Course Catalog
Hardin Valley Academy
2022-2023 School Year

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KNOX COUNTY POLICIES/PROCEDURES EARNING CREDITS

Transferring Credit: Students transferring from any state, regionally, or nationally accredited school will have all credits accepted in full. A student transferring from one Knox County School to another or from any state, regionally, or nationally accredited school to a Knox County high school will have his/her credit status determined by the number of credits attempted. Students from outside KCS must provide a current transcript.

Students may provide a report card or verbally indicate courses in which they are currently enrolled for course placement purposes. The weighted grade from another high school will be honored in calculating the GPA IF the equivalent course was offered in Knox County Schools for the school year the grade/credit was earned.

Transferring Credit from Schools with Different Scheduling Configurations: Because of varying scheduling configurations in high schools, conversion guidelines have been established to calculate the number of credits required for graduation. The total number of credits required for graduation will be four fewer credits than the maximum number of credits available during the four years (beginning in the ninth grade). Appropriate conversions will be made for students who transfer into KCS from districts using a different grading scale or credit configuration.

Transferring Credit from Tennessee Home Schools: (Schools should check the non-public list and the approved on-line list. https://www.tn.gov/education/school-options/non-public-schools/non-public-school-categories.html) Students entering from Category 4 and 5 schools, as designated by the Tennessee Department of Education, will be tested for credit. Students may be tested by taking and passing the final exam for each core course (English, Math, Science, Social Studies and Wellness) listed on a transcript from a Category 4 or 5 non-public schools. Upon passing the exam (see "Credit" section below), credit may be awarded. If a student demonstrates mastery on the exam, then the student's grade from his/her transcript will be entered on his/her Knox County Schools' transcript.

Home school students for which transcripts state they have earned a credit in world language shall be administered the Knox County EOC/mastery test for the highest level of language for which they are requesting credit be given. (Ex. A student who has earned a credit in French I and II will be given the French II EOC). KCS has the authority to award credit for high school courses completed at non-public middle schools based on demonstrated mastery of the subject matter, e.g., successful completion of mastery test or written exam or performance in subsequent courses.

Credits: Grades and credits from elective courses that do not require a state or local EOC will be transferred from the home school transcript directly. Credits/grades for courses in English, math, science, social studies, and wellness shall be determined as follows:

- Students scoring 85 or above on the EOC/mastery test for a course will be granted credit, and the grade for the course will be taken from the home school transcript;
- A student scoring below 85, but not lower than 60 on the EOC/mastery test, may appeal to the school principal, in conjunction with the content supervisor, for consideration of credit/grade for the course.

Credits/grades for world language will be determined as follows:

- Students scoring above 70 on the EOC/mastery test will be granted credit for the course level of the EOC and any levels below it. (EX. A student taking the French II EOC and scoring a 70 or higher will be given credit in French II and French I). The grade for the course(s) will be taken from the home school transcript;
- Students scoring below 70 on an EOC/mastery test above the first year of language will be given the opportunity to take the EOC the next level down. If the student scores 70 or higher on the EOC/mastery test for the next level down, credit will be granted for that level and the grade will be taken from the home school transcript. The same appeal process may be used for students scoring between 60 and 69 on a world language EOC/mastery test. Students who have taken the EOC/mastery test can submit their official scores for consideration of credit to the Director of Secondary Education.

High School Credit Earned in Middle School: Students in a KCS middle school who successfully complete a course which includes the EOC/mastery test in a class taught using the high school curriculum standards earn high school credit. The grade earned will be posted on the high school transcript and calculated in the high school GPA. For students who attended a middle school whose academic record/transcript indicates a high school course was taken in middle school, the determination of posting high school credit will be as follows: KCS will honor the sending school district's policy, provided it is an accredited school. If the sending school/district's policy was not to award credit, KCS will not award credit.

If parents want the credit to post, the following procedure will be followed to award pass/fail credit.
Procedure: If no middle school transcript exists, contact the middle school and request documentation of the high school course completed and the grade earned. Additionally, seek clarification for the sending school/district's high school posting procedures (e.g., are grades posted on the high school transcript? If posted, are they calculated in the high school grade point average?). If determination is made that a student does not receive high school credit, a parent may request that the student be tested in order to receive that credit. See procedure below.

Procedure for testing: A student must take a Knox County EOC/mastery test and receive a passing score as listed below: Credits/grades for courses in English, math, science, social studies, and wellness shall be determined as follows:
• Students scoring 85 or above on the EOC/mastery test for a course will be granted credit on a P/F basis.
• A student scoring below 85, but not lower than 60 on the EOC/mastery test, may appeal to the school principal, in conjunction with the content supervisor, for consideration of credit/grade for the course. Credits/grades for world language will be determined as follows:
• Students scoring above 70 on the EOC/mastery test will be granted credit (Pass/Fail) for the course level of the EOC and any levels below it. (EX. A student taking the French II EOC and scoring a 70 or higher will be given credit in French II and French I).
• Students scoring below 70 on an EOC/mastery test above the first year of language will be given the opportunity to take the EOC the next level down. If the student scores 70 or higher on the EOC/mastery test for the next level down, credit will be granted for that level on a Pass/Fail basis. The same appeal process may be used for students scoring between 60 and 69 on a world language EOC/mastery test. Students who have taken the EOC/mastery test can submit their official scores for consideration of credit to the Director of Secondary Education.
• The subject area department chair at the high school will provide to the high school counselor an EOC review or practice questions.
• The high school counselor will administer and proctor the exam, and the subject area department chair will grade the exam.
• Upon receiving documentation from the subject area department chair, the course and grade of Pass/Fail will be entered into the student's academic history, semester one of the ninth grade year. A copy of the documentation will be filed in the student CR. The credit earned will be pass/fail.

High School Credit-Bearing Courses Earned In KCS Middle Schools: High school credit-bearing course offerings vary for middle school students based on availability. Course offerings may include the following:
• Honors Algebra I/Integrated Math 1
• Honors Geometry/Integrated Math 2
• Honors Algebra II /Integrated Math 3
• Honors Physical Science
• Honors Biology
• World Languages
• High School Credit CTE Courses

Any middle school student enrolled in Honors Algebra I, Honors Geometry, Honors Algebra II, Honors Physical Science, and Honors Biology must take the state-mandated End-of-Course (EOC) assessment during the spring semester.

The State High School Policy requires students to take a mathematics course each year while in high school, even if the student already has the required 4 math credits for graduation.

Course Prerequisites: Many KCS courses have prerequisites. These prerequisites must be honored unless a student petitions and the ensuing conversations with school representatives indicate that an exception should be made. This exception will be based on the student data and/or the student's Individualized Education Plan (IEP).

Repeating Failed Courses: With the principal's permission, students may repeat courses on a space-available basis under provisions set forth in this policy. Courses previously failed may be repeated in summer school or during the regular school year.
REPEATING HIGH SCHOOL COURSES - BOE #I-350 (Revised 12/2017) Repeating Passed Courses: Courses passed within a sequential subject may not be repeated after the student has received a passing semester grade in the next course. (For example: the student may not repeat Spanish I after receiving a passing semester grade in Spanish II.)

Computation of Credits and Grade Points: When a course is repeated, the higher of the grades shall be computed in the GPA and all course attempts will remain on transcripts as part of the cumulative record. The numerical grades earned in middle school courses taken for high school credit will appear on the student's high school transcript and will be calculated in the student's cumulative grade point average.

New Credit: Students who wish to supplement their traditional program may earn first time credit through online learning, summer school or Dual Enrollment. Students desiring to earn new credit must have prior approval of the Principal.

Credit Earned Outside the Base High School*: *(BOE #I-122 Revised 3/2016)* High school course credit (i.e. e-learning courses, distance learning courses, etc.) earned outside the district shall be accepted *only with prior written permission of the high school principal and only within the following limiting conditions*:
• Institution awarding course credit is accredited by the state or by a state-approved accrediting agency;
• Makeup credit may be allowed for a failed course that will enable the student to graduate with his/her class;
• New course credit may be allowed only in the case of a student who, for reasons beyond the student's control, is unable to schedule the course in the base high school, or the new course credit will enable the student to graduate with his/her class;
• Credit should be allowed only for courses which provide a final examination covering all terminal objectives of the particular curriculum framework of the Tennessee Department of Education;
• All financial costs associated with the course work will be assumed by the student;
• Enrollment for courses outside the district must be in addition to the minimum number of school courses in which the student is required to be enrolled at all times.

Upon receipt of the course grade transmitted directly from the granting institution, the receiving high school shall grant credit on a term-to-term basis. Such grades shall be included in the computation of the student's cumulative grade-point average as consistent with the district's grading policy.

*This does not apply to Dual Enrollment courses taken through Knox County Schools Dual Enrollment partners.

QuEST Program: The QuEST (Quality Education for Students using Technology) program is an opportunity for our students to engage in courses via distance learning. Courses are offered in asynchronous (online classes with teacher recorded materials) formats. Courses are offered that students may not be able to access at their base school. More information and a current catalog can be found on the QuEST website.

CREDIT RECOVERY *BOE #I-351 (Revised 8/2017)* Credit Recovery is a course-specific, skill-based, extended learning opportunity for students who have previously been unsuccessful in mastering the content or skills required to

receive course credit or earn promotion. Its primary purpose is to help students who encounter situations beyond their control (i.e. illness, death of a family member, family issues, etc.) stay in school and graduate on time.

Preparing to Assign a Student to Credit Recovery: The counselor will determine which students need new/recovery credit. When that determination is made, a meeting with the counselor, an administrator, and the student should be scheduled. A parent and/or teacher may also be included. The meeting may be with individual students or groups of students as determined by administrator and/or counselor. As a result of this meeting, a decision will be made as to whether or not the student will be assigned to credit recovery. Other considerations to include:
• Has the student already taken the state EOC? (if applicable)
• Does this student possess skills to assist him in being successful in recovery credit or would he be better served by repeating the class in the regular classroom setting?
• Has the student signed a contract?

Students who enter KCS from a school system that awards half credits will be allowed to use recovery credit in order to earn the additional half credit to complete the course. The student will then complete all course modules and quizzes for which he has not tested out, as well as take the end of course test after completion of all modules.

In cases where the teacher objects to the student taking a credit recovery course, a school support team shall be convened to make a final determination of the student's eligibility. The majority of the school support team should be composed of classroom teachers who are familiar with the student's current level of academic performance. Student athletes who intend to compete at the collegiate level should not take recovery/online credit; instead, they should repeat the class in the regular classroom setting.

Admission and Removal: Students may be eligible for credit recovery if they meet the following criteria:
• The student's parent or legal guardian gives written consent for the student to enroll in the proposed credit recovery course. Parents/guardians should be informed that not all postsecondary institutions will accept credit recovery courses for credit and that the NCAA Clearinghouse may not accept credit recovery courses for credit;
• The student has previously taken an initial, regular section of the proposed course, received a grade of not less than fifty percent (50%), and the teacher of record for the failed course has no objection;
• In cases where the teacher objects to the student taking a credit recovery course, a school support team shall be convened to make a final determination of the student's eligibility. The majority of the school support team should be composed of classroom teachers who are familiar with the student's current level of academic performance. If a student is seeking to recover credit for the first semester of a two-semester course, the student may not receive full credit for the course until he has enrolled in and passed the second semester of the course and taken any applicable End of Course examinations. Student progress will be evaluated at the end of each semester. Students may be removed from credit recovery if they are not making adequate progress.

Knox County Schools shall track and designate students enrolled in credit recovery courses and programs in compliance with state guidelines.
Instruction:
1. Credit recovery teachers of record must be endorsed and certified in any content area(s) or which they teach or otherwise facilitate credit recovery courses.
2. Credit recovery teachers of record must work closely with credit recovery facilitators on class content and instruction.
3. Credit recovery facilitators will receive training with regard to the credit recovery course organization, online instruction management, and related technology.
4. All credit recovery courses shall align with Tennessee's current academic standards for the relevant course content areas
5. All credit recovery courses shall be able to differentiate instruction to address individual student growth needs based on diagnostic assessment or End of Course data.
6. Credit recovery content may be delivered through instructional technology.
7. Students may earn no more than 7 credits in credit recovery courses.

8. Students may enroll in no more than 2 credit recovery courses at one time.
9. Students in credit recovery programs shall:
• Complete a course skill-specific diagnostic exam to determine skill-specific goals;
• Meet individual skill-specific goals in a flexible time frame as established by student need;
• Master all individualized skill-specific goals as established by the diagnostic process in order to receive credit.

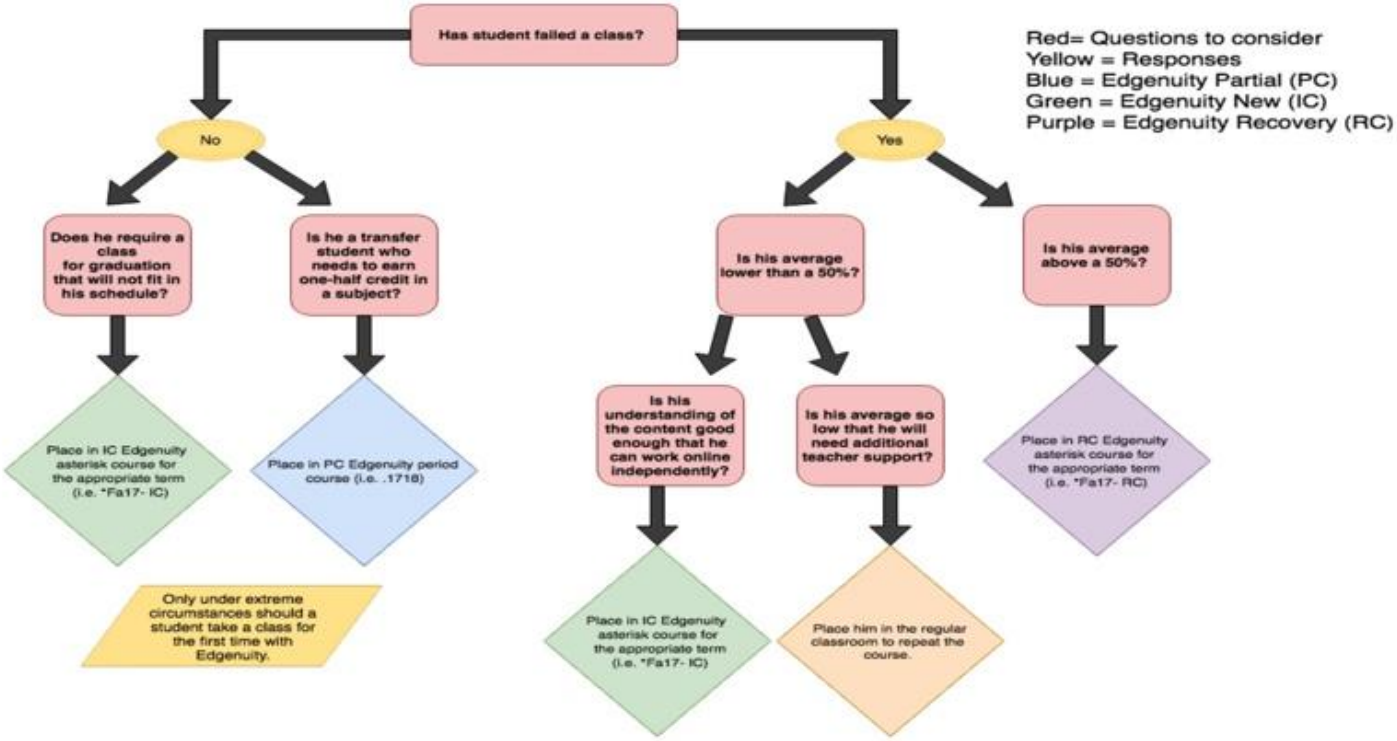
End of Course Assessment: The following applies to students enrolled in credit recovery courses that have a state EOC:
• If a student has already taken the state EOC and made a grade of 65% or above, that score may be used for final calculation of the credit recovery grade.
• If there is no EOC score on record, the student is required to take the state EOC upon completion of the course.
• For credit recovery courses that do not have a state EOC, students will take a mastery test upon completion of the course content.

Grade Calculation: The final grade for credit recovery courses must include the original failing grade in the calculation and the transcript must denote that the credit was attained through credit recovery. The original failing grade may also be listed on the transcript.

The final grade will be calculated as follows: Final grade = 25% from the original grade, the EOC percent will match the percentage used for all other courses, and the remaining percentage comes from the average of credit recovery activities and quizzes. Here is a helpful chart for calculating initial v. recovery credit for state or local exams when using Edgenuity:

	Initial Credit Based on Policy I-381	**Initial Credit** Based on Policy I-381	**Recovery Credit** Based on Policy I-351	**Recovery Credit** Based on Policy I-351
Type of Exam within Course	No State Exam	State Exam	No State Exam	State Exam
Location of Exam	Embedded in Edgenuity Course	Edgenuity zz-Exam Only	Embedded in Edgenuity Course	• Student has already taken and scored 65% or higher (use this score) OR • Student takes Edgenuity zz-Exam Only

New Versus Old Credit: If a student fails a class with an average of 50 or below, that student may be placed in a regular class or he may be placed in recovery credit for new credit. This student cannot take the pre-test and opt out of any of the course. When taking a course for new credit, the student must complete it from beginning to end. If a student fails a class with an average above 50, he will be placed in credit recovery. He will then take the pre-test to determine gaps in learning or the student has the option of taking credit recovery for new or old credit. This student will need some guidance in making this decision. The chart below will help you guide the student through the decision- making process.



HONORS AND ACCELERATED COURSES

Local education agencies may elect to offer honors courses. Local education agencies electing to offer honors courses will ensure that the approved honors courses substantially exceed the content standards, learning expectations, and performance indicators as approved by the State Board of Education. Further, each local education agency offering honors courses will ensure that additional rigor is being provided by implementing the framework of standards for honors courses listed below.

Framework of Standards for Honors Courses: Honors courses will substantially exceed the content standards, learning expectations, and performance indicators approved by the State Board of Education. Teachers of honors courses will model instructional approaches that facilitate maximum interchange of ideas among students: independent study, self-directed research and learning, and appropriate use of technology. All honors courses must include multiple assessments exemplifying coursework (such as short answer, constructed-response prompts, performance- based tasks, open-ended questions, essays, original or creative interpretations, authentic products, portfolios, and analytical writing). Additionally, an honors course shall include a minimum of five of the following components:

• Extended reading assignments that connect with the specified curriculum;
• Research-based writing assignments that address and extend the course curriculum;
• Projects that apply course curriculum to relevant or real-world situations. These may include oral presentations, PowerPoint presentations, or other modes of sharing findings. Connection of the project to the community is encouraged;
• Open-ended investigations in which the student selects the questions and designs the research;
• Writing assignments that demonstrate a variety of modes, purposes, and styles;
• Modes include narrative, descriptive, persuasive, expository, and expressive;
• Purposes include informing, entertaining, and persuading;
• Style includes formal, informal, literary, analytical, and technical;
• Integration of appropriate technology into the course of study;
• Deeper exploration of the culture, values, and history of the discipline;
• Extensive opportunities for problem solving experiences through imagination, critical analysis, and application;

• Job shadowing experiences with presentations, which connect class study to the world of work.

All course types, which meet the above framework, will be classified as Honors and be eligible for additional percentage point weighting.

Advanced Placement (AP) Program: A cooperative educational endeavor between secondary schools and colleges/universities, the Advanced Placement (AP) Program allows students to experience rigorous college-level courses while still in high school. AP course guidelines have been developed and published by the College Board in more than thirty courses. Based on their performance on the AP exams in May, students may earn advanced placement and/or credit at a college or university, depending on their recognition policies. To ensure that AP courses meet or exceed expectations established by college and university faculty, each AP teacher must submit a course syllabus to the College Board for approval through the AP Course Audit process. Only authorized courses may be listed as "AP" on student transcripts. *It is the student's responsibility to pay for any AP exams, and should check with their teachers throughout the semester to ensure they are meeting deadlines for payment.*

Dual Enrollment: The Dual Enrollment Agreement provides an opportunity for students to earn college credit while enrolled in high school and requires enrollment at a post-secondary institution. This may include on-campus, off-campus, and summertime work. Only coursework in approved Dual Enrollment programs will be recorded on the high school transcript. The postsecondary institution will determine grades, credits, and any accommodations. Withdrawal from a Dual Enrollment class may result in a failing grade.
Student Requirements:
• The student must be a junior or senior in high school;
• The student must have the minimum ACT sub-score in the specific subject area;
• The student must meet all prerequisites;
• The student must obtain permission from the high school principal and the parent/guardian;
• The student must complete all requirements of the college course.

NOTE: It is the responsibility of students to apply to the postsecondary institution as a dual enrollment student as well as apply for the dual enrollment grant here.

Enrollment in College Level Courses: *(BOE #I-121 Revised 3/2016)* High school students who are in good standing may earn high school credit by enrolling in college level courses at an institution of higher education. The institution shall be accredited by the state or by a state-approved accrediting agency. In order to qualify for college credit, a student shall:
• Meet all the requirements for dual credit/enrollment of the college/university;
• Have a planned high school program endorsed by guidance personnel as appropriate, including the college level course;
• Agree to assume any financial costs associated with the college level course,
• Obtain written permission of the high school principal and the acceptance of the college admissions officer;
• Continue to be enrolled in their base high school.

Upon receipt of the course grade transmitted directly from the institution of higher education, the high school shall grant credit on a term-to-term basis. Such grades shall be included in the computation of the student's cumulative grade point average as consistent with the district's grading policy. The Dual Enrollment Agreement (agreement reached between KCS and post-secondary institutions) provides an opportunity for students to earn college credit while enrolled in high school. This may include on campus, off campus, and summer time work. For more information on Dual Enrollment please contact the counseling department.

Upon receipt of the course grade transmitted directly from the granting institution, the receiving high school shall grant credit on a term-to-term basis. Such grades shall be included in the computation of the student's cumulative grade-point average as consistent with the district's grading policy.

Dual Enrollment Credit Earned Outside the School Day: For Dual Enrollment credit earned outside of the school day (summer or in addition to the typical class load of a high school student) to appear on the high school transcript, earning points toward the GPA, students must receive prior written permission from the high school principal. Schools will file the written permission in the CR. Upon completion of the course, students are responsible for requesting the college or university to send a copy of the transcript to their high school's school counseling department.

