expectations of this course.

AP ENGLISH LANG & COMP*

Length: Year

Grade: 11

Prerequisite: Teacher Recommendation Only

Fee: \$7 includes online vocabulary program and AP Exam.

Following the College Board's suggested curriculum designed to parallel college-level English courses, AP English Language and Composition courses expose students to prose written in a variety of periods, disciplines, and rhetorical contexts. These courses emphasize the interaction of author's purpose, intended audience, and the subject at hand, and through them, students learn to develop stylistic flexibility as they write compositions covering a variety of subjects that are intended for various purposes.

AP ENGLISH LIT AND COMP*

Length: Year

Grade: 12

Prerequisite: Teacher Recommendation Only

Fee: \$7 includes online vocabulary program and AP Exam.

Following the College Board's suggested curriculum designed to parallel college-level English courses, AP English Literature and Composition courses enable students to develop critical standards for evaluating literature. Students study the language, character, action, and theme in works of recognized literary merit; enrich their understanding of connotation, metaphor, irony, syntax, and tone; and write compositions of their own (including literary analysis, exposition, argument, narrative, and creative writing).

ENG 12: COMP/LIT/COLLEGE BOUND (Concurrent Enrollment Course)

Length: Year

Grade: 12

Prerequisite: Qualifying SAT or Accuplacer Test Score or Grade of a B or higher in 11th Grade English

Fee: Purchase College text book

ENG 121 (1st semester) emphasizes the planning, writing, and revising of compositions, including the development of critical and logical thinking skills. This course includes a minimum of five compositions that stress analytical, evaluative, and persuasive/ argumentative writing. ENG 122 (2nd semester) expands and refines the objectives of English Composition I. The Senior Capstone Project encourages students to engage with the local community (either individually or collaboratively) through choice of internship, service, or other creative endeavors. Students will ultimately submit an 8-10 page research paper related to their project. Both courses are taught concurrently through

Front Range Community College and are part of the statewide Guaranteed Transfer courses. Students who earn a C or better in the class will receive 6 transferable college credits through FRCC.

ENGLISH/LANGUAGE ARTS 12

Length: Year

Grade: 12

Prerequisite: None

English/Language Arts 12 blends composition, analytical reading, and literature into a cohesive whole. Students combine purposes, patterns and genres in writing while incorporating research and rhetorical techniques. Collaboration and critical thinking lead to more complex presentations and products, with students honing their comprehension skills while reading more complicated literary and nonfiction texts. Through personalized assessments, students will have the opportunity to mold the course according to their interests; the focus will be to improve skills to prepare for the future. Grading is based on a standards based competency model.

The following are elective courses offered by the English Department. Students will receive elective credit for these courses.

THEATRE-ACTING/PERF BEGINNING +

Length: Semester

Grades: 9-12

Prerequisite: None

Theatre-Acting/Performance (formally Drama) is intended to promote students' experience and skill development in one or more aspects of theatrical production, but they concentrate on acting and performance skills. This course is introductory in nature.

THEATRE-ACTING/PERF INTERMEDIATE +

Length: Semester

Grades: 9-12

Prerequisite: Drama-Acting/Performance

Theatre-Acting Performance (formally Drama) Intermediate is intended to promote students' experience and skill development in one or more aspects of theatrical production, but they concentrate on acting and performance skills. This course is for those who have had the initial acting course. The focus is on improving technique, expanding students' exposure to different types of theatrical techniques and traditions, and increasing their chances of participating in public productions.

THEATRE-COMPREHENSIVE +

Length: Spring Semester

Grades: 10-12

Prerequisite: Drama-Acting/Performance
Beginning and Intermediate

Fee: \$25 includes costumes, props,
set construction materials

Theatre-Comprehensive (formally Drama) is intended to help develop students' experience and skill in one or more aspects of theatrical production. Initial courses are usually introductory in nature, providing an overview of the features of drama such as acting, set design, stage management, and so on. The more advanced courses concentrate on improving technique, expanding students' exposure to different types of theatrical techniques and traditions, and increasing their chances of participating in public productions. These courses may also provide a discussion of career opportunities in the theater.

Students will perform three public productions.

THEATRE ARTS-CHILDREN'S +

Length: Fall Semester

Prerequisite: Drama-Acting Perf
Beginning and Intermediate

Grades: 10-12

Fee: \$25 includes costumes, props,
set construction materials

Theatre Arts-Children's focuses on the study and performance of drama using children's productions. It is intended to promote students' experience and skill development in one or more aspects of theatrical production, but they concentrate on acting and performance skills for children's productions. Students will write a children's play and tour it to the local elementary schools.

CREATIVE WRITING*

Length: Semester

Prerequisite: None

Grades: 10-12

Creative Writing offers students the opportunity to develop and improve their technique and individual style in poetry, short story, drama, essays, and other forms of prose. The emphasis is on writing; however, students may study exemplary representations and authors to obtain a fuller appreciation of the form and craft. Although most creative writing courses cover several expressive forms, others concentrate exclusively on one particular form (such as poetry or playwriting).

JOURNALISM*

Length: Semester

Prerequisite: None

Grades: 9-12

Fee: \$15 includes The Denver Post

Journalism courses (typically associated with the production of a school newspaper, yearbook, or literary magazine) emphasize writing style and technique as well as production values and organization. Journalism courses introduce students to the concepts of newsworthiness and press responsibility; develop students' skills in writing and editing stories, headlines, and captions; and teach students the principles of production design, layout, and printing. Photography and photojournalism skills may be included.

ADVANCED JOURNALISM

Length: Year

Prerequisite: Journalism and/or a recommendation
from an English Teacher and the Newspaper Adviser

Grades: 10-12

Fee: None

Publication Production courses provide students with the knowledge and skills necessary to produce the school newspaper, yearbook, literary magazine, or other printed publication. Students may gain experience in several components (writing, editing, layout, production, and so on) or may focus on a single aspect while producing the publication.

PUBLICATION PROD: YEARBOOK

Length: Year

Prerequisite: Advisor signature

Grades: 10-12

Publication Production courses provide students with the knowledge and skills necessary to produce the school newspaper, yearbook, literary magazine, or other printed publication. Students may gain experience in several components (writing, editing, layout, production, and so on) or may focus on a single aspect while producing the publication.

MATH

(All fees are subject to change)

A graphing calculator is required for ALL the math courses offered. The Math Dept. has provided two options for the students to acquire a graphing calculator: (1) a new graphing calculator can be purchased from a retail store for approximately \$100 and (2) a used graphing calculator can be rented for those on free/reduced lunch as supplies are available.

ALGEBRA I*

Length: Year

Grade: 9, 10

Prerequisites: Pre-Algebra or Middle School Math

Fee: \$10 workbook resources

This course meets 9th grade Colorado standards by following district approved Algebra curriculum and counts as first year of graduation requirements. Algebra I includes the study of properties and operations of the real number system including irrational numbers, applications of proportional reasoning, and solving and graphing first degree equations, inequalities and systems of linear equations. Students generate equivalent expressions, use formulas to solve problems, simplify and factor polynomials and solve simple quadratic equations. An emphasis is placed on analyzing situations verbally, numerically, graphically, and symbolically. To meet 21st century learning, students use technology and models to investigate and explore mathematical ideas and relationships and develop multiple strategies for analyzing complex situations.

GEOMETRY*

Length: Year

Grades: 9-11

Prerequisites: Algebra I

Fee: \$10 workbook resources

This course meets 10th grade Colorado standards by following the district approved Geometry curriculum and counts as second year of graduation requirements. This course develops the structure of Euclidean geometry and applies the resulting theorems and formulas to address meaningful problems. It includes properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems and proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; rules of angle measurement in triangles and concepts of coordinate geometry and trigonometry. Dynamic geometry software, compass and straightedge, and other tools are used to investigate and explore mathematical ideas and relationships and to develop multiple strategies for analyzing complex situations.

GEOMETRY HONORS*

Length: Year

Grade: 9

Prerequisite: Algebra I with a grade of B or
Higher and teacher recommendation

Fee: \$10 workbook resources

This course meets 10th grade Colorado standards by following the district approved Geometry curriculum and counts as second year of graduation requirements. This course develops the structure of Euclidean geometry and applies the resulting theorems and formulas to address meaningful problems. It includes properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems and proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; rules of angle measurement in triangles and concepts of coordinate geometry and trigonometry. Dynamic geometry software, compass and straightedge, and other tools are used to investigate and explore mathematical ideas and relationships and to develop multiple strategies for analyzing complex situations. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

ALGEBRA II*

Length: Year

Grades: 9-12

Prerequisite: Geometry

Fee: \$10 workbook resources

This course follows the Algebra II district approved curriculum and counts as a third year of graduation requirements. Algebra II topics include operations with rational and irrational expressions, in-depth study of linear equations and inequalities, analyzing and solving quadratic functions including complex numbers, solving systems of linear and quadratic equations, properties of higher degree equations, and operations with rational and irrational exponents. Students investigate and solve linear piece wise, absolute value, cubic, radical, exponential, logarithmic, and rational functions algebraically, numerically, and graphically, with and without a graphing calculator. Students analyze data and develop mathematical models to address real world problem situations.

