

**High School
2024 - 2025
Academic Planning Guide**

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Our Mission

Never Stop Innovating

Our Vision

We envision a world of exponential possibilities where every child develops the innate knowledge, skills, creativity and character to thrive, lead and succeed in an ever-changing future.

Welcome to STEM School Highlands Ranch. We are an innovative, free, public, charter learning community that exists to innovate K-12 education in order to prepare every student to lead change, solve problems, and succeed in an exponentially changing world.

We are more than a school. We are a think tank, a learning lab, and a catalyst for creativity. We are a haven for continual innovation, creative exploration, and rigorous discovery. We defy definition and break with convention. Because that's what innovators do.

We see school differently. Although our curriculum has a college preparatory focus with emphasis on developing core liberal arts skills in reading, writing, mathematics, and science, we use creativity, problem-solving, and innovation to inspire and challenge our students.

We are more than just STEM. We infuse STEM into all classrooms. We challenge students with STEM-based, real-world problem solving fueled by constant exploration, inquiry, and discovery.

We foster innovation. We equip every student, every day, in every classroom with the knowledge, skills, confidence, and character to thrive in a constantly changing world. By using continuous inquiry, constant discovery, and trial and error as critical pathways to new discoveries, we create a culture of safe failure and fearless innovation.

We empower students. We put students in the driver's seat of their learning, engaging and empowering them to push their own unique boundaries of innovative learning, thinking and doing.

We see teachers as catalysts. Here, teachers are role models and innovation coaches who provide the framework for learning. Our teachers are experts in teaching appropriate use of technology, collaboration, and teamwork that sparks interest in STEM and learning at an early age.

We innovate and learn together. Here, we leverage the power of collaboration, teamwork, and group think to build, design, and create solutions to real-world problems.

We're fostering tomorrow's innovators, creators, and change agents. We work tirelessly to nurture and develop integrity, respect, responsibility, and honesty within our students and take pride in encouraging well-rounded student development.

Definitions

Advanced Placement (AP): The Advanced Placement program is a national academic program sponsored by the College Board. All Advanced Placement course grades are weighted (additional 1.0).

Credit (high school unit of credit): A measure of credit earned in a course. One unit of credit equals two successfully completed semesters of high school work. One semester of successfully completed high school work equals .5 credit or Carnegie units.

Concurrent Enrollment (CE): A student is simultaneously enrolled in a local education provider and in an institute of higher education or career and technical course that will render college credit and satisfy credits toward high school graduation. Please see Concurrent Enrollment Policy for high school credit equivalency and enrollment information.

All 10th, 11th, and 12th graders only- All Concurrent Enrollment (CE) courses will receive a credit of 1.0 or higher unless otherwise stated in the course selection.

All 9th graders- To align with DCSD graduation requirements, Concurrent Enrollment (CE) courses will receive 0.5 credits, except for the following P-Tech Courses or as identified on the course selection sheet.

Engineering	Cybersecurity	Game Design
CE CAD 2455 CE CAD 2660 CE ELT 1206 CE ELT 2254 CE ELT 2252 CE ELT 2455 CE ELT 2367 CE ELT 2358	CE CNG 1021 CE CNG 1022 CE CSC 1026 CE CNG 1024 CE CNG 1025 CE CSC 1060 CE CSC 1061 CE CSC 2000 CE CSC 2017 CE CIS 2020 CE CIS 2040 CE CIS 2043	CE MGD 1011 CE MGD 1043

PTech: Pathways in Technology Early College High Schools (P-TECH) is an innovative partnership between a school district, a community college, and one or more local high growth industry employers. Students begin as early as ninth grade and continue for up to six years (i.e. high school and two equivalent years of college). Students graduate with both a high school diploma and an industry-recognized associate degree, in addition to gaining relevant workplace skills.

Cumulative GPA: A student's earned Grade Point Average for all semesters combined. (This feature is available for high school students only and is presented in both weighted and unweighted formats on the student's transcript)

GPA: A student's earned Grade Point Average for one semester or one year.

Class of 2025- 2027

Grades	Unweighted GPA	Weighted GPA
A	4.0	5.0
B	3.0	4.0
C	2.0	3.0
D	1.0	2.0
F	0	0

Class of 2028 and beyond

Grades	Unweighted GPA	Weighted GPA
A	4.0	5.0
B	3.0	4.0
C	2.0	3.0
D	1.0	1.0
F	0	0

HEAR Curriculum: The Higher Education Academic Requirements (HEAR) are a combination of courses, primarily in the areas of English, Mathematics, Natural and Physical Sciences, Social Sciences, and World Language that students are required to complete as preparation for entering one of Colorado's four-year public colleges or universities.

Prerequisite: A course that must be successfully completed before taking another course, demonstrated proficiency in previous course or standardized test, and/or teacher recommendation.

High School Policies

Adding/Dropping a High School Class: School counselors make ALL schedule changes. Find their contact information on our website.

Schedule Change Process:

- Requests made within school days 1-10 will be made, if reasonable, at student request. Students must complete a schedule change request form, obtaining appropriate teacher signatures. The school counselor must approve and complete all schedule changes.
- Requests made during school days 10-20 will be considered if the requesting student maintains a minimum number of classes. During this timeframe, administrative and/or parent permission may need to be obtained. A student can not drop a class, but will need to "withdraw". The requesting student's transcript will reflect either a "W/F" or "W/P", depending on their grade at the time of withdrawing. There will be no GPA consequence.
- Requests made after school day 20 will be considered if the requesting student maintains a minimum number of classes. Requests made late into the semester will require administrative and parent approval. The student must withdraw from the class and his/her transcript will reflect a "W/F" or "W/P", depending on the grade at time of withdrawing. There is a GPA consequence as if having earned an F for the class. A "0" (zero) will be factored into their GPA.
- For concurrent enrollment guidelines on adding and dropping a class, please see the institution's guidelines. For questions on the interpretation, please see the HS Career Discovery Coordinator.

Availability of Classes: While every effort will be made to provide the classes a student has requested during registration, some classes may not be available due to student enrollment numbers, staffing, and budget.

Community Service: STEM follows DCSD's community service guidelines. Students need 20 hours of community service between the summer prior to 9th grade and the end of grade 12. 5 of those 20 hours can be completed at STEM School Highlands Ranch. STEM Scholar requires 100 community service hours. If approved by a school administrator, additional hours completed at STEM can count toward the STEM Scholar requirement.

Course Load: All STEM school students are required to take a full schedule of eight (8) classes per semester in grades 9 and 10. If earned credits toward meeting requirements for graduation permits, students may be allowed to take six (6) classes per semester in grade 11, and six (6) classes per semester in grade 12. Seniors must take a minimum of six (6) classes in order to be a student at STEM School Highlands Ranch.

Courses taken through outside programs (Non CE ACC/or CE Option 3):

If a student decides to take a course for high school or dual (college and high school) credit, the student must receive approval from the high school counselor. Examples of outside programs are BYU and eDCSD. The student must complete the "Non-STEM Course Approval Form" and submit it to the counselor. The counselor will check to see if the program credit will transfer to STEM High School. STEM will only accept up to 2.0 credits of outside courses toward a STEM diploma. Please note: For ACC Concurrent Enrollment options, students must consult with our CE Advisor, not the high school counselor.

Early Graduation: Students planning to complete their high school course work in less than eight semesters must develop an early graduation plan with their principal, counselor, and parents. A student who plans to graduate early must complete all requirements set by the State Board of Education and the STEM Charter School Board.

Enrollment: Students enrolling at STEM School who have withdrawn from a previous school must enroll three weeks prior to the end of a semester in order to receive credit from STEM for the semester. Students who have not been in attendance at a school during a semester may not receive credit at STEM if they enroll 3 weeks after the semester begins. If a student is over 17, alternatives for earning credit during the semester will be presented. If a student is not yet 17, the student will be enrolled and attend a full schedule, but credit may not be granted.

Fees:

- Course Fees –As per STEM Charter Board policy, where additional charges are required for specific courses; the costs will be noted in the course description notably AP classes with required book and test fees. *fees are subject to change.
- School fees will be reduced or waived for students who receive free/reduced lunch.

Graduation: Douglas County School District requires that a student must complete all graduation requirements to participate in the graduation ceremony. Completion of graduation requirements must be documented 48 hours prior to the ceremony.

High School Credit for Middle School Students- 2017-18 and beyond

Compliance with DCSD Policy IKF-R-2

A student may earn credits towards a Douglas County School District high school diploma prior to the official start of the 9th grade year.

Compliance with DCSD Policy IKF-R-2

A student may earn credits towards a Douglas County School District high school diploma prior to the official start of the 9th grade year.

1. Credit will automatically be awarded for earning an "A" in:
 - a. Any Douglas County School District high school summer session content course(s) completed preceding the start of the 9th grade year.
 - b. Any Mathematics course(s) which exceeds the expectation of an Algebra 1 course.
 - c. Any World Language course(s), which exceeds the expectations of Level 1.
 - d. Any content area course, meeting, Board of Education criteria and which exceeds the expectations of a typical Douglas County 9th grade course as approved by the high school building administration.
2. Students who earn a grade other than an "A" will declare during their Junior year whether or not the course will be used to meet high school graduation requirements by submitting a Declaration of Credit for Middle School Courses form to the high school registrar. Once the form is submitted, the credit cannot be removed from the high school transcript.

Incomplete Grades: A student will be allowed to make up an incomplete grade within 10 school days after the end of the semester. If the grade is not made up within 10 school days, the incomplete will become an "F" on the transcript.

Independent Study Policy and Process

Independent study classes are designed to help students explore content that their schedule and/or course offerings do not easily allow. Students can work with a STEM teacher to design a meaningful independent study experience for a class not offered at STEM.

Independent study courses are only available for juniors and seniors and require counselor approval. Students interested in such a course should confirm teacher participation and then see the counselor to understand the process and acquire course paperwork.

Independent study classes are graded on the traditional A-F scale.

PE Waivers: Students may elect to waive up to two semesters of Physical Education through participation in club or high school competitive sport. Details can be found on the PE Waiver form available from the HS Main Office and school website.

STEM Scholar vs. Regular STEM Diploma- If a student has decided to graduate as a STEM scholar, this decision must be declared no later than April of Junior Year or November of Senior Year.

Teacher Aide Maximum: Students in grades 11 or 12 are allowed to be a teacher's aide up to two times for credit, or .25 each time. If a student decides to be a TA after taking the course twice, the student will not receive credit.

STEM Graduation Requirements for class of 2021 and Beyond

Class of 2025- 2027

Department	Standard Diploma	STEM Scholar
English **Most colleges require 4 years of English, not just 4 credits**	4	4
Mathematics <ul style="list-style-type: none"> • Algebra II is required for graduation **Most colleges require 4 years of math, not just 4 credits**	4	4
Social Studies <ul style="list-style-type: none"> • US Govt is required for graduation • Either US History, AP European History and/or AP World History is required for graduation 	3.5	3.5
Science	3	3
World Language (must be the same language)	2	2
STEM Electives	3	7
Fine Arts	1	1
PE/Health	1	1
General Electives	2.5	4.5
TOTAL	24	30

Other Graduation Requirements	Standard Diploma	STEM Scholar
Community Service Requirements	20 Hours	100 Hours
ICAP Completion	required	required
AP/CE Courses	n/a	At least two courses
GPA Requirement	n/a	3.5 or Higher

Demonstration of Competency on Exam (see explanation and exam list below)	required	required
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Class of 2028 and beyond

Standard Diploma requirements from above plus the following.

Other Graduation Requirements	Standard Diploma	STEM Scholar
Community Service Requirements	20 Hours	100 Hours
ICAP Completion	required	required
AP/CE Courses	n/a	At least 8 courses
GPA Requirement	n/a	3.75 or Higher
Demonstration of Competency on Exam (see explanation and exam list below)	required	required

Competency Exams for Graduation of Years 2021 and Beyond

In accordance with Superintendent File: IKF-R-3 Graduation Requirements, all students must demonstrate college and career readiness in both Mathematics and English by meeting or exceeding the required level of readiness in one of the following methods:

Exam	English	Math
Classic Accuplacer	62 on Reading Comprehension or 70 on Sentence Skills	61 on Elementary Algebra
Next Generation Accuplacer	241 on Reading or 236 on Writing	255 on Arithmetic (AR) or 230 on Quantitative Reasoning, Algebra, and Statistics (QAS) or 230 on Advanced Algebra and Functions (AAF)
ACT	18 on ACT English	19 on ACT Math
ACT WorkKeys	Bronze+	Bronze+
Advanced Placement	2	2
ASVAB	31	31
Concurrent Enrollment	Passing Grade	Passing Grade
SAT	470	500

District Capstone	Individualized	Individualized
Industry Certificate	Individualized	Individualized

Capstone

For students in the graduating class of 2021 and beyond, all students must demonstrate college and career readiness in both Mathematics and English by meeting or exceeding the required level of readiness. STEM students who have not met the standardized assessment criteria for math and/or English by the end of their Junior year must complete a capstone demonstrating proficiency.

Students who have not met the standardized assessment criteria by the end of their Junior year must enroll in the regular senior English class. During the Fall semester, students will complete a capstone that is aligned to the “Handbook: DCSD’s Capstone Project” document. Students will present their work to be evaluated by a panel of administrators, teachers and stakeholders. Any student who is needing to make revisions must complete and re-submit their capstone before April of their graduating year.