TDOE - DUAL ENROLLMENT GOVERNOR'S SCHOOL: As part of the Governor's School curriculum, some participating students may have the opportunity to earn at least three hours of college credit from the college at which they are attending Governor's School. This college credit may be included on the high school transcript as a dual enrollment credit and calculated into the student's GPA. In order for this to occur, Knox County Schools' policy requires that, prior to attending Governor's School, the student must request from the high school principal that the dual enrollment grade(s) earned be listed on the transcript. If the student does not request the dual enrollment Governor's School credit be on the transcript prior to attending Governor's School, the credit will NOT be listed on the high school transcript and the grade will not be calculated into the student's high school GPA. If the student does request the dual enrollment credit be on the transcript, then the credit will be on the transcript and the grade will be calculated into the student's GPA. Regardless of whether the credit is on the transcript, a student may always request that a separate transcript from the Governor's School college be sent as a part of the student's college application process. NOTE: It is the responsibility of the student to understand what course(s) he/she will be taking at Governor's School, and to contact the Governor's School for the most up to date information. Not all Governor's Schools offer dual enrollment credit.

STATEWIDE DUAL CREDIT: Statewide Dual Credit is a high school course aligned to standard at a local post-secondary institution with a required exam to earn credit at any Tennessee post-secondary institution. Teachers must participate in a training and be certified by the State Department of Education in order to teach a statewide dual credit course. The following courses are currently offered by the State Department of Education as Dual Credit Courses. *Not all courses are offered in all schools.*

- American History II
- Criminal Justice II
- Introduction to Business
- Introduction to Probability & Statistics
- Pre-Calculus
- Psychology
- Speech and Communications
- World History
- Introduction to Agriculture Business
- Introduction to Plant Science
- Introduction to Sociology

CAREER AND TECHNICAL EDUCATION (CTE) Career Technical Education (CTE) provides students of all ages with the academic and technical skills, knowledge and training necessary to succeed in future careers and to become lifelong learners. In total, about 12.5 million high school and college students are enrolled in CTE across the nation. CTE prepares these learners for the world of work by introducing them to workplace competencies, and makes academic content accessible to students by providing it in a hands-on context. In fact, the high school graduation rate for CTE concentrators is about 90% – 15 percentage points higher than the national average.

Knox County Schools Department of Career and Technical Education believes that every Knox County student should graduate high school fully prepared and focused on post-secondary coursework and therefore meeting the qualifications for quality employment. In order to do this, high school students are encouraged to focus their elective credits on rigorous, career and post-secondary aligned learning pathways.

CTE CAREER CLUSTERS: Knox County CTE teachers base their instruction on the Tennessee State Standards for CTE. These are grouped into 16 career clusters plus middle school content. Within each cluster, several programs of study can help students concentrate in a specific area. Each program of study consists of 4 levels/courses, of which a student must complete three to be considered a concentrator. Clusters are listed below:

- Advanced Manufacturing
- Agriculture, Food, & Natural Resources
- Architecture & Construction
- Arts, A/V Technology, & Communications
- Business Management & Administration
- Education & Training
- Finance
- Government & Public Administration
- Health Science
- Hospitality & Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections, & Security
- Marketing
- STEM
- Transportation, Distribution, & Logistics

NOTE: Program offerings may vary from school to school.

GRADING AND ASSESSMENTS

High School Uniform Grading Policy and Procedures: T.C.A. § 49-6-407 authorizes the State Board of Education to develop a uniform grading system for students in grades 9- 12 to establish consistent grade reporting for the purposes of application for post-secondary financial assistance administered by the Tennessee Student Assistance Corporation.

Except where otherwise indicated, the changes outlined in this version of the policy became effective for all students in the 2018-19 academic year.

Weighting Grades for Advanced High School Coursework: Beginning with the 2018-19 academic school year, high school weighting for an advanced class changed as indicated by the chart below. Points are added at the completion of the exam.

ADVANCED COURSE LEVEL DESIGNATION	ADDITIONAL GPA QUALITY POINT GUIDE	PERCENTAGE POINTS ADDED TO FINAL GRADE
HONORS*	Additional .5 quality point used for GPA calculation	Three (3) points added to student's Final Grade in accordance with school board policy
ADVANCED PLACEMENT	Additional 1 quality point used for GPA calculation	Five (5) points added to Final Grade for students who sit for AP Exam in accordance with school board policy
AICE/Cambridge	Additional 1 quality point used for GPA calculation	Five (5) points added to Final Grade for students who sit for AICE Exam in accordance with school board policy

INTERNATIONAL BACCALAUREATE	Additional 1 quality point used for GPA calculation	Five (5)points added to Final Grade for students who sit for IB ExamPoints will be added in the year the students take assessments. Year I- Five (5)points,Year II - Five (5) points in accordance with school board policy
INDUSTRY CERTIFICATION	Additional 1 quality point used for GPA calculation	Four (4) points added to Final Grade for students who sit for the identified Industry Certification Exam in accordance with school board policy
DUAL ENROLLMENT	Additional 1 quality point used for GPA calculation	Final Grades ARE NOT awarded by KCS AND will not have additional points added
STATEWIDE DUAL CREDIT	Additional 1 quality point used for GPA calculation	Four (4) points added to Final Grade for students who sit for State Challenge Exam College Level Examination Program
(CLEP)	No additional quality points used for GPA calculation	Five (5) points added to the Final Grade for students who sit for the identified CLEPExam

*Excludes middle school honors which are not credit-bearing classes. Includes designated Pre-AP and IGSCE classes when applicable.

TDOE - UNIFORM GRADING POLICY The KCS grading legend is aligned with the State Board of Education Tennessee Uniform Grading Scale.

A = 100 - 93
B = 92 - 85
C = 84 - 75
D = 74 - 70
F = 69 - 00

Calculation of the Student's Grade Point Average (GPA): All high school course work, with the exception of pass/fail courses, will be calculated in the GPA according to the KCS scale. When a course is repeated, the higher of the grades shall be computed as part of the accumulated grade point average. (BOE I-350)

For Transfer Students: KCS will honor grading scales from sending institutions. The transcript will reflect courses and grades earned at the previous institution. The weighted grade from another high school will be used in calculating the GPA as long as Knox County Schools offered the equivalent course for the same academic year.

Lottery/Hope Scholarship: State law requires that students applying for lottery scholarships and other state scholarship funds be evaluated utilizing the State's uniform grading scale (KCS Unweighted GPA). A transcript with grade calculations based on the Uniform Grading Policy will be submitted to TSAC for Lottery/Hope Scholarship eligibility.

Grade Changes:

• Only the teacher of record is authorized to initiate a grade change;
• The teacher must provide documentation and the rationale for the grade change. Such information must be signed by the teacher and submitted to the principal;
• The principal must approve or deny the request for the grade change and will sign-off giving approval for the requested change. The documented grade change shall be filed in the student's cumulative record;
• An administrative change in a teacher's grade shall not be made without prior consultation with the teacher of record. The teacher may request that the decision of the principal or the results of the consultation be reviewed by the director of elementary, middle and high as appropriate;
• In the event that the teacher is unavailable and/or unable to provide grades, the principal shall make the final decision regarding the grade change using existing documentation and a rationale for the change. No school counselor or other teachers may initiate or approve a change in grades.

Grade Change Procedures:
• The student or parent may initiate a grade review by contacting a school Administrator.
• The Administrator will conduct a thorough review in collaboration with the teacher of record and others as needed.
• Any approved grade change will be documented by the teacher and submitted to the Registrar for official change.
GRADE CHANGE - BOE #I-311

GRADUATION

Graduation Requirements: (*BOE #I-370 REVISED 12/2016)*

Students shall fulfill all state requirements as set by the State Board of Education and earn the prescribed 28 credits required by the Knox County Schools. In instances where a student does not have the opportunity to earn the 32 credits that are available with block scheduling, the required number of credits required for graduation from the Knox County Schools will be four less than the total available, but in any event, a student must earn the state minimum requirement of 22 credits. The pattern of courses which shall be required of all students in grades nine (9) through twelve (12) shall be in accordance with the Rules and Regulations of the State Board of Education and the Knox County Board of Education.

To earn a regular high school diploma, students must:
• Earn the prescribed number of credits;
• Complete the ACT or SAT. (This requirement is waived if the student did not attend a Tennessee public school during his/her junior year.)
• Have satisfactory records of attendance and discipline;
• Complete the Tennessee Civics Assessment with a minimum score of 70%.

Students with Disabilities: A Special Education Diploma may be awarded to students with disabilities at the end of their fourth year of high school provided the students have:
• Not met the requirements for a high school diploma;
• Satisfactorily completed an individualized education program;
• Satisfactory records of attendance and conduct. Students who obtain the Special Education Diploma may continue to work towards the high school diploma through the end of the school year in which they turn twenty-two (22) years old.

An Occupational Diploma may be awarded to students with disabilities at the end of their fourth year of high school who have:
• Not met the requirements for a high school diploma;
• Satisfactorily completed an individualized education program;
• Satisfactory records of attendance and conduct;
• Completed the occupational diploma Skills, Knowledge, and Experience Mastery Assessment (SKEMA) created by the Tennessee Department of Education;
• Completed two years of paid or non-paid work experience.

The determination that an occupational diploma is the goal for a student with a disability will be made at the conclusion of the student's tenth grade year or two academic years prior to the expected graduation date. Students who obtain the Occupational Diploma may continue to work towards the high school diploma through the end of the school year in which they turn twenty-two years old.

An Alternate Academic Diploma (AAD) may be awarded to students with disabilities at the end of their fourth year of high school who have:
• Not met the requirements for a high school diploma;
• Been assessed on the state alternate assessments;
• Earned the required AAD credits (16) plus the remaining 6 graduation required credits;
• Satisfactorily completed an individualized education program.
Students who obtain the Alternate Academic Diploma may continue to work towards the High School Diploma and/or Occupational Diploma through the end of the school year in which they turn twenty-two years old.

The Volunteer State Seal of Biliteracy: The Volunteer State Seal of Biliteracy encourages all students to pursue the important workforce skill of biliteracy. Students who earn the award will be best prepared for college, career, and community in a global society. The seal is awarded to students who have studied and attained proficiency in two or more languages by high school graduation. The award certifies the student attained high-level mastery of two or more languages. A seal appears on the diploma of the graduating senior as a statement of accomplishment for college admission offices and employers.

Students who receive qualifying scores on an AP, IB or other national assessment in Spring of their senior year will be eligible to receive the award after graduation, provided qualifying information is submitted by July 1 of the year in which the student graduates.

Student Course Load: All students in grades nine (9) through twelve (12) shall be enrolled each semester in subjects that will allow them to graduate within four (4) years from the time the student enters the ninth grade. Schools may appeal hardship cases to the director of schools. Graduation Credit Requirements:

GRADUATION REQUIREMENTS

CORE SUBJECTS	NUMBER OF CREDITS
ENGLISH	4 (ENGLISH I, II, III, IV)
MATH	4 (Algebra I, Geometry, Algebra II, one high level math)
SCIENCE	3 (Biology, Chemistry, one additional Lab science)
WORLD HISTORY AND GEOGRAPHY	1
US HISTORY AND GEOGRAPHY	1
US GOVERNMENT AND CIVICS	½
ECONOMICS	½
PERSONAL FINANCE	½
PHYSICAL EDUCATION AND HEALTH	1-1/2 (Lifetime Wellness and one additional ½ credit)
ELECTIVE FOCUS	3
ADDITIONAL ELECTIVE CREDITS	6
TOTAL	28 credits required
All students are required to take the ACT or SAT and pass Tennessee Civics Assessment to meet graduation requirements.	

Courses That May Substitute for Required Courses:

COURSES	MAY SUBSTITUTE FOR
Physics	Fourth Mathematics credit provided it was not used as a third lab science
AP Capstone	English 4
DE English 1010 or 1020	English 4
JROTC – 2 credits	½ credit of Physical Education 1 credit Lifetime Wellness
JROTC – 3 credits	½ credit Personal Finance If teacher is HQ ½ credit of US Government

Elective Focus

A three (3) credit Elective Focus is a graduation requirement. The table below provides the approved Elective Focus units.	
MATH AND SCIENCE	Any combination of three Math and/or Science electives in addition to the required math and science courses
HUMANITIES	Any combination of courses in English/Language Arts, World Languages (above Level 2 if completing University Admissions requirement), and Social Studies, above the core requirements
FINE ARTS	Any combination of courses in Visual and/or Performing Arts, Theatre and Dance above the core requirements for University Admissions.
CAREER AND TECHNICAL EDUCATION	Any combination of three units in the same Program of Studies
INTERVENTION ACADEMIC ELECTIVE FOCUS	Any combination of courses in Tier 2 and Tier 3 intervention.

ADVANCED PLACEMENT INTERNATIONAL BACCALAUREATE DUAL ENROLLMENT DUAL CREDIT	Any combination of three of the same type course (i.e. 3 AP courses, 3 IB courses, or 3 Dual Enrollment or Dual Credit courses). AP/IB/Dual Enrollment or Dual Credit courses may be used to satisfy core requirements and the elective focus requirement (i.e. AP US History may satisfy core requirements and may count as one course in an AP Elective Focus.) Students using The AP/IB/Dual Enrollment/Dual Credit courses to satisfy both core and elective focus requirements must earn 28 credits to graduate
JROTC	Any combination of 3 credits of JROTC
PHYSICAL FITNESS	Any three Physical Education courses above the core requirements. Students taking a full credit PE course to satisfy the additional ½ PE credit must take an additional three courses to complete a Physical Fitness Focus
STEM	Three elective credits earned in either STEM courses (special course designations) or a combination of three additional elective credits in Science, Technology, and/or Math courses where a significant portion (more than 25%) of the course is based on original inquiry and design.
AVID	Any combination of three credits of consecutive AVID course (not offered at HVA)
HUMAN SERVICES	Any combination of courses in Peer Tutoring, Leadership, and ACTS/Service Learning.

TYPES OF DIPLOMAS

Regular Diploma: To earn a regular high school diploma, students must:
• Earn the prescribed twenty-eight (28) credit minimum;
• Complete the ACT or SAT prior to graduation if the student was enrolled in a Tennessee public school during their eleventh (11th) grade year;
• Have a satisfactory record of attendance and discipline;
• Complete the Tennessee Civics Assessment with a minimum score of 70%.

Graduating with Honors or Distinction: Students may graduate with honors or distinction by meeting the criteria established for the Tennessee diploma with honors or distinction. Schools will recognize a student's distinction in the graduation ceremony with a diploma credential, wearable cord, or with a notation on the program.

Graduation with Honors: Students who score at or above all of the subject readiness benchmarks on the ACT or equivalent score on the SAT will graduate with honors. Students must satisfy all requirements for a regular diploma AND score at or above all of the following ACT subject area readiness benchmarks (or equivalent SAT scores.) Acceptable scores may be used from more than one ACT test.

SUBJECT READINESS BENCHMARKS

ENGLISH 18	MATH 22	SCIENCE 23	READING 22

Graduation with Distinction: Students will be recognized as graduating with "distinction" by attaining a B average and completing at least one of the following:
• Earn a national and/or state recognized industry certification;
• Participate in at least one of the Governor's Schools;
• Participate in one of the state's All State musical organizations; • Be selected as a National Merit Finalist or Semi-Finalist;
• Attain a score of 31 or higher composite score on the ACT or SAT equivalent;
• Attain a score of 3 or higher on at least two Advanced Placement exams;
• Successfully complete the International Baccalaureate Diploma Programme;
• Earn 12 or more semester hours of transcripted postsecondary credit.

Some of the data used to identify students as graduates with honors or distinction may not be available prior to commencement. Therefore, all students who potentially meet the requirements will become candidates for a diploma with honors or distinction and will be recognized at individual schools' ceremonies.
A final classification of all candidates will be completed once all relevant data is received.

Tri-Star Scholar: Students who earn a composite score of 19 on the ACT, or an equivalent.

Diploma of Specialized Education

A Special Education Diploma is awarded to students who, at the end of their fourth year, have not satisfied graduation requirements but have successfully completed their Individualized Educational Program and have satisfactory attendance and conduct.

Alternate Academic Diploma: The Alternate Academic Diploma is for students who are assessed on the state alternate assessments. This diploma recognizes the academic learning and success of students with the most significant cognitive disabilities. The requirements of the diploma align to the academic coursework and ACT requirements of students earning a regular diploma in order to ensure that all students are provided access and opportunities to learn and participate in rigorous, meaningful academic instruction. Individual IEP teams may determine if students on alternate assessments will take the ACT.

Occupational Diploma: The Occupational Diploma is for students who have not met the graduation requirements but have successfully completed the SKEMA (Skills, Knowledge, and Experience Mastery Assessment) through two years of approved work experience. Exchanging the Diploma of Specialized Education for a Regular Diploma: Students with disabilities who are awarded a Diploma of Specialized Education, Occupational Diploma, or Alternate Academic Diploma may continue to work toward the regular

high school diploma through the end of the school year in which they turn twenty-two years old. To qualify, the student must:
• Earn the specified units of credit required for a regular diploma;
• Take the required End of Course exams Individuals may not hold more than one diploma. A person must return the Diploma of Specialized Education before being awarded a regular diploma. The counselor at the high school shall handle an exchange where the diploma was awarded.

Multiple Pathways to Graduation Through Non-Traditional Models:

Information regarding the following schools can be found by clicking on the links below:
L&N STEM Academy https://www.knoxschools.org/landn

Dr. Paul Kelley Volunteer Academy https://www.knoxschools.org/Domain/83

Career Magnet Academy https://www.knoxschools.org/careermagnet

Non-Traditional Schools: Non-traditional schools fit individual student needs while offering programs from a variety of avenues. Each school offers unique learning opportunities tailored to meet the needs of motivated and responsible students in a nontraditional school setting. Click on the links below for more information.
Richard Yoakley Alternative School https://www.knoxschools.org/yoakley
Ridgedale Alternative https://www.knoxschools.org/ridgedale
Knoxville Adaptive Education Center (KAEC) https://www.knoxschools.org/Domain/90

ATHLETICS

Interscholastic Athletics: *(BOE #I-171 Revised 8/2017)* Interscholastic athletics shall be administered as a part of the regular school program and shall be the principal's responsibility. The principal or his designee must accompany an athletic team on trips. The Bylaws of the Tennessee Secondary School Athletic Association (TSSAA) shall regulate the operation and control of secondary athletics. School athletics shall be coached only by persons on contract to the Board of Education and approved by the Tennessee Secondary School Athletic Association. There shall be an annual physical examination of every student prior to his participation in interscholastic athletic practice. Cost of the examination shall be borne by the parent or guardian of the student. These records shall be on file in the principal's office.

Every participant in athletics shall participate in the Knox County Schools Athletic Insurance Program. There shall be no practice of organized school athletics schedules within the school day without approval of the Superintendent. Each school may play two home athletic events during the school day without requesting permission from the Board of Education. The conduct of players, spectators, or school personnel reflects directly upon the school system as a whole. Therefore, conduct of players, spectators, or school personnel that does not exemplify the best sportsmanship may result in that school's program, players, spectators, or school personnel being suspended from attendance or participation in the sport concerned with the infraction. The Board of Education will determine the duration of the suspension.

Maximum admission prices to all athletic events shall be approved by the Board of Education, upon the recommendation of the Superintendent.

Scheduling of Athletic Contests: District/regional games shall be scheduled first. No contract shall be signed until the following process is complete:

• Complete the schedule and submit to the principal for approval.
• Upon approval by the principal, submit to the Superintendent's office for final approval. If an adequate schedule is not obtained by each school, a rescheduling meeting shall be designated by the Superintendent's office to resolve existing problems. No contracts are to be signed prior to the Superintendent's approval of the schedule. Middle School basketball and track are sanctioned sports of the Knox County Schools and will be regulated by administrative procedures.

Eligibility of Home-Schooled Students for Public School Interscholastic Athletics: As a member of the Tennessee Secondary Schools Athletic Association, Knox County Schools shall honor the bylaws of the TSSAA with respect to home school students' participation in TSSAA sanctioned public school interscholastic athletic activities. The following conditions shall also apply to home school students seeking to participate in the Knox County Schools Interscholastic athletics program:
• Home school students who meet the requirements established by the TSSAA and who meet all other eligibility and selection criteria set forth by the school and the coach will be allowed to participate on an interscholastic athletic team of their zoned school. With regard to sports that do not require tryouts for eligible Knox County School students, participation will be allowed pursuant to the compliance with the requirements listed in this policy. With regard to sports requiring tryouts, compliance with the requirements listed in this policy will only ensure the opportunity to tryout and will not ensure a position on the respective team;
• If selected for membership on the zoned school athletic team, home school students will be subject to all rules, requirements and restrictions that are applicable as members of the team and the school community;
• Home school students shall pay all fees associated with each sport in which they may participate and these fees shall be paid in full prior to the first contest of the regular season;
• In the event that the Knox County School's insurance provider does not extend coverage to an athlete, that athlete must provide proof of independently secured catastrophic coverage, and liability coverage, with the school system as a named insured, of not less than the limits set forth in Tennessee Code Annotated § 29-20-403.

NCAA Requirements for College Scholarships in Athletics:

Refer to **NCAA GUIDE FOR THE COLLEGE-BOUND STUDENT ATHLETE** for information on Division I, II, and III colleges and universities. For additional information, visit **NCAA ELIGIBILITY CENTER**. **NOTE: There is a fee to register with the eligibility center. For fee waiver information, click here**

Division I:

To be eligible to compete in NCAA sports during a student's first year at a **DIVISION I** school, that student-athlete must graduate high school and meet ALL the following requirements:

Complete **16 core courses:**

- Four credits of English;
- Three credits of math (Algebra I or higher);
- Two credits of natural/physical science, including one credit of a lab science if offered at the student's high school;
- One additional credit of English, math, or natural/physical science;
- Two credits of social science;

- Four additional credits of English, math, natural/physical science, social science, foreign language, comparative religion or philosophy;
- Complete ten core courses, including seven in English, math or natural/physical science before the student's seventh semester. Once the seventh semester has started, a student must have more than ten core courses completed to be able to repeat or replace any of the ten courses used to meet the 10/7 requirement;
- Earn at least a **2.3 GPA** in the core courses;
- Earn an **SAT combined score or ACT sum score** matching the core-course GPA on the Division I sliding scale, which balances the test score and core-course GPA. If a student- athlete has a low test score, a higher core-course GPA is needed to be eligible. If the student-athlete has a low core-course GPA, a higher test score is needed to be eligible.