ALGEBRA II HONORS*

Length: Year

Grades: 9, 10

Prerequisite: Geometry with grade of B or
Higher and teacher recommendation

Fee: \$10 workbook resources

This course follows the Algebra II district approved curriculum and counts as a third year of graduation requirements. Algebra II topics include operations with rational and irrational expressions, in-depth study of linear equations and inequalities, analyzing and solving quadratic functions including complex numbers, solving systems of linear and quadratic equations, properties of higher degree equations, and operations with rational and irrational exponents. Students investigate and solve linear piece wise, absolute value, cubic, radical, exponential, logarithmic, and rational functions algebraically, numerically, and graphically, with and without a graphing calculator. Students analyze data and develop mathematical models to address real world problem situations. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and

higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

ALGEBRA INTERMEDIATE (This course is not NCAA approved)

Length: Year

Grades: 11, 12

Prerequisite: Geometry and teacher recommendation

Fee: \$10 workbook resources

This course follows the 11th grade district approved curriculum and counts as the third year of graduation requirements. Intermediate Algebra connects and extends algebra and geometry concepts. This course focuses on modeling various situations using rigorous mathematics with an emphasis on real numbers and algebraic properties, graphing skills, and applications drawn from a variety of areas including algebra, statistics, geometry, and continuous and discrete mathematics. Topics include polynomials, factoring, exponents and their notation, matrices, linear functions, linear systems and inequalities, quadratics, exponential functions, geometric connections, trigonometry and topics in probability and statistics. Students apply mathematical skills and make meaningful connections to life's experiences.

ALGEBRA III*

Length: Year

Grades: 11,12

Prerequisite: Algebra II and Teacher Recommendation

Fee: \$10 workbook resources

This full year course reviews and extends algebraic concepts for students that have already taken Algebra II. Topics include all of the one semester topics along with operations with irrational exponents, conics, exponential and logarithmic functions, matrices and determinants, sequences, series, probability and trigonometry.

PRE-CALCULUS/TRIGONOMETRY*

Length: Year

Grades: 10-12

Prerequisite: Algebra II

Fee: \$10 for online book access and \$10 workbook resources

This course combines the study of trigonometry, elementary functions, analytical geometry and math analysis topics as preparation for calculus. Topics include the study of complex numbers, polynomial, logarithmic, exponential, rational, right trigonometric and circular functions and their relations, inverses, and graphs, trigonometric identities and equations, solutions of right and oblique triangles, vectors, parametric equations and their graphs, the polar coordinate system, conic sections, and limits. NOTE: This class includes Calculus A topics.

*Students will have the option of also receiving 3 college credits for this course each semester through the University of Colorado at Denver's CU-Succeed Program. The cost for these credits is approximately \$75 per credit hour.

INFERENTIAL PROBABILITY & STATISTICS*

Length: Year

Grade: 11, 12

Prerequisite: Algebra II or Teacher Approval

Fee: \$10 workbook resources

This full year course provides a means by which the student will become a more effective communicator through the study of probability and statistics. It focuses deeply on descriptive statistics, with an introduction to inferential statistics. Topics include sample spaces, measures of central tendency, normal curve, sampling techniques, standard deviation, t-test, correlation coefficient, techniques for determining probabilities, and matrix algebra. Students will be able to conduct a hypothesis test for a population mean, a population proportion, and a population variance; construct confidence intervals for population parameters; and conduct regression analysis for variables. Technology will be emphasized through the use of graphing calculators.

*Students will have the option of also receiving 3 college credits for this course second semester through the University of Colorado at Denver's CU-Succeed Program. The cost for these credits is approximately \$75 per credit hour.

AP CALCULUS AB*

Length: Year

Grades: 11, 12

Prerequisite: Pre Calc/Trig

Fee: students required to purchase textbook and pay for AP Exam and \$10 workbook resources

This course follows the College Board's suggested curriculum designed to parallel college-level calculus courses. AP Calculus AB provides students with an intuitive understanding of the concepts of calculus and experience with its methods and applications. This course introduces calculus and includes the following topics: elementary functions; properties of functions and their graphs; limits and continuity; differential calculus (including definition of the derivative, derivative formulas, theorems about derivatives, geometric applications, optimization problems, and rate-of change problems); and integral calculus (including anti-derivatives, the definite integral and application of integrals).

*Students will have the option of also receiving 4 college credits for this course second semester through the University of Colorado at Denver's CU-Succeed Program. The cost for these credits is approximately \$75 per credit hour.

AP CALCULUS BC/*

MULTIVARIATE CALCULUS HON*

Length: Year (AP Calculus BC 1st semester and Multivariate Calculus Hon 2nd semester, 0.5 credit each semester)

Grade: 12

Fee: students required to purchase textbook and pay for AP Exam and \$10 workbook resources

This course follows the College Board's suggested curriculum designed to parallel college-level calculus courses. AP Calculus BC provides students with an intuitive understanding of the concepts of calculus and experience with its methods and applications, and also requires additional knowledge of the theoretical tools of calculus. This course assumes a thorough knowledge of elementary functions, and covers all of the calculus topics in AP Calculus AB as well as the following topics: vector functions, parametric equations and graphs, polar coordinates and functions, advanced techniques of integration, advanced applications of the definite integral, polynomial approximation and series.

One semester Multivariate Calculus includes the study of hyperbolic functions, improper integrals, directional derivatives, multiple integration and its applications. The honors course prepares students for advanced course work and

engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

*Students will have the option of also receiving 4 college credits for this course each semester through the University of Colorado at Denver's CU-Succeed Program. The cost for these credits is approximately \$75 per credit.

MUSIC

(All fees are subject to change)

All Choir students have an accompaniment fee of \$50 per year. Students enrolled in more than one choir pay only one fee. Instrumental Music students have an Instrumental rental fee of \$125 annually (if applicable).

VOCAL ENSEMB-TREBLE +

Length: Year

Grades: 9-12

Prerequisite: None

Fee: \$10 robe cleaning & \$50 accompanist fee

This treble, non-auditioned ensemble is open to all singers who wish to explore choral music on the high school level. Students will be expected to build upon their musicianship skills and to grow as performers and musicians through the study of music theory, sight-singing, and self-evaluation. Focus will be directed to the treble female voice and the unchanged male voice. Choral music will be selected to showcase these strengths and interests. Students will sing a wide variety of music ranging from standard choral literature to pop and Broadway tunes as well as solo literature. Students will have the opportunity to audition for Honor/All-State choirs. This class may be repeated.

CHORUS-TREBLE ADVANCED +

Length: Year

Grades: 10-12

Prerequisite: One Year of High School Choir or
Instructor Signature

Fee: \$50 accompanist fee

This auditioned, year-long ensemble is open to all students in the 10th-12th grades who have an interest in singing. Students will learn music theory/music reading skills as well as standard high school choral techniques. Students will sing a wide range of music ranging from standard choral literature to pop and Broadway tunes as well as solo literature. Students will have the opportunity to audition for Honor/All-State choirs. Outside of the school day performances are an expectation of this ensemble. This class may be repeated.

VOCAL ENSEMB-TENOR/BASS +

Length: Year

Grades: 9-12

Prerequisite: None

Fee: \$10 robe cleaning & \$50 accompanist fee

This tenor/bass, non-auditioned ensemble is open to all singers who wish to explore choral music on the high school level. Students will be expected to build upon their musicianship skills and to grow as performers and musicians

through the study of music theory, sight-singing, and self-evaluation. Focus will be directed to the tenor/bass, changed male voice. Choral music will be selected to showcase these strengths and interests. Students will sing a wide variety of music ranging from standard choral literature to pop and Broadway tunes as well as solo literature. Students will have the opportunity to audition for Honor/All-State choirs. This class may be repeated.

VOCAL ENSEMBLE – ADVANCED (SELECT) +

Length: Year

Grades: 10-12

Prerequisite: Must Audition

Fee: \$150 includes \$100 performance attire & \$50 accompanist fee

This mixed ensemble of 18-24 is open by audition only to 10th, 11th, and 12th graders who have at least one year of singing experience in another high school ensemble. Students will be expected to be able to sight read and have a basic understanding of music theory. Repertoire will be selected to showcase the more advanced nature of this group while providing a wide variety of musical genres. Singers will be expected to prepare auditions for All-State choir as well as local honor choirs. Outside of the school performances as well as off campus performances are an expectation of this ensemble. This class may be repeated with successful completion of audition.

CONCERT BAND +

Length: Year

Grades: 9-12

Prerequisite: None

Fee: \$60, performance fees and transportation

Concert Band is open to all students grades 9-12 who demonstrate an interest in developing their performing skills and technical proficiency through performance in band. This large concert ensemble performs a variety of wind band repertoire. During the school year, this ensemble performs concerts in our school auditorium and also attends state-wide concert band festivals. No prior experience is necessary. Additional fees for concert attire and use of school instruments may apply.