Concurrent Enrollment Policy

Concurrent Enrollment (CE) allows high school students (9th-12th grade) to enroll in college-level courses while still in high school. STEM School Highlands Ranch will pay the tuition portion of that college education. To qualify for the Concurrent Enrollment Program, students must:

- Be in 9th, 10th, 11th, or 12th grade
- Be a student of good standing in previous coursework and show a history of strong standardized test scores. This includes a GPA of 3.0 for the previous 2 semesters.
- Have a social maturity to excel in a college environment.
- Must follow the attendance policy at STEM School Highland Ranch.
- Receive a minimum score on the ACT, SAT, or Accuplacer as needed.
- Complete all portions of the CE application and submit the completed application to the Career Discovery Coordinator by the published deadlines.
- Meet with the Career Discovery Coordinator once each year to review eligibility for CE.
- Guaranteed transfer course recommended.
- Be enrolled in the College Opportunity Fund.

*Students who fail to meet these requirements, might not be eligible to enroll in Concurrent Enrollment courses paid for by STEM.

** If a student has an Individualized Education Plan or Section 504 plan, they are responsible for submitting that plan to the partner institution and working directly with that institution for accommodations.

Offsite Concurrent Enrollment Option

Students can take courses onsite or online at one of our partner colleges/universities. Please note if a CE course is offered at STEM, it may not be approved at the partner institution. You must review your offsite CE course selection with your high school counselor or the career discovery coordinator.

Students are required to maintain full-time status while taking courses offsite. Students may enroll in 12-18 semester credit hours at one of our partner schools to achieve full-time status. If students are enrolled part-time* at a partner school, they may choose to take a combination of STEM and off-campus CE courses. Each student’s schedule is unique and must be reviewed to ensure it meets STEM’s course load requirements (defined above).

*Part-time status is 3-11 semester credit hours.

Concurrent Enrollment Credit Equivalency

Students completing college-level concurrent enrollment college level courses with a grade of C or higher will be awarded credit equivalency as follows:

Class of 2025- 2027

1 college credit	(0.5 credits) 1 semester of high school credit
2-3 college credits	(1 credit) 2 semesters of high school credit
4 college credits	(1.5 credits) 3 semesters of high school credit
5 college credits	(2 credits) 4 semesters of high school credit

* Students who earn a D will only receive 0.5 credits (1 semester) of high school credit regardless of the number of college credits.

Class of 2028

1-3 college credits	0.5 semester of high school credit
4-6 college credits	1 semester of high school credit

* Students who earn a D will only receive 0.5 credits (1 semester) of high school credit regardless of the number of college credits.

All P-tech courses listed below will receive 1 year high school credit with a grade of C or higher

Engineering	Cybersecurity	Game Design
CE CAD 2455	CE CSC 1019	CE MGD 1011
CE CAD 2660	CE CNG 1021	CE MGD 1043
CE ELT 1206	CE CNG 1022	CE CSC 2017
CE ELT 2254	CE CSC 1026	CE CSC 1060
CE ELT 2252	CE CNG 1024	CE CSC 1061
CE ELT 2455	CE CNG 1025	CE CSC 2000
CE ELT 2358	CE CIS 2020	
	CE CIS 2040	
	CE CIS 2043	

* Students who earn a D will only receive 0.5 credits (1 semester) of high school credit regardless of the number of college credits.

The Advanced Placement Program

The Advanced Placement Program® is a cooperative educational endeavor between secondary schools and colleges and universities. Since its inception in 1955, the Program has provided motivated high school students with the opportunity to take college-level courses in a high school setting. Students who participate in

the Program not only gain college-level skills, but in many cases they also earn college credit while they are still in high school. AP courses are taught by dedicated and enthusiastic high school teachers who follow course guidelines developed and published by the College Board. **(The College Board: AP Central, 2022).** There is a cost to the student for each exam taken. Students who wish to take multiple AP courses need to discuss the rigorous schedule demands with their counselor.

Advantages of Taking AP Course Work

- AP courses show colleges that you are able to complete the most rigorous courses your high school offers.
- Collegiate institutions recognize that applicants with AP experience are better prepared for the demands of college courses.
- Most colleges and universities will offer college credit and/or advanced placement to students earning a high enough score on an AP exam.
- AP students may be eligible for honors and other special programs in college.

More information regarding the AP program can be obtained from any AP teacher, your counselor, and the [AP website](#).

Student Profile

We recommend that students undertaking Advanced Placement® course work:

- have a desire to undertake rigorous, in depth study of the course content;
- have a history of satisfactory performance within the content area;
- possess a strong work ethic and superior study skills;
- demonstrate strong language skills (students should be able to read and write at or above grade level);
- advocate and take responsibility for their own learning;
- understand that the pace of Advanced Placement® instruction requires daily attendance;
- meet the established prerequisites for specific courses;
- have sufficient time management skills to balance academics, and activities
- are mature, curious, and active learners who will contribute to classroom discussions and activities.

AP Scholar Awards

Each year, the College Board recognizes high school students who have demonstrated college-level achievement through multiple AP courses and exams. Some of the awards and their requirements are as follows:

- AP Scholar: students who receive scores of 3 or higher on three or more AP Exams
- AP Scholar with Honor: students who receive an average score of at least 3.25 on all AP Exams taken and scores of 3 or higher on four or more on these exams
- AP Scholar with Distinction: students who receive an average score of at least 3.5 on all AP Exams taken and scores of 3 or higher on five or more of these exams
- National AP Scholar: students in the U.S. who receive an average score of at least 4 on all AP exams taken and scores of 4 or higher on eight or more of these exams

STEM Internship

- Employer must offer an internship for a specified time frame, in one of the Colorado Career Clusters:
 - Business, Marketing & Public Administration
 - Agriculture, Natural Resources & Energy
 - STEM, Arts, Design & Information Technology

- Skilled Trades & Technical Sciences
- Health Science, Criminal Justice & Public Safety
- Hospitality, Human Services & Education
- Internships can be paid or unpaid at the discretion of the employer. The student must notify STEM administration beforehand if the employer does not cover the STEM intern with Worker's Compensation Insurance.
- Internships may be for both for profit or non-profit organizations. All other requirements, including Workers Compensation Insurance, must still be addressed.
- Students must submit the following documents before starting their internship:
 - *Student Internship Agreement* form
 - *Professional Internship Course Approval* form with attached *Skills Identification* form
 - *Assumption of Risk and Release - Off Campus* form [DCSD Assumption of Risk](#).

High School Credit for Internship

Students may earn up to .5 elective credits per semester for participation in an approved STEM internship. This will be a pass/fail course. Internships must meet the following requirements:

- Students must have a complete Internship Course Approval Form and all required paperwork **before** beginning an internship. The paperwork can be submitted to the career discovery coordinator.
- Internship will be scheduled for a minimum of 75 hours per semester.
- Students who do not attend 85% or more of their scheduled hours will not pass the class. Attendance must be verified via Internship Attendance Verification Form which must be submitted to the counseling office the last week of the semester in which the internship occurs.
- Complete all necessary paperwork for the internship.
- Students must be on track for high school graduation.
- Students must submit a one-page internship reflection paper highlighting their experiences and lessons learned by the **last week of the semester**.

P-Tech

Pathways in Technology Early College High Schools (P-TECH) is an innovative partnership between a school district, a community college, and one or more local high growth industry employers. Students begin as early as ninth grade and continue for up to six years (i.e. high school and two equivalent years of college). Students graduate with both a high school diploma and an industry-recognized associate degree, in addition to gaining relevant workplace skills.

The P-TECH pathways that are offered at STEM are Robotics and Automation (formally Mechatronics), Cybersecurity and Game Design and Development. Robotics and Automation (Mechatronics) is a synergetic integration of mechanical, electrical, control, automation, robotics, computer systems for industry and computer engineering technologies. Cybersecurity prepares students to access the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Game Design and Development offers training in game programming and development, 2D and 3D modeling and animation, and allows students to pick an emphasis in multimedia or computer science

STEM School Highlands Ranch will pay the tuition portion of that college education that is outlined in the P-TECH pathway. Families are responsible for books, fees, and additional tuition costs from online classes, as well as courses that are not outlined in the P-TECH pathway.

To qualify for the P-TECH Program, students must:

1. Be in 9th, 10th, 11th, or 12th grade.
2. Be enrolled in P-TECH program by October of 11th grade.
3. Have a social maturity to excel in a college environment.
4. Must follow the attendance policy at STEM School Highland Ranch.
5. Receive a minimum score on the ACT, SAT, or Accuplacer as needed.
6. Complete all portions of the P-TECH application and submit the completed application to the Career Discovery Coordinator by the published deadlines.
7. Be enrolled in available P-TECH courses.
8. Be enrolled in the College Opportunity Fund.

*Students who fail to meet these requirements, might not be eligible to enroll in Concurrent Enrollment courses paid for by STEM.

Credit Equivalency

Please see "Concurrent Enrollment Credit Equivalency" above

PTECH (Pathways to Technology Early College High School) Pathways

Recommended Course Sequence		
<p align="center">** Courses do not need to be taken in order unless there are prerequisites.</p> <p>Bold = offered at STEM <i>Italics</i> = offered through ACC</p>		
Robotics and Automation	Cybersecurity	Game Design and Development
Year 1	Year 1	Year 1
EIC 1001 - Electrical Print Reading <p align="right">4 Credits</p>	CNG 1024 - Networking I: Network+ <p align="right">3 Credits</p>	CSC 1019 - Introduction to Programming: (Programming Language) <p align="right">3 Credits</p>
ELT 1206 - Fundamentals of DC/AC <p align="right">4 Credits</p>	CSC 1019 - Introduction to Programming: (Programming Language) <p align="right">3 Credits</p>	CSC 1026 - Game Design and Development <p align="right">3 Credits</p>
<i>MAT 1150 - Technical Mathematics</i> <p align="right">4 Credits</p>	ENG 1021 - English Composition I: GT-CO1 <p align="right">3 Credits</p>	MAT 1340 - College Algebra: GT-MA1 <p align="right">4 Credits Or Higher</p>
<i>BUS 1021 - Basic Workplace Skills</i> <p align="right">1 Credit</p>	DAT 1001 - Introduction to Data Science <p align="right">3 Credits</p>	CSC 1060 - Computer Science I (Language) <p align="right">4 Credits</p>
ELT 2254 - Industrial Wiring <p align="right">3 Credits</p>	CIS 2020 - Fundamentals of UNIX <p align="right">3 Credits</p>	CSC 2000 - Game Programming I <p align="right">3 Credits</p>
<i>ENG 1031 - Technical Writing I: GT-CO1</i> <p align="right">3 Credits</p>	OR	
OR		

<p>ENG 1021 - English Composition I: GT-CO1 3 Credits</p> <p>OR</p> <p>ENG 1022 - English Composition II: GT-CO2 3 Credits</p> <p>PHY 1105 - Conceptual Physics w/Lab: GT-SC1 4 Credits</p> <p>OR</p> <p>PHY 1112 - Physics: Algebra-Based II with Lab: GTSC1 5 Credits</p> <p>OR</p> <p>PHY 2112 - Physics: Calculus-Based II With Lab: GTSCI 5 Credits</p> <p>Year 2</p> <p>CAD 2455 - Solidworks/Mechanical 3 Credits</p> <p>ELT 2348 - Automation Control Circuits 3 Credits</p> <p>ELT 2367 - Introduction to Robotics 1 Credit</p> <p>OSH 1300 - 10-HR OSHA Voluntary Compliance 1 Credit</p> <p>ELT 2455 - Fluid Power 3 Credits</p> <p>ELT 2252 - Motors & Controls 3 Credits</p> <p>Restricted Elective Choose 2 of 3 Courses:</p> <p>CAD 2660 - 3D Printing/Additive Manufacturing 3 Credits</p>	<p>CIS 315 - UNIX Operating System: CSU Course**</p> <p>CNG 1032 - Network Security Fundamentals 3 Credits</p> <p>MAT 1340 - College Algebra: GT-MA1 4 Credits</p> <p>BUS 2017 - Business Communication and Report Writing 3 Credits</p> <p>Year 2</p> <p>CNG 1042 - Introduction to Cloud Computing 3 Credits</p> <p>CNG 2012 - Configuring Windows Server 4 Credits</p> <p>OR</p> <p>CIS 401 - Network Systems Administration: CSU Course**</p> <p>CNG 1025 - Networking II: Network+ 3 Credits</p> <p>CNG 2043 - Cloud Security and Cyber Law 3 Credits</p> <p>CNG 2057 - Network Defense and Counter Measures 3 Credits</p> <p>OR</p> <p>CIS 461 - CSU Course* 3 credits</p>	<p>MGD 1043 - Motion Graphic Design I: (Software) 3 Credits</p> <p>ART 1201 - Drawing I 3 Credits</p> <p>ENG 1021 - English Composition I: GT-CO1 3 Credits</p> <p>OR</p> <p>ENG 1020 - Technical Writing GT-CO1</p> <p>Year 2</p> <p>CSC 1061 - Computer Science II (Language) 4 Credits</p> <p>MGD 1053 - 3-D Animation I 3 Credits</p> <p>CSC 2046 - Mobile App Development 3 Credits</p> <p>BUS 2017 - Business Communication and Report Writing 3 Credits</p> <p>COM 1150 - Public Speaking 3 Credits</p> <p>OR</p> <p>COM 1250 - Interpersonal Communication</p> <p>CSC 2027 - 3D Game Programming 3 Credits</p> <p>Major Elective Choose One Course ~Recommended Restricted</p>
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MTE 1220 - Lean Manufacturing Practices and Processes 3 Credits	BUS 1021 - Basic Workplace Skills 1 Credit	Elective~
PRO 2800 - Quality in Process Technology 3 Credits	BUS 2026 - Business Statistics 3 Credits	CSC 1029 - Introduction to Secure Coding 3 Credits
Year 3 ELT 2358 - Programmable Logic Controllers 3 Credits	Year 3 CNG 2002 - Unix/Linux Server Admin 3 Credits	CSC 1061 - Computer Science II (Language) 4 Credits CSC 2065 - Discrete Structures 4 Credits
IMA 1500 - Industrial Rotating Equipment 3 Credits	CNG 2056 - Vulnerability Assessment Level 1 3 Credits	CSC 2033 - Object-Oriented Prog.: (Lang) 3 Credits
PHI 1013 - Logic: GT-AH3 3 Credits	CIS 2087 - Cooperative Education 3 Credits	CSC 2045 - Secure Software Development: (Language) 3 Credits
ELT 2359 - Advanced Programmable Logic Controllers 3 Credits	CNG 2058 - Digital Forensics 4 Credits	CSC 2046 - Mobile App Development 3 Credits
ELT 2367 - Introduction to Robotics 1 Credit	OR CIS 462 - Computer Forensics: CSU Course**	MGD 2043 - Web Motion Graphic Design II 3 Credits
ELT 2080 - Internship 3 Credits	CNG 2059 - Enterprise Security 4 Credits	MGD 1012 - Adobe Illustrator I 3 Credits
		MUS 1061 - Computer Music Applications I 3 Credits
		CIS 2089 - Capstone 3 Credits Restricted Elective Choose One Course ~Recommended Restricted Elective~
		CSC 1029 - Introduction to Secure Coding 3 Credits
		CSC 1060 - Computer Science I (Language) 4 Credits
		CSC 2033 - Object-Oriented