Division II:

To be eligible to compete in NCAA sports during a student's first year at a **DIVISION II** school, the student-athlete must meet academic requirements for the core courses, grade point average (GPA) and test scores and meet the following requirements:

Complete **16 core courses:**

- Three credits of English;
- Two credits of math (Algebra I or higher);
- Two credits of natural/physical science, including one credit of a lab science if offered at the student's high school;
- Three additional credits of English, math, or natural/physical science;
- Two credits of social science;
- Four additional credits of English, math, natural/physical science, social science, foreign language, comparative religion or philosophy;
- Earn at least a **2.2 GPA** in the core courses;
- Earn an **SAT combined score or ACT sum score** matching the core-course GPA on the Division II sliding scale, which balances the test score and core-course GPA. If a student- athlete has a low test score, a higher core-course GPA is needed to be eligible. If the student-athlete has a low core-course GPA, a higher test score is needed to be eligible.

Division III:

DIVISION III schools provide an integrated environment focusing on academic success while offering a competitive athletics environment. Division III rules minimize potential conflicts between athletics and academics and focus on regional in-season and conference play.

While Division III schools do not offer athletics scholarships, 80 percent of Division III student-athletes receive some form of merit or need-based financial aid.

A student who plans to attend a Division III school does not need to register with the NCAA Eligibility Center. Division III schools set their own admission and eligibility standards.

Please be advised that NCAA eligibility requirements are not likely to allow credit for a course taken through recovery credit, even if it is an approved course.

For additional information, visit NCAA ELIGIBILITY CENTER. This site will provide information regarding initial-eligibility at NCAA Division I and II member colleges and universities. The NCAA Eligibility Center serves three main constituent groups: prospective student-athletes, high school administrators, and NCAA m

HIGH SCHOOL COURSE DESCRIPTIONS

NOTE:

The courses listed in this catalog are from Knox County School's progression plan for the 2021-2022 school year (the progression plan for the 2022-2023 school year has not been published as of 2/1/2022) and only list courses available for selection through Hardin Valley Academy. Final course availability will be developed based on course requests from course selection sheets by students in the spring of 2022.

Career and Technical Education (CTE)

The state of Tennessee department of education provides a complete CTE program of study documents annually with periodic updates throughout the year. This document outlines the state's approved CTE programs of study within the 16 nationally recognized career clusters. Included in the document for each program of study are the approved course sequences, aligned alternative academic courses (AP, AICE, etc.), and available state-approved industry certifications. For additional information on any of the CTE programs of study or courses described below, please refer to 2021-2022 Proposed CTE Program of Study.

Please note: Within each CTE pathway, courses are listed in the order in which they should be completed. Typically, the preceding course is a prerequisite.

Advanced Manufacturing Career Cluster (available at Byington Campus):

Electromechanical Technology Pathway
Welding Pathway

NIC Principles of Manufacturing: *Principles of Manufacturing is the Level 1 Course for both the Electromechanical and Welding Pathways*

Designed to provide students with exposure to various occupations and pathways in the Advanced Manufacturing career cluster, such as Machining Technology, Electromechanical Technology, Mechatronics, and Welding. In order to gain a holistic view of the advanced manufacturing industry, students will complete all core standards, as well as standards in two focus areas. Throughout the course, students will develop an understanding of the general steps involved in the manufacturing process and master the essential skills to be an effective team member in a manufacturing production setting. Course content covers basic quality principles and processes, blueprints and schematics, and systems. Upon completion of this course, proficient students will advance from this course with a nuanced understanding of how manufacturing combines design and engineering, materials science, process technology, and quality. Upon completion of the Principles of Manufacturing course, students will be prepared to make an informed decision regarding which Advanced Manufacturing program of study to pursue. Prerequisite(s)/corequisites: Algebra I and Physical Science strongly recommended

<u>Electromechanical Technology Pathway</u>:
Principles of Manufacturing (see above for course description)

NIC Introduction to Electromechanical: A foundational course that introduces students to basic industrial maintenance skills necessary in a manufacturing facility. Topics covered include safety, construction drawings, site layout, hand and power tools, linear and angular measurements, and application of algebraic and geometric principles to construction problems. Upon completion of this course, proficient students will be able to understand, describe, and troubleshoot industrial maintenance systems. Prerequisite(s) Principles of Manufacturing, Algebra I, and Physical Science. Algebra I and Physical Science may be taken as co-requisites.

NIC Advanced Electromechanical*:* Designed to provide students with the knowledge and skills to effectively perform basic industrial maintenance procedures in an advanced manufacturing facility. Students in this course develop proficiency in a vast array of industrial maintenance domains, including: fundamental safety practices in electromechanical technology, shielded metal arc welding (SMAW), basic metal inert gas (MIG) welding, electrical systems, AC and DC motors, calibrating instruments, drive systems, pipe fabrication, hydraulic systems, pumps, digital electronics, programmable logic controllers (PLC), and troubleshooting procedures. Upon completion of this course, proficient students will be prepared to pursue postsecondary industrial maintenance technology programs and entry-level industrial maintenance technology careers in the advanced manufacturing industry. Prerequisite(s) Algebra, Geometry, Physical Science, and Introduction to Electromechanical.

<u>Welding Pathway:</u>
Principles of Manufacturing (see above for course description)

NIC Welding I: Welding I is designed to provide students with the skills and knowledge to effectively perform cutting and welding applications used in the advanced manufacturing industry. Proficient students will develop proficiency in fundamental safety practices in welding, interpreting drawings, creating computer aided drawings, identifying and using joint designs, efficiently laying out parts for fabrication, basic shielded metal arc welding (SMAW), mechanical and thermal properties of metals, and quality control. Upon completion of this course, proficient students will understand the requirements to pursue the American Welding Society (AWS) Entry Welder qualification and examination and will be prepared to undertake more advanced welding coursework. Prerequisite(s) Principles of Manufacturing.

NIC Welding II (2 block course): Welding II is designed to provide students with opportunities to effectively perform cutting and welding applications of increasingly complexity used in the advanced manufacturing industry. Proficient students will build on the knowledge and skills of the Welding I course and apply them in novel environments, while learning additional welding techniques not covered in previous courses. Specifically, students will be proficient in (1) fundamental safety practices in welding, (2) gas metal arc welding (GMAW), (3) flux cored arc welding (FCAW), (4) gas tungsten arc welding (GTAW), and (5) quality control methods. Upon completion of the Welding II course, proficient students will be eligible to complete the American Welding Society (AWS) Entry Welder qualification and certification. Prerequisite(s) Welding I. *Can be taken as a dual enrollment course through TCAT (and DE grant)*, *check with the instructor.*

Manufacturing Practicum (for Advanced Manufacturing and Welding Pathways)**:**
Manufacturing Practicum is a *capstone course* intended to provide students with the opportunity to apply the skills and knowledge learned in previous Advanced Manufacturing courses within a professional, working

environment. While continuing to add to their technical skill sets, students in this course assume increasing responsibility for overseeing manufacturing processes and managing complex projects. Specifically, proficient students will be able to work in teams to plan the production of a sophisticated product; develop troubleshooting and problem-solving mechanisms to ensure that projects run smoothly; analyze output and compile professional reports; and connect practicum activities to career and postsecondary opportunities. For all projects undertaken in this course, students are expected to follow the focus area in their chosen program of study (Machining Technology, Electromechanical Technology, Mechatronics, or Welding), while also refining skills previously acquired to achieve deeper levels of mastery. Upon completion of the practicum, proficient students will be prepared for postsecondary study and career advancement in their chosen focus area. Prerequisite(s): Minimum of two credits in an Advanced Manufacturing or Welding program of study.

Agriculture, Food & Natural Resources Career Cluster (Available at Byington Campus)

Environmental & Natural Resources Pathway

Environmental & Natural Resource Management Pathway (at Byington):

NIC Agriscience (Grade 9)*Agriscience is the Level 1 course).* This is an introductory laboratory science course that prepares students for biology, subsequent science and agriculture courses, and postsecondary study. This course helps students understand the important role that agricultural science and technology plays in the twenty-first century. In addition, it serves as the first course for all programs of study in the Agriculture, Food, & Natural Resources cluster. Upon completion of this course, proficient students will be prepared for success in more advanced agriculture and science coursework. This course counts as a lab science credit toward graduation requirements.

Applied Environmental Science: Applied Environmental Science focuses on the knowledge, information, and skills related to the fundamental science and management of ecosystems as well as careers, leadership, and history of the industry. This course covers principles of environmental impacts, energy consumption, and ecosystem management. Upon completion of this course, proficient students will be prepared for advanced coursework in the Environmental and Natural Resources program of study.

Plant & Soil Science: Plant and Soil Science is an applied-knowledge course focusing on the science and management of plants and soils, with special attention given to current agricultural practices that support the healthy and sustainable cultivation of major crops. Upon completion of this course, proficient students will have been exposed to a range of careers associated with the science and management of plants and soils and will have developed the essential skills and knowledge to be successful in science- or agriculture-related occupations.

Natural Resource Management: Natural Resource Management is an applied course for students interested in learning more about becoming good stewards of our environment and natural resources. This course covers major types of natural resources and their management, public policy, and the role of public education in managing resources, as well as careers, leadership, and history of the industry. Upon completion of this course, proficient students will be prepared for further study and careers as an environmental scientist, conservationist, forester, or wildlife manager.

Architecture & Construction Career Cluster:

Architecture Pathway at HVA

Structural Systems Pathway at Byington
Mechanical, Electrical & Plumbing Systems Pathway at Byington

Architecture Pathway (at HVA)

Architecture & Engineering Design I: Architectural & Engineering Design I is a foundational course in the Architecture & Construction cluster for students interested in a variety of engineering and design professions. Upon completion of this course, proficient students will be able to create technical drawings of increasing complexity, and utilize these skills to complete the design process and communicate project outcomes. Students will Page 2 build foundational skills in freehand sketching, fundamental technical drawing, and related measurement and math. Standards in this course also include career exploration within the technical design industry, as well as an overview of the history and impact of architecture and engineering. In addition, students will begin compiling artifacts for inclusion in a portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Architecture & Engineering Design II: Architecture & Engineering Design II is the second course in the program of study. Students in this course build their skills in developing and representing design Page 2 ideas using technical drawing and modeling techniques, and apply the design process to solve design problems. Upon completion of this course, proficient students will be able to use computer aided drafting (CAD) software to create multi-view, sectional view, auxiliary view, and three dimensional drawings using industry standard dimensioning and notation. Students will connect drawings with actual physical layouts by building models based on drawings, creating drawings based on objects and other physical layouts, and using software to create basic three-dimensional models. In addition, students will continue compiling artifacts for inclusion in a portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

NIC Architecture & Engineering Design III: Architecture & Engineering Design III is the third course in the program of study. In this advanced course, students will apply technical drawing and design skills developed in the previous courses to specific architectural and mechanical design projects contexts. In the process, students will expand their problem-solving and critical-thinking skills by assessing the requirements of a project alongside the available resources in order to accomplish realistic planning. Upon completion of this course, proficient students will be able to employ methods of data collection and analysis to provide others with appropriate information for projects and to develop their own designs. Students will also be able to engage with industry-specific technology to create visual representations of project outcomes. In addition, students will continue compiling artifacts for inclusion in a portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Architectural Design Practicum or Dual Enrollment: Engineering Practicum is a capstone course intended to provide students with the opportunity to apply the skills and knowledge learned in previous Engineering courses within a professional, working environment. In addition to developing an understanding of the professional and ethical issues encountered by engineers and technologists in the workplace, students learn to refine their skills in problem solving, research, communication, data analysis, teamwork, and project management. The course is highly customizable to meet local system needs: instruction may be delivered through school laboratory training or through work-based learning arrangements such as internships, cooperative education, service learning, mentoring, and job shadowing. Upon completion of the practicum, students will be prepared for postsecondary study in engineering and technology fields.

Structural Systems Pathway (at Byington)

NIC Fundamentals of Construction (at Byington):
Fundamentals of Construction is the Level 1 Course for the Structural Systems and MEP Systems programs of study within the Architecture & Construction Career Cluster. This course is a foundational course in the Architecture & Construction cluster covering essential knowledge, skills, and concepts required for careers in construction. Upon completion of this course, proficient students will be able to describe various construction fields and outline the steps necessary to advance in specific construction careers. Students will be able to employ tools safely and interpret construction drawings to complete projects demonstrating proper measurement and application of mathematical concepts. Standards in this course also include an overview of the construction industry and an introduction to building systems and materials. Students will begin compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in their selected program of study. Standards in this course are aligned with the National Center for Construction Education and Research (NCCER) Curriculum.

NIC Structural Systems I: Structural Systems I prepares students for careers in residential and commercial carpentry. Upon completion of this course, proficient students will be able to demonstrate knowledge and skill in framing buildings. Students will be able to frame floors, walls, ceilings, roofs, and stairs while safely employing tools and interpreting construction drawings to complete projects. Emphasis is placed on demonstrating proper measurement and application of mathematical concepts. Standards in this course also include principles of the construction industry and business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Standards in this course are aligned with the National Center for Construction Education and Research (NCCER) Curriculum. Prerequisite(s) Fundamentals of Construction.

NIC Structural Systems II: Structural Systems II is a continuation of NIC Structural Systems I. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Standards in this course are aligned with the National Center for Construction Education and Research (NCCER) Curriculum. Prerequisite(s) Fundamentals of Construction.

Construction Practicum: Construction Practicum is a capstone course intended to provide students with the opportunity to apply the skills and knowledge learned in previous Architecture & Construction courses within a professional, working environment. In addition to developing an understanding of the professional and ethical issues encountered by tradesmen and contractors in the workplace, students learn to refine their skills in problem solving, communication, teamwork, and project management in the completion of a course- long project. Due to the importance of on-the-job training in the construction industry, a principle aim of the practicum is to assist students with placements where on-the-job training occurs, if available, so they can begin to log hours on a worksite and gain experience prior to entering the job market, such as in pre-apprenticeships. Additionally, students are exposed to the great range of postsecondary opportunities in today's construction fields as well, in order to prepare them to make an informed decision regarding their post-high school plans. Prerequisite(s): Minimum of 2 credits in an Architecture & Construction program of study.

<u>Mechanical Electrical & Plumbing Systems Pathway (at Byington):</u>
NIC Fundamentals of Construction (see above)

NIC Electrical Systems: Electrical Systems prepares students for careers as electricians across a variety of residential and commercial environments. Upon completion of this course, proficient students will be able to implement safety procedures and tools to perform operations with device boxes, conduit, raceway systems conductors, and cable. Students will read and interpret the National Electrical Code, drawings, specifications,

and diagrams to determine materials and procedures needed to complete a project. Students will calculate residential loads to recommend electrical hardware. Standards in this course also introduce basic troubleshooting procedures and power systems, and expand on principles of the construction industry, delving deeper into business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Standards in this course are aligned with the National Center for Construction Education and Research (NCCER) Curriculum. Prerequisite(s): Fundamentals of Construction.

NIC Heating, Ventilation, & Air Conditioning (HVAC) Systems: HVAC prepares students for careers in residential and commercial heating, ventilation, air conditioning, and refrigeration. Upon completion of this course, proficient students will be able to demonstrate knowledge and skill in performing basic operations with HVAC systems, with emphasis on safety, tools, and equipment specific to HVAC. In addition, students will be able to explain the functions and components of heating, cooling, and air distribution systems. They will demonstrate basic techniques to prepare piping and tubing for HVAC systems including performing soldering and brazing. Students will understand proper refrigerant management in preparation for EPA Section 608 Technician Certification. They will read and interpret drawings, specifications, and diagrams to determine materials needed to complete an HVAC project. Standards in this course also introduce basic troubleshooting and maintenance procedures and alternate power systems, and expand on principles of the construction industry, delving deeper into business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Prerequisite(s): Fundamentals of Construction.

NIC Plumbing Systems: Plumbing Systems prepares students for careers in plumbing across a variety of residential and commercial settings. Upon completion of this course, proficient students will be able to implement safety procedures and tools to perform operations with plumbing systems. Students will be able to explain how drain, waste, and vent (DWV) systems, water distribution systems, and plumbing fixtures work and apply proper tools and procedures to perform operations with plumbing piping, including measuring, cutting, joining, supporting, and hanging various types of pipe. Students will read and interpret drawings, specifications, and diagrams to determine materials needed to complete a plumbing project. Standards in this course also introduce basic maintenance and troubleshooting procedures and expand on principles of the construction industry, delving deeper into business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Prerequisite(s): Prerequisite(s): Fundamentals of Construction.

Construction Practicum: Construction Practicum is a capstone course intended to provide students with the opportunity to apply the skills and knowledge learned in previous Architecture & Construction courses within a professional, working environment. In addition to developing an understanding of the professional and ethical issues encountered by tradesmen and contractors in the workplace, students learn to refine their skills in problem solving, communication, teamwork, and project management in the completion of a course- long project. Due to the importance of on-the-job training in the construction industry, a principle aim of the practicum is to assist students with placements where on-the-job training occurs, if available, so they can begin to log hours on a worksite and gain experience prior to entering the job market, such as in pre-apprenticeships. Additionally, students are exposed to the great range of postsecondary opportunities in today's construction fields as well, in order to prepare them to make an informed decision regarding their post-high school plans. Prerequisite(s): Minimum of 2 credits in an Architecture & Construction program of study.

Arts, Audio/Visual Technology, and Communication Career Cluster

Audio/Visual Production Pathway at Byington
Digital Arts & Design Pathway at HVA

Audio/Visual (A/V) Production Pathway (at Byington)

Audio/Visual Production I (TV: A/V Production I is a foundational course in the Arts, A/V Technology, & Communications cluster for students interested in A/V (audio/visual) production occupations. Upon completion of this course, proficient students will be able to explain and complete the phases of the production process including pre-production, production, and post-production. Students will establish basic skills in operating cameras, basic audio equipment, and other production equipment. Standards in this course include career exploration, an overview of the history and evolution of A/V production, and legal issues affecting A/V production. In addition, students will begin compiling artifacts for inclusion in a portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Audio/Visual Production II : A/V Production II is the second course in the A/V Production program of study intended to prepare students for a career in audio/visual production. Building on knowledge acquired in A/V Production I, this course advances technical skill in utilizing industry equipment related to lighting and audio, and it places special emphasis on the research and technical writing involved in planning productions. Upon completion of this course, proficient students will be able to plan, capture, and edit research-based productions of increasing complexity, individually and through collaboration in teams. In addition to more robust career preparation, standards in this course include an investigation of concerns affecting A/V production businesses, such as ethical and legal issues, technology, funding, and the organization of professional roles in various industries. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Prerequisite(s): A/V Production I.

Audio/Visual Production III: A/V Production III is an applied-knowledge course intended to prepare students to pursue careers and postsecondary learning in audio/visual production. Students in this course will apply knowledge and skills from previous courses in the program of study to create productions both independently and in teams, with the option of participating in a work-based learning experience for additional credit. Students will use industry equipment and technology to complete all phases of the production process, including planning, coordinating, capturing, editing, and distributing productions. Standards in this course include policies and regulations, independent and collaborative productions, distribution of media, and the production of live events. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Upon completion of this course, proficient students will be prepared for a career in audio/visual production or to transition to a postsecondary program for further study. Prerequisite(s): A/V Production II.

Digital Arts & Design Pathway (at HVA)

Digital Arts & Design I: A foundational course in the Arts, A/V Technology, & Communications cluster for students interested in art and design professions. The primary aim of this course is to build a strong understanding of the principles and elements of design and the design process. Upon completion of this course, proficient students will be able to utilize industry tools to conceptualize and create communications solutions which effectively reach targeted audiences. Students will acquire basic skills in illustration, typography, and photography. Standards in this course include career exploration, an overview of the history of design, basic business management, and legal issues. In addition, students will begin compiling artifacts for inclusion in a

digital portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Digital Arts & Design II: This course builds on the basic principles and design process learned in the introductory Digital Arts & Design I course. Upon completion of this course, proficient students will be able to perform advanced software operations to create photographs and illustrations of increasing complexity. Students will employ design principles and use industry software to create layouts for a variety of applications. Standards in this course also include an overview of art and design industries, career exploration, and business management. In addition, students will continue compiling artifacts for inclusion in a digital portfolio, which they will carry with them throughout the full sequence of courses in this program of study

Digital Arts & Design III: The third course in the Digital Arts & Design program of study. Applying design skills developed in prior courses, students will expand their creative and critical thinking skills to create comprehensive multimedia projects and three-dimensional designs. Upon completion of this course, proficient students will be able to use industry-standard software to create multimedia projects, web pages, three-dimensional models, and animations. Students will utilize research techniques to plan and enhance project outcomes. Standards in this course also include professionalism and ethics, career exploration, and business and project management. In addition, students will continue compiling artifacts for inclusion in a digital portfolio, which they will carry with them throughout the full sequence of courses in this program of study.

Dual Enrollment Digital Arts & Design: To be determined in consultation with the student's School Counselor.