CONCERT BAND SYMPHONIC

Length: Year

Grades: 9-12

Prerequisite: Audition required

Fee: \$60, performance fees and transportation

Symphonic Band is designed to promote more intermediate techniques for playing brass, woodwind, and percussion instruments and cover a variety of band literature styles, primarily for concert performances.

CONTEMPORARY/JAZZ BAND (JAZZ ONE) +

Length: Year

Grades: 9-12

Prerequisite: Instrument

Fee: \$60, performance fees and transportation

Jazz One is non-auditioned class open to standard big band instrumentation. This ensemble performs standard repertoire from all periods of jazz. Students are introduced to improvisation and also refine note and rhythm reading skills. During the school year, this ensemble performs concerts in our school auditorium and at community venues, as well as attends state jazz festivals. Concurrent enrollment in a concert ensemble is strongly recommended. Additional fees for concert attire and use of school instruments may apply.

CONTEMPORARY BAND/JAZZ BAND INTERMEDIATE (JAZZ TWO) +

Length: Year

Grades: 9-12

Prerequisite: Audition and Teacher Approval

Fee: \$60, performance fees and transportation

Signature Jazz is an audition only class open to standard big band instrumentation. This ensemble performs standard repertoire from all periods of jazz. Students are introduced to improvisation and also refine note and rhythm reading skills. During the school year, this ensemble performs concerts in our school auditorium and at community venues, as well as attends state jazz festivals. Additional fees for concert attire and use of school instruments may apply.

ORCHESTRA +

Length: Year

Grades: 9-12

Prerequisite: Instrument

Fee: \$50 performance fees and transportation

Orchestra is a non-auditioned string ensemble which is open to 9th through 12th graders. Students in Concert Orchestra will learn techniques for playing string instruments, as well as how to read music, effectively play within an ensemble, and understand basic music theory. A variety of musical styles will be covered for concert performances.

CHAMBER ORCHESTRA +

Length: Year

Grades: 9-12

Prerequisite: Instrument, Audition

Fee: \$50 performance fees and transportation

Chamber Orchestra is a small, select string ensemble which is open to 9th through 12th graders by audition only, held each spring. Students in Chamber Orchestra will learn more advanced string repertoire, requiring advanced techniques on their instruments, well-developed ensemble skills, and a greater understanding of music theory. A variety of musical styles will be covered for concert performances.

AP MUSIC THEORY

Length: Year

Grades: 10, 11, 12

Prerequisite: Approval from Mrs. Chatfield

The AP Music Theory course resembles that of a college freshman year theory course. Significant critical, analytical and creative thinking skills are fostered in most parts of the course, especially when dealing with texture, harmonic progression, formal structuring and style. AP Examination questions emphasize the synthesis of musical knowledge into usable musical understanding, asking questions that require a high level of comparison and analysis. You'll learn the fundamentals of music, how the elements of music are expressed through history and style and you'll create imitative musical compositions. Musicianship skills such as score reading, dictation, audiation, sight-singing, playing the piano and using music technology are developed within the scope of the curriculum.

The student's prior ability to read and write musical notation is highly recommended but not required. It is also highly recommended that the student have acquired some basic performance skills on an instrument or with the voice.

This course is a self-motivated class and will require daily note taking and neat handwriting skills. Students are

expected to take the AP Music Theory Exam in May in efforts of earning a score of 3 – 5, which will yield credit towards music theory college course offerings depending on the institution.

PHYSICAL EDUCATION

(All fees are subject to change)

LIFETIME FITNESS

Length: Semester
Prerequisite: None

Grade: Mandatory for 9th Graders
Fee: \$17 PE uniform

Lifetime Fitness is a mandatory class for all 9th grade students. Lifetime Fitness has two components: classroom learning as well as exercise geared for lifetime physical fitness. In the classroom, students acquire the skills, habits and knowledge necessary for lifelong fitness. Topics include the Physical Activity Pyramid, principles of physical fitness and self-management skills. During the exercise component, students will engage in regular physical activity, as well as create and carry out a personalized fitness plan.

WEIGHT TRAINING

Length: Semester
Prerequisite: None

Grades 10-12
Fee: \$17 PE uniform

Weight Training teaches basic weight training techniques and safety skills. Students will learn various weight workouts as well as basic anatomy.

ADVANCED WEIGHTS

Length: Semester
Grade: 10-12
Prerequisite: Participation in an Interscholastic Sport or completion of Intro to Weights with a grade of 85% or higher.
Fee: \$17 PE uniform

Strength and Conditioning helps students and student/athletes develop advanced weight training skills, techniques, knowledge, and experience that will in turn help them in their sports and lifetime physical fitness. This class also includes conditioning activities that help develop muscular strength, speed, agility, explosiveness, flexibility, and cardiovascular fitness.

SPECIFIC SPORTS ACTIVITIES – Male/Female BASKETBALL

Length: Semester
Grades: 9-12
Prerequisite: Participation in Interscholastic Basketball

Specific Sports Activities help student athletes develop knowledge, experience, and skills related to basketball.

SPECIFIC SPORTS ACTIVITIES – CHEER/POM

Length: Semester
Grades 9-12
Prerequisite: Must try-out and make the cheer or pom team for the Fall of 2018.

SPECIFIC SPORTS ACTIVITIES - FOOTBALL

Length: Semester
Grades: 10-12 First Semester
Prerequisite: Participation in Interscholastic Football
9-11 Second Semester

Specific Sports Activities help student athletes develop knowledge, experience, and skills related to football.

TEAM SPORTS

Length: Semester
Grade: 10-12
Prerequisite: None
Fee: \$17 PE uniform

Team Sports courses provide students with knowledge, experience, and an opportunity to expand their skills in more than one team sport (such as tennis, golf, badminton, basketball, volleyball and so on).

This class may go bowling one day per week during block days (the fee is approx. \$4 each time each week). Students will drive or ride with classmates to the bowling alley with parent approval and signed waivers.

RECREATION SPORTS

Length: Semester
Grade: 12

Prerequisite: Any PE Class

Recreation Sports courses provide students with knowledge, experience, and an opportunity to develop skills in more than one recreational sport or activity. On-campus activities may include basketball, badminton, team handball, floor hockey, football, soccer, tennis, Frisbee and volleyball. Off-campus activities may include bowling, laser-maze, sand volleyball, yoga, self-defense, golf, ice skating, racquet ball and stadium tours. All activities are subject to change each semester. This class is offered to seniors only and may be taken only one semester.

This class will experience a variety of off-campus activities at an estimated cost of \$50 per student.

SCIENCE

(All fees are subject to change)

Science Course Pathways

Grade	Standard Path	Honors Path For Students with high interest/proficiency in science & math	IB Path
9	Biology	Honors Biology	Honors Biology
10	Physics Chemistry/Physics Principles	Physics and/or Chemistry	Pre-IB Physics & Chemistry
11	Chemistry Physics Chemistry/Physics Principles Environmental Science	Chemistry AP Physics AP Chemistry Senior Honors Earth Science	HL IB Biology - Year 1 HL IB Chemistry - Year 1
12	Chemistry or Physics Environmental Science Chemistry/Physics Principles	AP Chemistry AP Physics Senior Honors Biology Senior Honors Earth Science	HL IB Biology - Year 2 HL IB Chemistry - Year 2

*****The Standard path and Honors path are not exclusive. Students may cross over at any time.**

*Physics & Chemistry are the preferred courses for most 4 year Colleges and for Science & Technology career paths. Students that have indicated a Science & Technology career path in ICAP may elect to take multiple science classes in the same year. Check with your counselor for availability.

BIOLOGY*

Length: Year

Grade: 9

Prerequisite: None

Fee: \$25 Science project fee

Biology is designed to provide information regarding the fundamental concepts of life and life processes. These courses include (but are not restricted to) such topics as biochemistry, cell structure and function, ecology, general plant and animal physiology, genetics, and taxonomy.

BIOLOGY HONORS*

Length: Year

Grade: 9

Prerequisite: Grade 9 must have C or better
in 8th grade science

Fee: \$25 Science project fee

Biology is designed to provide information regarding the fundamental concepts of life and life processes. These courses include (but are not restricted to) such topics as biochemistry cell structure and function, ecology, general plant and animal physiology, genetics, and taxonomy. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

CHEMISTRY*

Length: Year

Grades: 11, 12

Prerequisite: None

Fee: \$15 includes book fee and science project fee.

Chemistry involves studying the composition properties and reactions of substances. This course explores the behavior of solids, liquids and gasses; acid/base and oxidation/reduction reactions; atomic structure, chemical formulas, equations, and reactions. This class is recommended for those planning on attending a 4-year college program. Strong math skills are highly recommended for this class.

PHYSICS*

Length: Year

Grades: 10, 11, 12

Prerequisite: Strong understanding of
Algebra I skills

Fee: \$15 includes book fee and science project fee.

First semester Physics involves the study of the forces and laws of nature affecting matter such as equilibrium, motion, momentum, and the relationships between matter and energy. Second semester Physics includes examination of sound, light, and magnetic and electric phenomena. This class is recommended for those planning on attending a 4-year college program.

CHEMISTRY/PHYSICS PRINCIPLES

Length: Year

Grades: 10, 11, 12

Prerequisite: None

Fee: \$10 Science project fee.