		Prog.: (Lang) <p style="text-align: right;">3 Credits</p> CSC 2045 - Secure Software Development: (Language) <p style="text-align: right;">3 Credits</p> CSC 2046 - Mobile App Development <p style="text-align: right;">3 Credits</p> MAR 2016 - Principles of Marketing <p style="text-align: right;">3 Credits</p> MGD 1012 - Adobe Illustrator I <p style="text-align: right;">3 Credits</p> MUS 1062 - Computer Music Applications II <p style="text-align: right;">3 Credits</p>
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Course Descriptions by Department and Recommended Pathway per Subject



Sample Course Description Interpretation

<p>Course Title</p> <p>English I</p> <p>Year long course 1.0 credit</p>	<p>Course duration</p> <p>9th grade</p> <p>High school credits earned</p>	<p>Grade level(s) of students who can take the course</p> <p>No fee, although students will be asked to supply required novels throughout the year</p> <p>Fees</p>	<p>Prerequisites</p> <p>No prerequisite, required course.</p>
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This course will help to refine and strengthen students' reading, writing, and communication skills. Emphasis is on communication through composition of well-structured paragraphs, letters, short stories and reports. Literature will be studied through the genres: novels, drama, short story, nonfiction, and poetry as well as common themes. Vocabulary, grammar, and standard usage are taught alongside reading and literature, as well as through the continuation of grammar practice.

Course description

English / Language Arts - recommended pathway

<p>9th Grade</p>	<p>ENGLISH I WORLD LITERATURE AP LANGUAGE AND COMPOSITION</p>
	
<p>10th Grade</p>	<p>WORLD LITERATURE CE ENG 1021 ENGLISH COMP I* CE ENG 1022 ENGLISH COMP II* CE ENG 1020 TECHNICAL WRITING I* AP LANGUAGE & COMPOSITION</p>
	
<p>11th Grade</p>	<p>AMERICAN LITERATURE CE ENG 1021 ENGLISH COMP I* CE ENG 1022 ENGLISH COMP II* CE ENG 1020 TECHNICAL WRITING I* CE LIT 1015 INTRO TO LITERATURE* CE LIT 2002 WORLD LITERATURE*</p>

AP LANGUAGE & COMPOSITION
 AP LITERATURE & COMPOSITION



12th Grade

BRITISH LITERATURE

- CE ENG 1021 ENGLISH COMP I*
- CE ENG 1022 ENGLISH COMP II*
- CE ENG 1020 TECHNICAL WRITING I*
- CE LIT 1015 INTRO TO LITERATURE*
- CE LIT 2002 WORLD LITERATURE*
- AP LANGUAGE & COMPOSITION
- AP LITERATURE & COMPOSITION

NOTES on ENGLISH COURSES:

- 4 credit hours are required for graduation
- 4 years of English are recommended for College admission
- Standard course progression is in **BOLD**
- CE classes are 1.0 credit hours each semester
- All standard & AP classes are 1.0 credit hours
- * courses have a prerequisite and/or grade minimum to remain in the class

Language Arts

English I

STEMHS019

Year long course 1.0 credit	9th grade	No fee, although students will be asked to supply required novels throughout the year	N/A
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This course will help to refine and strengthen students' reading, writing, and communication skills. Emphasis is on communication through composition of well-structured paragraphs, short stories, essays, and presentations. Literature will be studied through the genres: novels, graphic novels, short stories, nonfiction, and poetry. Vocabulary, grammar, and standard English conventions are taught alongside reading and literature as well as through the continuation of grammar practice.

AP Language and Composition

STEMHS0120

Year long course 1.0 credit	9th-12th grade	\$95.00 for AP Exam and students will be asked to supply selected novels throughout the year	2 years of high school level English is recommended
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This accelerated, year-long course prepares students for the AP Language and Composition exam through reading and analysis of non-fiction essay and classic literature in addition to strengthening critical thinking and writing skills. Because students who pass the AP exam may earn college credit, the degree of difficulty is high. Primary to this class is the understanding of rhetoric, both the writing and analysis of it. Qualities of an AP student include one with a mature perspective (global and historical), a persuasive and analytical voice, a flow

of writing and organizational structure, and correctness in grammar. Students will learn to write persuasively, using appropriate rhetorical strategies. They will also learn to analyze such things as diction, syntax, and figures of speech as part of the deconstruction of language, and will understand rhetorical strategies in the context of public discourse. They will be expected to complete summer reading in preparation for the course. Students are expected to take the AP exam in May.

World Literature

STEMHS0110

Year long course 1.0 credit	9th - 10th grade	No fee, although students will be asked to supply required novels throughout the year	English I or equivalent.
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In this course we will study works classified as World Literature in order to broaden students' literary landscape. Texts will range from the Ancient World to 21st Century fiction and nonfiction, and highlight themes of global awareness and power. These texts will be placed in their social and historical context, giving us a more complete understanding of the circumstances and culture in which they were written.

CE ENG 1021 English Composition I

STEMHS0116

Semester long course 1.0 credit (for 10th, 11th and 12th) 0.5 credits for 9th grade (graduate year 2028)	10th - 12th Grade	No fee, although students will be asked to supply required novels throughout the year	ACC Placement scores for English Student must enroll at ACC and fill out CE College agreement
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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. This is a statewide Guaranteed Transfer course in the GT-CO1 category.

CE ENG 1022 English Composition II

STEMHS0117

Semester long course 1.0 credit (for 10th, 11th and 12th) 0.5 credits for 9th grade (graduate year 2028)	10th - 12th grade	No fee, although students will be asked to supply required novels throughout the year	ACC Placement scores for English Student must enroll at ACC and fill out CE College agreement
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Expands and refines the objectives of English Composition I. Emphasizes critical/logical thinking and reading, problem definition, research strategies, and writing analytical, evaluative, and/or persuasive/argumentative compositions. This is a statewide Guaranteed Transfer course in the GT-CO2 category.

CE ENG 1020 Technical Writing I

STEMHS0130

Semester long course 1.0 credit (for 10th,11th and 12th) 0.5 credits for 9th grade	10th - 12th grade	No fee, although students will be asked to supply required novels throughout the year	ACC Placement scores for English Student must enroll at ACC and fill out CE College agreement
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Students enrolled in this class will develop skills one can apply to a variety of technical documents. The class focuses on principles for organizing, writing, and revising clear, readable documents for industry, business, and government. This is a statewide Guaranteed Transfer course in the GT-CO1 category.

American Literature

STEMHS0111

Year long course 1.0 credit	11th grade	No fee, although students will be asked to supply required novels throughout the year	English I or equivalent
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In this course we will study works classified as American Literature in order to broaden students' understanding of what American really means. Texts will range from Native American to 21st Century fiction and nonfiction, and highlight themes of non-conformity and "the American Dream." These texts will be placed in their social and historical context, giving us a more complete understanding of the circumstances and culture in which they were written.

CE LIT 1015 Intro to Literature

STEMHS0118

Semester long course 1.0 credit (for 10th,11th and 12th) 0.5 credits for 9th grade (graduate year 2028)	11th - 12th grade	No fee, although students will be asked to supply required novels throughout the year	ACC Placement scores for English Student must enroll at ACC and fill out CE College agreement
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Introduces fiction, poetry, and drama. This course emphasizes active and responsive reading. This is a statewide Guaranteed Transfer course in the GT-AH2 category.

Students must be enrolled in the CE course, and the class will also prepare students to take the AP Literature and Composition exam in the Spring. A Concurrent Enrollment Literature and Composition course engages students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students consider a work's structure, style and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism and tone.

CE LIT 2002 World Literature after 1600

STEMHS0119

Semester long course 1.0 credit (for 10th,11th and 12th) 0.5 credits for 9th grade (graduate year 2028)	11th - 12th grade	No fee, although students will be asked to supply required novels throughout the year	ACC Placement scores for English Student must enroll at ACC and fill out CE College agreement
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This course will examine significant writings in world literature from seventeenth century to the present. It will emphasize careful and critical reading and understanding of the works and their cultural backgrounds.

Examines significant writings in world literature from the ancients to the seventeenth century. It emphasizes active reading and understanding of the works and their cultural backgrounds.~~This is a statewide Guaranteed Transfer course in the GT-AH2 category.

AP Literature and Composition

STEMHS0121

Year long course 1.0 credit	11th or 12th grade	\$95.00 for AP exam	2 years of high school level English is recommended
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An AP English Literature and Composition course engages students in the careful reading and critical analysis of imaginative literature . Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers . As they read, students consider a workstyle, structure, style and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism and tone. They will be expected to complete summer reading in preparation for the course. Students are expected to take the AP exam in May.

British Literature

STEMHS0112

Year long course 1.0 credit	12th grade	No fee, although students will be asked to supply required novels throughout the year	English I or equivalent
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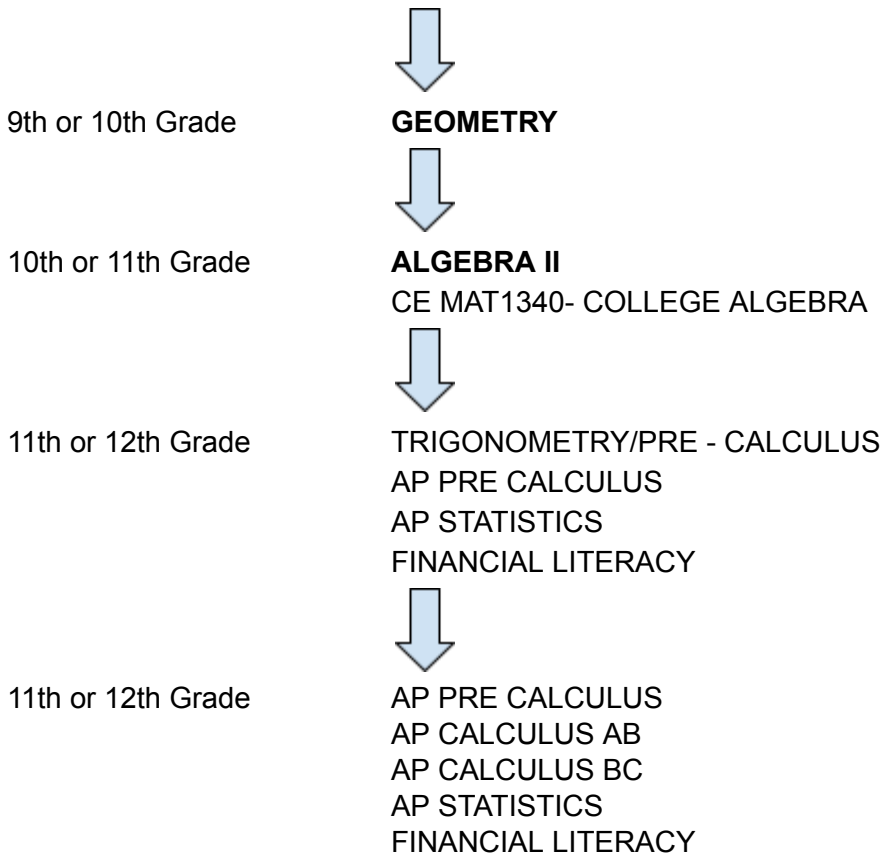
In this course we will study works classified as British Literature in order to broaden students' scope of literature written in English. Texts will range from the middle English of Chaucer to 21st century fiction and nonfiction, and highlight themes of escapism. These texts will be placed in their social and historical context, giving us a more complete understanding of the circumstances and culture in which they were written.

*Satisfies Capstone requirement

Mathematics - recommended pathway

9th Grade

ALGEBRA I



NOTES on MATH COURSES:

- 4 credit hours are required for graduation
- Algebra II is **required for graduation**
- Freshman will begin with the appropriate math class based on previous math class and eligibility.
 - Eligibility may be based on:
 - recent interim assessment scores (iReady, STAR, or MAPS)
 - math placement test by STEM

Mathematics

Algebra I

STEMHS029

Year long course 1.0 credit	9th - 11th grade	None	Pre Algebra
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This course introduces students to solving problems by using variables to represent unknown quantities and then solving for those unknown quantities by writing equations and inequalities. Course topics include a review of the order of operations with integers, solving equations, inequalities and absolute values equations. Students will work extensively on solving and graphing linear system/inequalities and quadratic equations . Additional topics will include rules of exponents, simplifying and factoring quadratics, operations with polynomials , radicals, and the quadratic formula. Students who successfully complete this course with an 85% or higher will be prepared to move on to Geometry.