Auto Maintenance & Light Repair

Pathway at Byington

Maintenance & Light Repair I: This course prepares students for entry into Maintenance and Light Repair II. Students explore career opportunities and requirements of a professional service technician. Content emphasizes beginning transportation service skills and workplace success skills. Students study safety, tools, equipment, shop operations, basic engine fundamentals, and basic technician skills. Upon completing all of the Maintenance and Light Repair courses, students may enter the automotive service industry as an ASE Certified MLR Technician. Hours earned in the Maintenance and Light Repair courses may be used toward meeting National Automotive Technicians Education Foundation (NATEF) standards and Tennessee Department of Education standards. NATEF requires that 95% of the P-1 tasks, 80% of the P-2 tasks, and 50% of the P-3 tasks will be accomplished. These tasks are notated in these standards. Credit 1 - Grade Level 9 - Prerequisite(s) none

Maintenance and Light Repair II: This course prepares students for entry into Maintenance and Light Repair III. Students study automotive general electrical systems, starting and charging systems, batteries, lighting, and electrical accessories. Upon completing all of the Maintenance and Light Repair courses, students may enter the automotive service industry as an ASE Certified MLR Technician. Hours earned in the Maintenance and Light Repair courses may be used toward meeting National Automotive Technicians Education Foundation (NATEF) standards and Tennessee Department of Education standards. NATEF requires that 95% of the P-1 tasks, 80% of the P-2 tasks, and 50% of the P-3 tasks will be accomplished. These tasks are notated in these standards. Credit 1 - Grade Level 10 - Prerequisite(s) The Maintenance and Light Repair I (MLR I)

Maintenance and Light Repair III: This course prepares students for entry into Maintenance and Light Repair IV. Students study and service suspension and steering systems and brake systems. Upon completing all of the Maintenance and Light Repair courses, students may enter the automotive service industry as an ASE Certified MLR Technician. Hours earned in the Maintenance and Light Repair courses may be used toward meeting National Automotive Technicians Education Foundation (NATEF) standards and Tennessee Department of Education standards. NATEF requires that 95% of the P-1 tasks, 80% of the P-2 tasks, and 50% of the P-3 tasks will be accomplished. 168 These tasks are notated in these standards. Credit 2 - Grade Level 11 - Prerequisite(s) The Maintenance and Light Repair II

Business Management & Administration Career Cluster:

Business Management Pathway at HVA

Introduction to Business and Marketing: Introduction to Business & Marketing is an introductory course designed to give students an overview of the Business Management and Administration, Marketing, and Finance career clusters. The course helps students prepare for the growing complexities of the business world by examining basic principles of business, marketing, and finance in addition to exploring key aspects of leadership, ethical and social responsibilities, and careers. Students' academic skills in communications, mathematics, and economics are reinforced with activities modeled in the context of business topics. Upon completion of this course, proficient students will be equipped with the foundational skills to succeed in any of the Business, Marketing, or Finance programs of study and will be prepared to make an informed decision regarding which pathways they would like to pursue in high school. Prerequisite(s): None.

Business Communications: Business Communications is a course designed to develop students' effective oral and electronic business communications skills. This course develops skills in multiple methods of communications, including social media, as well as electronic publishing, design, layout, composition, and video conferencing. Upon completion of this course, proficient students will be able to demonstrate successful styles and methods for professional business communications using the proper tools to deliver effective publications and presentations. Prerequisite: Introduction to Business and Marketing.

Business Management (NIC): Business Management focuses on the development of the planning, organizing, leading, and controlling functions required for the production and delivery of goods and services. This applied knowledge course addresses the management role of utilizing the businesses' resources of employees, equipment, and capital to achieve an organization's goals. Students will participate in a continuing project throughout the course in which, individually or in teams, they will present recommendations to improve an existing business. Local business partnerships are encouraged to provide resources for faculty and students. Upon completion of this course, proficient students will be able to complete a full review of an existing business and offer recommendations for improvement as would a management consultant. Prerequisite: Introduction to Business and Marketing.

Business & Entrepreneurship Practicum: Business & Entrepreneurship Practicum is a capstone course intended to provide students with the opportunity to apply the skills and knowledge learned in previous Business and Marketing courses within a simulated startup environment or authentic business setting. The course is structured to allow students the creativity to develop, launch, and market original business ideas. It is ideal for students who wish to pursue careers as future business owners or entrepreneurs. Practicum activities can take place around student-led startups under the supervision of the instructor, or in collaboration with a

local business incubator. The standards in this course can also be used to promote student participation in a work-based learning (WBL) experience through an internship or other off-campus arrangement. Upon completion of the practicum, proficient students will be prepared to further develop their business ideas into viable ventures, or continue their study at the postsecondary level. Prerequisite(s): Completion of Business Management Pathway courses

Education & Training Career Cluster

Early Childhood Education Careers Pathway at Byington
Teaching as a Profession (K-12) Pathway at HVA

Teaching as a Profession (K-12) Pathway:

Fundamentals of Education: Fundamentals of Education is a foundational course in the Education and Training career cluster for students interested in learning more about becoming a school counselor, teacher, librarian, or speech- language pathologist. Upon completion of this course, proficient students will gain knowledge in the history of education in the United States, careers in education, and the influence of human development on learning. Artifacts will be created for inclusion in a portfolio, which will continue throughout the full sequence of courses.

Teaching as a Profession (TAP) I: TAP I is an intermediate course for students interested in learning more about becoming a school counselor, teacher, librarian, or speech-language pathologist. This course covers the components of instruction, teaching strategies, types of assessments, student learning, special populations, and educational technology. Students will conduct observations of educators at work and create artifacts for a course portfolio, which will continue with them throughout the program of study. Upon completion of this course, proficient students will have a fundamental understanding of instructional strategies needed for becoming an educator. Students will spend no more than 2 to 3 ninety-minute class periods in a supervised field trip experience. Prerequisite(s) Fundamentals of Education.

Teaching as a Profession (TAP) II: TAP II is an applied-knowledge course for students interested in learning more about becoming a teacher, school counselor, librarian, or speech-language pathologist. This course covers classroom management, concepts of higher order thinking, differentiating instruction, and strategies of effective classroom planning. Students in this course will demonstrate their skills in laboratory settings while building a course portfolio of work, which will carry with them throughout the program of study. Upon completion of this course, proficient students will be prepared to take the capstone TAP III course and further their studies at the postsecondary level. Prerequisite(s): Teaching as a Profession I (TAP I).

Teaching as a Profession (TAP) III: TAP III is a capstone course in the Education and Training career cluster for students interested in applying the knowledge and skills learned in previous courses toward becoming a teacher, school counselor, librarian, or speech-language pathologist. The course covers classroom professionalism, ethics, policies, communications, and career requirements in education fields. In addition, students will complete an internship and continue to create artifacts for their student portfolios. Upon completion of this course, proficient students will be prepared to pursue advanced training at a postsecondary institution. Prerequisite(s): Teaching as a Profession II (TAP II).

Early Childhood Careers Pathway (at Byington):

Early Childhood Education Careers (ECEC) I: ECEC I is a foundational course in the Education and Training career cluster intended to prepare students for careers as childcare providers, nannies, preschool teachers, and more. Course content covers the foundation of childhood development services, careers, provider responsibilities and aptitudes, and fundamentals of child development. Upon completion of this course, students will have created artifacts for inclusion in a course portfolio, which will continue with them throughout the program of study.

Early Childhood Education Careers (ECEC) II (NIC): ECEC II is an intermediate course for students interested in learning more about becoming an early childhood teacher, nanny, or childcare provider. This course covers the components of curriculum planning, learning, screening and assessing, special populations, and educational technology. Students will observe educators in action, practice specific skills, and add personal work products to a course portfolio. Upon completion of this course, proficient students will be able to pursue more advanced coursework in the ECEC program of study. Prerequisite(s): ECEC I.

Early Childhood Education Careers (ECEC) III: An applied-knowledge course for students interested in becoming an early childhood teacher, nanny, or childcare provider. This course covers the components of the learning environment, planning age appropriate activities, using activities for learning, and developing communication skills. If available, students may participate in a work-based learning component of instruction and add work products to a course portfolio. Upon completion of this course, proficient students will be prepared to participate in the capstone *ECEC IV* course and/or continue their studies at the postsecondary level. Prerequisite(s): ECEC II.

NIC Early Childhood Education Careers (ECEC) IV: ECEC IV is a capstone course for students who intend to pursue advanced training as an early childhood teacher, nanny, or childcare provider. The course standards cover understanding of the components of professionalism, policies, regulations, and teaching and learning. Students will participate in a work-based learning component of instruction and add work products to a course portfolio. Upon completion of this course, proficient students will be prepared to continue their studies at the postsecondary level. Prerequisite(s): ECEC III.

Finance Career Cluster

Banking & Finance Pathway at HVA

Accounting

Introduction to Business: The course helps students prepare for the growing complexities of the business world by examining basic principles of business, marketing, and finance in addition to exploring key aspects of leadership, ethical and social responsibilities, and careers. Students' academic skills in communications, mathematics, and economics are reinforced with activities modeled in the context of business topics.

Banking & Finance: Designed to challenge students with real-world banking and financial situations through a partnership with a local financial institution. This business partnership should provide resources for faculty and students that include but are not limited to mentors, seminars, and hands-on experience with day-to-day banking operations. Upon completion of this course, proficient students will have a strong foundation for

continued education in finance and business administration, specializing in occupations that support banking and financial institutions.

Entrepreneurship, Practicum, Dual Enrollment or Work Based Learning is the fourth level course to complete this pathway.

Accounting I: An essential course for students who wish to pursue careers in business and finance, or for those who wish to develop important skill sets related to financial literacy. Whether students aspire to be future business owners or work in finance with other companies, accounting skills are fundamental to success and applicable in many different fields. In this course, proficient Accounting students develop skills to analyze business transactions, journalize, post, and prepare worksheets and financial statements, and apply financial analysis to business processes. Additionally, students receive exposure to the ethical considerations that accounting professionals must face and the standards of practice governing their work, such as the GAAP (generally accepted accounting procedures) standards. Upon completion of this course, proficient students will be prepared to apply their accounting skills in more advanced Business and Finance courses, and ultimately pursue postsecondary training. Grade Level 10 – 11 - Prerequisite: Introduction to Business and Marketing

Health Science Career Cluster:

Cardiovascular Services
Nursing Services Pathway at HVA
Pharmacology at HVA
Sport & Human Performance Pathway at HVA

Intro to Health Science Education: *This is the Level 1 Course for all programs of study within the Health Science Career Cluster.*
Health Science Education is an introductory course designed to prepare students to pursue careers in the fields of biotechnology research, therapeutics, health informatics, diagnostics, and support services. Upon completion of this course, a proficient student will be able to identify careers in these fields, compare and contrast the features of healthcare systems, explain the legal and ethical ramifications of the healthcare setting, and begin to perform foundational healthcare skills. This course will serve as a strong foundation for all of the Health Science programs of study.

Cardiovascular Services:
Intro to Health Science Education

Diagnostic Medicine: A second or third level course designed to prepare students to pursue careers in the fields of diagnostic medical imaging, medical laboratory testing, optometry, and other patient diagnostic procedures. Upon completion of this course, proficient students will be able to describe new and evolving diagnostic technologies, compare and contrast the features of healthcare systems, explain the legal and ethical ramifications of the healthcare setting, and begin to perform foundational healthcare skills. In addition, students will continue to add artifacts to a portfolio, which they will continue to build throughout the program of study.

Anatomy & Physiology: Anatomy & Physiology is an upper level course designed to develop an understanding of the structures and functions of the human body, while relating those to knowledge and skills associated with pathophysiology. Upon completion of this course, proficient students will be able to (1) apply

the gross anatomy from earlier courses to a deeper understanding of all body systems, (2) identify the organs and structures of the support and movement systems, (3) relate the structure and function of the communication, control, and integration system, and (4) demonstrate a professional, working understanding of the transportation, respiratory, excretory, and reproductive systems. Prerequisite(s): Biology I and Health Science Education.

Cardiovascular Services: Cardiovascular Services is an applied course in the Diagnostic Services program of study intended to prepare students with an understanding of the roles and responsibilities of those seeking employment in the cardiovascular field of healthcare. Upon completion of this course, proficient students will have a thorough understanding of the anatomy and physiology of the heart and be knowledgeable about both invasive and non-invasive cardiovascular procedures. Students will incorporate communication, goal setting, and information collection skills to be successful in the workplace. Students who complete a Clinical Internship in addition to this course will be eligible upon graduation to sit for the Certified EKG Technician (CET) Exam.

Clinical Internship: A capstone course and work-based learning experience designed to provide students with real-world application of skills and knowledge obtained in a Prerequisite Health Science course. Prior to beginning work at a clinical site, students must be certified in Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR), and deemed competent in basic first aid, body mechanics, Standard Precaution guidelines, and confidentiality. Note: Students must be at least 16 years old to be enrolled in this course and able to provide their own transportation to and from clinical sites. Student to teacher ratio for this course is 15:1 in a clinical setting. Prerequisite: Cardiovascular Services.

Nursing Services Pathway:
Intro to Health Science Education

Medical Therapeutics: An applied course designed to prepare students to pursue careers in therapeutic services. Upon completion of this course, a proficient student will be able to identify careers in therapeutics services; assess, monitor, evaluate, and report patient/client health status; and identify the purpose and components of treatments. Prerequisite(s): Health Science Education.

Anatomy & Physiology: Anatomy & Physiology is an upper level course designed to develop an understanding of the structures and functions of the human body, while relating those to knowledge and skills associated with pathophysiology. Upon completion of this course, proficient students will be able to (1) apply the gross anatomy from earlier courses to a deeper understanding of all body systems, (2) identify the organs and structures of the support and movement systems, (3) relate the structure and function of the communication, control, and integration system, and (4) demonstrate a professional, working understanding of the transportation, respiratory, excretory, and reproductive systems. Prerequisite(s): Biology I and Health Science Education.

Nursing Education and Clinical Internship (2 blocks): Nursing Education is a capstone course designed to prepare students to pursue careers in the field of nursing. Upon completion of this course, a proficient student will be able to implement communication and interpersonal skills, maintain residents' rights and independence, provide care safely, prevent emergency situations, prevent infection through infection control, and perform the skills required of a nursing assistant. At the conclusion of this course students may sit for the Certified Patient Care Technician (CPCT) exam, or if students have logged 40 hours of classroom instruction and 20 hours of classroom clinical instruction, and if they have completed 40 hours of site-based clinical with at least 24 of

those hours spent in a long-term care facility through a Department of Health approved program, they are eligible to take the certification examination as a Certified Nursing Assistant (CNA).

Clinical Internship: A capstone course and work-based learning experience designed to provide students with real-world application of skills and knowledge obtained in a Prerequisite Health Science course. Prior to beginning work at a clinical site, students must be certified in Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR), and deemed competent in basic first aid, body mechanics, Standard Precaution guidelines, and confidentiality. Note: Students must be at least 16 years old to be enrolled in this course and able to provide their own transportation to and from clinical sites. Student to teacher ratio for this course is 15:1 in a clinical setting. Prerequisite: Medical Therapeutics.

Pharmacology Pathway
Intro to Health Science Education

Anatomy & Physiology: Anatomy & Physiology is an upper level course designed to develop an understanding of the structures and functions of the human body, while relating those to knowledge and skills associated with pathophysiology. Upon completion of this course, proficient students will be able to (1) apply the gross anatomy from earlier courses to a deeper understanding of all body systems, (2) identify the organs and structures of the support and movement systems, (3) relate the structure and function of the communication, control, and integration system, and (4) demonstrate a professional, working understanding of the transportation, respiratory, excretory, and reproductive systems. Prerequisite(s): Biology I and Health Science Education.

Pharmacological Science: Pharmacological Sciences is a second or third-level applied course in the Therapeutic Services program of study intended to prepare students with an understanding of the roles and responsibilities of the healthcare worker in a pharmacy setting. This course equips students with the communication, goal setting, and information-processing skills to be successful in the workplace, in addition to covering key topics in pharmacology, pharmacy law and regulations, sterile and non-sterile compounding, medication safety, quality assurance, and more. Upon completion of this course, proficient students who have also completed a Clinical Internship can apply to sit for the Pharmacy Technician Certification Board examination immediately after high school graduation.

Clinical Internship: A capstone course and work-based learning experience designed to provide students with real-world application of skills and knowledge obtained in a Prerequisite Health Science course. Prior to beginning work at a clinical site, students must be certified in Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR), and deemed competent in basic first aid, body mechanics, Standard Precaution guidelines, and confidentiality. Note: Students must be at least 16 years old to be enrolled in this course and able to provide their own transportation to and from clinical sites. Student to teacher ratio for this course is 15:1 in a clinical setting. Prerequisite: Pharmacological Science.

Dual Enrollment Therapeutic Services

Sports & Human Performance Pathway
Intro to Health Science Education

Rehab Careers: An applied course designed to prepare students to pursue careers in rehabilitation services. Upon completion of this course, a proficient student will be able to identify careers in rehabilitation services,

recognize diseases, disorders or injuries related to rehabilitation services and correlate the related anatomy and physiology then develop a plan of treatment with appropriate modalities.

Anatomy & Physiology: Anatomy & Physiology is an upper level course designed to develop an understanding of the structures and functions of the human body, while relating those to knowledge and skills associated with pathophysiology. Upon completion of this course, proficient students will be able to (1) apply the gross anatomy from earlier courses to a deeper understanding of all body systems, (2) identify the organs and structures of the support and movement systems, (3) relate the structure and function of the communication, control, and integration system, and (4) demonstrate a professional, working understanding of the transportation, respiratory, excretory, and reproductive systems. Prerequisite(s): Biology I and Health Science Education.

Exercise Physiology: An applied course designed to prepare students to pursue careers in kinesiology and exercise physiology services. Upon completion of this course, proficient students will be able to apply concepts of anatomy and physiology, physics, chemistry, bioenergetics, and kinesiology to specific exercise science contexts. Through these connections students will understand the importance that exercise, nutrition, and rehabilitation play in athletes or patients with debilitating or acute metabolic, orthopedic, neurological, psychological, and cardiovascular disorders. In addition, students have the opportunity to incorporate communication, goal setting, and information collection skills in their coursework in preparation for future success in the workplace.

Clinical Internship: A capstone course and work-based learning experience designed to provide students with real-world application of skills and knowledge obtained in a Prerequisite Health Science course. Prior to beginning work at a clinical site, students must be certified in Basic Life Support (BLS) Cardiopulmonary Resuscitation (CPR), and deemed competent in basic first aid, body mechanics, Standard Precaution guidelines, and confidentiality. Note: Students must be at least 16 years old to be enrolled in this course and able to provide their own transportation to and from clinical sites. Student to teacher ratio for this course is 15:1 in a clinical setting. Prerequisite(s): Exercise Physiology.

Hospitality & Tourism Career Cluster

Hospitality & Tourism Management Pathway at HVA

Hospitality & Tourism Management I: A foundational course for students interested in careers within the hospitality industry. The course allows students to explore the career opportunities and fundamental principles that guide the organization and management of hospitality and tourism services. Upon completion of this course, students will be proficient in the foundations of hospitality and tourism, the segments of the industry, business concepts and operations, careers, and customer relations.

Hospitality & Tourism Management II: Builds on the foundation course; an intermediate course for students interested in learning more about careers in the hospitality and tourism industry. Covers multiple topics preparing students for the hospitality and tourism industry with the skills and knowledge in management, human resources, recruitment, career development, marketing finances, economics, and customer services. Upon completion of this course, proficient students will be able to pursue more advanced coursework in the program of study.

Hospitality & Tourism Management III: An advanced course intended to further build on the knowledge and skills from previous courses and prepare students for a variety of careers in the hospitality and tourism industry. This course covers multiple topics in employability and professionalism, international and global hospitality and tourism, marketing and selling and financial applications. Upon completion, proficient students will be able to pursue more advanced coursework in the program of study.

Event Planning & Management: A project based, capstone experience in which students research, prepare, deliver and reflect upon an original event for a community organization, business, or non profit. Upon completion of this course, proficient students will further refine leadership, teamwork, and management skills acquired in previous courses and apply them through application in a practicum setting.

Human Services Career Cluster

Cosmetology Pathway at Byington
Human Services and Social Sciences (11 and 12 grades @ HVA)

Cosmetology (at Byington)

Cosmetology I: Cosmetology I is the first level of cosmetology. It prepares students with work-related skills for advancement into the Design Principles of Cosmetology course. Content provides students the opportunity to acquire basic fundamental skills in both theory and practical applications of leadership and interpersonal skill development. Content stresses safety, environmental issues, and protection of the public and designers as integrated with principles of hair design, nail structure, and cosmetic procedures. Laboratory facilities and experiences simulate those found in the cosmetology industry.

Cosmetology II: Cosmetology II is the second level of cosmetology which prepares students for work-related skills and advancement into the Chemistry of Cosmetology course. Content provides students the opportunity to acquire knowledge and skills in both theory and practical application. Advanced knowledge and skills in hair design, nail artistry, and cosmetic applications will be enhanced in a laboratory setting, which duplicates cosmetology industry standards. Upon completion and acquisition of 300 hours, students are eligible to take the Tennessee Board of Cosmetology Shampoo examination for a Tennessee Shampoo Technician License. Prerequisite(s): Cosmetology I.

Cosmetology III: Cosmetology III is the third course in the Cosmetology program of study intended to prepare students for careers in cosmetology by developing an understanding of efficient and safe work practices, salon business concepts and operations, advanced hair techniques and chemical services, and facial and skin care procedures. Students will gain experience in practical applications of cosmetology practices. Laboratory facilities and experiences simulate those found in the cosmetology industry. Upon completion and acquisition of 1500 hours, students are eligible to take the Tennessee Board of Cosmetology Examination to obtain a Tennessee Cosmetology License. Artifacts will be created for inclusion in a portfolio, which will continue throughout the full sequence of courses.

Human and Social Services Pathway:

Introduction to Human Studies: Human Services is a foundational course for students interested in becoming a public advocate, social worker, dietician, nutritionist, counselor, or community volunteer. Upon completion of this course, a proficient student will understand human needs, overview of social services, career investigation,

mental health, and communication. Artifacts will be created for inclusion in a portfolio, which will continue to build throughout the program of study.

Lifespan Development: Lifespan Development builds basic knowledge in human growth and development. Upon completion of the course, proficient students will have knowledge of developmental theory, principles of growth, behavior of children from conception through adolescence, adult development and aging, and death and dying. Artifacts will be created for inclusion in a portfolio, which will continue to build throughout the program of study.

Family Studies: Family Studies is an applied knowledge course that examines the diversity and evolving structure of the modern family. Upon completion of the course, proficient students will have knowledge of the demographic, historical, and social changes of interpersonal relationships, as well as parenting, and the effect of stressors on the family. Artifacts will be created for inclusion in a portfolio, which will continue to build throughout the program of study.

Information Technology Career Cluster at HVA

Coding Pathway
Cybersecurity Pathway

Computer Science Foundations: *Computer Science Foundations is the Level 1 Course for both career pathways within the Information Technology Career Cluster. (Other courses available in the Information Technology cluster follow this description.)* It is a course intended to provide students with exposure to various information technology occupations and pathways such as Networking Systems, Coding, Web Design, and Cybersecurity. As a result, students will complete all core standards, as well as standards in two of four focus areas. Upon completion of this course, proficient students will be able to describe various information technology (IT) occupations and professional organizations. Moreover, they will be able to demonstrate logical thought processes and discuss the social, legal, and ethical issues encountered in the IT profession. Depending on the focus area, proficient students will also demonstrate an understanding of electronics and basic digital theory; project management and teamwork; client relations; causes and prevention of Internet security breaches; and writing styles appropriate for web publication. Upon completion of the CSF course, students will be prepared to make an informed decision about which Information Technology program of study to pursue.