This course integrates both chemistry and physics into a unified domain of study. It will introduce the fundamental concepts of scientific inquiry, the structure of matter, chemical reactions between energy and matter, and the physics principals of velocity, acceleration, force, & energy. This course will be centered in the classroom with the majority of work completed in class. Both chemistry and physics use mathematics, so it will be a part of the curriculum. This course can produce scientifically literate citizens capable of using their knowledge of physical science to solve real-world problems and to make personal, social and ethical decisions that have consequences beyond the classroom walls.

ENVIRONMENTAL SCIENCE

Length: Year

Grades: 11, 12

Prerequisite: None

Fee: \$10 Science project fee.

Environmental Science examines the mutual relationships between organisms and their environment. In studying the interrelationships among plants, animals and humans, this course covers the following subjects: Ecosystems, pollution, population, climate change, land use and conservation of natural resources.

AP PHYSICS 1*

Length: Year

Grades: 11, 12

Prerequisite: completion of Algebra II and strong math skills; if you are in Calculus, you should be enrolled in AP PHYSICS C, not this course.

Fee: Students are expected to purchase a textbook and pay for the AP Exam

Designed by the College Board to parallel college-level physics courses that provide a systematic introduction to the main principles of physics and emphasize high level conceptual and mathematical problem solving without calculus. Course content includes kinematics, forces, energy and momentum conservation, rotational motion, waves and sound, electrostatics and circuits. This course will be taught concurrently with AP PHYSICS C (Mechanics) and will require the ability to complete some independent work in class and mandatory attendance of a minimum of 12 hours of sessions outside of class-time.

AP PHYSICS C (Mechanics)*

Length: Year

Grades: 11, 12

Prerequisite: Currently taking (or have taken)
Calculus or IB Math SL

Fee: Students are expected to purchase a
textbook and pay for the AP Exam

Designed by the College Board to parallel the college-level physics courses that serves as a foundation for science and engineering majors, the AP Physics C course primarily focuses on mechanics. AP Physics C courses are more intensive and analytical than the AP Physics 1 course and require the use of calculus to solve the problems posed. This course emphasizes problem-solving and lab experiments. Topics covered include: kinematics, forces, energy and momentum conservation, rotational motion, oscillations and gravitation. This course will be taught concurrently with AP Physics 1.

AP CHEMISTRY*

Length: Year

Prerequisite: Successful completion of Chemistry and Algebra 2 with a C or better. Physics is also required, but may be enrolled in concurrently.

Grade: 11, 12

Fee: Students are expected to purchase textbook and pay for the AP exam

AP Chemistry follows the curriculum as set by the College Board. This course emphasizes the fundamental concepts of chemistry such as structure and states of matter, intermolecular forces, reactions, and how to use chemical calculations to solve problems. The skills learned in this class will prepare the student for college classes in the physical and life sciences.

SENIOR SCIENCE SEMINARS – COURSES LISTED AS FOLLOWS:

‡Prerequisite: Both Physics and Chemistry are required, but a student who has completed only one of these may enroll in the other concurrently with a Senior Science course. Grades for all science courses should be B's or better.

SCI SEM-EARTH SCI SPRING: FIELD GEOLOGY HONORS (and SELECTED EARTH SCIENCE TOPICS) *

Fall Semester

Grades: 11,12th preferred

‡Prerequisite: Successful completion of 2 years of Science to include Honors Biology

Fee: Field trip fees will apply (varies)

Science Seminar-Field Geology involves a study of geological topics in the Front Range area. Exploration in geological history, fossils, rock formation and composition, mineralogy, hydrology and the sculpting of the landscape by the forces of erosion will take place. Selected topics in Earth Science (astronomy, meteorology and oceanography) will also be discussed. Bi-weekly field trips to Front Range locations will take place.

SCI SEM-EARTH SCI Fall: ENVIRONMENTAL TOPICS and ENGINEERING HONORS*

Spring Semester

Grades: 11,12th preferred

‡Prerequisite: Successful completion of 2 years of Science to include Honors Biology

Fee: Field trip fees will apply (varies)

Science Seminar Environmental Engineering course will study how the environment has been affected by human use through case studies, student projects and field trips. Investigations will focus on a variety of energy, air, and water quality issues currently facing Colorado residents. The course prepares students for advanced course work and engages

students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the course. A multi-day field trip to Arches National Park and vicinity is also an option during this class.

SCI SEM-BIOLOGY FALL: FIELD BIO HONORS & CELLULAR BIO HONORS*

Fall Semester

Grades: 12

†Prerequisite: see the information above

Fee: \$40 Science project fee.

This course will be a split course with the student in Field Biology Honors for 9 weeks and Cellular Biology Honors for 9 weeks.

Science Seminar Field Biology Honors will utilize the natural ecosystems as a laboratory to study the diversity and interrelationship of plants, animals and insects in their environment. Students will learn field techniques, including water chemistry, animal and plant ecology, aquatic insect collection and raptor identification and dissection of fish, frogs, and pigeons. This course incorporates project based learning to enhance understanding in advanced biology.

Science Seminar Cellular Biology Honors includes a tour of the cell, focusing on cellular processes such as cellular respiration, photosynthesis, and protein synthesis. Biotechnology will be utilized through such techniques as DNA extractions, use of restriction enzymes and gel electrophoresis.

SCI SEM-BIOLOGY SPRING: ANATOMY/PHYSIOLOGY HONORS*

Spring Semester

Grades: 12

†Prerequisite: see the information above

Fee: \$40 Science project fee.

Science Seminar-Anatomy/Physiology Honors presents an in-depth study of the human body and biological system. Students study such topics as anatomical terminology, cells, and tissues and typically explore functional systems such as skeletal, muscular, circulatory, respiratory, endocrine, and nervous systems. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

SOCIAL STUDIES

(All fees are subject to change)

U.S. GOV COMPREHENSIVE*

Length: Semester

Grade: 9

Prerequisite: None

U.S. Government—Comprehensive provides an overview of the structure and functions of the U.S. Government and political institutions and examine constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. This course may examine the structure and function of state and local governments and may cover certain economic and legal topics.

U.S. GOV COMPREHENSIVE HON*

Length: Semester

Grade: 9

Prerequisite: Teacher Approval

U.S. Government—Comprehensive provides an overview of the structure and functions of the U.S. government and political institutions and examine constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. This course may examine the structure and function of state and local governments and may cover certain economic and legal topics. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

WORLD GEOGRAPHY*

Length: Semester

Grade: 9

Prerequisite: None

World Geography provides students with an overview of world geography, but may vary widely in the topics they cover. Topics typically include the physical environment; the political landscape; the relationship between people and the environment; economic development, the interdependence of regions; and the movement of people, goods, and ideas.

AP HUMAN GEOGRAPHY*

Length: Year

Grades: 9

Prerequisite: Teacher Approval

Fee: Must pay for AP exam

Following the College Board's suggested curriculum designed to parallel college-level Human Geography courses, AP Human Geography introduces students to the systematic study of patterns and processes that have shaped the ways in which humans understand, use, and alter the earth's surface. Students use spatial concepts and landscape analysis to examine human social organization and its environment consequences and also learn about the methods and tools geographers use in their science and practice.

MODERN U.S. HISTORY*

Length: Year

Grade: 10

Prerequisite: None

Modern U.S. History examines the history of the United States from the Progressive Era through the present time. These courses typically include a historical review of political, military, scientific, economic, and social developments.

AP U.S. HISTORY*

Length: Year

Grade: 11, 12

Prerequisite: Teacher Approval

Fee: Must pay for text and AP exam

Following the College Board's suggested curriculum designed to parallel college-level U.S. History courses, AP U.S. History provides students with the analytical skills and factual knowledge necessary to address critically problems and materials in U.S. history. Students learn to assess historical materials and to weigh the evidence and interpretations presented in historical scholarship. The course examines the discovery and settlement of the New World through the recent past.

WORLD HISTORY OVERVIEW*

Length: Year

Grade: 11

Prerequisite: None

World History provides students with an overview of the history of human society from early civilization to the contemporary period, examining political, economic, social, religious, military, scientific, and cultural developments. World History may include geographical studies, but often these components are not as explicitly taught as geography.

ECONOMICS*

Length: Semester

Grade: 12

Prerequisite: None

Economics provides students with an overview of economics with primary emphasis on the principles of microeconomics, macroeconomics and the U.S. economic system. The course may also cover topics such as international economics, and comparative economics. Economic principles may be presented in formal theoretical contexts, applied contexts, or both.

AP EUROPEAN HISTORY*

Length: Year

Grade: 10-12

Prerequisite: Teacher Approval

Fee: Must pay for text and AP exam

Following the College Board's suggested curriculum designed to parallel college-level European History courses, AP European History examines European civilization from the High Renaissance period to the recent past and also expose students to the factual narrative. In addition, this course helps students develop an understanding of some of the principal themes in modern European history and the abilities to analyze historical evidence and to express that understanding and analysis in writing.