Geometry

STEMHS0210

Year long course 1.0 credit	9th - 11th grade	None	Algebra I
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This high school graduation requirement course serves as the second in the series of advanced mathematical courses by providing a complete foundation of geometrical concepts. Students will represent problem situations with geometric models, classify figures in terms of congruence and similarity, and deduce properties of and relationships between figures from given assumptions. Students will also be able to prove geometrical properties and relationships.

Algebra II

STEMHS0211

Year long course 1.0 credit	9th - 12th grade	None	Geometry (with a C or better for students in grades 6-8)
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This course will expand students' knowledge of functions to include exponential, logarithmic and polynomial functions by examining real-world problems. Students will gain an understanding of the characteristics and transformation of functions.

CE MAT 1340- College Algebra

STEMHS0222

Semester long course 1.0 credit (for 10th, 11th and 12th) 0.5 credits for 9th grade (graduate year 2028)	10th-12th grade	N/A	Must have completed Algebra II with a C or higher Student must enroll at ACC and fill out CE College agreement
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Includes a brief review of intermediate algebra, equations, and inequalities, functions and their graphs, exponential and logarithmic functions, linear and nonlinear systems, selection of topics from among graphing of the conic sections, introduction to sequences and series permutations and combinations, the binomial theorem and theory of equations.

CE MAT1150- Technical Math

STEMHS0230

Semester long course 1.0 credit (for 10th, 11th and 12th) 0.5 credits for 9th grade (graduate year 2028)	10th-12th grade	N/A	Must have completed Algebra II with a C or higher Student must enroll at ACC and fill out CE College agreement
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Covers material designed for career and technical students who need to study particular mathematical topics. Topics include measurement, algebra, geometry, statistics, and graphs. These are presented at an introductory level and the emphasis is on applications.

Trigonometry/Pre-Calculus

STEMHS0212

Year long course 1.0 credit	9th - 12th grade	None	Algebra II and Geometry (recommended C or better)
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This problem-based course integrates the study of trigonometry, analytic geometry, advanced algebraic topics, and elementary statistics into a logical approach to the solution of real-world problems. All students considering a career in a mathematical, scientific or technological related field should enroll in this course.

AP Pre-Calculus

STEMHS0229

Year long course 1.0 credit	9th - 12th grade	None	Algebra II and Geometry Teacher recommendation required
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In AP Precalculus, students explore everyday situations and phenomena using mathematical tools and lenses. Through regular practice, students build deep mastery of modeling and functions, and they examine scenarios through multiple representations. They will learn how to observe, explore, and build mathematical meaning from dynamic systems, an important practice for thriving in an ever-changing world. AP Precalculus prepares students for other college-level mathematics and science courses. The framework delineates content and skills common to college precalculus courses that are foundational for careers in mathematics, physics, biology, health science, social science, and data science.

AP Calculus AB

STEMHS0216

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP exam \$35.00 for Web Assign	Pre-calculus (recommended C or better)
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Topics covered include limits, differentiation, integration, and problem solving involving calculus concepts. This course is the equivalent to the first semester college calculus course and leads to the national AP exam in May.

AP Calculus BC

STEMHS0217

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP exam \$35.00 for Web Assign	Trigonometry required AP Calculus AB recommended Teacher recommendation needed.
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Following the College Board's suggested curriculum designed to parallel college-level calculus courses, AP Calculus BC courses provide students with an understanding of the concepts of calculus and experience with its methods and applications. These courses cover all of the calculus topics in AP Calculus AB as well as the following topics: parametric, polar, and vector functions; applications of integrals; and polynomial approximations and series, including series of constants and Taylor series. See SCED Code 02124 for more details.

AP Statistics

STEMHS0218

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP Exam Textbook	Algebra II, earning a C or higher.
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The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students are exposed to four broad conceptual themes:

- Exploring Data: Describing patterns and departures from patterns
- Sampling and Experimentation: Planning and conducting a study
- Anticipating Patterns: Exploring random phenomena using probability and simulation
- Statistical Inference: Estimating population parameters and testing hypotheses

Students who successfully complete this course will be prepared for the AP Statistics test and may be awarded up to one semester of college credit with a successful score. All students enrolled are expected to take the AP exam in May.

Financial Literacy

STEMHS0214

Year long course 1.0 credit	10th - 12th grade	None	None
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The Financial Literacy course introduces more than a dozen topics spanning personal finance to global economics. Students first learn practical money management skills like budgeting, credit card responsibility, and college loans. Then students explore career planning topics like salaries, retirement/401(k) plans, employer-provided health care, and personal tax preparation. An overview of micro/macro-economics and accounting is covered, as well as a thorough study of financial markets and investment vehicles. Finally, the course explores conceptual financial topics like behavioral economics, game theory, and deceptive marketing tactics. This course satisfies the capstone requirement for math.

Science - recommended pathway

9th Grade

BIOLOGY
AP BIOLOGY*



10th Grade

CHEMISTRY*
AP CHEMISTRY*
CE BIO 2120- ZOOLOGY



11th Grade

PHYSICS*
AP PHYSICS I*
AP PHYSICS II*



12th Grade

AP PHYSICS II*
 AP PHYSICS C*
 AP CHEMISTRY*
 AP BIOLOGY*
 ZOOLOGY*
 HUMAN ANATOMY & PHYSIOLOGY*

Elective Classes
 10th - 12th Grade

AP ENVIRONMENTAL SCIENCE
 AP BIOLOGY*
 AP CHEMISTRY*
 AP PHYSICS I,II or C*
 ZOOLOGY*
 HUMAN ANATOMY & PHYSIOLOGY*
 EARTH & SPACE SCIENCE
 MARINE BIOLOGY

NOTES on SCIENCE COURSES:

- 3 credit hours of lab based classes is required for graduation
- All classes, except electives, are lab based and year long
- Standard course progression is in **BOLD**
- * courses have a prerequisite and/or grade minimum to remain in the class see academic planning guide for details

Science

Biology

STEMHS039

Year long course 1.0 credit	9th - 11th grade	N/A	N/A
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Topics include the philosophy of science, scientific method, chemical organization of life, cell biology, cellular metabolism, genetics, molecular genetics, molecular biology, evolution, and biodiversity of the Bacteria, Archaea, protists, and Fungi. Also includes an introduction to higher levels of biological organization from the organism to the ecosystem. Topics include diversity of the plants and animals, organism structure and physiology, behavior, population ecology, community ecology, ecosystem ecology, and environmental biology. This is a lab-based course.

AP Biology

STEMHS0317

Year long course	10th - 12th grade	\$95.00 For AP Exam	Biology and Chemistry
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1.0 credit			are strongly recommended.
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The AP Biology course is designed to enable you to develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. The result will be readiness for the study of advanced topics in subsequent college courses—a goal of every AP course. This AP Biology course is equivalent to a two-semester college introductory biology course and has been endorsed enthusiastically by higher education officials. All students are expected to take the AP exam in May.

This is a lab-based course.

Chemistry

STEMHS0310

Year long course 1.0 credit	10th - 12th grade	N/A	Algebra I
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This Chemistry course uses real-world applications that help students connect abstract chemical concepts to their own lives. This course utilizes engaging inquiry skills that allow students to really think like scientists. Chemistry strikes a balance between theory and application by incorporating real examples and helping students visualize the three-dimensional atomic and molecular structures that are the basis of chemical activity. Laboratory work in this course focuses on data analysis of chemical concepts and principles covering a broad range of topics. An integral part of this course is to develop students' problem solving and critical thinking skills.

This is a lab-based course.

AP Chemistry

STEMHS0318

Year long course 1.0 credit	10th - 12th grade	\$95.00 For AP exam	Chemistry and Algebra II are strongly recommended.
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This course is designed to be the equivalent of the general chemistry course usually taken during the first college year. Students should attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. This course in general chemistry is accelerated in the topics covered. The emphasis of this class is on chemical calculations and the mathematical formulation of principles, and laboratory experience equivalent to that of a typical college course. All students are expected to take the AP exam in May.

This is a lab-based course.

Zoology

STEMHS0316S1/S2

Year long course 1.0 credit	10th - 12th grade	N/A	Biology is strongly recommended.
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Introduces the student to the study of animals from the cellular level to the interactions of the organism within its environment, and their ecological contributions. This course includes principles of evolution, animal ecology, animal architecture, taxonomy, and phylogeny. It also includes the study of animal diversity, emphasizing the characteristics and classifications of animal phyla and major classes

CE BIO 2120- Zoology

STEMHS0320

Semester long course 1.0 credit (for 10th,11th and 12th) 0.5 credits for 9th grade (graduate year 2028)	10th-12th grade *open to 9th graders who have completed Biology with a C or higher	N/A	ACC Placement scores for English & Math Student must enroll at ACC and fill out CE College agreement
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Introduces the student to the study of animals from the cellular level to the interactions of the organism within its environment, and their ecological contributions. This course includes principles of evolution, animal ecology, animal architecture, taxonomy, and phylogeny. It also includes the study of animal diversity, emphasizing the characteristics and classifications of animal phyla and major classes

Physics

STEMHS0311S1/S2

Year long course 1.0 credit	10th - 12th grade	N/A	1 year of lab based science and Geometry are strongly recommended.
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The Physics course at STEM utilizes real world problem solving, mathematical analysis, and hands-on experimentation to teach students how to establish patterns in the natural world. Physics will cover 2-dimensional motion, forces, momentum, energy, waves, electricity, and other phenomena that can be broken down mathematically. The rigor of this course will also prepare students for AP Physics if they choose to continue and requires a strong foundation in algebra. Algebra 1 credit required, Algebra II preferred. This is a lab-based course.

AP Physics I

STEMHS0320S1/S2

Year long course 1.0 credit	10th - 12th grade	\$95.00 For AP exam	Pre-req: Geometry completed and Algebra 2 taken concurrently or prior
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AP Physics 1 is designed by the College Board to parallel first-semester college-level courses in algebra based physics. This course covers classical mechanics including kinematics, dynamics, gravitation, energy, momentum, oscillations, and rotation. AP Physics 1 will also include rigorous college-level laboratory investigations and mathematical analysis. All students are expected to take the AP exam in May. This is a lab-based course.

AP Physics II

STEMHS0321S1/S2

Year long course 1.0 credit	10th-12th grade	\$95.00 For AP Exam	Required to take calculus concurrently or prior and also have taken AP Physics 1 or gained instructor approval.
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AP Physics 2 is designed by the College Board to parallel second-semester college-level courses in algebra-based physics. AP Physics 2 courses cover fluids, thermodynamics, electrostatics, electrical circuits, magnetism, electromagnetism, optics, and some modern physics. This class includes college level laboratory

investigations, mathematical analysis, and scientific communication. Students are expected to have taken AP Physics 1 or an equivalent preparatory course and be concurrently enrolled in pre-calculus or above. All students are expected to take the AP exam in May. This is a lab based course.

AP Physics C

STEMHS0319

Year long course 1.0 credit	10th - 12th grade	\$95.00 For AP Exam	Required to take calculus concurrently or prior and also have taken AP Physics 1 or gained instructor approval.
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This course is designed to be the equivalent of a general, calculus based physics course usually taken during the first college year in preparation for a science or engineering degree. This course will focus heavily on the mathematical manipulation of variables necessary to deepen a student's current understanding of physics. Semester 1 will be mechanics based, with emphasis on the following: Kinematics, Dynamics, Energy, Systems of Particles, Momentum, Circular Motion/Oscillations, Rotation, and Gravity/Orbits. Semester 2 will be based on Electricity and Magnetism, with emphasis on the following: Electrostatics, Conductors/Capacitors/Dielectrics, Electric Circuits, Magnetic Fields, and Electromagnetism. Students will be required to identify, design and implement lab based research where they analyze and communicate their data driven results. Consequently, the course will utilize guided inquiry and student-centered learning to foster the development of critical thinking skills. All students are expected to take the AP exam in May. This is a lab-based course.

AP Environmental Science

STEMHS0322

Year long course 1.0 credit	9th - 12th grade	\$95.00 for AP Exam Textbook	N/A
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Earth Science is a laboratory science course that explores origins and the connections between the physical, chemical, and biological processes of the earth system. Students experience the content of Earth Science through inquiry-based laboratory investigations and focus on topics associated with energy, weather and climate, geochemical processes, and the expanded time scales needed to understand events in the earth system. Earth Science provides the knowledge, skills, and habits of mind needed for problem solving and ethical decision-making about scientific and technological issues. All students are expected to take the AP exam in May.

Human Anatomy & Physiology

STEMHS0312

Year long course 1.0 credit	10th - 12th grade	No fee, although students will be asked to supply required reading and study materials throughout the year.	Biology is strongly recommended.
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Human Anatomy and Physiology covers the structure and function of the human body. Included is an organization of the human body, basic chemistry, and a study of cells, tissues, metabolism, human body systems, and the senses. Dissection, histological studies, and physiological simulations are featured in the laboratory experience. This is a lab-based course.

Intro to Marine Biology

STEMHS0302

Semester long course	10th-12th	N/A	Biology is strongly
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0.5 credit			recommended
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Explore the ocean by investigating the biodiversity of life that fills this vast space and the remarkable ecosystems in which they live. Study ocean history and changes across time, which have affected life in the sea and its physical attributes. The ocean and life within it interact and depend upon each other in amazing ways—study these intricate webs. As part of the Earth ecosystem, how do we, as humans, impact life in the ocean and what can we do, as scientists and citizens, to respect, appreciate, and care for our precious ocean.