Coding Pathway

Computer Science Foundations

Coding I: Coding I is a course intended to teach students the basics of computer programming. The course places emphasis on practicing standard programming techniques and learning the logic tools and methods typically used by programmers to create simple computer applications. Upon completion of this course, proficient students will be able to solve problems by planning multi step procedures; write, analyze, review, and revise programs, converting detailed information from workflow charts and diagrams into coded instructions in a computer language; and will be able to troubleshoot/debug programs and software applications to correct malfunctions and ensure their proper execution. Prerequisite: Computer Science Foundations

Coding II: Coding II challenges students to develop advanced skills in problem analysis, construction of algorithms, and computer implementation of algorithms as they work on programming projects of increased

complexity. In doing so, they develop key skills of discernment and judgment as they must choose from among many languages, development environments, and strategies for the program life cycle. Course content is reinforced through numerous short- and long-term programming projects, accomplished both individually and in small groups. These projects are meant to hone the discipline and logical thinking skills necessary to craft error-free syntax for the writing and testing of programs. Upon completion of this course, proficient students will demonstrate an understanding of object-oriented programming language using high-level languages such as FOCUS, Python, or SAS. Prerequisite(s): Coding I.

Coding Practicum: Coding Practicum is a capstone course intended to provide students with the opportunity to apply the skills and knowledge learned in previous *Coding* courses toward the completion of an in-depth project with fellow team members. Students who have progressed to this level in the program of study take on more responsibilities for producing independent work and managing processes involved in the planning, designing, refinement, and production of original software applications. The course is designed to allow students to choose their specific application of interest, be it the development of a mobile application (app), an animation package, a game or other educational tool, or any other approved program that requires coding and development skills. Upon completion of the practicum, proficient students will be prepared for postsecondary study and career advancement in programming and software development, and will be equipped to market their finished product should they choose. Prerequisite(s): Coding II.

Cybersecurity Pathway at HVA:
Computer Science Foundations

Cybersecurity I: Cybersecurity I is a course intended to teach students the basic concepts of cybersecurity. The course places an emphasis on security integration, application of cybersecurity practices and devices, ethics, and best practices management. The fundamental skills in this course cover both in house and external threats to network security and design, how to enforce network level security policies, and how to safeguard an organization's information. Upon completion of this course, proficient students will demonstrate an understanding of cybersecurity concepts, identify fundamental principles of networking systems, understand network infrastructure and network security, and be able to demonstrate how to implement various aspects of security within a networking system. Prerequisite(s): Computer Science Foundations.

Cybersecurity II: Cybersecurity II challenges students to develop advanced skills in concepts and terminology of cybersecurity. This course builds on previous concepts introduced in Cybersecurity I while expanding the content to include malware threats, cryptography, wireless technologies and organizational security. Upon completion of this course, proficient students will demonstrate an understanding of cybersecurity ethical decisions, malware threats, how to detect vulnerabilities, principles of cryptology, security techniques, contingency plan techniques, security analysis, risk management techniques, and advanced methods of cybersecurity. Prerequisite(s): Cybersecurity I.

Advanced Placement (AP) Computer Science Principles: This course helps you understand how computing and technology influence the world around you. As part of this course, you'll create digital projects, such as videos and mobile apps, to address real-world issues in the same way that writers, programmers, engineers, and designers would. Students will conceive and implement digital projects, utilizing some of the same processes that writers, programmers, engineers, designers, and other creators use to bring their ideas to life. Prerequisite: Departmental Recommendation.

Advanced Placement (AP) Computer Science A: AP Computer Science emphasizes object-oriented programming methodology with an emphasis on problem solving and algorithm development and is meant to be the equivalent of a first-semester course in computer science. It also includes the study of data structures and abstraction. The scope and sequence of this course follows the topics listed in the College Board Advanced Placement course description. Students who study this course will be prepared to take the Advanced Placement Computer Science "A" AP Exam and seek college credit. This course satisfies the State's four-year math requirement for those students who have met the ACT and/or SAT college readiness benchmarks in mathematics. Prerequisite: Departmental Recommendation.

Dual Enrollment Cybersecurity

Law, Public Safety, Corrections & Security Career Cluster

Criminal Justice Pathway at HVA
Fire Management Service at Byington
Pre-Law Pathway at HVA

Criminal Justice and Correctional Services Pathway (at HVA)

Criminal Justice I: Criminal Justice I is the first course of study and serves as a comprehensive survey of how the law enforcement, legal, and correctional systems interact with each other in the United States. Upon completion of this course, proficient students will understand the context of local, state, and federal laws, have investigative skills pertaining to basic crime scenes and incident documentation, and understand the importance of communications and professionalism in law enforcement.

Criminal Justice II: Criminal Justice II is the second course of study. Upon completion of this course, proficient students will understand the impact of the constitution on law enforcement, law enforcement and police procedures, alcohol and beverage laws, sentencing, and the importance of communications and professionalism in law enforcement. Prerequisite(s): Criminal Justice I .

DCC Criminal Justice III: Statewide dual credit Criminal Justice III is a college-level course taught at the high-school level by trained high-school teachers. All students enrolled in a statewide dual credit course take the online challenge exam, which is used to assess mastery of the postsecondary-level learning objectives. Students who meet or exceed the exam 'cut score' receive college credit that can be applied to any Tennessee public postsecondary institution. The college course code is CRMJ 1010.

Criminal Justice Practicum: A capstone course that provides students a practicum experience for students as they develop an understanding of professional and ethical issues in law enforcement and correction services.

Fire Management Services Pathway at Byington:

Principles of Fire and Emergency Services: Principles of Fire and Emergency Services is the introductory course in the Fire Management Services program of study. Students will be introduced to the challenging work of emergency responders in fire management services by learning regulations, health and safety protocol, communications, and operations. Upon completion of this course, if the teacher is a member of the local

volunteer fire department, proficient students who are at least 16 years of age will have met the state requirements (T.C.A. 4-24-112) for minimum training of firefighters. Standards in this course are aligned with the National Fire Academy Fire and Emergency Services (FESHE) model.

Fire Prevention: In this course, students will be prepared with technical knowledge and skills related to firefighter safety, fire behavior, building construction guidelines, and the use of firefighting equipment. Upon completion of this course, proficient students will be able to correctly demonstrate skills associated with ropes, ladders, and fire hoses in a non-live fire situation. Standards in this course are aligned with the NFPA Standards. Prerequisite(s): Principles of Fire and Emergency Services.

Fire Science I: Students in this course continue to acquire the skills and knowledge needed to pursue a career as a Firefighter I. Those students who complete this course will be prepared, after graduation, to further their instruction at a training facility. Upon completion of this course, proficient students will be able to correctly demonstrate skills associated with ventilation, water supply, fire hose and fire streams in a non-live fire situation, and safety with hazardous materials. Standards in this course are aligned with NFPA standards. Prerequisite(s): Fire Prevention.

Fire Science II: The fourth and final course in the Fire Management Services program of study. Students in this course continue to acquire the skills and knowledge needed to pursue a career as a Firefighter I. Those students who complete this course will be prepared, after graduation, to further their instruction at a training facility. Upon completion of this course, proficient students will be able to correctly demonstrate skills associated with ventilation, water supply, fire hose and fire streams in a non-live fire situation, and safety with hazardous materials. Standards in this course are aligned with NFPA standards. Credit: 1 - Grade Level 12 - Prerequisite(s) Fire Science I

Pre-Law Pathway at HVA:

Pre-Law I: Pre-Law I is the first course designed to prepare students to pursue careers in the field of law. Upon completion of this course, a proficient student will be able to describe career planning and compliance, foundations of the legal system, organization of the law and public safety system, basic constitutional protections, and types of law. In addition, students will model the professional, moral, and ethical standards required of professionals in the field of law.

Pre-Law II: Pre-Law II is the second course designed to prepare students to pursue careers in the field of law. Upon completion of this course, a proficient student will be able to describe the organization of local, national and state court systems and the legal process, explain the concepts of trials, and differentiate business, labor, and consumer law. In addition, students will model the professional, moral, and ethical standards required of professionals in the field of law

Pre-Law III: The third course designed to prepare students to pursue careers in the field of law. Upon completion of this course, a proficient student will be able to describe sentencing and decisions, appeals, punishment, parole, probation, detention, and family and property law. In addition, students will model the professional, moral, and ethical standards required of professionals in the field of law.
Dual Enrollment Pre-LAw

Marketing, Distribution & Logistics Career Cluster at HVA:

Marketing Pathway

Supply Chain Management Pathway

Introduction to Business & Marketing: *Introduction to Business and Marketing is the Level 1 Course in both pathways offered at HVA*. It is an introductory course designed to give students an overview of the Business Management and Administration, Marketing, and Finance career clusters. The course helps students prepare for the growing complexities of the business world by examining basic principles of business, marketing, and finance in addition to exploring key aspects of leadership, ethical and social responsibilities, and careers. Students' academic skills in communications, mathematics, and economics are reinforced with activities modeled in the context of business topics. Upon completion of this course, proficient students will be equipped with the foundational skills to succeed in any of the Business, Marketing, or Finance programs of study and will be prepared to make an informed decision regarding which pathways they would like to pursue in high school.

Marketing Management Pathway:
Introduction to Business & Marketing

Marketing I: The course focuses on the study of marketing concepts and their practical applications. Students will examine the risks and challenges that marketers face to establish a competitive edge in the sale of products and services. Topics covered include foundational marketing functions such as promotion, distribution, and selling, as well as coverage of economics fundamentals, international marketing, and career development. Upon completion of this course, proficient students will understand the economic principles, the marketing mix, and product development and selling strategies.

Social Media Marketing: Social Media Marketing & Analytics is a study of concepts and principles used in social media marketing. Students will examine the uses, marketing strategies and data generated by social media marketing. Subject matter includes foundational social media knowledge, social media marketing strategies, communication and ethical responsibilities. Prerequisite(s): Marketing I

Event Planning: Designed to be a project-based, capstone experience in which students' research, prepare, deliver, and reflect upon an original event for a community organization, business, or non-profit. Upon completion of this course, proficient students will further refine leadership, teamwork, and management skills acquired in previous courses and apply them through application in a practicum/work based learning setting.

Supply Chain Management Pathway:
Introduction to Business & Marketing

Supply Chain Management I: Exposes students to careers and businesses involved in the planning, management, and movement of people, materials, and products by road, air, rail, pipeline, and water. As an introduction to this important and globally evolving field, this course covers the basic principles of logistics, reviews the history and development of distribution networks, and examines how they function within the dynamics of the supply chain. Upon completion of this course, proficient students will explore career options; demonstrate an understanding of the historical, current, and future significance of supply chain industries; and plan for the effective and efficient flow of goods and services. This course will require extensive Microsoft Office applications including but not limited to PowerPoint creation; use of templates; spreadsheet manipulations; and designing of charts, graphs, formulas, and tables.

Supply Chain Management II: Prepares students for entry into the warehouse and distribution career field. Course content emphasizes a deep understanding of the dynamics of distribution and logistics operations, the

warehousing skills needed for the tracking and managing of inventory, and the problem-solving skills used by logisticians in today's complex business environments. Upon completion of this course, a proficient student will have a thorough understanding of safety, tools, equipment, operations, processes, customer fulfillment, product lifecycle, future trends, and regulatory issues in the industry. Extensive use of Microsoft Office is required throughout this course.

Entrepreneurship (Retail): Entrepreneurship is an applied knowledge course that begins with the discovery process of generating new business ideas. Students research local, national, and international social and economic trends and analyze the feasibility of their own proposed businesses, both from a market demand and revenue producing standpoint. Based on their entrepreneurial endeavors, students will prepare, write, and revise a business plan. In preparation for the business plan, students will conduct market research, study ownership structures, evaluate risks, examine startup costs, determine essential vendors, and identify sources of capital and financing options. Students will also draft, refine, and rehearse entrepreneurship pitches developed from their business plans to present during course intervals and to give final presentations at the conclusion of the course. At the conclusion of the course, proficient students will be able to articulate, and defend, elements of a full business plan for a new business. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects, Tennessee State Standards for Mathematics, and Tennessee Economics standards

Dual Enrollment/WBL/Entrepreneurship is the fourth course level of this pathway

STEM Career Cluster

Engineering Pathway at HVA

NIC Principles of Engineering and Technology: A foundational course in the STEM cluster for students interested in learning more about careers in engineering and technology. This course covers basic skills required for engineering and technology fields of study. Upon completion of this course, proficient students are able to identify and explain the steps in the engineering design process. They can evaluate an existing engineering design, use fundamental sketching and engineering drawing techniques, complete simple design projects using the engineering design process, and effectively communicate design solutions to others.

Engineering Design I: Engineering Design I is a fundamental course in the STEM cluster for students interested in developing their skills in preparation for careers in engineering and technology. The course covers essential knowledge, skills, and concepts required for postsecondary engineering and technology fields of study. Upon completion of this course, proficient students are able to describe various engineering disciplines, as well as admissions requirements for postsecondary engineering and engineering technology programs in Tennessee. They will also be able to identify simple and complex machines; calculate various ratios related to mechanisms; explain fundamental concepts related to energy; understand Ohm's Law; follow the steps in the engineering design process to complete a team project; and effectively communicate design solutions to others. Note: Students are expected to use engineering notebooks to document procedures, design ideas, and other notes for all projects throughout the course. Prerequisite(s): Principles of Engineering & Technology, Algebra I, and Physical Science or Biology.

NIC Engineering Design II: Engineering Design II is an applied course in the STEM career cluster for students interested in further developing their skills as future engineers. This course covers knowledge, skills, and concepts required for postsecondary engineering and technology fields of study. Upon completion of this course, proficient students are able to explain the differences between scientists and engineers, understand the

importance of ethical practices in engineering and technology, identify components of control systems, describe differences between laws related to fluid power systems, explain why material and mechanical properties are important to design, create simple free body diagrams, use measurement devices employed in engineering, conduct basic engineering economic analysis, follow the steps in the engineering design process to complete a team project, and effectively communicate design solutions to others. Prerequisite(s): Engineering Design I and Biology or Chemistry.

STEM Engineering Practicum: Work Based Learning

Core Academic & Elective Courses:

Driver Education:

Driver Education: Driver Education is a class available to students who are at least fifteen years of age prior to beginning the course in grades 10-12. The instructional phases consist of classroom, driving range, and on-street driving instruction. The course will be taught as a one-unit course with sufficient instructional contact time with driver education teacher and the inclusion of safety education. Learner's permits are not required but are highly recommended so as to allow parents to work with the student to coincide with the drive time that they will receive in class to prepare for the driving test. Suggested class size: 22 students first semester; 22 students second semester. All students must meet state requirements for attendance and academic progress. (Prerequisite: 15 years of age.)

Fine Arts:

MUSIC:

Development of Rock & Roll: Development of Rock & Roll is designed as a survey of rock and roll music, from its very roots to the music today. Students will develop knowledge and understanding of the musical elements of rock and roll and the major artists within each period. Students will identify the different styles that make up each period and study the social and cultural connections in the creation of rock and roll. Class participation, attendance, maintaining a journal, and completion of all assignments is required. *Maximum credit: one unit*.

Sound Design/Music Production: Offers a practical, fully multimedia based curriculum designed to teach basic musical concepts through the creative process of composition, recording, and editing. Students will have hands-on experience with digital audio workstation software, and learn how to create, edit, save, and produce digital music. This course is designed to create an in-depth general music experience without having to know traditional music theory. Students will have a meaningful hands-on applied learning experience that impacts not only their musical knowledge, but also their understanding of modern digital audio technology.

Band: Band provides students with the opportunity of continuing the study and performance of music emphasizing traditional band literature and selected orchestral transcriptions. The course focuses on the study of the elements of music and the development of individual and group performance skills. Individual practice, after-school practice and rehearsal sessions, and performances are required. Performance opportunities include

marching band, concert band, invitational and audition clinics, festivals, and contests. (Prerequisites: Previous experience and teacher recommendation) *Can be taken for multiple credits.*

Marching Band: Concert, Symphonic or Wind Ensemble: The Concert Band, Symphonic Band, and Wind Ensemble are musical groups concentrating their skills on musical performance for advanced woodwind, brass, and percussion performance. These bands play a variety of styles and types of music selected from the standard high school band repertoire. The goal of these courses is to develop proficiency on a chosen instrument through rehearsals, lessons and various performances. These bands will have several performance opportunities throughout the semester. Through these classes the students will improve instrumental skills, elevate performance skills as well as develop an understanding of the performance process. All National Music Standards are addressed and the highest expectations of musicianship and behavior are expected. Rehearsals and performances during the school day, before and after the regular school day, as well as on non-school days, may be required. (Prerequisite: Previous study of a band instrument and teacher recommendation) *Can be taken for multiple credits.*

Instrument Ensemble: Instrument Ensemble provides students with the opportunity to continue the study and performance of music literature relative to a specific ensemble, such as Jazz, Percussion, Brass, or Woodwind. The course focuses on advanced individual and group performance skills relative to the selected medium. Individual practice, after-school practice and rehearsal sessions, and performances are required. (Prerequisite: Teacher recommendation) (HVA offers Brass, Percussion and Wind ensemble) *Can be taken for multiple credits.*

Guard: (Mandatory 2 block): Provides students with the opportunity of continuing the study and performance of music. The course focuses on the study of the elements of music and the development of individual and group performance skills. Individual practice, after-school practice and rehearsal sessions, and performances are required. Performance opportunities include invitational and audition clinics, festivals, and contests. Can be taken for multiple credits. Prerequisites: Previous experience and teacher approval; instructor's signature.

Freshman Orchestra: Beginning Orchestra is designed to give students the opportunity to learn to play one of the following string instruments: Violin, Viola, Cello or Bass. Students will be exposed to the four (4) string instruments listed above and through teacher guidance will be allowed to learn the instrument of their choice or the instrument for which the student is best suited. Students will learn the basic elements of music as well as the proper way to play their musical instrument. (Prerequisite: Teacher recommendation)

Orchestra: Orchestra provides students with the opportunity to continue the study and performance of music emphasizing styles from several historical periods. The course focuses on the study of the elements of music and the development of performance skills for individuals and ensembles. Individual practice, after-school practice and rehearsal sessions, and performances are required. Performance opportunities include string orchestra, full orchestra, invitational and audition clinics, festivals, and contests. (Prerequisites: Previous experience and teacher recommendation) (HVA offers Festival orchestra, and Orchestra Ensemble) *Can be taken for multiple credits.*

Guitar (General Music):

Female Chorus: Female Chorus is for female choral students to study and perform a wide variety of sacred and secular choral literature of easy to medium difficulty from all historical and performance styles. Emphasis is placed on the development of individual and ensemble skills in vocal production, tone quality, diction,

intonation, balance and blend, sight-reading and music reading, and ensemble esprit de corps. Previous choral experience is not a prerequisite but would be beneficial. Performances and after-school rehearsals are required. *Can be taken for multiple credits*.

Male Chorus: Male Chorus is for male choral students to study and perform a wide variety of sacred and secular choral literature of easy to medium difficulty from all historical and performance styles. Emphasis is on vocal production and basic choral techniques, intonation, phrasing, sight-reading and ear training, general musicianship skills, understanding and attitude and the responsibility of individuals to the group. There are no prerequisites, although some minimum requirements may be recommended by the teacher. Performances and after-school rehearsals are required. *Can be taken for multiple credits.*

Advanced Mixed Chorus/Vocal Music II: Advanced Mixed Chorus is for students who wish to study and perform a wide variety of medium to difficult sacred and secular choral literature in a variety of styles and historical periods. Emphasis will be placed on an advanced degree of musicianship and increased performance skills individually and in ensemble. The mixed chorus is for students who elect and are selected **by audition** to be in the group. Previous choral music experience is usually beneficial but not a prerequisite. Performances and after- school rehearsals are required. *Can be taken for multiple credits. Prerequisite: teacher recommendation.*

Vocal Music III – Choral Ensemble: Choral Ensemble consists of students with previous choral experience selected by audition. The nature of the group may vary according to the discretion of the director and the needs of the school music program. Examples are: Chamber Choir, Madrigal Singers, Pop Ensemble, and Show Choir. Emphasis is placed on an advanced degree of musicianship, increased harmonic and rhythmic reading skills, and increased performance skills. Opportunities are provided for performance in school and community. Performances and after-school rehearsals are required. Choreography and/or costumes may be required by the teacher for some ensembles. This is an auditioned group. *Can be taken for multiple credits.*

Advanced Placement (AP) Music Theory: The goal of the AP Music Theory course is to develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. The achievement of these goals will be approached by initially addressing fundamental aural, analytical, and compositional skills using both listening and written exercises. Building on this foundation, the course will progress to include more creative tasks, such as the harmonization of a melody by selecting appropriate chords, composing a musical bass line to provide two-voice counterpoint, or the realization of figured-bass notation. Part-writing, sight-reading, and sight-singing are essential components of this process. The Advanced Placement Exam is the culmination of this course. (Prerequisite: Teacher recommendation)

Musical Theatre: Musical Theatre offers students the opportunity to study and perform in this genre. This is a production-based course designed to provide students with opportunities to participate in the varied aspects of a musical theatre production. The course combines practical vocal training including diction and tone quality as well as the development of students as actors by instilling work ethic, time management and the importance of teamwork. Students will study the evolution of musical theatre and develop an appreciation for this uniquely American art form. (Elective credit) *Can be taken for multiple credits.*

Honors Courses for Band, Orchestra and Chorus:

Honors courses are offered in both instrumental and vocal music. Students that enroll in an honors course will be required to complete all of the requirements for their chosen area of study (band, orchestra or chorus) as well as the honors course requirements listed in the Knox County Schools Honors Course Credit Contract for

instrumental and vocal music. Honors courses require a yearlong commitment. Students must be enrolled in the course for both the fall and spring semesters and must complete all of the requirements above before honors credit will be given for the course. (Prerequisites: Previous band, orchestra or chorus experience and teacher recommendation).