AP U.S. GOVT AND POLITICS*

Length: Semester

Grade: 12

Prerequisite: Teacher Approval

Fee: Must pay for text and AP exam

Following the College Board's suggested curriculum designed to parallel college-level U.S. Government and Politics courses, this course provides students with an analytical perspective on government and politics in the United States, involving both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. The

course generally covers the constitutional underpinnings of the U.S. government, political beliefs and behaviors, political parties and interest groups, the institutions and policy process of national government, and civil rights and liberties.

PSYCHOLOGY*

Length: Semester

Grades: 11, 12

Prerequisite: None

Psychology introduces students to the study of individual human behavior. Course content typically includes, but is not limited to an overview of the field of psychology, topics in human growth and development, personality and behavior, and abnormal psychology.

IB PSYCHOLOGY*

Length: Year

Grades: 11, 12

Prerequisite: Teacher Approval

Fee: Pay for IB exam

IB Psychology courses prepare students to take the International Baccalaureate Psychology exams at either the Subsidiary or Higher level. Course content includes developmental and social psychology, cognition and learning, and personality subject areas, which are approached from biological/physiological, behavioral, and humanistic points of view. These courses may include a study of research design and statistics and involve practical work in psychological research.

PHILOSOPHY

Length: Semester

Grades: 11, 12

Prerequisite: None

Fee: \$5 workbook resources

Introduction to Philosophy will engage students in the activity of doing philosophy. The class will encourage students to use critical inquiry, debate, and reflection to address fundamental questions of humanity. Students will become familiar with important historical figures and texts that contribute to the foundation to understanding philosophy. Students will also use their critical thinking and ability to write arguments to express their point of view on the subject. Students will use cooperative learning to understand others point of view, through the use of exercising their listening and public speaking skills. Some of the areas of focus will be centered on the understanding of themes dealing with Ethics, Political Philosophy, Free Will v. Determination, the Philosophy of the Mind, Epistemology, and the Philosophy of Religions.

WORLD LANGUAGES

(All fees are subject to change)

Communication in languages other than English has become increasingly important in a diverse nation and ever-shrinking world. Through long, uninterrupted sequences of study of world languages, learners acquire the skills and cultural understandings that permit them to function in a non-English speaking environment. Technological advances

have provided new opportunities for learners to use their world language skills in interactions with other speakers and to learn about other cultures whether or not they travel beyond their classrooms.

The changing nature of our society will place greater demands on students in the future. In order to succeed, they must acquire new characteristics and skills. Our students will need to become:

- effective communicators
- keen observers of global cultures
- insightful about themselves and their learning
- informed and knowledgeable across the disciplines
- participants in the community and global marketplace

FRENCH I*

Length: Year

Prerequisite: None

Grades: 9-12

Fee: \$26 includes French I workbook, magazine subscription and National French Exam.

Designed to introduce students to French language and culture, French I emphasizes basic grammar and syntax, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. French culture is introduced through the art, literature, customs, and history of the French-speaking people.

FRENCH II*

Length: Year

Prerequisite: French I or equivalent

Grades: 10-12

Fee: \$26 includes French II workbook, French magazine subscription and National French exam. Class also continues to use French I workbook. (Fee of \$15 to replace)

French II courses build upon skills developed in French I, extending students' ability to understand and express themselves in French and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of French-speaking people to deepen their understanding of the culture(s).

FRENCH III*

Length: Year

Prerequisite: French II or equivalent

Grades: 11, 12

Fee: \$22 includes magazine subscription, National French exam and two short novels

French III courses focus on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

FRENCH IV*

Length: Year

Prerequisite: French III or equivalent

Grade: 12

Fee: \$22 includes magazine subscription, National French exam and two short novels

French IV courses focus on advancing students' skills and abilities to read, write, speak, and understand the French language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.

GERMAN I*

Length: Year

Grades: 9-12

Prerequisite: None

Fee: \$7 includes workbook.

Designed to introduce students to German language and culture, German I courses emphasize basic grammar and syntax, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. German culture is introduced through the art, literature, customs, and history of the German-speaking people.

GERMAN II*

Length: Year

Grades: 10-12

Prerequisite: German I or equivalent

Fee: \$7

German II courses build upon skills developed in German I, extending students' ability to understand and express themselves in German and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of German-speaking people to deepen their understanding of the culture(s).

GERMAN III*

Length: Year

Grades: 11, 12

Prerequisite: German II or equivalent

Fee: \$7

German III courses focus on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

GERMAN IV*

Length: Year

Grade: 12

Prerequisite: German III or equivalent

Fee: \$49 workbook

German IV courses focus on advancing students' skills and abilities to read, write, speak, and understand the German Language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.

SPANISH I*

Length: Year
Prerequisite: None

Grades: 9-12
Fee: \$16 practice workbook.

Designed to introduce students to Spanish language and culture, Spanish I courses emphasize basic grammar and syntax, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. Spanish culture is introduced through the art, literature, customs, and history of Spanish-speaking people.

SPANISH II*

Length: Year
Prerequisite: Spanish I or equivalent

Grades: 9-12
Fee: \$16 includes new Spanish 2 workbook (2nd semester).
Students continue to use Spanish 1 workbook

Spanish II courses build upon skills developed in Spanish I, extending students' ability to understand and express themselves in Spanish and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Spanish-speaking people to deepen their understanding of the culture(s).

SPANISH II HONORS*

Length: Year
Prerequisite: Teacher approval based on Standardized test scores and recommendations from Spanish 1
Summer assignment

Grades: 9-12
Fee: \$16 includes new Spanish 2 workbook (2nd semester).
Students continue to use Spanish 1 workbook.

The Spanish 2 Honors course incorporates all of the principles mentioned above for Spanish 2, but also prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

SPANISH III*

Length: Year
Prerequisite: Spanish II, Spanish II Hon or equivalent

Grades: 10-12
Fee: \$17 includes Catrina workbook. Students continue to use Spanish II workbook

Spanish III courses focus on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

SPANISH III HONORS*

Length: Year

Grades: 10-12

Prerequisite: Teacher approval based on
Standardized test scores and recommendations
from Span II or Span II Honors

Fee: \$17 includes Catrina workbook. Students
continue to use Spanish II workbook

Spanish III courses focus on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

SPANISH IV*

Length: Year

Grades: 10, 11, 12

Prerequisite: Spanish III or Spanish III Honors

Fee: \$18 Workbook

Spanish IV courses focus on advancing students' skills and abilities to read, write, speak, and understand the Spanish language so that they can maintain simple conversations with sufficient vocabulary and an acceptance accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and strong vocabulary. Cultural topics are heavily addressed this year, including art, music, Aztec, Maya and Inca history and legends, History of Spain and its influence in Latin America, foods and relationships. The entire class is conducted in Spanish and grammar will be the equivalent to a 200/2000 grammar class at the university level. Several field trips will be taken in order to expand learning beyond the classroom.

AP SPANISH LANGUAGE*

Length: Year

Grades: 10, 11, 12

Prerequisite: Spanish III Honors or Spanish IV
or equivalent and teacher approval plus
summer assignment

Fee: \$45 – AP Exam workbook
Additional AP exam fee

Designed by the College Board to parallel third-year college-level courses in Spanish Composition and Conversation, AP Spanish Language courses build upon prior knowledge and develop students' ability to understand others and express themselves (in Spanish) accurately, coherently, and fluently in both formal and informal situations. Students will develop a vocabulary large enough to understand literary texts, magazine/newspaper articles, films and television productions, and so on. Students will address the 6 main themes as addressed on the AP Language Culture and Exam: Families and Community, Science and Technology; Beauty, Art and Aesthetics; Contemporary Life; Challenges Facing the World; and Personal and Public Identities and Personalities. Several field trips will be taken in order to expand learning beyond the classroom. Students are required to take the AP exam at the end of the course for which they could earn university credits.

AP SPANISH LITERATURE, HISTORY AND CULTURE

Length: Year
Prerequisite: AP Spanish Language and Culture or
Spanish Language Heritage Class or approval by teacher.

Grades: 10, 11, 12
Fee: \$30.00

This course is designed for students who have taken AP Spanish Language and Culture or Spanish Language for Heritage Speaker, or for students who are fluent both in written and spoken Spanish. This exciting course takes us through Medieval to Modern Spain, Don Quijote, and all over Latin American and El Caribe in order to read some of the most creative and inspirational literature ever conceived. We will also study the history, culture, art, and society around which these literary pieces were written. Students are required to take the AP exam at the end of the course for which they could earn university credits.

SPANISH LANGUAGE HERITAGE CLASS

Length: Year
Prerequisite: Near /native spoken fluency

Grades: 9-12
Fee: \$16 – workbook

This course is designed for students who speak the Spanish language with relative fluency and need to focus more on writing, reading and cultural exploration. This course also allows for students who would like to take a language course, but are concerned about regular Spanish classes not meeting their needs. The objective of the course is to provide an appropriate class for students who speak Spanish but still would like to improve their Spanish skills with an emphasis on reading and writing. It is also designed to prepare the student to move into AP Spanish Literature, History, and Culture in order to take the exam, for which they could earn university credits. We will use a variety of materials to address different levels of literacy.