Earth and Space Science

STEMHS0325

Semester long course 0.5 credit	9th - 10th grade	N/A	N/A
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Earth and Space science is a class designed to introduce students to the field of geology, meteorology, and astronomy within the context of planetary sciences and connections to impacts on humans and society. Students will use the full range of science and engineering practices to make sense of natural phenomena and solve problems that require understanding the universe and Earth's place in it. Students will learn and apply the methodologies of NASA planetary scientists to understand the diversity of objects in and outside of our solar system, and use those observations to deepen their understanding of the Earth's geology, history, weather and climate patterns.

Social Studies - recommended pathway

9th Grade
 GEOGRAPHY (1 semester)
 AP HUMAN GEOGRAPHY
 US GOVERNMENT (1 semester)
 AP WORLD HISTORY: MODERN



10th Grade
 WORLD HISTORY
 AP WORLD HISTORY: Modern
 GEOGRAPHY (1 semester)
 AP HUMAN GEOGRAPHY
 US GOVERNMENT (1 semester)
 AP GOVERNMENT AND POLITICS
 AP EUROPEAN HISTORY



11th Grade
 and/or
 12th Grade
 US HISTORY
 AP US HISTORY
 WORLD HISTORY
 AP WORLD HISTORY: MODERN

GEOGRAPHY
 AP HUMAN GEOGRAPHY
 AP EUROPEAN HISTORY

Elective Classes	PSYCHOLOGY (1 semester)	AP PSYCHOLOGY
10th - 12th Grade	ECONOMICS (1 semester)	AP MACROECONOMICS
	AP MICROECONOMICS	
	AP EUROPEAN HISTORY	

NOTES on SOCIAL STUDIES:

- 3.5 credits are required for graduation
- Students must take US Government to meet graduation requirements
- Students must also take U.S. History, AP World History, or AP European History to meet graduation requirements
- * classes have a grade minimum to remain in the class and/or a prerequisite
- US History is strongly recommended for out of state college acceptance
- Classes are a year long unless otherwise noted

Social Studies

Geography			STEMHS0412
Semester long course 0.5 credit	9th - 11th grade	N/A	N/A

Geography includes the study of different peoples as well as the physical characteristics of the earth, including landforms, climates, ecosystems and their interrelationships. Using the tools of geographers, students first learn to apply the Five Themes of Geography: Location, Place, Human-Environment Interaction, Movement, and Region. The course then concentrates on the political, economic, and social processes that shape cultural patterns of the following world regions: The United States, Latin America, Europe, Asia, Africa, Australia, and Antarctica. Using geographic information systems and a variety of other media, students compile, analyze, and present geographic data pertaining to the regions. Finally, students learn about types and patterns of settlement; the distribution and movement of world populations; relationships among people, places, and environments and how location affects economic systems. Cross-curricular integration projects with Science, Technology, Engineering, Math and Language Arts are emphasized.

AP Human Geography			STEMHS0420
Year long course 1.0 credit	9th - 12th grade	\$95.00 for AP Exam Textbook	N/A

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 environmental consequences and also learn about the methods and tools geographers use in their science and practice.

US Government

STEMHS049

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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The Civics and U.S. Government course prepares students for informed and responsible participation as citizens of our constitutional democracy. Students deepen their understanding of the democratic values expressed in the Declaration of Independence, the Constitution, and other foundational documents of the United States. They learn the purposes and structures of government as well as the principles of federalism, with a focus on how the executive, legislative and judicial branches operate at the federal, state and local levels. They also learn how citizens exert influence on public affairs and decisions. As a result of this course, students are prepared to exercise the rights and responsibilities of American citizenship. Cross-curricular integration projects with Science, Technology, Engineering, Math and Language Arts are emphasized.

AP Government and Politics

STEMHS0421

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP Exam Textbook	N/A
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Following the College Board's suggested curriculum designed to parallel college-level U.S. Government and Politics courses, these courses provide 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 courses generally cover the constitutional underpinnings of the U.S. government, political beliefs and behaviors, political parties and interest groups, the institutions and policy processes of national government, and civil rights and liberties.

US History

STEMHS0411

Year long course 1.0 credit	11th - 12th grade	N/A	Strongly recommended for college admissions
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The study of 11th grade United States History starts in chronological sequence with the causes and events leading up to the Civil War through modern times. The class will emphasize the strands of constitutional development, government, minorities, economics, culture, foreign affairs, and war and peace. The focus of this course provides students with a framework for studying political, social, economic, and cultural issues, and for analyzing the impact these issues have had on American society. This course goes beyond memorization of isolated facts to the development of higher level thinking skills, encouraging students to make historical assessments and evaluations.

*Satisfies Colorado Department of Education Holocaust requirement

AP U.S History

STEMHS0424

Year long course 1.0 credit	11th - 12th grade	\$95.00 for AP Exam Textbook	N/A
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The class will prepare students to take the AP exam in the Spring. The AP U. S. History course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems

and materials in U.S. history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students should learn to assess historical materials—their relevance to a given interpretive problem, reliability, and importance—and to weigh the evidence and interpretations presented in historical scholarship. An AP U.S. History course should thus develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. Students who take this course will have the opportunity to earn high school credit and sit for the College Board AP World History exam in the spring.

World History

STEMHS0410

Year long course 1.0 credit	10th - 12th grade	N/A	N/A
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This HS course is a study of world history anchored by a unit on world religions. Students will study the beliefs, history, and modern issues affecting faiths from both Eastern & Western traditions. Students study the key concepts of continuity and change, cause and effect, complexity, unity and diversity, and significant ideas through multiple perspectives, within and among cultures and societies. Using primary and secondary sources, they will utilize critical thinking, analytical and problem-solving skills as they conduct inquiry-based research, participate in interactive discussions, and complete assignments establishing real-world connections. Cross-curricular integration projects with Science, Technology, Engineering, Math and Language Arts are emphasized.

AP World History: Modern

STEMHS0423

Year long course 1.0 credit	9th - 12th grade	AP Exam fee	N/A
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In AP World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places: humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation. All students are expected to take the AP exam in May.

*Satisfies Colorado Department of Education Holocaust requirement

Psychology

STEMHS0422

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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Psychology courses introduce students to the study of human cognition and behavior. Course content typically includes an overview of the field of psychology, covering topics about the biological bases of behavior, motivation & emotion, human growth and development, learning, personality and abnormal psychology.

AP Psychology

STEMHS0429

Year long course	9th - 12th grade	\$95.00 for AP Exam	N/A
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1.0 credit		Textbook	
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Following the College Board's suggested curriculum designed to parallel college-level Psychology, the AP Psychology course is to introduce students to the history, ideas, theories and methods of the scientific study of the behavior and mental processes of humans and animals via reading, discussion and analyzing scientific data.

Economics

STEMHS0413

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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Why do 24-hour convenience stores have locks on their doors? Why do shirts for men button from the left, while shirts for women button from the right? Economics supplies the answers to these questions. Economics is the study of resources, efficiency, and how people choose to use their time and money. The field includes examinations of microeconomics - personal choices concerning resources - as well as macroeconomics - how entire economies grow or shrink based on the ideas of supply and demand. We will consider questions that economists ask, such as how and why prices change, what competition does to businesses, and how the stock market works. The focus of this class will be on how we can use economic principles to solve everyday problems, and how we can become more intelligent decision makers.

AP Microeconomics

STEMHS0427

Year long course 1.0 credit	9th - 12th grade	\$95.00 for AP Exam Textbook	N/A
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Following the College Board's suggested curriculum designed to parallel college-level Microeconomics courses, AP Microeconomics courses introduces students to the principles of economics that apply to the behavior of individuals within an economic system. You will use graphs, charts, and data to analyze, describe, and explain economic concepts. Topics such as supply and demand, production, costs, competition, factor markets and market failure will be explored.

AP Macroeconomics

STEMHS0428

Year long course 1.0 credit	9th - 12th grade	\$95.00 for AP Exam Textbook	N/A
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Following the College Board's suggested curriculum designed to parallel college-level Macroeconomics courses, AP Macroeconomics introduces students to the principles of economics that apply to an economic system as a whole. You will use graphs, charts, and data to analyze, describe, and explain economic concepts. Topics such as economic indicators and the business cycle, national income, price determination, the financial sector, policy and economic growth, and international trade will be explored.

AP European History

STEMHS0430

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP Exam Textbook	N/A
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AP European History follows events from 1450 to Present by analyzing turning points, wars, innovations, revolutions, and social movements of the kingdoms and republics of the European continent. Starting with the Renaissance, students will understand social, political, and economic implications of major points of the Enlightenment, Scientific & Industrial Revolutions, and the creation of the modern world resulting from the two 20th Century World Wars. After learning to properly examine documents, students will attempt the AP Test at the end of the year for college credit.

*Satisfies Colorado Department of Education Holocaust requirement

HS Sports Psychology

STEMHS0431

Semester long course 0.5 Credit	9th - 12th grade	N/A	N/A
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This course will concentrate on cognitive and behavioral skills training for performance enhancement, counseling and clinical intervention issues with athletes and team building concepts. Students will explore topics such as: goal setting; visualization, imagery and performance; development of self-confidence, self-esteem, advocacy and competence in sports; sportsmanship and leadership skills including moral and character development, eating disorders, nutrition, substance abuse, ergogenic aids, depression, overtraining, aggression in sports, injury, rehabilitation and team building; team processes and concepts. Sports Psychology proficiencies have been recognized and developed by the Division 47 Committee of the American Psychological Association.

Computer Science

HS CyberPatriots

STEMHS110

Semester long course 0.5 credit	9th - 12th grade	Class fee TBD	N/A
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Students will learn skills for defensive cybersecurity techniques and building robust cisco networking models. They will get hands-on experience using virtualized environments, including how to secure and harden various windows and linux operating systems both desktop and server side systems. Focus on problem-solving and working in small teams to troubleshoot systems in a systematic way, including scripting and documenting their methodologies. *May be taken multiple times for credit.

Game Design I

STEMHS1017

Semester long course 0.5 credit	9th - 12th grade	Class fee TBD	N/A
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Students will be introduced to Computer Science concepts through the development and design of 3D video games using the Unity game engine and C# coding. This course is light on programming and focuses on all of the other aspects of game design that convey a mood, aesthetic, or feeling to users. The topics covered include materials and shaders, lighting, animation, particle effects, camera options, and post-processing settings. Students get to practice using the Unity interface and learning all of the tools built into Unity to streamline the development process.

AP Computer Science A

STEMHS1014

Year Long Course 1.0 credit	9th - 12th grade	\$95.00 for AP Exam	AP Computer Science Principles are highly recommended
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Computer Science A emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development and is meant to be the equivalent of a first-semester college-level course in Computer Science. Students will learn Java. It also includes the study of data structures, design, and abstraction. Students will be prepared to take the AP Computer Science A exam.

AP Computer Science Principles STEMHS1015

Year long course 1.0 credit	9th - 12th grade	\$95.00 for AP Exam	N/A
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This course offers a multidisciplinary approach to teaching the underlying principles of computation. This course will introduce students to creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. Students get the opportunity to use technology to address real world problems and build relevant solutions.

Gaming Studio STEMHS1025

Year long course 1.0 credit	10th - 12th grade	Course fee TBD	Computer Science: Game Design I or demonstration of equivalent knowledge.
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Design, build, and collaborate to create a singular game using a variety of tools (Sculptris, Unity Game Engine, Blender, Krita, etc.). Students will experience how a game studio functions and learn to work in large teams effectively. Students will learn Git and LFS Git repositories. Students will be expected to fill multiple roles, such as: 2D Concept Artist, 3D Modeler/Sculpture, 3D Rigger, Level Designer, Art Director, Sound Director, Composer, Character Designer, Software Engineer, Lead Game Designer, Story Director, Scrum Leader, and Networking and Database Engineer. Students are expected to pursue a certification in their respective field of study depending on the area of work, this course can count as STEM Elective or a Fine Arts credit.

CE-CNG 1021 Computer Technician I A+ STEMHS1010

Semester long course 1.5 credit	9th - 12th grade	Class fee TBD	Student must enroll at ACC and fill out CE agreement
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Provides students with an in-depth look at personal computer hardware, introduces O.S. features and security concepts, and covers interpersonal skills, all of which are necessary for a successful entry-level computer service technician position. Provides extensive hands-on work with computer systems, PC setup and configuration, and basic maintenance and troubleshooting. This course helps prepare you for the CompTIA A+ Essentials Exam. [4 College Credits]

CE-CNG 1022 Computer Technician II A+

STEMHS1011

Semester long course 1.5 credit	9th - 12th grade	Class fee TBD	CNG 1021(C or better) Student must enroll at ACC and fill out CE agreement
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Provides students with an in-depth look at Operating System support, maintenance, and troubleshooting, and an overview of hardware, security concepts, and interpersonal skills, all of which are necessary for a successful entry-level computer service technician position. Provides extensive hands-on work with Windows 2000 and/or XP, including using common GUI and command line tools, registry editing, System backup and Recovery, Networking, and O.S. Troubleshooting. This course helps prepare you for the CompTIA A+ 602 Exam.

CE CNG 1024 Networking I: Network+

STEMHS1012

Semester long course 1.0 credit	10th - 12th grade	Class fee TBD	Student must enroll at ACC and fill out CE agreement
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Provides students with the knowledge necessary to understand, identify and perform necessary tasks involved in supporting a network. Covers the vendor-independent networking skills and concepts that affect all aspects of networking, such as installing and configuring the TCP/IP. This course also prepares students for the Networking II: Network + course (3 college credits).