THEATER:

Theatre Arts I: Theatre Arts I is a one-unit course for students who have an interest in drama and wish to learn the history of theatre and improve their abilities in communicating and appearing before a group. The curriculum includes exercises in pantomime, improvisation, basic stage direction, play reading, theatre history, stagecraft, basic acting skills, and oral interpretation. (Elective credit)

Advanced Theatre Arts: Advanced Theatre Arts is for students who have completed Theatre Arts I and who wish to expand their interpretative skills and knowledge of theatre. The curriculum includes further study of oral and dramatic interpretation of prose and poetry. An interview with the teacher and/or auditions for admission may be required. (Elective credit) (Prerequisite: Theatre Arts I) *Can be taken for multiple credits.*

VISUAL ARTS:

Visual Art I (General): Art I is a one-unit survey course designed for students in grades 9-12 who are enrolling in a high school art course for the first time. Provides a variety of experiences that build on the concepts, techniques, and use of media introduced in the middle school program. Generally laboratory in nature, Art I explores and gives experience in two-dimensional (drawing, painting, printmaking) and three-dimensional (sculpture, ceramics, textiles) formats and integrates art history, design principles, and aesthetic criticism and response. *This course is a prerequisite for all other advanced art coursework.*

Advanced Art: Advanced Art is for students who have successfully completed Art I and, who, in the judgment of the instructor, show a sufficient level of interest and/or ability that would warrant continued study in Visual Art. Based on approved curriculum guides, the program of study may be divided into the following topics or areas of concentration: Sculpture, Painting, Ceramics, Drawing, Printmaking, Paper, or Photo. General Advanced Art will study a combination of two-dimensional and three-dimensional media. This assures that students who continue beyond the first year will grow in their artistic development. *Students may continue in Advanced Art on a space-available basis and may repeat Advanced Art up to seven times at the determination of the instructor.* (Prerequisite: Art I and teacher recommendation.)

AP Art Portfolios: General Description:
The AP Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. AP Studio Art is not based on a written examination; instead, students submit portfolios for evaluation at the end of the school year.

AP Studio Art: Drawing Portfolio: The Advanced Placement Drawing Portfolio is designed to include a very broad interpretation of drawing issues. Many types of painting, printmaking, studies for sculpture, and some forms of design, as well as abstract and observational works, could qualify as addressing drawing issues. The range of marks used to make drawings, the arrangement of those marks, and the materials used to make the marks are endless. Works of photography, videotapes and computer-generated works may not be submitted for the drawing portfolio.

AP Studio Art 3-D: Art & Design: AP Studio Art 3-D is a portfolio course intended to address a broad interpretation of sculptural issues in depth and space. These may include mass, volume, form, plane, light, and texture. Such elements and concepts may be articulated through additive, subtractive, and/ or fabrication processes. A variety of approaches to representation, abstraction, and expression may be part of the student's portfolio. These might include traditional sculpture, architectural models, apparel, ceramics, three-dimensional fiber arts or metal work, among others.

AP Studio Art 2-D: Art & Design: AP Studio Art 2-D is intended to address a very broad interpretation of two-dimensional (2D) design issues. This type of design involves purposeful decision-making about how to use the elements and principles of art in an integrative way. For this portfolio, students are asked to demonstrate proficiency in 2D design using a variety of art forms. These could include, but are not limited to, graphic design, typography, digital imaging, photography, collage, fabric design, weaving, illustration, painting, printmaking, etc. A variety of approaches to representation, abstraction, and expression may be part of the student's portfolio.

JROTC (Junior Reserve Officers Training Corps):

NOTE: No substitutions may be made.

General Description:
J.R.O.T.C. is a joint program provided by the Knox County School System in partnership with the United States Department of Defense. All JROTC services present a curriculum designed to help each student achieve the following goals: (1) Develop habits of orderliness, precision, and respect for authority in our society, (2) Instill patriotism, (3) Develop a high degree of personal honor, self-reliance, individual discipline, and leadership, (4) Instill pride, self-respect, confidence, and a desire to do one's best in any endeavor, and (5) Promote a basic understanding of national security requirements and the role of the armed service in the national defense structure. Each student must successfully complete an introductory phase before advancing to the next level of the program.

Air Force JROTC (offered at Karns High School for HVA Students): Air Force Junior Reserve Officer Training Corps (AFJROTC) is a program designed to develop citizens of character dedicated to serving their nation and community. Each AFJROTC class contains three components: aerospace science, leadership education, and a wellness program. Aerospace Science courses develop a sense of service, while focusing on science and technology. Leadership education courses emphasize citizenship and character education. Wellness is an official and integral part of the Air Force Junior ROTC program. It motivates cadets to pursue healthy, active lifestyles throughout their adult lives. Each semester of study contains an aerospace science, leadership and wellness component in a 40/40/20% ratio respectively.

The course titles JROTC I – IX refer to a cadet's current semester in the program with associated curriculum selected from the following AFJROTC course offerings.

Language Arts:

To satisfy graduation requirements, each student must complete four courses of Language Arts: English 1, English 2, English 3, and English 4. Each of these core courses addresses four curriculum content strands: Language, Reading, Writing, and Speaking and Listening.

All Honors courses should substantially exceed the content standards, learning expectations, and performance indicators approved by the State Board of Education. Additionally, an honors course shall include a minimum of five of the nine components from the Tennessee Department of Education Framework of Standards for Honors Courses.

English I: In English 1, students will build upon the skills developed in the middle school English Language Arts. The focus is on close reading of informational and literary texts of appropriate grade level complexity. Based upon their reading, the students will engage in class discussion and written assignments to present analysis to develop an argument, or to write real or imagined narrative. While reading and writing, students will analyze the author's point of view, evidence, assumptions, and style. Within their own writing, students will develop focus, organization, style, and grammatical fluency. Vocabulary study will focus on morphology, etymology, and context, and the words will come from the texts that the students read. Assessment will focus on the students' ability to read appropriately complex text and to cite evidence to support analysis or claims from that text. Language skills will be assessed in the context of their writing, as well as through authentic workplace tasks, such as editing a draft. *This course may be combined with World History/Geography.*

English I Honors: English I Honors consists of the English I standards. Students in an English 1 Honors course engage with text at the upper end of the reading band for the grade level. They also engage in deeper levels of analysis with more rigorous expectations for the thoroughness of the evidence considered in developing analyses and arguments.

English 2: In English 2, students build upon the skills developed in English 1. The focus is on the close reading of informational and literary texts of appropriate grade level complexity. Based upon their reading, the students engage in class discussion and written assignments to present analysis to develop an argument, or to write a real or imagined narrative. While reading and writing, students analyze the author's point of view, evidence, assumptions, and style. Within their own writing, students will develop focus, organization, style, and grammatical fluency. Vocabulary study focuses on morphology, etymology, and context, and the words come from the texts that students read. Assessment will focus on the students' ability to read appropriately complex text and to cite evidence to support analysis or claims from that text. Language skills are assessed in the context of their writing, as well as through authentic workplace tasks, such as editing a draft.

English 2 Honors: English 2 Honors consists of the English 2 standards. Previous experience in honors is not a prerequisite; however, students who make the transition from grade level to honors may experience a significant difference in the level of text and the expectations for fluency in writing. It is reading and writing intensive with an emphasis on an in-depth study of composition, research, and literary analysis. The focus is on the close reading of informational and literary texts selected for overlapping concepts and historical periods. Based upon their reading, the students will engage in class discussion and written assignments to present analysis, to develop an argument, or to write a real or imagined narrative. While reading and writing, students will analyze the author's point of view, evidence, assumptions, and style. Within their own writing, students will develop focus, organization, style, and grammatical fluency. Vocabulary study focuses on morphology, etymology, and context, and the words will come from the texts that the students read. Assessment centers on the students' ability to read appropriately complex text and to cite evidence to support analysis or claims from that text. Language skills will be assessed in the context of their writing, as well as through authentic workplace tasks, such as editing a draft.

English 2 Honors Combined: A yearlong course, English 2 Honors Combined is typically combined with an honors or Advanced Placement social studies class.

English 3: Students in English 3 work on college and career-ready reading and writing skills while also reading and analyzing foundational works in American literature. Through analyzing how multiple authors present similar subjects, students learn about varying perspectives, bias, and audience. They also become proficient at identifying and evaluating reasoning within documents of historical, literary, information, and legal natures. Throughout the course, they will conduct short and long-term research projects, following both their lines of inquiry and some teacher-directed lines of inquiry. While the foundational skills for composition should be established in the earlier grades, students in English 3 work to refine their writing style in fluency and sophistication.

English 4: Students in English 4 work on college and career-ready reading and writing skills while also reading and analyzing foundational works in world literature. Through analyzing how multiple authors present similar subjects, students learn about varying perspectives, bias, and audience. They also become proficient at identifying and evaluating reasoning within documents of historical, literary, information, and legal natures. Throughout the course, they will conduct short and long-term research projects, following both their lines of inquiry and some teacher-directed lines of inquiry. While the foundational skills for composition should be established in the earlier grades, students in English 4 work to refine their writing style in fluency and sophistication. They also develop their speaking and listening skills through speeches and presentations.

Advanced Placement (AP) Language and Composition: The curriculum emphasizes analysis, research, and composition as students become skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts. Students will be expected to think critically and analytically and be able to express themselves effectively. College level outside reading is required. The course is designed to help develop the cognitive and communicative skills necessary to do well on the AP English Language and Composition Test, the culmination of the course. This course may be combined with AP Research or AP US History.

Advanced Placement (AP) Seminar: AP Seminar involves intensive research and synthesis of self-selected topics. Students engage in research to analyze real-world problems and to cultivate the skills needed for successful college writing. Teams of students work to analyze and synthesize their findings and present their research to the class. The students explore scientific, economic, and political topics from a variety of viewpoints and broaden their understanding of global issues.

Advanced Placement (AP) Research: In AP Research, students further the skills they obtained in the AP Seminar course and develop a research methodology while employing ethical research practices. Students work on a year-long research project, document their processes, and curate artifacts as they develop a scholarly work portfolio. The final project is an academic paper of 4000–5000 words (accompanied by a performance or exhibition of product where applicable) and a presentation of their findings with an oral defense.

Advanced Placement (AP) Capstone: The AP Capstone designation is built on the foundation of two courses AP Seminar and AP Research.

Language Arts Elective Credits:

Introduction to Journalism/Journalism 1: In Journalism 1, students will have the opportunity to improve the skills necessary in journalistic writing for both print and broadcast media. Curriculum includes the history and elements of journalistic style and the application of journalistic techniques to the development of a publication. Students who wish to take this course must be highly motivated, work well with peers, and be responsible in

following through with assignments as the work culminates in a publication. Prerequisites: Students may have to demonstrate ability to write well; may be required to apply for this course; and may be required to receive teacher recommendation. Publications include the newspaper, the literary magazine, and/or the annual.

Advanced Journalism (Yearbook or Multimedia): In Journalism 2, students continue to explore and refine the skills necessary for journalistic writing and digital publishing. In addition to being actively engaged in communication skills, students explore the topics of ethics in journalism particularly paying close attention to plagiarism. Prerequisites: Successful completion of Journalism 1. Additionally, students may have to demonstrate ability to write well; may be required to apply for this course; and may be required to receive teacher recommendation. Publications include the newspaper, the literary magazine, and/or the yearbook. *Can be taken for multiple credits*.

Creative Writing: In Creative Writing, students will be given the opportunity to develop a creative outlet through additional writing experiences in fiction and nonfiction. Creative writing allows students to promote self-expression, to explore various writing styles, and to strive for variety in diction, sentence structure, and format.

Advanced Creative Writing: Students will continue to pursue the art of creative writing, concentrating especially on poetry, short stories, non-fiction, and screenwriting in Advanced Creative Writing. Works of great authors are examined and modeled, with a view to enhancing the students' own work. The class is conducted as a workshop with both teacher- and peer-conferencing, an important part of the process, the end result being a significant portfolio of student work.

Etymology/Mythology: Curriculum includes a study of etymology, vocabulary development, classical mythology, and allusions found in literature, music, and the arts.

Genre Literature: In Genre Literature, students will be given the opportunity to develop deeper thematic critical reading skills through additional reading experiences of two or more literary genres. Students will explore the thematic elements and various styles and plot elements of various literary genres, including Ancient Literature, Appalachian and Southern Literature, Modern Literature, Mystery and Suspense Literature, Mythology, Science Fiction and Shakespeare

Speech (Statewide Dual Credit): Students will explore a variety of speaking situations (informative, small group, persuasive, and special event speaking) and different types of communication (interpersonal, small group, and public communication) using a variety of digital media (text, audio, and visual) through formal and informal settings while taking Speech and Communication. The student will develop the skills to generate ideas, research topics, organize information, and create and evaluate oral presentations. Students enrolled in a statewide dual credit course take the online challenge exam, which is used to assess mastery of the postsecondary-level learning objectives. Students which meet or exceed the exam 'cut score' receive college credit that can be applied to any Tennessee public postsecondary institution.

English Language Learners (ELL): ELL is an English course designed for students who are classified as active ELLs. Based on the student's level of English proficiency as determined by a standardized, state-approved ESL Test, students are provided English instruction specifically designed for second language learners. This course is available in grades 9-12. ***Students may substitute ESL for up to two units of English***

credit. Additional credit earned in ELL may be used as elective credit at the same rate as other courses in the student's school. Only a Certified ESL teacher can teach this course.

Lifetime Wellness & Physical Education:

Note: One unit of Lifetime Wellness is required for graduation.

Note: Students must complete one-half (½) credit in Physical Education. This requirement may be met by substituting a documented and equivalent time of physical activity in marching band, JROTC, cheerleading, interscholastic athletics, school sponsored intramural athletics, and other areas approved by the local board of education.

The 1/2 credit Physical Education requirement may be satisfied by one of the following:
One Physical Education elective course (1 credit) 65 hours of documented physical activity outside of the school day in other school-related areas such as:

- Marching Band;
- JROTC;
- TSSAA approved sports;
- Swim Team
- Cheerleading
- Dance Team
- School-related club/activity approved by the Knox County Schools Supervisor of Physical Education, Health and Wellness.

The 65 hours must be completed during one school/academic year, which includes the summer prior to the beginning of a school year. Upon completion of the 65 hours of physical activity, credit in Activity PE with a grade of 'Pass' will be recorded on the student transcript. Documentation of hours is the responsibility of the teacher/coach supervising the activity.

Physical Education 1: Physical Education1 is a one-unit elective course. The goal of Physical Education 1 is to provide a variety of activities through four strands: Health Related Fitness; Individual Sports; Team Sports; and Basic Gymnastic Fundamentals. Each unit within the strand will be designed to teach the basic skills, rules and strategies necessary to understand and perform a variety of activities.

Advanced Physical Education: Advanced Physical Education is a one-unit elective course. The goal of Advanced Physical Education is to provide progressive skills, techniques and strategies in various activities. Prerequisite: Physical Education 1. *Can be taken for multiple credits.*

Lifetime Wellness: Lifetime Wellness is a one-unit course required for graduation. The goal of Lifetime Wellness is for students to learn a lifelong process of positive lifestyle management that seeks to integrate the emotional, social, intellectual, and physical dimensions of self for a longer, more productive and higher quality of life. The course consists of the following state standards: Disease Prevention and Control; Mental Health; Nutrition; Physical Fitness and Related Skills; Safety and First Aid; Sexuality and Family Life; and Substance Use/Abuse.

Family Life Education, HIV/AIDS Education, and Human Trafficking are included in the Wellness standards. These topics are mandated by State Law (Public Charter No. 565). Parents have the option to have their child exempted and placed in an alternate learning environment during the Family Life instruction. A parent may complete and return the "opt out" form sent home with each student before instruction begins. Parents are welcome to review the Family Life and HIV/AIDS education curriculum and materials by contacting their child's teacher at the school. Knox County Schools and the Knox County Health Department have employed a School Health Educator, whose primary responsibility is to deliver the Family Life curriculum in collaboration with the Health and Wellness teachers. Only Knox County Schools' staff and Knox County Health Department personnel will deliver this important and delicate curricular material. Family Life education is taught in 6th, 8th grades and Lifetime Wellness in high school.

Advanced Strength & Conditioning:
Conditioning and Advanced Strength Training is a one-unit elective course designed to allow students to make gains in conditioning, muscle tone, and strength while emphasizing the importance of making an active healthy lifestyle a lifelong practice. Health and skill related activities such as flexibility, speed, agility, coordination and power, along with self-discipline and a positive attitude will be the content focus. Proper nutrition will also be examined and emphasized. Physical Education I is not a prerequisite for this course. *Can be taken for multiple credits.*

Mathematics:

To satisfy graduation requirements, each student must complete a math course each year he or she is enrolled in high school. Algebra 1, Geometry, Algebra 2 and one math course above Algebra 2 are required for graduation.

All Honors courses should substantially exceed the content standards, learning expectations, and performance indicators approved by the State Board of Education. Additionally, an honors course shall include a minimum of five of the nine components from the Tennessee Department of Education Framework of Standards for Honors Courses.

Algebra IA and Algebra IB: Algebra IA is the first term of a two-term sequence in the study of Algebra I and is designed for students in the 9th grade who enter high school not ready to start Algebra 1. Time during this semester-long course is spent integrating pre-algebra and introductory algebra skills. Students will receive an elective mathematics credit for successfully completing Algebra IA.

Algebra IB is the second course of the required two-term sequence. The combination of Algebra IA and Algebra IB will explore and apply concepts, processes, and skills that are essential to successfully completing the high school graduation requirement. More time is devoted to skill development than is possible in the one-term Algebra 1 class. Students who successfully complete Algebra IA and Algebra IB will receive credit for Algebra I.

Algebra I: The fundamental purpose of Algebra I is to formalize and extend the mathematics that students learned in the middle grades. Because it is built on the middle grades' standards, this is a more ambitious version of Algebra 1 than has generally been offered. The critical areas deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data

that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Successful completion of this sequence prepares students for Geometry.

Honors Algebra I: Honors Algebra is designed for students who did exceptionally well in the 8th grade mathematics. Course content covers the topics of Algebra 1 in greater depth and at a faster pace, thus providing time for enrichment through the study of additional performance objectives.

Algebra IA (Year-long): Algebra IA Prep is the first part of a two-year sequence and is designed for students with a qualifying disability as documented in the IEP. This course will count as one math credit required for a regular diploma.

Algebra IB (Year-long): This course is part of a two-year sequence and is designed for students with a qualifying disability as documented in the IEP. This course, along with the state EOC assessment, completes the Algebra I requirement and will count as the Algebra credit required for a regular diploma.

Geometry A (Year-long): Year-long Geometry A is the first part of a two-year sequence and is designed for students with a qualifying disability as documented in the IEP. This course will count as one math credit required for a regular diploma.

Geometry B (Year-long): Geometry B (Year-long) is the second part of a two-year sequence and is designed for students with a qualifying disability as documented in the IEP. This course, along with the state EOC assessment completes the Geometry requirement and will count as the Geometry credit required for a regular diploma.

Geometry: The fundamental purpose of the course in Geometry is to formalize and extend students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between this Geometry course and the historical approach taken in Geometry classes. For example, transformations are emphasized early in this course. Close attention should be paid to the introductory content for the Geometry conceptual category found in the high school CCSS. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Successful completion of Geometry prepares a student for further work in Algebra 2. Prerequisite: Algebra I with a grade of "C" or better is recommended.

Honors Geometry: In Honors Geometry, standards found in Geometry are covered more in-depth with emphasis placed on problem solving, writing skills (especially in writing of proofs) and algebraic applications. Additional enrichment objectives are covered as time permits. Successful completion of this Honors Geometry prepares a student for further work in algebra, usually Honors Algebra 2. Prerequisite: Algebra 1 in the 8th grade or Honors Algebra 1 in the 9th grade and Departmental Recommendation.

Algebra 2: Building on their work with linear, quadratic and exponential functions, students extend their repertoire of functions to include polynomial, rational, and radical functions in Algebra 2. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model

situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Satisfactory completion of this course prepares students for entry into Pre-Calculus, Statistics, Applied Mathematical Concepts, or Bridge Math. Prerequisites: Algebra I and Geometry credit with a grade of "C" or better is recommended.

Honors Algebra 2: Honors Algebra 2 provides a rigorous preparation for Honors Pre-Calculus. An emphasis is placed on algebraic proof and provides an enriched version of Algebra 2 through the study of additional objectives and topics. Successful completion of this course prepares students for entry into Pre-Calculus or Honors Pre-Calculus or Advanced Placement Statistics. Prerequisites: Algebra 1 and Honors Geometry credit with an "A" or "B" average grades or Departmental Recommendation.

Algebra 2A and Algebra 2B: Algebra 2A, the first term of the required two-term sequence and Algebra 2B, the second term of the sequence, is designed for students who complete Geometry and are not ready to start Algebra 2. More time is devoted to skill development than is possible in the one-term Algebra 2 class. These courses will explore and apply concepts, processes, and skills that are essential to successfully completing the high school graduation requirement. The first term is an elective mathematics credit and time is spent integrating Algebra I and introductory Algebra 2 skills. The second term focuses on continuing and completing the Algebra 2 standards. Successful completion of Algebra 2B results in the Algebra 2 graduation credit.

Bridge Math: Bridge Math is a 4th year senior level math credit course designed for students who need to refresh core mathematics skills prior to further study. Eligibility: It is recommended that students who have not scored at least a 19 on their ACT assessment (or equivalent assessment) take this course to be better prepared for post-secondary study. Prerequisite: Algebra 2.

Statistics (SAILS): Eligibility: Less than 19 on math ACT. Upon completion, students can eliminate college remediation and remove financial burdens by not paying for remedial classes in college, entering postsecondary in credit-bearing courses.