****Important:** signing up for this class is not the only option available to students; all students are welcome to take any of the Spanish classes if he/she feels it is the appropriate level.

INTERNATIONAL BACCALAUREATE

(All fees are subject to change)

The **INTERNATIONAL BACCALAUREATE** Diploma program is a rigorous pre-university course of study, leading to examinations, that meets the needs of the highly motivated students. Designed as a comprehensive curriculum that allows its graduates to fulfill requirements of the various national systems of education, the IB is based on the pattern of no single country. It provides students of different linguistic, cultural, and educational backgrounds with the intellectual, social and critical perspectives necessary for the adult world. The comprehensive IB program provides students with a balanced education in all the main disciplines: languages, social sciences, experimental sciences, mathematics, and elective subjects. The intent is that students should learn how to learn, how to analyze, how to reach considered conclusions about people, their languages and literature, their ways in society, and the scientific forces of the environment. Standley Lake High School offers a four-year curriculum: two years in IB Prep and two years in a college level curriculum which challenges Jefferson County's best scholars and promotes international understanding. Successful completion earns the student an IB Diploma.

The IB Examination

The IB Diploma is awarded for satisfactory performance in six subjects, one chosen from each of the following six groups:

1. Language A: English.
2. Language B: Spanish, French or German
3. Study of Individuals in Society: World History
4. Experimental Sciences: Biology or Chemistry
5. Mathematics: Math Studies or Math SL
6. An IB elective course: Art, Music, Psychology or a Second Science

Three of these six subjects must be taken for examination at higher level and three at the standard level.

All Diploma Candidates must also:

- Follow an interdisciplinary course in the Theory of Knowledge; submit an Extended Essay in an IB subject; and undertake creative, action and service activities (CAS) totaling 200 hours.
- Fulfill the Jefferson County Graduation Requirements.

For information, contact the IB office at 303.982.3241

IB PREPARATORY GRADE9

IB PREPARATORY ENGLISH 9 HONORS*

Length: Year

Prerequisite Acceptance into the IB program

English/Language Arts 9 incorporates the five aspects of language arts: reading, writing, speaking, listening, and viewing. Study of genres leads to written compositions that build upon students' prior knowledge of grammar, vocabulary, word usage, and mechanics. Students apply comprehension and critical reading skills to both literature and nonfiction. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

WORLD GEOGRAPHY*

Length: Semester

Prerequisite Acceptance into the IB program

World Geography provides students with an overview of world geography, but may vary widely in the topics they cover. Topics typically include the physical environment; the political landscape; the relationship between people and the environment; economic development, the interdependence of regions; and the movement of people, goods, and ideas. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

OR AP HUMAN GEOGRAPHY*

Length: Year

Prerequisite: Acceptance into the IB program

AP Human Geography introduces students to the systemic study of patterns and processes that have shaped the ways in which humans understand use, and alter the earth's surface. Students use spatial concepts and landscapes analysis to examine human social organization and its environmental consequences and also learn about the methods and tools geographers use in their science and practice.

U.S. GOVERNMENT COMPREHENSIVE 9 HONORS *

Length: Semester

Prerequisite Acceptance into the IB program

U.S. Government—Comprehensive provides an overview of the structure and functions of the U.S. government and political institutions and examine constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. This course may examine the structure and function of state and local governments and may cover certain economic and legal topics. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning

styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

BIOLOGY 9 HONORS*

Length: Year

Prerequisite Acceptance into the IB program

Biology is designed to provide information regarding the fundamental concepts of life and life processes. These courses include (but are not restricted to) such topics as cell structure and function, general plant and animal physiology, genetics, and taxonomy. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

IB PREPARATORY GRADE 10

IB PREPARATORY ENGLISH 10 HONORS*

Length: Year

Prerequisite Acceptance into the IB program

English/Language Arts 10 offers a balanced focus on composition and literature. Students read widely to improve their reading rate, vocabulary, and comprehension and develop skills to determine the author's intent and theme and to recognize the techniques used by the author to deliver his or her message. Students apply knowledge of purposes and audiences by studying and producing various genres. Oral communication is practiced in group settings as well through presentations. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials. Diverse interests, cultures, perspectives, learning styles, and intelligences are cultivated and higher level critical and creative thinking skills such as interpretation, problem-solving, investigation, and logic are emphasized throughout the honors course.

IB PREPARATORY CHEMISTRY 10 HONORS*

Length: Semester

Prerequisite Acceptance into the IB program

Chemistry involves studying the composition, properties, and reactions of substances. These courses typically explore such concepts as the behaviors of solids, liquids, and gases; acid/base and oxidation/reduction reactions; and atomic structure. Chemical formulas and equations and nuclear reactions are also studied. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials.

IB PREPARATORY PHYSICS 10 HONORS*

Length: Semester

Physics involves the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between matter and energy. The study of physics includes examination of sound, light and

magnetic and electric phenomena. The honors course prepares students for advanced course work and engages students in enrichment opportunities. Rigor is demonstrated through sophistication and acceleration in terms of thought-provoking learning activities, challenging assessments, and more complex text/materials.

IB PROGRAM CLASSES 11th AND 12th GRADE

IB LANGUAGE 11 (ENGLISH)*

Length: Year

Grade: 11

Prerequisite: Acceptance into IB Program

IB Language A (English 11) prepares students to take the International Baccalaureate Language A exams at either the Subsidiary or Higher level. Course content includes in-depth study of literature chosen from the appropriate IB list of texts and authors and written analyses of this literature, in addition to other oral and written assignments. All course content is designed to improve students' accuracy and fluency in the English language. Some paperback books will be available for purchase for approximately \$40 in total.

IB LANGUAGE 12 (ENGLISH)*

Length: Year

Grade: 12

Prerequisite: IB Language 11

IB Language A (English 12) extends learning from English 11 and prepares students to take the International Baccalaureate Language A exams at either the Subsidiary or Higher level. Course content includes in-depth study of literature chosen from the appropriate IB list of texts and authors and written analyses of this literature, in addition to other oral and written assignments. All course content is designed to improve students' accuracy and fluency in the English language

IB LANGUAGE B SPANISH (1)*

Length: Year

Grade: 11, 12

Prerequisite: Acceptance into IB Program

Purchase Adv. Grammar Book (available online)

Spanish III or Spanish IV, Proficiency Skills

IB Language B—Spanish courses prepare students to take the International Baccalaureate Language B exams at either the Subsidiary or Higher level. These courses focus on improving students' accuracy and fluency in oral and written communication (usually in the students' "second" language). Students preparing to take the Subsidiary level exam will

be able to understand native speakers; students preparing for the Higher level exam will be able to communicate fluently at native speed.

IB LANGUAGE B FRENCH (1)*

Length: Year

Grades: 11, 12

Prerequisite: Successful completion of French III or French IV

IB Language B—French courses prepare students to take the International Baccalaureate Language B exams at either the Subsidiary or Higher level. These courses focus on improving students' accuracy and fluency in oral and written communication (usually in the students' "second" language). Students preparing to take the Subsidiary level exam will be able to understand native speakers; students preparing for the Higher level exam will be able to communicate fluently at native speed.

IB LANGUAGE B GERMAN (1)*

Length: Year

Grades: 11, 12

Prerequisite: German II or III

IB Language B – German courses prepare students to take the International Baccalaureate Language exams at either the Subsidiary or Higher level. These courses focus on improving students' accuracy and fluency in oral and written communication (usually the students' "second" language). Students preparing to take the Subsidiary level exam will be able to understand native speakers; students preparing for the higher level exam will be able to communicate fluently at native speed.

IB History Year One (History of the Americas)*

Length: 1 year (1st year of 2 year program)

Grade: 11

Prerequisite: None

Fee: none (at end of 2nd year)

Highly recommended prerequisites: AP Human Geography, Honors Government, & AP European history

IB History of the Americas is the higher level option for students enrolled in the International Baccalaureate (IB) Diploma program. The course is taught to 11th grade IB students. It is primarily a modern history class, focusing mainly on the 20th century. Along with studying the history of the United States, the course also examines the history of many of the countries in the Americas, including Canada and countries in Latin America.

IB History Year Two (20TH CENTURY WORLD HISTORY)*

Length: 1 year (2nd year of 2 year program)

Grade: 12

Prerequisite: IB History of Americas

Fee: Pay for IB Exam

Highly recommended prerequisites: AP Human Geography, Honors Government, & AP European history

IB 20th Century is a year-long course that examines a variety of topics from the International Baccalaureate History Guide. With its emphasis on twentieth century World History, the course critically examines and assesses a number of events that occur within the 100 year time period. Topics of in-depth study include the Causes and Effects of 20th Century Wars and the Cold War along with a Prescribed Subject. Often this class will continue to develop and connect prior years of social studies instruction to develop a sophisticated level of historical consciousness that focuses on

connecting important events of the past to their relevance today. This class also includes an individual research component in the form of a historical investigation.

IB BIOLOGY*

Length: Year

Prerequisite: Acceptance into IB Program

Grade: 11 – Bio I

Grade: 12 – Bio II

Fee: \$25 Science project fee.