CE-CNG 1025 Networking II: Network+

STEMHS1013

Semester long course 1.0 credit	10th - 12th grade	Class fee TBD Materials TBD	CNG 1024 (C or better) Student must enroll at ACC and fill out CE agreement
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Continues to provide students with the knowledge necessary to implement and support a network. Focuses on the vendor-independent networking skills and concepts that affect all aspects of networking. The Networking I and II: Network + courses prepare students for the Network + certification.

CE-CIS 2020 Fundamentals of UNIX

STEMHS1028

Semester long course 1.0 credit	11th - 12th grade	Class fee TBD Materials TBD	Student must enroll at ACC and fill out CE agreement
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This concurrent enrollment course provides students with the structure and fundamentals of the UNIX operating system. It includes the file system, file processing, various utility programs, shell, multi-user operation, text processing and communications.

CE-CIS 2040 Database Design and Development

STEMHS1029

Semester long course 1.0 credit	11th - 12th grade	Class fee TBD Materials TBD	Student must enroll at ACC and fill out CE agreement
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This concurrent enrollment course introduces the basic concepts of relational databases, data storage, and retrieval. Covers database design, data modeling, transaction processing, and introduces the Structured Query Language (SQL) for databases.

CE-CIS 2043 Introduction to SQL

STEMHS1030

Semester long course 1.0 credit	11th - 12th grade	Class fee TBD Materials TBD	Prerequisite CIS 1045 and CIS 2040 Student must enroll at ACC and fill out CE agreement
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This concurrent enrollment course introduces Structured Query Language (SQL) including creation of database structures and how to store, retrieve, and manipulate data in a relational database. This course also covers creating tables and views, using indexes, and developing stored procedures and triggers.

Certified Ethical Hacker

STEMHS1023

Semester long course .5 credit	11th - 12th grade	Course fee TBD	Minimum age of 16 years old and administration approval. CNG 124, CNG 125, & CIS 220 are strongly recommended. Signed release form.
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Delivers a comprehensive overview of network security, including general security concepts from both Security+ and Certified Ethical Hacker. Students will study various attack types including buffer overflows, SQL injections, Cross-site scripting, etc. Cryptography basics are incorporated, and operational/organizational security is discussed as it relates to physical security, disaster recovery, and business continuity. Computer forensics is introduced. The minimum age for this class is 16. Considering the nature of this course, applicants must be approved by the administration to take this course.

CE CSC1019 - Introduction to Programming: (Python)

STEMHS1031

Semester long course 1.0 credit	9th - 12th grade	Course fee TBD	Student must enroll at ACC and fill out CE agreement
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Focuses on a general introduction to computer programming. This course emphasizes the design and implementation of structured and logically correct programs with good documentation. It is centered on basic programming concepts, including control structures, modularization, and data processing. A structured programming language is used to implement program designs. It emphasizes the writing of multiple programs following the software development process, from start to finish, including design, implementation, and testing.

CE CSC 1026: Game Design and Development

STEMHS1032

Semester long course 1.0 credit	9th - 12th grade	Course fee TBD	Student must enroll at ACC and fill out CE agreement
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Combines problem-solving techniques with computer game design and implementation to introduce the student to basic gaming and computer science concepts. Students design, implement, and test computer

games using software that allows for basic game creation through a wide variety of game creation tools; no prior programming experience is required.

CE CSC 1060: Computer Science I: Language

STEMHS1033

Semester long course 1.5 credit	9th - 12th grade	Course fee TBD	Student must enroll at ACC and fill out CE agreement CSC 1019 and MAT 0300/099 or higher with a grade of "C" or better
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Introduces students to the discipline of computer science and programming. Algorithm development, data representation, logical expressions, sub-programs and input/output operations using a high-level programming language are covered. Intensive lab work outside of class time is required.

CE CSC 1061: Computer Science II: Language

STEMHS1034

Semester long course 1.5 credit	9th - 12th grade	Course fee TBD	Student must enroll at ACC and fill out CE agreement CSC 1060 with a grade of "C" or better
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Continues algorithm development and problem solving techniques not covered in Computer Science I using a high-level programming language. Students are able to gain experience in the use of data structures and the design and implementation of larger software projects. Intensive computer laboratory experience is required for this course.

CE CSC 2000: Game Programming I

STEMHS1035

Semester long course 1.0 credit	10th - 12th grade	Course fee TBD	Student must enroll at ACC and fill out CE agreement Corequisite: CSC 1026
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Introduces the student to game programming techniques and how to use a game library. Skills developed include programming input devices, 2D game theory and design, bitmap handling, sprite programming and threads.

CE CSC 2017 Advanced Python

STEMHS1038

Semester long course 1.0 credit	10th - 12th grade	Course fee TBD	Student must enroll at ACC and fill out CE agreement Prerequisite CSC1019 and MAT1340 or CSC1060
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Continues program development and problem solving not covered in CSC1019: Introduction to Programming. Students will create larger programs in the areas of advanced expression, iterator objects, parsing, and GUI applications.

Engineering

Foundations of Engineering

STEMHS2134S1/S2

Semester long course 0.5 credit	9th - 12th grade	TBD	N/A
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Survey course of engineering principles from a variety of disciplines. Students will have project based units on: 3D models and drawings, circuits, MATLAB coding, construction, materials, basic physics principles. This course helps prepare freshmen who did not attend STEM for middle school for more in-depth high school engineering paths (Biomedical, Aerospace, Robotics, etc). Can also be offered to 10-12th grade transfer students.

HS Robotics

STEMHS219

Semester long course 0.5 credit	9th - 12th grade	TBD	N/A
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Students learn the basics of robotics and programming using the VEX V5 system. Subjects covered will include motors, sensors, servos, programming, functions, loops, and coding.

TSA

STEMHS2118

Year long course 1.0 credit	9th - 12th grade	TBD	Must be a member of TSA Club
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Students will learn about technical sketching and drawing, how to apply mathematical principles to their design, and then use various tools and materials to bring their 3D projects to life. This is a hands-on inquiry based and problem/project driven class. Students will learn how to utilize the Engineering Design Process, critical thinking, and problem solving skills, to design and build projects. While learning about different materials and processes, students will also learn how to safely choose and operate the correct tool or machine for the job at hand. Students will learn to document their projects and solutions in an Engineering Notebook, and produce a presentation for each project. *May be taken multiple times for credit.

Manufacturing

STEMHS2115

Semester long course 0.5 credit	9th - 12th grade	TBD	N/A
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Students will learn to design a project in a 3D modeling program, then fabricate their project through processes such as 3D printing, Laser cutter and engraver, and CNC machining. Students will also learn about Manufacturing Processes including Assembly Line, Just In Time, and Batch

CE EIC 1001 Electrical Print Reading

STEMHS2133

Semester long course 0.5 credit	9th - 12th grade	TBD	Student must enroll at ACC and fill out CE College agreement
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Teaches the skills needed to interpret electrical drawings properly. This 15 hour seminar is critical for anyone involved in the design, construction, or maintenance of electrical systems.

CE ELT 1206 Fundamentals of DC/AC

STEMHS2121

Semester long course 1.5 credit	9th - 12th grade	TBD	Student must enroll at ACC and fill out CE College agreement
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Introduces the basic skills needed for many careers in electronics and related fields. Covers the operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes. Emphasizes the use of common test instruments in troubleshooting.

CE ELT 2254 Industrial Wiring

STEMHS2129

Semester long course 1.0 credit	9th - 12th grade	N/A	Student must enroll at ACC and fill out CE College agreement
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Focuses on the required and recommended practice for industrial wiring. The National Electrical Code is applied to industrial power and control wiring. Covers specification and installation of wiring, conduit, enclosures, and termination components in lecture and applied during lab.

CE CAD 2455 Solidworks/Mechanical

STEMHS2125

Semester long course 1.0 credit	9th - 12th grade	N/A	Student must enroll at ACC and fill out CE College agreement
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Introduces parametric feature based solid modeling 3D concepts to build confidence in 3D thinking and progresses to three dimensional parameters. The student learns to construct, modify, and manage complex parts in 3D space as well as to produce 2D drawings from the 3D models.

CE CAD 2660 3D Printing/Additive Manufacturing

STEMHS2126

Semester long course 1.0 credit	9th - 12th grade	N/A	CAD 2455 (C or better) Student must enroll at ACC and fill out CE College agreement
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Provides the student with the ability to blend the virtual and real design worlds together through the use of 3D CAD Modeling and 3D Printing.

CE ELT 2252 Motors and Controls

STEMHS2128

Semester long course	9th - 12th grade	TBD	ELT 1206
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1.0 credit			Student must enroll at ACC and fill out CE College agreement
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Enables the student to study, construct, test, and evaluate basic industrial control systems, including AC/DC motors, stepper motors, power sources, generators, tachometers, line diagrams and logic functions. Covers safety standards and preventive maintenance.

CE ELT 2455 Fluid Power

STEMHS2130

Semester long course 1.0 credit	9th - 12th grade	TBD	Student must enroll at ACC and fill out CE College agreement
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Enables the student to study, construct, test and evaluate circuit diagrams, transmission of force and energy, pumps and motors, actuators, cylinders, valves, and control devices. Incorporates the construction of hydraulic and pneumatic circuits using industrial equipment in the laboratory.

CE ELT 2358 Programmable Logic Controllers

STEMHS2131

Semester long course 1.0 credit	9th - 12th grade	TBD	ELT 1206 and ELT 2252 Student must enroll at ACC and fill out CE College agreement
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Covers the fundamentals of programmable logic controllers (PLCs) as they are applied in robotics and automation. Includes history, terminology, typical applications, hardware, and software. Incorporates lab and project activities that address operating, monitoring, programming, troubleshooting, and repairing PLC controlled lab trainers as well as actual industrial equipment.

CE ELT 2367 Introduction to Robotics

STEMHS2132

Semester long course 0.5 credit	9th - 12th grade	TBD	ELT 1206 Student must enroll at ACC and fill out CE College agreement
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Introduces basic robotics. Enables the student to program a robot in a higher-level language to perform various tasks. Covers building and interfacing of sensor circuits.

Aerospace Engineering I

STEMHS234

Semester long course 0.5 credit	9th - 12th grade	TBD	Algebra 1
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Students will be fully immersed in the Engineering Design Process as they learn the basics of Aerospace Engineering, with a focus on Aerodynamics, Rocketry, and Space Systems. They will design, create and test gliders, rockets, and other aerospace projects. They will analyze and simulate their designs virtually before developing precise manufacturing templates in order to build the physical projects. Students then will build their

designs and compete in in-class challenges. This course will help students to be prepared to compete in extracurricular competitions.

Aerospace Engineering II

STEMHS238

Semester long course 0.5 credit	9th - 12th grade	TBD	Algebra 1
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Students will continue to develop their skills in Aerospace Engineering and the Engineering Design Process as they focus on additional fields of Aerospace Engineering, such as Space Systems, Satellites, Orbital Mechanics, Drones and Space Materials. They will design, create and test drones, satellites, and other aerospace projects. They will analyze and simulate their designs virtually before developing precise manufacturing templates in order to build the physical projects. Students then will build their designs and compete in in-class and/or industry challenges. This course will help students to be prepared to compete in extracurricular competitions.

Biomedical Engineering I

STEMHS236

Semester long course 0.5 credit	9th - 12th grade	TBD	Biology highly recommended Algebra I
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Students will learn about the principles of biomedical engineering. The course will consist of studying a biomedical problem (diabetes), learning about how we currently identify and manage the problem clinically and in research. Students will develop and test solutions to the overarching problem learned about in the course.

Biomedical Engineering II

STEMHS237

Semester long course 0.5 credit	9th - 12th grade	TBD	Biomedical Engineering I Algebra I
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This course focuses on prosthetic devices and other external biomedical engineering devices. Students will learn about how the body is affected by forces to guide their design of prosthetic devices.

Biomedical Engineering III

STEMHS238S1/S2

Year long course 1.0 credit	10th - 12th grade	TBD	Biomedical Engineering II
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A deep dive into the principles of biomedical engineering with the focus primarily being on aspects of infectious diseases, sterile control, tissue engineering and other medical interventions.

Physical Education

Strength and Conditioning

STEMHS0812

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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This class will focus on furthering the knowledge base of effectively utilizing the weight room to promote

physical fitness and maintain overall wellness. Logs of exercise, workouts, diet, health markers/body measurements, and sleep will provide insight into student's individual health and also enable them to evaluate their daily choices leading to their overall health. Developing techniques in creating workout routines, exploring varying diets, and researching means of exercise will be both uncovered and explored by student learning. We will also engage in various team sports and activities that will teach you about teamwork, sportsmanship, and individual physical fitness. This class may be taken multiple times for credit.

Healthy Decisions

STEMHS0810

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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This course is designed to encompass concepts related to mental, emotional, physical, personal and social well-being. The topics covered include Nutrition, Mental and Emotional Health, Managing Stress, Resolving Conflicts and Preventing Violence, Tobacco, Alcohol, Illegal Drugs, Sexual Education, and Social Health.

Physical Education

STEMHS089

Semester long course 0.5 Credit	9th - 12th grade	N/A	N/A
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This course will teach and develop lifelong habits promoting the physical well-being of the individual. Though the primary means of fitness will be resistance/strength training, students will be exposed to and practice many areas of fitness. These areas may include: yoga, flexibility, cardiovascular exercise, crossfit, exercise videos, and fitness testing. Fitness testing is utilized as markers of physical fitness as well as to identify improvements in physical fitness. There are various standards that students are asked to meet, but at varying levels. As individuals we are discovering what it means to be a smart consumer of exercise while also uncovering what it means to be "healthy." This class may be taken multiple times for credit.