Statistics Statewide Dual Credit SDC: Statistics is non-calculus in its orientation and designed to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The major themes in Statistics include: interpreting categorical and quantitative data, conditional probability and other rules of probability, using probability to make decisions, and making inferences and justifying conclusions. Statistics is intended for students interested in business, social sciences, education, and data analysis. Prerequisites: Algebra 2 and ACT Math 19-22

Pre-Calculus Statewide Dual Credit (SDC): Pre-Calculus develops the topics essential for success in Calculus. Content includes a study of algebraic, transcendental, and trigonometric functions, as well as their compositions and inverses, vectors, polar graphing, complex numbers, conic sections, and sequences and series. Students who complete this course successfully will have a strong background for a first-year Calculus sequence. Prerequisites: Algebra 1, Geometry, and Algebra 2 with an "A" or "B" average grades recommended. ACT Math >23

Pre-Calculus College Prep: Pre-Calculus develops the topics essential for success in Calculus. Content includes a study of algebraic, transcendental, and trigonometric functions, as well as their compositions and inverses, vectors, polar graphing, complex numbers, conic sections, and sequences and series. Students who complete this course successfully will have a strong background for a first-year Calculus sequence. Prerequisites: Algebra 1, Geometry, and Algebra 2 with an "A" or "B" average grades recommended.

Advanced Placement (AP) Calculus AB AP Calculus AP is devoted mainly to the topics in differential and integral calculus. Students who study this course will be prepared to take the Advanced Placement AB Calculus Exam and seek college credit. The scope of this course follows the topics listed in the College Board Advanced Placement Mathematics Course Description. Prerequisites: Honors Pre-Calculus or Departmental Recommendation.

Advanced Placement (AP) Calculus BC: AP Calculus BC is an extension of all the topics covered in AP Calculus AB with additional topics. Students who study this course will be prepared to take the Advanced Placement BC Calculus Exam and seek college credit. The scope of this course follows the topics listed in the College Board Advanced Placement Course Description. Prerequisites: AP Calculus AB or Departmental Recommendation.

Calculus 3: An advanced math course for students who have completed AP Calculus AB and BC.

Advanced Placement (AP) Statistics: AP Statistics is non-calculus in its orientation with a major focus on data analysis. Students who study this course will be prepared to take the AP Statistics Exam and seek college credit. This course follows the topics listed in the College Board Advanced Placement course description. Prerequisites: English 2 or Honors English 2 with a grade of "B or better and Algebra 2 with a grade of "C" or better are recommended, and Departmental Recommendation.

Advanced Placement (AP) Computer Science A: AP Computer Science emphasizes object-oriented programming methodology with an emphasis on problem solving and algorithm development and is meant to be the equivalent of a first-semester course in computer science. It also includes the study of data structures and abstraction. The scope and sequence of this course follows the topics listed in the College Board Advanced Placement course description. Students who study this course will be prepared to take the Advanced Placement Computer Science "A" AP Exam and seek college credit. This course satisfies the State's four-year math requirement for those students who have met the ACT and/or SAT college readiness benchmarks in mathematics. Prerequisite: Departmental Recommendation.

Advanced Placement (AP) Computer Science Principles: This course helps you understand how computing and technology influence the world around you. As part of this course, you'll create digital projects, such as videos and mobile apps, to address real-world issues in the same way that writers, programmers, engineers, and designers would. Students will conceive and implement digital projects, utilizing some of the same processes that writers, programmers, engineers, designers, and other creators use to bring their ideas to life.

Frequently Asked Questions about High School Mathematics:

What mathematics courses are required for graduation?
Answer: The TDOE policy requires students to take a mathematics course each year while in high school to complete a four credit core that must include Algebra I, Geometry, and Algebra II (or the equivalent of these courses) and one advanced math course. Students must be enrolled in a mathematics course each

school year. See the TBR and UT list of courses to identify accepted math courses for college entrance requirements.

What math course should students take after completing Algebra II?
Answer: Currently, many students have access to STEM (Science, Technology, Engineering, & Mathematics) focused courses such as Pre-Calculus, Applied Mathematical Concepts, Bridge Math, Calculus, College-Prep Statistics, or an Advanced Placement or Dual Enrollment course. These options will still be available to any student who wishes to take them according to local school board policy. Note: Courses such as AP Physics, Computer Science, Robotics, or Math Computer Applications can count as a 4th year math course, but not as a math AND science credit.

What is Bridge Math?
Answer: The Bridge Math course is designed for students who have not scored 19 or higher on the ACT mathematics subtest or 460 on the SAT mathematics subtest by the beginning of the senior year. It is intended to "mirror" the content in a developmental math course at the college level.

Can students earn 2 credits in math in one year?
Answer: Yes, provided the proper mathematics sequence is followed and that the student has departmental approval.

If a student earns 4 math credits in 3 years (non-middle school), does he/she need to take an additional year of math the senior year?
Answer: Students may earn multiple math credits in one year, but they must still complete a math course each year they are enrolled in high school. These students will graduate with a number of credits well above the minimum required for graduation.

What is the difference between a traditional high school pathway (Algebra I, Geometry, Algebra II) and the integrated pathway (Integrated I, II, III)?
Answer: The difference in the two pathways is how the standards are organized into the three courses. For example, in the traditional pathway, the geometry conceptual category is its own course. In the integrated pathway, there are geometry standards present in all three courses. The integrated pathway intends for connections across all conceptual categories to be made, as standards from all conceptual categories are present in each of the three courses. By doing so, the coherence of studying mathematics across the various domains in K-8 is preserved.

What happens if a student transfers from (or into) a school with a different high school pathway?
Answer: If a student has earned credit in Algebra I and transfers to a district on the integrated pathway, that student should be placed in Integrated Math II. The Algebra I credit will act as the Integrated Math I credit. If a student transfers in the middle of the year from one pathway to the other, the student should be placed in the appropriate course. For example, if a student transfers from Algebra II in the middle of the year, he should be placed in Integrated Math III. Teachers will support these students just as they do when any student transfers and there are differences in pacing, pathways, materials, etc.

Can Physics or AP Physics count as a student's fourth math credit:
Answer: Yes, a physics course can count as a student's fourth math credit provided it is not a student's third science credit.

<table>
<tr><th colspan="8">Knox County Schools Mathematics
High School Progression</th></tr>
<tr><th>8th Grade</th><th colspan="2">9th Grade</th><th colspan="2">10th Grade</th><th>11th Grade</th><th colspan="2">12th Grade</th></tr>
<tr><td rowspan="2">Honors Algebra I</td><td colspan="2">Honors Geometry</td><td colspan="2">Honors Algebra II</td><td rowspan="2">Honors Pre-Calculus</td><td rowspan="2">AP Calculus AB</td><td rowspan="2">AP Calculus BC</td></tr>
<tr><td colspan="2">Honors Algebra I</td><td>Honors Geometry (Fall)</td><td>Honors Algebra II (Spring)</td></tr>
<tr><td colspan="8"></td></tr>
<tr><td rowspan="4">Pre- Algebra</td><td colspan="2" rowspan="2">Honors Algebra I</td><td>Honors Geometry (Fall)</td><td>Honors Algebra II (Spring)</td><td>Honors Pre-Calculus</td><td>AP Calculus AB</td><td>AP Calculus BC</td></tr>
<tr><td colspan="2">Geometry</td><td>Algebra II</td><td>Pre-Calculus</td><td>CP Calculus</td></tr>
<tr><td colspan="2">Algebra I</td><td colspan="2">Geometry</td><td>Algebra II</td><td colspan="2">Pre-Calculus, CP Statistics, Applied Mathematical Concepts, OR AP Statistics</td></tr>
<tr><td colspan="7"></td></tr>
<tr><td>Algebra IA (Fall)</td><td>Algebra IB (Spring)</td><td colspan="2">Geometry</td><td>Algebra II</td><td colspan="2">Bridge Math, Pre-Calculus, CP Statistics, Applied Mathematical Concepts, OR AP Statistics</td></tr>
</table>

Science:

To satisfy graduation requirements, three (3) credits of science are required. One unit must be Biology; one must be Chemistry or Physics, and one additional lab science course. Physics (Algebra 2 based or above) may count for a fourth year of math. If Physics is used for a fourth year of math, it cannot count as science credit towards graduation. Students who have a qualifying IEP must take Biology and two additional lab sciences. Chemistry or physics is not required of a student who has an IEP but can be taken.

Some eighth grade students may enter high school with an Honors Physical Science or a Biology credit. These credits do count as credits towards the graduation requirement. However, these students are strongly encouraged to take additional sciences in high school.

All Honors courses should substantially exceed the content standards, learning expectations, and performance indicators approved by the State Board of Education. Additionally, an honors course shall include a minimum of five of the nine components from the Tennessee Department of Education Framework of Standards for Honors Courses.

Life Sciences:

Biology 1:

The goal of Biology 1 is to develop an understanding of the diversity and unity in living things. Concepts covered include current and emerging technologies as well as interactions of organisms with their environment, chemical structure of organisms, transfer of energy in organisms, cell structure and function, continuity and change in living things, diversity of living things, and evidence of biological evolution.

Honors Biology 1:

Honors Biology 1 encompasses all of the standards of Biology but places increased emphasis on development of critical thinking skills. Prerequisites: Honors level is based upon a combination of standardized test scores, past performance in science, and teacher recommendations.

Biology 1A and Biology 1B (for students with a documented IEP): Biology 1A and Biology IB are part of a two-semester sequence and are designed for students with a qualifying disability as documented in the IEP. Biology 1A will count toward one science credit as required for a regular diploma. Biology 1B, along with the state EOC, will count toward the Biology credit as required for a regular diploma. The two-sequence course may be taught in one year or over multiple years.

Honors Biology 2: Honors Biology 2 takes the standards of Biology 2 to a much deeper level. The course is fast paced and includes time for some enrichment topics. Prerequisites: Biology 1, Chemistry 1 and Department Recommendation.

Advanced Placement (AP) Biology: AP Biology is a first-year college level biology course, which follows the syllabus of the College Board's Advanced Placement (AP) Program. The AP Biology curriculum is designed to prepare students to take the College Board AP Biology test given in May of each year. The course has been audited and approved by the College Board. For schools on block scheduling, Biology 2 Honors is intended to be the first semester course that will lead into AP Biology in the spring. This course offers accelerated and in-depth coverage of biology topics in the areas of molecular and cellular biology, genetics and evolution, and organismal and population biology. Some schools may elect to offer AP Biology as a stand-alone, one-semester course. Students may be required to complete a summer assignment and/or attend additional classroom or laboratory sessions beyond the regularly scheduled classes. Prerequisites: Biology 1 and Chemistry and Biology 2 (Honors)-based on school requirements.

Botany/Zoology: Botany/Zoology is a one-unit course which surveys the major phyla of the plant and animal kingdoms. The course covers the diversity of plants and animals and emphasizes the distinguishing characteristics of each kingdom and groups within the kingdoms. The importance of plants and animals to various ecosystems will be included. Botany topics will include vascular and nonvascular plants. Zoology topics will include vertebrates and invertebrates. Prerequisites: Biology 1 and Chemistry 1. *The State Board of Education has approved this course through 2023.*

Microbiology: Microbiology examines the role of microbes in everyday life. Major topics covered include microbial cell biology, microbial genetics, microorganism's interactions in the environment, and the interactions and impact of microorganisms with humans. Prerequisites: Biology 1 and Chemistry 1. *The State Board of Education has approved this course through 2020.*

Human Anatomy & Physiology: Human Anatomy & Physiology is a study of the body's structures and respective functions at the molecular/biochemical, cellular, tissue, organ, systemic, and organism levels. Students explore the body through laboratory investigations, models, diagrams, and/ or comparative studies of the anatomy of other organisms. Content includes the study of the structure and function of cells, tissues, organs, and body systems. Some schools may offer this course as dual credit in coordination with a local cooperating institution of higher education. Prerequisites: Biology 1 is required; Chemistry 1 is recommended.

Honors Human Anatomy & Physiology: Honors Human Anatomy & Physiology takes the standards of Human Anatomy & Physiology to a much deeper level. The course is fast paced and includes time for some

enrichment topics. Prerequisites: Biology 1 is required, Chemistry 1 is recommended and teacher recommendation.

Advanced Placement (AP) Environmental Science: AP Environmental Science is a first-year college level environment science course that follows the syllabus of the College Board's Advanced Placement (AP) Program. The AP Environmental Science course is designed to prepare students to take the College Board AP Environmental Science test given in May of each year. The course has been audited and approved by the College Board. The goal of this course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Students may be required to complete a summer assignment and/or attend additional classroom or laboratory sessions beyond the regularly scheduled classes. Prerequisites: Biology 1, Chemistry 1 and teacher recommendation.

VIST: is an acronym for: Variation, Inheritance, Selection and Time - the core components of evolutionary biology. This course is an upper level, college-prep science course that incorporates the use of lab, group and field activities plus directed readings and computer technology. The course will help students develop a balanced understanding of the theory, mechanisms and applied aspects of evolutionary biology. Activities are designed to promote analytical, practical and research-based thinking skills and to simulate evolutionary science procedures and research methods. Contemporary issues in evolutionary biology (e.g., antibiotic resistance, crop management) will be used to develop critical and creative thinking skills that will equip students to make ethical, informed decisions regarding medicine, agriculture and other relevant topics.

Physical Sciences:

Physical Science: The primary theme for Physical Science is the study of matter and energy. The course is designed to introduce students to the concepts of forces and motion, chemical and physical properties of matter, the ways in which matter and energy interact, the forms and properties of energy, and other basic concepts in chemistry and physics. Prerequisites: The fundamental level of this course is based upon a combination of standardized test scores, past performance in science, teacher recommendations, and established enrollment limits.

Chemistry I: The goal of Chemistry 1 is to develop an understanding of the relevance of chemistry as it relates to standards of living, career choices, and current issues in science and technology. Course content includes laboratory techniques and safety, properties and structures of matter in its various states, chemical calculations and quantitative relationships, chemical bonding and molecular structure, chemical reactions, solutions, gas laws, and acids and bases. The ability to make mathematical computations using fractions, decimals, ratios and proportions, and exponents is required. Honors Chemistry is designed to meet the needs of the more academically able student and will include a basic study of nuclear principles and organic chemistry. Prerequisite: Algebra 1and a combination of standardized test scores, past performance in science and mathematics, and teacher recommendation.

Honors Chemistry I:

Honors Chemistry I takes the standards of Chemistry I to a much deeper level. The course is fast paced and includes time for some enrichment topics. Prerequisites: Algebra I, a combination of standardized test scores, past performance in science, and teacher recommendation.

Honors Chemistry 2 and Advanced Placement (AP) Chemistry:
AP Chemistry is a first-year college level chemistry course that follows the syllabus of the College Board's Advanced Placement (AP) Program. The AP Chemistry curriculum is designed to prepare students to take the College Board AP Chemistry test given in May of each year. This course has been audited and approved by the College Board. For schools on block scheduling, Honors Chemistry 2 is intended to be the first semester course that will lead into AP Chemistry in the spring. This course offers accelerated and in-depth coverage of chemistry topics in the areas of structure and states of matter, kinetic theory, chemical reactions including kinetics, and the concepts of thermodynamics. Students may be required to complete a summer assignment and/or attend additional classroom or laboratory sessions beyond the regularly scheduled classes. Prerequisites: Chemistry 1, Algebra 1 and 2 required; current enrollment in Advanced Math is strongly suggested; Chemistry 2. Or Honors Chemistry 2.

Honors Organic & Biochemistry: Honors Organic Biochemistry is an introduction to organic chemistry. The course includes nomenclature, structure and reactions, in-depth treatment of biological molecules such as proteins, lipids and numerous metabolic processes such as glycolysis, gluconeogenesis and the central dogma will make up the biochemistry portion of the course. Prerequisites: Chemistry 1 and Biology 1. (Approval from the Science Supervisor is required before offering this course.) *The State Board of Education has approved this course through 2024.*

Physics: Physics is the study of the interrelationships between matter and energy. Topics of study include force, motion, momentum, energy, heat, light, sound, electricity and magnetism, and atomic and nuclear physics. Prerequisites: Algebra 1; Biology and Chemistry recommended.

Advanced Placement (AP) Physics 1: AP Physics 1 is equivalent to a first semester college course in algebra-based physics. This course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy and power; and mechanical waves and sound. It also introduces electric circuits. Prerequisites: Geometry and currently taking Algebra 2 or equivalent course.

Advanced Placement (AP) Physics 2: AP Physics 2 is equivalent to a second semester college course in algebra-based physics. The course covers fluid mechanics; thermodynamics: electricity and magnetism; optics; and atomic and nuclear physics. Prerequisite: AP Physics 1 or comparable introduction course in physics. Students should have taken or be concurrently taking pre-calculus or an equivalent course.

Advanced Placement (AP) Physics C-EM (Electricity and Magnetism): AP Physics C-EM is a first year, calculus-based college level Physics course that has been audited and approved by the College Board's Advanced Placement (AP) Program. This course is equivalent to a semester-long calculus-based college course in classical Electricity and Magnetism that includes a strong laboratory component. The Physics C course requires a more advanced knowledge of mathematics than the Physics 1 or 2 course. Topics covered include electrostatics, conductors, capacitors and dielectrics, electric circuits, magnetic fields, and electromagnetism. Students may be required to complete a summer assignment and/ or attend additional classroom or laboratory sessions beyond the regularly scheduled classes. Prerequisites: Pre-calculus and concurrent enrollment in Calculus, Physics or Honors Physics.

Advanced Placement (AP) Physics C-M (Mechanics): AP Physics C-M is a first year, calculus-based college level Physics course that has been audited and approved by the College Board's Advanced Placement (AP) Program. This course is equivalent to a semester-long, calculus-based college course in classical Mechanics that includes a strong laboratory component. The Physics C course requires a more advanced knowledge of mathematics than the Physics 1 or 2 course. Topics covered include the following six content areas: kinematics; Newton's laws of motion; work, energy and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation. Students may be required to complete a summer assignment and/or attend additional classroom or laboratory sessions beyond the regularly scheduled classes. Prerequisites: Pre-calculus and concurrent enrollment in Calculus, Physics or Honors Physics.

Earth and Space Sciences:

Geology: Geology explores the origins and the connections between the physical, chemical, and biological processes of the earth system. The student will investigate maps, matter and minerals, the rock cycle, geologic history, oceanography, hydrologic cycle, geologic hazards, and plate tectonics. Geology focuses on the physical aspects of the earth processes and cycles. Tennessee geologic features will also be a part of this study. Prerequisites: Biology 1 and Chemistry .

Astronomy: The goal of Astronomy is to introduce students to the concepts, theories, and laws defining the motions of the planets and the properties of the sun, moon, stars, planets and other bodies of the heavens. Students will actively observe the day and night skies; make measurements of astronomical phenomena; create projects and models; and use computers for simulations and research. Prerequisites: Algebra 1 and Geometry. *The State School Board has approved this course through 2023.*

Social Studies:

To satisfy graduation requirements for Social Studies, students must earn one credit in World History and Geography, one credit in United States History and Geography, one-half credit in United States Government and Civics, and one-half credit in Economics for a total of three credits in Social Studies. One-half credit in Personal Finance remains a graduation requirement. Additionally, successful completion of the Tennessee Civics Assessment (minimum 70%) is required for graduation.

Instruction in Honors World History and Geography and Honors Ancient History will substantially exceed the content standards, learning expectations, and social studies practices, as approved by the State Board of Education. Additionally, an honors course shall include a minimum of five of the nine components from the Tennessee Department of Education Framework of Standards for Honors Courses.

World History and Geography: In World History and Geography, students will study the rise of the nation-state in Europe, the origins and consequences of the Industrial Revolution, political reform in Western Europe, imperialism across the world, and the economic and political roots of the modern world. Students will explain the causes and consequences of the great military and economic events of the past century, including the World Wars, Great Depression, Cold War, and Russian and Chinese Revolutions. Students will study the rise of nationalism and the continuing persistence of political, ethnic, and religious conflict in many parts of the world. Students will explore geographic influences on history, with attention to political boundaries that developed with the evolution of nations from 1750 to the present and the subsequent human geographic issues that dominate the global community. Additionally, students will examine aspects of technical geography and

how these innovations continuously impact geopolitics in the contemporary world. This course is a continuation of the 6th and 7th grade survey courses of world history and geography and is designed to help students think like historians, focusing on historical concepts in order to build a foundational understanding of the world. Appropriate primary sources have been embedded in the standards in order to deepen the understanding of world history and geography. Special emphasis will be placed on the contemporary world and its impact on students today.

Honors World History and Geography: This course description for Honors World History and Geography is the same as the CP World History and Geography course and follows the same state standards and local curriculum but with increased rigor.

United States Government and Civics: U.S. Government and Civics is a one-half credit course. Students will study the purposes, principles, and practices of American government as established by the United States Constitution. Students will learn the structure and processes of the government of the state of Tennessee and local governments. Students will recognize their rights and responsibilities as citizens as well as how to exercise these rights and responsibilities at the local, state, and national levels.

Advanced Placement (AP) United States Government and Politics: AP U.S. Government and Politics provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. They will also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments. In addition, they will complete a political science research or applied civics project. The required project adds a civic component to the course, engaging students in exploring how they can affect, and are affected by, government and politics throughout their lives. The project might have students collect data on a teacher-approved political science topic, participate in a community service activity, or observe and report on the policymaking process of a governing body. Students should plan a presentation that relates their experiences or findings to what they are learning in the course. Prerequisite: Departmental Recommendation.

United States History and Geography (Post-Reconstruction to the Present): In United States History and Geography, students will examine the causes and consequences of the Industrial Revolution and the United States' growing role in world diplomatic relations, including the Spanish-American War and World War I. Students will study the goals and accomplishments of the Progressive movement and the New Deal. Students will also learn about the various factors that led to our nation's entry into World War II, as well as the consequences for American life. Students will explore the causes and course of the Cold War. Students will study the important social, cultural, economic, and political changes that have shaped the modern-day United States resulting from the Civil Rights Movement, Cold War, and recent events and trends. Additionally, students will learn about the causes and consequences of contemporary issues impacting the world today. Students will continue to use skills for historical and geographical analysis as they examine United States history after Reconstruction, with special attention to Tennessee connections in history, geography, politics, and people. Students will continue to learn fundamental concepts in civics, economics, and geography within the context of United States history. The reading of primary source documents is a key feature of the United States history course. Specific primary sources have been embedded within the standards for depth and clarity. Finally, students will focus on current human and physical geographic issues important in the contemporary United States and global society. This course will place Tennessee history, government, and geography in

context with United States history in order to illustrate the role our state has played in our nation's history. This course is the second of a two-year survey of United States History and Geography, continuing from 8th grade's study of United States History and Geography. This course can be used for compliance with T.C.A. § 49-6-1028, in which all districts must ensure that a project-based civics assessment is given at least once in grades 4–8 and once in grades 9–12. ***NOTE: Pellissippi State HIST 2020 or Tusculum University HIST 202 is the course equivalent for meeting graduation requirements for US History.***

Advanced Placement (AP) United States History: The AP United States History course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States 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. This AP United States History course will 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. Prerequisite: Departmental Recommendation.