IB Biology courses prepare students to take the International Baccalaureate Biology exams at either the Subsidiary of Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Biology promotes understanding of the facts, principles, and concepts underlying the biological field; critical analysis, evaluation, and generation of scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of biology and scientific advances in biology upon both society and issues of ethical, philosophical, and political importance. Course content varies, but includes study of living organisms from the cellular level through functioning entities within the biosphere. Laboratory experimentation is an essential component of these courses.

IB CHEMISTRY*

Length: Year

Prerequisite: Chemistry, enrollment in
IB Math strongly recommended

Grade: 11- Chem I /Grade:12 Chem II

Fee: \$25 Science project fee.

IB Chemistry prepares students to take the International Baccalaureate Chemistry exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Chemistry promotes understanding of the facts, patterns, and principles underlying the field of chemistry; critical analysis, evaluation, prediction, and generation of scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of chemistry and scientific advances in chemistry upon both society and issues of ethical, philosophical, and political importance. Course content varies, but includes the study of the materials of the environment, their properties, and their interaction. Laboratory experimentation is an essential part of these courses.

IB MATHEMATICAL STUDIES

Length: Year

Prerequisites: Acceptance into IB Program:
Algebra II and Teacher Approval (Mrs. Winkel)

Grades: 10, 11

Fee: Student required to purchase book and pay for IB exam.
\$10 workbook resources

This course prepares students for the IB Math Studies exam at the Standard Level. Intended to provide students with the skills to cope with the mathematical demands of a technological society, course topics include linear, quadratic, and exponential functions, solutions, and graphs; skills in computation, estimation, and development of algorithms; data analysis, including collection, calculation, and presentation of statistics; set operations and logic; business techniques,

including progressions and linear programming; and geometry and trigonometry. Students will acquire the necessary skills to conduct an internal assessment during the second year.

IB MATHEMATICS SL* (Year 1)

Length: Year

Prerequisite: Teacher Approval and Algebra II

Grades: 10, 11

Fee: Student required to purchase book and pay for IB exam.

\$10 workbook resources and \$10 Pre-Calc Online Book Access

This course is intended for IB students who do wish to pursue a field of study in college that requires a strong calculus background. Topics include operations and properties of number sets; trigonometric functions, equations, and graph; algebra and coordinate geometry; simultaneous linear equations; polynomial and quadratic functions and equations; calculus, including bilinear, exponential and logarithmic functions; two and three dimensional vectors; and statistics and probability.

*Students will have the option of also receiving 3 college credits for this course each semester through the University of Colorado at Denver's CU-Succeed Program. The cost for these credits is approximately \$225 per semester.

IB MATHEMATICS SL* (Year 2)

Length: Year

Prerequisites: IB Mathematics SL(1)

Grades: 11, 12

Fee: Student required to purchase book and pay for IB exam

\$10 workbook resources

This course is a continuation of IB Math I and includes a full calculus curriculum. In addition, students will complete their internal assessment. Students will take the IB Math exam at the end of the second semester. Students will also have the option to take the AP Calculus AB test if they pay for the exam fee. This is only recommended for seniors.

*Students will have the option of also receiving 4 college credits for this course second semester through the University of Colorado at Denver's CU-Succeed Program. The cost for these credits is approximately \$75 per credit hour.

IB THEORY OF KNOWLEDGE*

Length: Semester

Prerequisite: Acceptance into IB Program

Grade: 11, 2nd Semester

Grade: 12, 1st Semester

Obligatory for every International Baccalaureate degree candidate, IB Theory of Knowledge aims to stimulate critical self-reflection of students' knowledge and experiences. Course content generates questions regarding the bases of knowledge and their verification in the disciplines of mathematics, natural sciences, human sciences, and history, with an awareness of moral, political, and aesthetic judgments and biases. Students learn to appreciate the strengths and

limitations of various kinds of knowledge; to relate studied subjects to one another, general knowledge, and living experiences; to formulate rational arguments; and to evaluate the role of language in knowledge and as a way to convey knowledge.

IB VISUAL ARTS* +

Length: Year

Prerequisite: Teacher approval
pencils.

Grades: 11, 12

Fee: \$110 includes art supplies, drawing paper, pen/Sharpie,

NOTE: For the 2017-18 school year, this will be an Independent Study and must be a 7th class.

IB Visual Arts prepares students to take the International Baccalaureate Visual Arts exams at either the Subsidiary or Higher level. The IB Visual Arts course helps develop students' aesthetic and creative faculties, offers training in awareness and criticism of art, and enables students to create quality works of art of their own. Students perform both studio and research work; the research component is designed to investigate particular topics or concepts of interest in further detail.

IB PSYCHOLOGY*

Length: Year

Prerequisite: Teacher Approval

Grades: 11, 12

IB Psychology courses prepare students to take the International Baccalaureate Psychology exams at either the Subsidiary or Higher level. Course content includes developmental and social psychology, cognition and learning, and personality subject areas, which are approached from biological/physiological, behavioral, and humanistic points of view. These courses may include a study of research design and statistics and involve practical work in psychological research.

SPECIAL COURSES

PEER MENTOR (LINK LEADER)

Length: Fall Semester

Grade: 11, 12

Prerequisite: Application

Students apply in February to be a Link Leader the following Fall Semester. Our Link Leader Program is designed to help freshmen successfully transition to high school, create a positive school climate, and to help specially selected junior and senior students develop their leadership skills. Students attend one day of training, in August, before school starts and help run Freshman Orientation Day. Leaders continue working with ninth graders weekly throughout the first semester, engaging students in discussions about a wide range of topics including how to succeed academically, dealing with peer pressure, and how to get involved in school clubs and activities. Students receive elective credit and are graded pass/fail.

OUTDOOR LAB LEADER

Length: One Week

Grades: 11, 12

Prerequisite: 2.5 GPA last semester and current, application, interview

Juniors and seniors attend Outdoor Lab School with one of the local feeder elementary schools as leaders/teachers for one week. Leaders will also assist with supervising dormitory and cafeteria activities as well as carrying on other duties at the site. High school leaders will work with elementary school teachers to plan and prepare lesson plans. High school leaders will be required to attend four meetings with the sixth grade teachers and their students prior to leaving. Leaders are required to make up all course work they miss during the week they are gone. Grading will be evaluated by the sixth grade teachers and principal and based on a pass/fail basis. Students will earn either .5 credit or 110 community service hours. A mandatory informational/recruiting meeting will be held in April. (Students do not add this class to their schedule.)

TUTORING PRACTICUM (STUDIO)

Length: Semester

Grades: 11, 12

Prerequisite: 3.0 GPA

Students with a 3.0 GPA or higher and are willing to help tutor students in all subject areas. Students must have good attendance. More than 3 unexcused absences will result in failing the class. This is a Pass/Fail course.



Warren Tech 2018 - 2019

CAREER AND TECHNICAL HIGH SCHOOL FOR JEFFERSON COUNTY PUBLIC SCHOOLS

Warren Tech, the career and technical high school for Jeffco Public Schools, is the springboard to a competitive edge in college readiness and career opportunities. Programs offer dynamic, career-focused learning that integrates both high school and college credit, including core academic math, science, and English credit to keep students on track for graduation. Through collaborative industry partnerships, Warren Tech programs open doors to internships, apprenticeships, on-the-job experiences, and industry certifications.

Grade level: 16 years or older - and going into their junior or senior year of high school.
Prerequisite: Online application - see your counselor or visit warrentech.org
Fee: Varies
Credit: 1.5 credits per semester - see Warren Tech website for details at warrentech.org

WARREN TECH CENTRAL CAMPUS

13300 W. 2nd Place • Lakewood, CO 80228 • 303-982-8600

Auto Collision Repair

(2-4 semesters)

Body and structural repair, refinishing, painting, estimating, welding, shop management

Auto Customization

(2-4 semesters)

Custom metal fabrication, welding, refinishing, custom paint, airbrushing

Automotive Technology

(2-4 semesters)

Engine performance, suspension and steering, brakes, heating/air conditioning, transmission repair, auto parts specialist

Computer Science

(2-4 semesters)

Programming, Oracle Academy, CompTIA Certifications, machine learning, Linux, artificial intelligence

Cosmetology: Esthetics

(2 semesters)

Skin care, massage, waxing, makeup, industry-related certifications; additional hours required in June

Cosmetology: Hairstyling

(2-4 semesters)

Hairstyling/cut/color/texture, professional salon and client experience, internships

Additional hours required in June

Cosmetology: Nail Technology

(2 semesters)

Spa techniques in manicure/pedicure, artificial nail enhancements; additional hours required in June

Culinary Arts

(2-3 semesters)

Classical and modern cuisine, full-service restaurant and kitchen, baking and pastry preparation, exposure to farm to table practices

Cybersecurity

(2-4 semesters)

Prerequisite: Completion of Geometry with a "C" or better; Technical detailed reading required; Cisco, Oracle, TCP/IP, KALI Linux, hacking electronics

Dental Assisting

(2 semesters)

Dental anatomy, x-ray/laboratory techniques, patient care, first aid/CPR

Fire Science/ First Responder

(2 semesters)