Sports and Games

STEMHS090

Semester long course 0.5 Credit	9th - 12th grade	N/A	N/A
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Concentrates on the different skills, rules and strategies of individual and team sports/games. Teamwork and competition are emphasized. Students will learn the skills necessary to play each sport/game, rules and terminology associated with the sport/game and offensive/defensive strategies particular to the sport/game. Sportsmanship and competitiveness are learned and practiced, along with leadership.

World Language

French I

STEMHS069F

Year long course 1.0 Credit	9th - 12th grade	N/A	N/A
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French 1 develops the basic concepts in French Language and culture including French pronunciation, grammar, and vocabulary. Students will learn to develop their use of French in all three modes of communication: Interpersonal, Interpretive and Presentational as defined in the Standards for World Languages. The importance of communication and cultural awareness is stressed through a wide variety of

activities (group/pair work/video, audio recordings, computer assignments). At the completion of this course, students are expected to be able to:

- Communicate in French orally and in writing to describe themselves and others, daily routine, family and close environment in the present tense.
- Comprehend both written and spoken language about themselves, and others, daily routine, family and close environment in the present tense.
- Demonstrate a basic understanding of French spelling, pronunciation, and grammar.
- Express knowledge of the Francophone world including geography, history and daily life
- Connect French studies with other content areas studied at STEM School Highlands Ranch and found in the world around them.
- Illustrate similarities and differences between the French and American cultures.

French II

STEMHS0610F

Year long course 1.0 Credit	9th - 12th grade	N/A	French I
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French 2 continues to develop the basic concepts in French Language and culture including French pronunciation, grammar, and vocabulary. Students will continue to learn to develop their use of French in all three modes of communication: Interpersonal, Interpretive and Presentational as defined in the Standards for World Languages. The importance of communication and cultural awareness is stressed through a wide variety of activities (group/pair work/video, audio recordings, computer assignments). At the completion of this course, students are expected to be able to:

- Communicate in French orally and in writing to describe themselves and others, daily routine, family, close environment, celebrations, vacations, homes, food, and health in the present and past tenses.
- Comprehend both written and spoken language about themselves, and others, daily routine, family, close environment, celebrations, vacations, homes, food, and health in the present and past tenses.
- Demonstrate a basic understanding of French spelling, pronunciation, and grammar. Express knowledge of the Francophone world including geography, history and daily life Connect French studies with other content areas studied at STEM School Highlands Ranch and found in the world around them.
- Illustrate similarities and differences between the French and American cultures

Year long Course 1.0 credit	10th - 12th grade	N/A	French II
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French 3 continues to develop the basic concepts in French Language and culture including French pronunciation, grammar, and vocabulary. Students will continue to learn to develop their use of French in all three modes of communication: Interpersonal, Interpretive and Presentational as defined in the Standards for World Languages. The importance of communication and cultural awareness is stressed through a wide variety of activities (group/pair work/video, audio recordings, computer assignments). At the completion of this course, students are expected to be able to:

- Communicate in French orally and in writing to describe themselves and others, daily routine, family, close environment, celebrations, vacations, homes, food, health, technology, cities, future and careers, nature and environment, and in the present, past, and future tenses.
- Comprehend both written and spoken language about themselves, and others, daily routine, family, close environment, celebrations, vacations, homes, food, health, technology, cities, future and careers, nature and environment, and in the present, past, and future tenses.
- Demonstrate a basic understanding of French spelling, pronunciation, and grammar. Express knowledge of the Francophone world including geography, history and daily life Connect French studies with other content areas studied at STEM School Highlands Ranch and found in the world around them.
- Illustrate similarities and differences between the French and American cultures

French IV

STEMHS0612F

Year long course 1.0 Credit	11th - 12th grade	N/A	French III
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The emphasis in this course is on encouraging spontaneous expression through extensive oral and written practice via authentic documents (newspaper, magazines, advertisements, media) and literature. Extended discussion and personal reactions or opinions serve to increase correctness of expression. As much current cultural material as possible is integrated into the course to reinforce student proficiency and to prepare the student for the AP course or for proficiency tests as required by some colleges.

AP French

STEMHS0613F

Year long course 1.0 Credit	11th - 12th grade	\$95.00 for AP Exam Textbook	French IV
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Advanced Placement foreign language classes offer the students a weighted credit. Students continue building their fluency in the language through oral, written, listening and reading practice. These classes are conducted entirely in the language with both students and teachers communicating only in the target language. Students prepare to take the Language Advanced Placement tests, which are given in May. The AP test must be taken in order to receive the AP designation on the transcript. Students are committed to AP classes for the entire school year and cannot change classes at semester.

Spanish I

STEMHS069S

Year long course 1.0 credit	9th - 11th grade	N/A	N/A
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Students in Level I will learn the basic skills of speaking, listening, reading, and writing as well as cultural information. Students will study present, future, and past tense verb conjugations, vocabulary, gender of nouns, adjective use, and sentence structure. These courses are designed to present students with the solid knowledge base necessary at intermediate and advanced language levels.

Spanish II

STEMHS0610S

Year long course 1.0 credit	9th - 12th grade	N/A	Spanish I
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Some of the finer grammatical points are learned at this level, making language use a little more sophisticated. The students continue learning to express past events and begin learning more complicated grammatical constructions. Vocabulary learning continues to be an important component of language learning. Practice of all grammatical structures and vocabulary continues through speaking, writing, reading, and listening.

Spanish III

STEMHS0611S

Year long course 1.0 credit	10th - 12th grade	N/A	Spanish II
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In Level III students continue to learn vocabulary and increasingly more complicated grammar and syntactical structures. They begin fine tuning their language by learning expressions, constructions, and different verb tenses and moods that are more complicated and are more native-like in quality. The student and teacher's use of the target language in the classroom increases greatly at this level of language learning.

Spanish IV

STEMHS0612S

Year long course 1.0 credit	10th - 12th grade	N/A	Spanish III
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Level IV classes are conducted entirely in the target language. The students work on improving their fluency in speaking, reading, writing and listening to the language they are learning. Vocabulary study continues as does practice and review of the grammatical structures already learned. Classroom discussions are conducted on topics of interest to the students. The reading is from works of native authors.

AP Spanish Language and Culture

STEMHS0613S

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP Exam Textbook	Spanish IV
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Advanced Placement foreign language classes offer the students a weighted credit. Students continue building their fluency in the language through oral, written, listening and reading practice. These classes are conducted entirely in the language with both students and teachers communicating only in the target language. Students in Level 5 classes prepare to take the Language Advanced Placement tests, which are given in May. The AP test must be taken in order to receive the AP designation on the transcript. Students are committed to AP classes for the entire school year and cannot change classes at semester.

AP Spanish Literature

STEMHS06155SS1/S2

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP Exam Textbook	Spanish IV
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The AP Spanish Literature course is intended to be the equivalent of a college third-year Introduction to Peninsular and Latin American literature. This course prepares students to analyze critically representative works of prose, poetry, and drama of Peninsular and Latin American literature of different historical periods from Medieval to the most recent trends. Students acquire a sense of literary expression as part of the human experience and understand the characteristics of major literary movements and the forces that shaped them. This allows for a profound analysis and understanding of the works presented without neglecting the enjoyment of literature as an art and reflection of themselves. Since this course is presented entirely in Spanish, students have the opportunity to communicate and improve their language skills as well as learn new basic vocabulary of critical terms.

American Sign Language I

STEMHS069AS

Year long course 1.0 credit	9th - 12th grade	N/A	N/A
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Introduces students to basic American Sign Language (ASL) skills, focusing on communication in a cultural context. Students will learn fingerspelling, basic ASL vocabulary, facial grammar and sentence structure. Students will also develop the visual receptive and expressive skills necessary to hold a beginning-level conversation in ASL. Topical information about the Deaf community, its history and culture will also be presented to provide students with a broad picture of language and culture.

American Sign Language II

STEMHS070AS

Year long course 1.0 credit	10th - 12th grade	N/A	N/A
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American Sign Language II builds upon those skills developed in ASL I and applies additional grammatical principles for conversing in ASL. Students will focus on developing more fluent usage of ASL, expanding vocabulary, and furthering their visual receptive and expressive skills. This course also emphasizes the cultural behaviors and practices distinct to those who approach the world from a visual perspective.

Fine Arts

Advanced Art

STEMHS0511

Semester long course 0.5 credit	9th - 12th grade	N/A	Recommended: 2 levels of a particular medium
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This course is designed for the advanced art student who is self motivated and driven. It is taught during AP Art class for one semester. Each project is student driven from start to finish. This course is self guided and self directed. Students will explore techniques and themes related to a given medium or material, develop a language of representation and begin developing a sustained investigation in art. The pace and expectations are rigorous. Students should only enroll in this course if they have completed two levels of a particular

medium (Drawing and Painting, Ceramics). It is an excellent preparation for AP Art and Design as students participate in the AP Art classroom. It is also a great option for students to perfect an art style, technique or material independently. This course cannot be taken concurrently with AP Art as they are taught at the same time.

Ceramics I

STEMHS0512

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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Ceramics I is an introduction to design, glazes, basic handbuilding, Coil construction, and slab construction, skills. Students are encouraged to try wheel throwing as an introduction. The course will provide students with a foundation in 3D principles of design and creative production. This course provides knowledge of ceramic techniques (e.g., kiln firing and glazing) and processes, with a focus on creative design and craftsmanship.

Ceramics II

STEMHS0513

Semester long course 0.5 credit	9th - 12th grade	N/A	Ceramics I
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Ceramics II builds on the skills and concepts learned in Ceramics I and explores clay at an advanced level. This course has an emphasis categories of ceramics such as ancient ceramics, sculpture in the round and ceramic sets. Elements of the history of ceramics are included and used for inspiration on projects through research.

Ceramics III

STEMHS0535

Semester long course 0.5 credit	10th - 12th grade	N/A	Ceramics I and II
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Ceramics III builds on the skills and concepts learned in Ceramics II. The course requires the student to have a high production of studio artworks, research, and art criticism skills. Students focus on a body of work, with a high degree of study, artistic voice and relationship to historical precedents.

Drawing & Painting I

STEMHS059

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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Students will explore different approaches to drawing & painting while applying the elements and principles of design to develop skills and sensitivity to line, shape, color, value, and composition. A variety of techniques will be explored. Students will be expected to develop technical skills and personal style.

Drawing & Painting II

STEMHS0510

Semester long course 0.5 credit	9th-12th	N/A	Drawing & Painting I
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Students will explore advanced drawing concepts, including but not limited to, space and form through mark making, abstraction, and historical styles of art. Students are expected to create works of art that are personal to them with considerations toward messages, themes and style. A variety of artistic techniques and concepts will be explored including, hatching and stippling, color theory, emphasis, composition and unity.

Digital Media I

STEMHS0547

Semester long course 0.5 credit	9th-12th	N/A	
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Students will learn digital photography, video production, and 3D modeling. In this course, students will create concept art in order to create video game assets using digital drawing software. Students will continue to advance their artistic skills and concepts required to create a video game. Creature/Character design will be the focus. Content includes a study of photography as a visual communication; perception and response to the visual aspects of photography found in prints, slides and published images; the valuing of the photographic image as a visual statement; the production of photographs with particular subject matter, types of lighting and variations in printing; the knowledge of images and styles of major photographers; the criteria for critically analyzing photographs to make judgments concerning quality; the knowledge of basic techniques for proper presentation of photographic works.

Digital Media II

STEMHS0548

Semester long course 0.5 credit	9th-12th	N/A	Digital Media I
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Students will advance in digital photography, video production, and 3D modeling. In this course, students will advance their skills in creating concept art in order to create video game assets using digital drawing software. Students will continue to advance their artistic skills and concepts required to create a video game. Creature/Character design will be the focus. Students will apply the concepts learned in photo I towards the creations of photographic images based on an idea or concept.

AP Studio Art: 2D Design

STEMHS0521

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP Exam	Digital Media I
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Designed for students with a serious interest in art, AP Studio Art—Drawing focuses on a variety of concepts and approaches in drawing, enabling students to demonstrate in-depth knowledge of the processes, range of abilities, and versatile uses of media, technique, problem solving, and scope. They can demonstrate such conceptual variety through the use of one or several media. These courses enable students to refine their skills and create artistic works to submit via portfolio to the College Board for evaluation.

AP Studio Art: 3D Design

STEMHS0523

Year long course 1.0 credit	10th - 12th grade	\$95.00 for AP Exam	Ceramics I & II
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AP Studio Art—Three-Dimensional courses focus on a variety of concepts and approaches in 3-D design and creation, enabling students to demonstrate a range of abilities and versatility with media, technique, problem solving, and scope. They can demonstrate such conceptual variety through the use of one or several media. These courses enable students to refine their skills and create artistic works to submit via portfolio to the

College Board for evaluation.

Gaming Studio

STEMHS1025

Year long course 1.0 credit	10th - 12th grade	Course fee TBD	Digital Media I
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Design, build, and collaborate to create a singular game using a variety of tools (Sculptris, Unity Game Engine, Blender, Krita, etc.). Students will experience how a game studio functions and learn to work in large teams effectively. Students will learn Git and LFS Git repositories. Students will be expected to fill multiple roles, such as: 2D Concept Artist, 3D Modeler/Sculpture, 3D Rigger, Level Designer, Art Director, Sound Director, Composer, Character Designer, Software Engineer, Lead Game Designer, Story Director, Scrum Leader, and Networking and Database Engineer. Students are expected to pursue a certification in their Respective field of study. Depending on the area of work, **this course can count as a STEM Elective or a Fine Arts credit.**

CE MGD 1043 Motion Graphic Design I

STEMHS1036

Semester long course 1.0 credit	9th - 12th grade	N/A	N/A
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Stresses creation of animation and dynamic interactive media for web and multimedia applications to a professional standard. Students will learn how to develop projects for time-based media, key-frames, tweens and symbols. Students will learn how to use actions to trigger timeline events to create interactive behaviors.

CE MGD 1011 Adobe Photoshop

STEMHS1037

Semester long course 1.0 credit	9th - 12th grade	N/A	N/A
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Concentrates on the high-end capabilities of Adobe Photoshop as an illustration, design and photo retouching tool. Students explore a wide range of selection and manipulation techniques that can be applied to photos, graphics and videos. Course competencies and outline follow those set out by the Adobe Certified Associate exam in Visual Communication Using Adobe Photoshop.

Music Fundamentals

STEMHS0532

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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This semester-long repeatable course will cover music appreciation, music history, and basic music theory. We will cover how to read and write musical notation along with musical harmony to help deepen the understanding of how rhythm, pitch, dynamics, tempo, and timbre develop the melody, harmony, and form when creating music. Hopefully leading to musical exploration with the use of singing, key instruments, string instruments, wind instrument instruments, and technology. This class will provide a strong foundation for the second semester music production class.

Music Production

STEMHS0531

Semester long course 0.5 credit	9th - 12th grade	N/A	Music Fundamentals is required.
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This advanced semester-long (Spring) repeatable course focuses on the application of the fundamental course's use of composition, song creation and recording using high level equipment and a cloud based recording software. Other skills built are live recording, sound design, and music theory as an avenue to self expression and creation. In order to succeed in this class, you must be able to describe/demonstrate: basic harmonic progressions, the basics of rhythmic notation, musical form (in both classical and popular styles of writing), and be able to create simple melodies vocally or instrumentally. You will produce multiple pieces of music and you will build skills that allow you to more fluently express yourself through musical creation.

HS Beginning Band

STEMHS0543

Year long course 1.0 credit	9th - 12th grade	N/A	N/A
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This year-long course is an introduction to performing music in the concert band setting for students with limited or no musical experience. This is a great follow-up course to the Fundamentals of Music class. Instruments taught in this course are flute, clarinet, trumpet, trombone, baritone, saxophone, and percussion (bell kit and snare drum), which can be expanded on in subsequent advanced instrumental band ensembles. STEM does not supply instruments but our instructor will help you determine the best option for obtaining the required materials before the year begins. Instrument maintenance, playing technique, and musical theory are all taught as you perform a variety of music with a group. We will perform as a band during concerts throughout the year.

HS Intermediate Band

STEMHS0528

Year long course 1.0 credit	9th - 12th grade	N/A	Placement/ Role by audition, signature from music instructor
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This year-long repeatable course is the intermediary between STEM's Beginner Band and Concert Band Ensembles. We will perform classical transcriptions and arrangements of popular music for multiple concerts and school events. Members must be able to perform three-four major scales of their choice with characteristic tone, a portion of the chromatic scale, and sightread notated music that feature rhythms such as half notes, quarter notes, quarter rests, and eighth notes. Instrumentation for Intermediate Band is flute, clarinet, trumpet, trombone, baritone, saxophone(s) (alto and/or tenor), tuba, and french horn, percussion (Snare, Bass drum Keys, Aux).

HS Concert Band

STEMHS0544

Year long course 1.0 credit	9th - 12th grade	N/A	Placement/ Role by audition, signature from music instructor
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This year-long repeatable course is the Advanced Band Ensemble. Instrumentation for this Band ensemble is: flute, clarinet, trumpet, trombone, baritone, saxophone(s) (altos, tenor, baritone), euphonium, tuba, piccolo, french horn and percussion (Snare drum, Bass Drum, Bell kit and Auxiliary percussion). We will perform classical transcriptions and arrangements of popular music for multiple concerts and school events. Members

must be able to perform six or more major scales of their choice with a characteristic tone, a portion of the chromatic scale, and sightread notated music that feature rhythms such as half notes, quarter notes, quarter rests, and eighth notes, eighth rest sixteenth notes, doted half and dotted quarter and dotted 8th notes.

HS Orchestra

STEMHS0542

Year long course 1.0 credit	9th - 12th grade	N/A	
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This year-long repeatable course is a large String Ensemble. They will perform classical transcriptions and arrangements of popular music for multiple concerts and school events. Members must be able to perform four or more major scales of their choice with correct intonation, a portion of the chromatic scale, and sightread notated music that feature rhythms such as half notes, quarter notes, quarter rests, and eighth notes, eighth rest sixteenth notes Doted half and dotted quarter and dotted 8th notes. Instrumentation for this String ensemble is: Violin, Viola, Cello, Double Bass.

Choir

STEMHS0526S1/S2

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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- Students learn proper breath support and vocal production
- Students perform at concerts and events
- Students will learn a variety of vocal genres
- Students learn to read music as it applies to vocal scores
- Students write, produce and perform original music

HS Theater I

STEMHS0123

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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A comprehensive beginning theater class. the purpose of the course is to give students an overview of Theater in general. We learn the tools of theater in mind. body. and voice which include the following: Scene work, monologues, improvisation, and pantomime. Major emphasis of the class is on developing beginning acting skills, teamwork and self esteem.

HS Theater II

STEMHS0125

Semester long course 0.5 credit	9th - 12th grade	N/A	Theater I
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Theater II helps students develop experience and skill in one or more aspects of theatrical production. Advanced courses concentrate on extending and refining dramatic technique, by expanding students' exposure to different types of theatrical techniques and traditions and increasing their participation in public productions. Theater II helps students develop experience and skill in one or more aspects of theatrical production. Advanced courses concentrate on extending and refining dramatic technique, by expanding students' exposure to different types of theatrical techniques and traditions and increasing their participation in

public productions. Theater II Curriculum is performance based. It has been developed to expand and deepen the students' skills as an artist. They will do so by building on material covered in Theater I curriculum, with units in: Character Analysis, Monologue Analysis, and writing, Shakespeare Performance, and Design. The curriculum will culminate in a performance.

HS Theater Performance

STEMHS0126

Semester long course 0.5 credit	10th - 12th grade	N/A	Theater I and II
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Theater Performance courses provide students with experience and skill development in one or more aspects of theatrical production, by allowing them to concentrate on acting and performance skills. Introductory courses explore fundamentals, while advanced courses extend and refine technique, expand students' exposure to different types of theatrical craft and traditions, and increase their participation in public productions.

HS Theater Tech

STEMHS0131

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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Drama is a discipline that requires collaboration, visioning, compromising, leading, and following. Without all these moving parts, it doesn't work. That's why technical theater is important: it is the unsung hero of our industry, where the actors and directors are celebrated. How can a solid, holistic drama program exist if all members do not experience all the moving parts?

Technical theater will give you the opportunity to introduce lighting, sound, costuming, staging, stage management, and makeup into our program.

The great thing about this class is that it gives an opportunity for those who are not interested in performing an opportunity to be in the theater - behind the scenes.

General Electives

Principles of Finance

STEMHS1211

Semester long course 0.5 credit	9th - 12th grade	N/A	BUS 115
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Course furthers student understanding of two specific business activities—accounting and finance—that were introduced in an earlier High School Business course, BUS 115. Through team activities and a semester-long corporate investment project, students make connections between accounting and finance. Students acquire an understanding of financial statements, calculate financial ratios, and make corporate financial management decisions based on their analysis of that financial data. In addition, students apply the concepts of operating and overhead costs, internal accounting controls, and budgets to their class business. Lastly, cost/benefit analysis is introduced as an element of financial planning and decision-making.

*This course counts as a general elective; it does not count as a Math or STEM elective.

Accounting I

STEMHS1214

Semester long course 0.5 credit	9th - 12th grade	N/A	Algebra I strongly recommended
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This course prepares the accounting student in the theory and techniques of accounting necessary for the advanced courses and provides a basic introduction to accounting for those students pursuing an accounting degree. Students will be introduced to financial statements and the accounting cycle for a service and merchandise business.

*This course counts as a general elective; it does not count as a Math or STEM elective.

School-Based Enterprise

STEMHS1215S1/S2

Year long course 1.0 credit	9th - 12th grade	N/A	N/A
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Students enrolled in this course will work in the student store where they will gain valuable work experience, customer service skills, merchandising and basic money handling skills. This course also includes classroom instruction on the fundamentals of retail marketing. Students are automatically enrolled in DECA or FBLA, which are the Business Career and Technical Student Organizations. Opportunities available through DECA and FBLA include leadership development, field trips, travel, and competition. Students who successfully complete this course will be prepared for entry-level positions in retail.

The School-Based Enterprise (SBE) is an entrepreneurial operation in a school setting that provides goods/services to meet the needs of the market. SBE's are managed and operated by students as hands-on learning laboratories that integrate National Curriculum standards in Marketing, Finance, Hospitality or Management. SBE's provide realistic and practical learning experiences that reinforce classroom instruction.

*This course counts as a general elective; it does not count as a Math or STEM elective.

CE MAR 2016 Principles of Marketing

STEMHS1212

Semester long course 1.0 credit 0.5 credits for 9th grade (graduate year 2028)	9th - 12th grade	N/A	Student must enroll at ACC and fill out CE College agreement
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Presents the analysis of theoretical marketing processes and the strategies of product development, pricing, promotion and distribution, and their applications to businesses and the individual consumer.

CE ENP 1005 Introduction to Entrepreneurship

STEMHS1213

Semester long course 1.0 credit 0.5 credits for 9th grade (graduate year 2028)	9th - 12th grade	N/A	Student must enroll at ACC and fill out CE College agreement
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Explores the business skills, personality traits, and commitment necessary to successfully plan, launch, and grow an entrepreneurial venture. This course will cover the challenges and rewards of entrepreneurship. This course will cover the role of entrepreneurial businesses in the United States and the world and their impact on our national and global economy.

CE BUS 1015 Intro to Business			STEMHS128
Semester long course 1.0 credit 0.5 credits for 9th grade (graduate year 2028)	9th - 12th grade	Textbook fee	Student must enroll at ACC and fill out CE agreement

Focuses on the operation of the American business system. Covers fundamentals of the economy, careers and opportunities, marketing, management, production, governmental regulations, tools of business and social responsibilities.

CE BUS 1021 Basic Workplace Skills			STEMHS1216
Semester long course 1.0 credit 0.5 credits for 9th grade (graduate year 2028)	9th - 12th grade	Textbook fee	Student must enroll at ACC and fill out CE agreement

Focuses on personal and workplace skills necessary for successful performance. This course introduces project management principles necessary to effectively lead and implement a project.

CE BUS 2017 Business Communications & Report Writing			STEMHS1217
Semester long course 1.0 credit 0.5 credits for 9th grade (graduate year 2028)	9th - 12th grade	Textbook fee	Student must enroll at ACC and fill out CE agreement

Emphasizes effective business writing and covers letters, memoranda, reports, application letters, and resumes. Includes the fundamentals of business communication and an introduction to international communication

CE BUS 2026 Business Statistics			STEMHS1218
Semester long course 1.0 credit 0.5 credits for 9th grade (graduate year 2028)	9th - 12th grade	Textbook fee	Student must enroll at ACC and fill out CE agreement

Focuses on statistical study, sampling, organizing and visualizing data, descriptive statistics, probability, bi-nominal distributions, normal distributions, confidence intervals, linear regression, and correlation. Intended for business majors.

Yearbook

STEMHS0113

Year long course 1.0 credit	9th - 12th grade	N/A	N/A
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This is an experiential course in which students will write, edit, design, and layout the school yearbook. Leadership, cooperation and high standards of achievement are essential to success in this class. Students will be assigned roles such as a reporter, editor, copywriter, design editor and photographer. Students will work together as a team to produce a high quality yearbook highlighting the achievements of STEM School students, faculty and staff. This is an English elective course and does not meet graduation requirements for English.

Introduction to Creative Writing

STEMHS0127

Semester long course 0.5 credit	9th - 12th grade	N/A	N/A
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Introduction to 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 of the course is on writing: however, students may study exemplary representations and authors to obtain a fuller appreciation of the form and craft. This course will allow students to transfer literacy skills obtained in their main English courses and apply them in a real-world context by learning about publication.

HS Study Hall

STEMHS221

Semester long course 0.0 credit	9th - 12th grade	N/A	N/A
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Supervised class period devoted to completing assigned class work or projects.

Professional Internship (Fall/Spring)

STEMHS2124

Semester long course 0.5 credit	11th - 12th grade	N/A	Required enrollment with CareerWise OR approval from career discovery team.
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Students will work in a professional setting in an industry that aligns with their career interests or goals. Students will have an onsite supervisor, as well as report to a STEM School supervisor for periodic reporting. Students will only be placed in Internships that are approved by The STEM School and Academy for this credit. Actual content and specific industry will vary according to student interest, and availability of industry partners. Students will be evaluated regularly, and if they do not meet identified expectations, they will be removed from the program, and will not receive credit. Student evaluations will be based on: Attendance, Attitude and Accomplishments

Semester long course 0.25 credit	11th - 12th grade	N/A	Administrative approval and maintain "C"s or better
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Teacher/Office assistants provide needed support to classroom teachers, office staff, and students. They are instrumental in providing instructional support to enrich teaching by providing individual support to students as needed. Teacher/Office assistants help staff with various duties including clerical support by distributing materials, photocopying, and filing.

Classroom teachers may require a teacher assistant to check and grade assignments and collect various materials for the upcoming lessons. Office staff may require an office assistant to work on special projects that require attention to make the school run smoothly. As an assistant, you should be able to work independently to complete responsibilities with minimal supervision.

Courses Not Currently Offered - [click here](#)