Prerequisite: Doctor's release, liability waiver
Fire chemistry, fire prevention, tactics and strategy, first responder/CPR, drill ground

Game Development

(2-4 semesters)

Prerequisite: Completion of Geometry with a "C" or better; 2-D & 3-D computer game programming, trigonometry/physics-based programming

Graphic Design & Digital Photography

(2-4 semesters)

Basic drawing and illustration skills, communication design theory, typography, layout, photography, AP Studio Art and advertising design

Outdoor Leadership

(2-4 semesters)

Prerequisite: Doctor's release
Leadership styles and strategies, environmental education, challenge course facilitation, orienteering, wilderness survival, first aid/CPR

Power Equipment Motorcycle Technology

(2-4 semesters)

Engine repair/performance, hydraulics, motorcycle brakes/suspension, transmission/transaxle, parts

Precision Machining Technology

(2-4 semesters)

Prerequisite: Completion of Geometry
Blueprint reading, computer-aided machining and design, 2-D and 3-D precision parts

S²TEM: X-TREME Engineering

(2-4 semesters)

Prerequisite: Completion of Geometry with a "C" or better; architectural/engineering drafting, sustainable farming, design & build a wide variety of projects using sustainable methods and practices

TV/Video Production

(2-4 semesters)

Professional demo reel, green screen TV studio, script writing in a variety of genres

Welding

(2-4 semesters)

Automated welding equipment, MIG and TIG welding, blueprint reading, American Welding Society National Certifications

WARREN TECH NORTH CAMPUS

11325 Allendale Drive • Arvada, CO 80004 • 303-982-9360

Audio Production

(2 semesters)

Record, edit, master recordings, operation of microphones/speakers/mixers/effect development

Criminal Justice

(2 semesters)

Constitutional/criminal law, criminal investigations, law enforcement, judicial process, Introduction to Sociology

Emergency Medical Services

(2 semesters)

Prerequisite: Seniors only, with supplemental application
Intro. to Pathophysiology, EMT Basic Curriculum, trauma care, Medical Terminology, clinical rotations, Students are able to take National Registry EMT-Basic Certification Examination upon successful completion of the program

Forensic Science

(2 semesters)

Prerequisite: Completion of biology
Crime scene analysis, forensic pathology, fingerprinting, DNA

Introduction to Medical Assisting

(2 semesters)

Patient medical history, vital signs, direct patient care, Medical Terminology, Anatomy & Physiology

Nurse Aide & Introduction to Healthcare

(1st semester)

Medical Terminology, healthcare systems, direct patient care, Clinical Rotations. Five week intensive shadowing experience at St. Anthony Hospital and Lutheran Medical Center. Students are able to take nurse aide certification examination upon successful completion of the program.

Sports Medicine

(2 semesters)

Prevention/treatment/rehabilitation of sports injuries, patient care, Medical Terminology, BLS CPR/AED Certification, Anatomical Kinesiology

WARREN TECH SATELLITE PROGRAMS

Automotive Technology at Standley Lake H. S.

(2 semesters)

Engine performance, suspension and steering, brakes, heating/air conditioning, transmission repair
Students from all schools may apply.

Building Trades Pre-Apprenticeship at Arvada H.S.

(2-4 semesters)

Internships, introduction to underground utilities locating, introduction to heavy equipment operation, plumbing basics, safety/OSHA Certification, surveying
Students from all schools may apply.

Executive High School Internship

(1 semester)

Must be selected through application and interview process; 3.5+ GPA
100 hours in career field (10-12 hrs./wk.)
Apply spring of junior year.



APPLY ONLINE TODAY @ warrentech.org

PLANNING FOR COLLEGE

Preparing to attend a college or university takes planning on the part of both student and family to ensure that the process goes smoothly. The process begins when the student first selects his high school courses in the spring of the eighth grade year and continues through high school until the student has been accepted in college, during the senior year. (For the Naviance link: go to the SLHS homepage - departments – counseling – Naviance)

The process consists of several parts: choosing the appropriate high school courses, taking the required entrance tests, selecting and applying to college, and applying for financial aid and scholarships.

COURSE SELECTION

Competitive colleges consider the difficulty of a student's high school classes when they make their admissions decisions. They count academic credits; college bound classes in English, social studies, math, science, and world language. Specific requirements for individual colleges are available online but we suggest that all students who are planning to attend college take the following:

English	4.0 credits (emphasizing composition)
Mathematics	4.0 credits (beginning with algebra)
Science	4.0 credits
Social Studies	3.5 credits
World Language	1 to 3 years (depending on the college)

COLLEGE ENTRANCE TESTS

It is important that students check college entrance requirements to learn which tests are required by the college or university they would like to attend. The two major college entrance tests used by colleges and universities to help them predict the probable success of students at their institution are the ACT and the SAT. The SAT is given to all juniors in April, and is paid for by the state. Students can sign up for the ACT or an additional SAT by going to the following websites: www.actstudent.org or sat.collegeboard.org

All sophomores take the PSAT in the spring. The PSAT is a practice test for the SAT, and is the qualifying test for National Merit Scholarships when taken in the fall of junior year.

APPLYING TO COLLEGE

College applications are normally sent in the fall of the senior year and they must be processed by the Counseling Center through the student's counselor. Applications are sent online.

SCHOLARSHIPS AND FINANCIAL AID

Scholarship information is available on Naviance and is continuously being updated. Students need to be particularly aware of the various deadlines which different scholarships require. Financial aid information (for grants, loans, and work-study programs) is also available on the counseling website, and applications are available online at fafsa.ed.gov.

College Planning Timeline

Freshman Year

- Learn how to manage your time and work hard to earn the best grades you can. Semester grades count towards your GPA, and each class you pass earns you .5 credit towards graduation.
- Take advantage of Gator time every Monday/Tuesday/Friday from 7:30-8:00 am to work with teachers. Go to the Studio during your free period to get extra help.
- Join a club, play a sport, attend games and activities – get involved!
- Counselors will introduce you to Naviance, where you will begin to explore your career interests and plan your high school courses. You can even begin looking for scholarships.
- Over the summer, look for volunteer opportunities in the community.
- Keep track of your volunteer hours using the resume builder on Naviance.

Sophomore Year

- Look for leadership opportunities in clubs, activities, or student government. Apply to be a Link Leader for your Junior year.
- Continue to work on your grades, and take advantage of teachers and resources to help you be successful.
- Look for summer opportunities for community service, leadership, and college experiences.

Junior Year

- Begin the college selection process. Attend college fairs, financial aid seminars, general information sessions, etc., to learn as much as you can about the college application process.
- Attend In-State and Out-of-State college fairs next fall to get more information about colleges on your list. Get to know college admission representatives that recruit from Colorado. Share your interest in their institution!
- Make sure you are meeting NCAA requirements if you want to play Division I or II sports in college, or the NAIA requirements for Division III and register with NCAA Clearinghouse.
- Take the PSAT in October. Junior year PSAT scores may qualify a student for the National Merit Scholarship Competition and the National Achievement and the National Hispanic Scholars programs. So, even though these scores will not be used for college admission, it is still a good idea to take the PSAT. The more times you take standardized tests, the more familiar you will become with the format and the types of questions asked.
- Begin researching colleges of interest and add them to your Naviance account under "Colleges I am Thinking About".
- Junior year grades are extremely important in the college admissions process. Grades also are used to determine scholarships and grants for which you may be eligible. Put in the extra effort and keep those grades up!
- Look into summer jobs or apply for special summer academic or enrichment programs. Colleges love to see students using their knowledge and developing their skills and interests outside of the classroom.
- Consider using school breaks to visit colleges.
- Make sure you have signed up for the College Opportunity Fund (COF), by going to www.cof.college-assist.org/cofapp/cofapp and applying for a stipend. This is currently worth \$75 per credit hour for public schools and \$38 per credit hour for private schools. This is only for students attending public colleges in Colorado.

Senior Year

- Narrow your college choices to your top schools. Complete your online college applications by Thanksgiving. Be sure to add colleges to “Colleges I’m Applying To” in Naviance, and indicate whether or not you are using the Common Application.
- Pay attention to important deadlines for applications and scholarships.
- If Letters of Recommendation or school reports are required, be sure to give your teachers and/or counselor at least 2 weeks’ notice.
- Complete the NCAA Initial-Eligibility Clearinghouse form if you hope to play Division I or II sports. The form is available online at: www.ncaaclearinghouse.net. Complete the NAIA form for Division III at www.playnaia.com
- Set aside time to work on scholarships. This is the best paying part time job you will ever have!
- Fill out the FAFSA. Attend Financial Aid Night.
- Senior year matters; keep your grades up!

6-YEAR PLAN

ICAP (Six-Year Graduation Plan)

The mission of Jeffco Public Schools is to provide a quality education that prepares all children for a successful future. Each student will have an Individual Career and Academic Plan (ICAP) mapping out each student’s progress toward completing high school successfully and making meaningful career decisions. Creating this plan is a partnership between the student, parents and school staff. Questions regarding this process can be directed to your student’s counselor.