Advanced Placement (AP) European History: AP European History provides an in-depth study of the development of Western European history. The course is designed to increase the knowledge of European political, social, economic, and intellectual history of the nations of Western Europe. The student will gain a better understanding of the problems faced by people at a given time, relate these problems to the present, and attempt to find solutions. This course follows College Board guidelines and is taught at the college level. Prerequisite: Departmental Recommendation

Economics (paired with Personal Finance): Economics is a one-half credit course. Students will examine the allocation of scarce resources and consider the economic reasoning used by consumers, producers, savers, investors, workers, and voters. Students will explore the concepts of scarcity, supply and demand, market structures, national economic performance, money and the role of financial institutions, economic stabilization, and trade. Finally, students will examine key economic philosophies and economists who have and continue to influence economic decision-making.

Advanced Placement (AP) Micro-Economics: The purpose of AP Micro-Economics is to give students a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the economic system. It places primary emphasis on the nature and functions of product markets and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy. (Personal Finance is taken online) Prerequisite: Departmental Recommendation.

Personal Finance (paired with Economics): Personal Finance is a one-half credit course. This course is designed to inform students how individual choices directly influence occupational goals and future earnings potential. Real world topics covered will include income, money management, spending and credit, as well as saving and investing. (This course is recommended for grade 12.)

Sociology (SDC/Statewide Dual Credit): All students enrolled in a statewide dual credit course take the online challenge exam, which is used to assess mastery of the postsecondary-level learning objectives. Students which meet or exceed the exam 'cut score' receive college credit that can be applied to any Tennessee public postsecondary institution. See course outline for SDC Sociology here

Tennessee History: Students will examine the history of Tennessee, including the cultural, geographic, economic, and political influences upon that history. Students will discuss Tennessee's indigenous peoples as well as the arrival of Euro-American settlers. Students will analyze and describe the foundation of the state of Tennessee. Students will identify and explain the origins, impact, and aftermath of the Civil War. Students will discuss the rise of a manufacturing economy. Finally, students will examine and discuss the Civil Rights Movement and Tennessee's modern economy and society.
This course follows the same organization as Section VI from the Tennessee Blue Book. Additionally, all United States History courses (i.e., 3rd grade, 4th grade, 5th grade, 8th grade, and United States History) can use the course standards to elaborate on Tennessee history.

SDC Psychology:

Advanced Placement (AP) Psychology: AP Psychology is a one credit, semester-long course (equivalent to 90 days of instruction) and is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.
Prerequisite: Departmental Recommendation.

Advanced Placement (AP) Human Geography: The purpose of the AP Human Geography course is to introduce students to the systemic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.

Bible History: Bible History is an elective course. This course is a survey of the Bible with emphasis upon its historical, literary, geographical, artistic, and cultural aspects. This course offers insights into the many historical events recorded in the Bible. It treats the Bible as a great literary work in itself as well as a primary source of allusions found in countless works of literature, art, and music. The first half focuses primarily on the Old Testament and the second half on the New Testament.

Film Studies: Film Studies is an elective course open to Knox County Schools students. The curriculum for this course ranges from the history of modern cinema and techniques of film production to the influence of cinema in 20th Century American culture. It is also a supplement to United States and World History classes. Students will view numerous films, which represent every major cinematic genre from the Silent Era to Film School Generation, analyzing the parallels between each cinematic style and the events that shaped American history/culture across the 20th Century. Students will also explore the relationship between literature, literary components and storytelling to their onscreen translation. Finally, the students will leave this class with a refined appreciation for film-making as an art and as a medium which continues to emulate and redefine American culture.

Americans at War: In Americans at War, students will examine the causes and consequences of the American Revolution, the War of 1812, the Mexican American War, Indian Wars, Civil War, Spanish-American War, and World War I. Students will also learn about the various factors that led to America's entry into World War II, as well as its consequences forAmerican life. Students will explore the causes and course of the Cold War, which led to the United States involvement in Korea and Vietnam.

Additionally, students will learn the causes and consequences of contemporary issues impacting their world today. Students will continue to use skills for historical and geographical analysis as they examine American history since the American Revolution. Students will continue to learn fundamental concepts in civics, economics, and geography within the context of United States history. The reading of primary source documents and secondary sources is a key feature of United States history standards. Finally, students will focus on current human and physical geographic issues important in contemporary America and the global society that relates directly to the topic of this course.

World Language:

Students should progress through world language courses in sequence. Students must complete each level with a passing grade before enrolling in the next level. Each course offers one unit of credit. Two (2) sequential units of the same world language satisfy the requirement for graduation. Completion of two (2) sequential units of the same world language for high school credit meets the requirement for admission to most university programs; however, language study beyond the basic requirement will better prepare students for entry into a university program. Therefore, the World Language department highly recommends any student planning to attend a four-year college or university continue world language study through level 3 and beyond. For this reason, students should begin World Language in grade 9, or earlier, when possible.

Generic course descriptions for alphabetic modern languages Arabic, French, German, Russian, and Spanish appear below. Due to differences in course progressions for logographic modern languages such as Chinese, visual modern languages such as American Sign Language (ASL), and classical languages such as Latin, descriptions for these courses are listed separately. For Honors courses, only additional expectations are highlighted in the course description.

Modern Languages:

Modern languages are living languages currently utilized in everyday communication by native speakers. Students of world languages will be able to communicate through interpretive, interpersonal, and presentational modes of communication. Students also gain cultural and intercultural competencies through thoughtful examination of target culture products, practices, and perspectives in comparison to one's own culture. The Tennessee World Language Standards (2017) and the American Council on the Teaching of Foreign Languages (ACTFL) recommend instruction in a modern language occur in the target language at least 90% of the time. Therefore, instruction in modern language classes occur mostly in the target language. Teachers use various instructional strategies which make input comprehensible to support and build students' understanding in the target language.

Alphabetic Modern Languages:

Level 1: French, German, Spanish: Level 1 Modern Languages are recommended for students in the ninth grade. The goal for Level 1 students is to perform at the Novice High proficiency level across the three modes of communication. Level 1 students demonstrate cultural and intercultural competency in the Novice range. Students must earn two sequential credits in the same language to meet graduation requirements.

Level 1 Honors Spanish: Students enrolled in a Level 1 Honors class perform at the Intermediate Low proficiency level. Enrolling in a Level 1 Honors world language class is the first step toward future success in

upper level courses and the pursuit of the Seal of Biliteracy. Students must earn two sequential credits in the same language to meet graduation requirements. Prerequisite: Teacher recommendation.

Level 2: French, German, Spanish: The goal for Level 2 students is to perform at the Intermediate Low proficiency level across the three modes of communication and demonstrate cultural and intercultural competency in the Intermediate range. Prerequisite: Successful completion of Level 1 of the same language.

Level 2 Honors: French, German, Spanish: In addition to the Level 2 requirements, the goal for students enrolled in a Level 2 Honors class is to perform at the Intermediate Mid proficiency level. Enrolling in a Level 2 Honors world language class is a step toward future success in upper level courses and the pursuit of the Seal of Biliteracy. Prerequisite: Teacher recommendation.

Level 3 Honors: French, German, Spanish: The Level 3 Honors program is highly recommended for students who intend to apply for the Seal of Biliteracy and/or enroll in advanced academic world language courses. In addition to Level 3 requirements, the goal for Level 3 Honors students is to perform at the Intermediate High proficiency level. Enrolling in a Level 3 Honors world language class is a step toward future success in upper level courses and the pursuit of the Seal of Biliteracy. Prerequisite: Teacher recommendation.

Level 4 Honors: French, German, Spanish: Level 4 Honors is highly recommended for students who intend to apply for the Seal of Biliteracy and/or enroll in advanced academic world language courses. The goal for students enrolled in a Level 4 Honors class is to perform at the Advanced Low proficiency level. Students will demonstrate Advanced range cultural and intercultural competencies. Enrolling in a Level 4 Honors world language class is a step toward future success in upper level courses and the pursuit of the Seal of Biliteracy. Prerequisite: Teacher recommendation.

Advanced Placement (AP): French, German, Spanish: AP world language is recommended for students who demonstrate a minimum of Advanced Low proficiency in an alphabetic modern language and for students who intend to apply for the Honors Seal of Biliteracy. This course is for students who are motivated to intensely study the language in preparation for the Advanced Placement examination. This course should not be taught in combination with any other world language course. Prerequisite: Teacher recommendation.

Logographic Modern Languages:

Honors Chinese 1: In addition to Level 1 requirements, more emphasis is placed on character recognition and spontaneous responses rather than prepared responses in Chinese 1 Honors. Enrolling in a Level 1 Honors world language class is the first step toward future success in upper level courses and the pursuit of the Seal of Biliteracy. Students must earn two sequential credits in the same language to meet graduation requirements. Prerequisite: Teacher recommendation.

Honors Chinese 2: In addition to Level 2 requirements, more emphasis is placed on character recognition and spontaneous responses rather than prepared responses in Honors Chinese 2. Enrolling in a Level 2 Honors world language class is a step toward future success in upper level courses and the pursuit of the Seal of Biliteracy. Prerequisite: Teacher recommendation.

Honors Chinese 3: Honors Chinese 3 is highly recommended for students who intend to apply for the Seal of Biliteracy and/or enroll in advanced academic world language courses. In addition to Level 3 requirements,

students enrolled in a Level 3 Honors class perform at the Intermediate Mid proficiency level. Enrolling in a Level 3 Honors world language class is a step toward future success in upper level courses and the pursuit of the Seal of Biliteracy. Prerequisite: Teacher recommendation.

Honors Chinese 4: Honors Chinese 4 is highly recommended for students who intend to apply for the Seal of Biliteracy and/or enroll in advanced academic world language courses. The goal for students enrolled in a Level 4 Honors class is to perform at the Intermediate High proficiency level in communication. Students will demonstrate Advanced range proficiency in cultural and intercultural competencies. Enrolling in a Level 4 Honors world language class is a step toward future success in upper level courses and the pursuit of the Seal of Biliteracy. Prerequisite: Teacher recommendation.

Advanced Placement (AP) Chinese: AP Chinese is recommended for students who demonstrate a minimum of Intermediate High proficiency in the language, and for students who intend to apply for the Honors Seal of Biliteracy. This course is for students who are motivated to intensely study the language in preparation for the Advanced Placement examination. This course should not be taught in combination with any other course. Prerequisite: Teacher recommendation.

Pursuant to State Board of Education Rule 0520-1-3-05 (6)(a)3. Foreign Language:

Procedure for documenting the World Language graduation requirement for students who are native speakers of languages of than English is as follows:

Students with secondary transcripts showing coursework in their native language may have those language course credits transferred to their Knox County high school transcript regardless of the native language. For example, a student from China with a secondary transcript showing two years of coursework in Chinese (their native language), may have those two years of Chinese transferred to their Knox County high school transcript and meet the requirements for foreign language.

Students with secondary transcripts indicating only one year of coursework in their native language may have one year of credit in that language transferred to their Knox County high school transcript. The second year of foreign language can be documented "Proficient" on the transcript, either by a qualified examiner or by a KCS Knox County teacher, depending on whether the language is offered by Knox County (see below).

Procedure for determining placement of heritage speakers of other languages in WL classes:

- WL teacher(s) conducts initial interview to determine appropriate Level EOC to administer to the student.
- Student takes appropriate level EOC. (This will usually be the Level 1 EOC.)
- If the student passes the EOC, the student receives “P” for *Proficient* on transcript for the tested level(s); no credit is awarded.
- Teacher obtains a Speaking sample and a Writing Sample from the student.
- Student placement in a WL course will be determined by the WL teacher(s) of the tested language based on the EOC score, the Speaking and Writing Sample, and the initial interview.

***For students with language credits on a transfer transcript, please refer to the *Procedure For Documenting the Foreign Language Graduation Requirement for Students Who Are Native Speakers of Languages Other Than English* above.**

For students whose heritage language is a language credit that is NOT offered by Knox County (or if it is offered in Knox County, but not at the school in which the student is enrolling):

Students may receive world language credits and thus meet the graduation requirement in any of the following ways:

- Have two language credits on their transcript:
- Take two credits of a language other than their native language or English in high school;
- Be assessed by a qualified examiner for intermediate level proficiency in a language. The examiner must complete the Knox County form for Documenting Proficiency. Any level that a student places out of will be entered on the transcript as "Proficient", however NO credit will be given, and it will not be included in the grade point average. All costs involved with the test are the student's responsibility.

For students whose native language IS offered by Knox County, please follow the steps below:

1. Counselor will coordinate with the Foreign Language teacher who will determine student's proficiency.

2. The Foreign Language teacher will administer the EOC and also assess the student's written and oral production in the language. The teacher will determine the student's proficiency compared to the second-year expectations.

3.After the administration of the EOC, the Foreign Language teacher will return the test to The testing coordinator/designee and share the results with the counselor. The teacher should fill out the KCS form for "Documenting Proficiency for Foreign Language Graduation Requirements" and give it along with the EOC to the counselor. These forms are to be placed in the student's CR.

4. Any level that a student places out of will be entered onto the transcript as "Proficient" by the counselor/registrar. No credit will be given for the course(s) and it will not be included in the grade point average. Example for transcript: "Proficient through the 3rd level of Spanish."

Any student proficient in a language other than English may fulfill the world language requirement by demonstrating proficiency equivalent to level 2 requirements in the language. If the language is offered by Knox County Schools, the student will be required to pass a corresponding EOC exam, which tests proficiency in the three modes of communication, for the level which the student is challenging. If the student is fluent in a language that is not offered by KCS, it is the responsibility of the parent or guardian to arrange (and pay) for the student to pass a proficiency exam by a reputable world language provider or translation service. Students who demonstrate a minimum equivalency of level 2 proficiency in the assessed language will fulfill the graduation requirement; however, credit is not earned. No credit is awarded for proficiency testing.

Specialized Education:

Intervention (9-12):
Intervention for students in grades 12 are courses designed for students with a qualifying disability as documented in the IEP. Interventions may include skill-based instruction in reading, math, prevocational, study, and/or social/emotional skills.

ELA Comprehensive Program (9-12):
The ELA Comprehensive Program is designed for students with more severe disabilities who require a replacement of core, content instruction. This course is aligned to grade level/content standards but does not meet graduation requirements for a regular diploma. Students enrolled in this course will take the state required EOC for English II prior to graduation with a special education diploma.

Mathematics Comprehensive Program (9-12):
The Mathematics Comprehensive Program is designed for students with more severe disabilities who require a replacement of core, content instruction. This course is aligned to grade level/content standards but does not meet graduation requirements for a regular diploma. Students enrolled in this course will take the state required EOC for Algebra I prior to graduation with a special education diploma.

Science Comprehensive Program (9-12):
The Science Comprehensive Program is designed for students with more severe disabilities who require a replacement of core, content instruction. This course is aligned to grade level/content standards but does not meet graduation requirements for a regular diploma. Students enrolled in this course will take the state required EOC for Biology I prior to graduation with a special education diploma.

Mathematics Functional Math Skills:
Math Skills is designed for 12th grade+ students with a qualifying disability as documented in the IEP and on a special education diploma path.

Read Functional Reading Skills:
Reading Skills is designed for 12th grade students with a qualifying disability as documented in the IEP and on a special education diploma path.

Work-Based Learning:
Work-Based Learning is a one-half credit course. This course is designed to inform students how individual choices directly influence occupational goals and future earnings potential. Real world topics covered will include income, money management, spending and credit, as well as saving and investing. This course is recommended for students in grade twelve.

Peer Tutoring:
Peer Tutoring is designed for students who desire to give academic and social support to fellow students with a disability. Application with teacher recommendation and approval from school counselor and administrator is required. *Students may earn multiple elective credits in this course.* Courses offered at HVA include: Peer Tutoring with CDC, Peer Tutoring with CDCA.

Principles of Transition: Introduction to Self-Determination: Introduction to Self-Determination is designed to equip students who have an IEP with the knowledge concerning the legal rights of individuals

with a disability and how to advocate for themselves in their school and community settings. Placement in this course is determined by the IEP team.

Principles of Transition: Focus on Adulthood: Focus on Adulthood is designed to equip students who have an IEP with the knowledge and skills necessary to transition into postsecondary community involvement and independent living. Through a series of in-class and out—of-class activities, students will refine their self-awareness through a discovery process and then learn about relevant community supports and how to access them. Placement in this course is determined by the IEP team.

Principles of Transition: Planning for Postsecondary: Planning for Postsecondary is designed to provide opportunities for students who have an IEP to finalize their postsecondary transition plans and develop concrete steps necessary to transition seamlessly into postsecondary, including being an active participant in developing a summary of performance. Placement in this course is determined by the IEP team.

Alternate Academic Diploma Courses:

The following courses may be used for students who have an IEP and take the state alternate assessment. A student on alternate assessment may participate in any combination of these courses regardless of special education diploma path. The following 16 courses are a *required* portion of the 22 credits needed to obtain the Alternate Academic Diploma. Standards for each course are available on the Tennessee Department of Education website at www.tn.gov/education.

Required Courses for Students to Attain an Alternate Academic Diploma

- Alternate Academic Diploma – Algebra I
- Alternate Academic Diploma -Algebra II
- Alternate Academic Diploma –Geometry
- Alternate Academic Diploma -Applied Mathematical Concepts
- Alternate Academic Diploma -English I
- Alternate Academic Diploma -English II
- Alternate Academic Diploma -English III
- Alternate Academic Diploma -English IV
- Alternate Academic Diploma -Physical Science
- Alternate Academic Diploma -Earth and Space Science
- Alternate Academic Diploma -Biology 1
- Alternate Academic Diploma -World History and Geography
- Alternate Academic Diploma -United States History and Geography
- Alternate Academic Diploma -United States Government and Civics
- Alternate Academic Diploma -Economics
- Alternate Academic Diploma -Personal Finance

Student Senior Portfolio/Endorsement

Students must complete an application to enroll in the academy endorsement program. For more information on requirements, reach out to the Academy Dean.

Seniors who complete Student Portfolio/Endorsement Program can complete the capstone requirement by taking one of the following courses:

In addition to meeting Knox County graduation requirements, Academy Endorsement Requirements Include:

- Minimum 3.0 unweighted GPA
- "C" or better in all Pathway Courses including AP Capstone Program, Dual Enrollment, CTE Level 3 or 4 course, including a practicum or work based learning
- Minimum of 12-hour job shadow, internship or pathway experience with an mentor evaluation, and should include one or more of the following documents:
    - Journals
    - Reflective Paper
    - Digital presentation of artifacts or projects completed
- Mentor Evaluation
- Creation of a digital portfolio to highlight all areas of the endorsement experience
- Formal presentation of the digital portfolio as required by the academy dean.

Hardin Valley Academy
Academy Pathways

Pathway	Course #1	Course #2	Course #3	Course #4 (Optional)	Course #5 (Optional)	Academy
Advanced Life Sciences	4th Science Course	5th Science Course	6th Science Course			Health Science
Advanced Linguistics	Third Course in World Language	Fourth Course in World Language	AP / Dual Enrollment World Language**			Liberal Arts
Advanced Mathematics	5th Math Course	6th Math Course	7th Math Course			STEM
Advanced Physical Sciences	4th Science Course	5th Science Course	6th Science Course			STEM
AP Capstone	AP Seminar**	AP Course - Non Grad**	AP Course - Non Grad**	AP Research**		Liberal Arts
Architecture	Architectural & Engineering Design 1	Architectural & Engineering Design 2	Architectural & Engineering Design 3*	Architectural & Engineering Design Practicum	Dual Enrollment Architectural & Engineering Design **	STEM
Audio/Visual Productions	AV Productions I	AV Productions II	AV Productions III	Dual Enrollment AV Productions**		Liberal Arts
Auto Maintenance & Repair	Maintenance & Light Repair 1	Maintenance & Light Repair 2	Maintenance & Light Repair 3	Maintenance & Light Repair 4		STEM
Banking & Finance	Intro to Business	Accounting	Banking & Finance	Business & Entrpreneurship Practicum	Dual Enrollment Banking & Finance**	BLPA
Business Management	Intro to Business	Business Communications	Business Management*	Business & Entrpreneurship Practicum	Dual Enrollment Business Managament **	BLPA

*denotes Industry Certification
**denotes EPSO opportunity

Hardin Valley Academy
Academy Pathways

Pathway	Course #1	Course #2	Course #3	Course #4 (Optional)	Course #5 (Optional)	Academy
Cardiovascular Services	Intro to Health Science	Dianogstic Medicine	Anatomy & Physiology	Cardiovascular Services*	Clinicial Internship*	Health Science
Coding	Computer Science Foundations* or AP Computer Science Principles	Coding 1	Coding 2*	Coding Practicum	Dual Enrollment Coding**	STEM
Cosmetology	Cosmetology I	Cosmetology II	Cosmetology III	Cosmetology IV		Liberal Arts
Criminal Justice	Criminal Justice 1	Criminal Justice 2	SWDC Criminal Justice**	Criminal Justice Practicum	Dual Enrollment Criminal Justice**	BLPA
Cybersecurity	Computer Science Foundations* or AP Computer Science Principles	Cybersecurity 1*	Cybersecurity 2*	Cybersecurity Practicum*	Dual Enrollment Cybersecurity **	STEM
Digital Art and Design	Digital Arts and Design 1	Digital Arts and Design 2	Digital Arts and Design 3*	Dual Enrollment Digital Arts and Design**		Liberal Arts
Early Childhood Education	Early Childhood Education I	Early Childhood Education II	Early Childhood Education III	Early Childhood Education IV*		Liberal Arts
Early College Experience	College 1000	Psychology 1030	History 2020	Sociology 1010		Liberal Arts
Electromechanical Technology	Principles of Manufacturing*	Intro to Electromechanical	Advanced Electromechanical Technology*	Manufacturing Practicum		STEM
Engineering	Principles of Engineering & Design*	Engineering Design 1*	Engineering Design 2	Engineering Practicum	Dual Enrollment Engineering**	STEM
Environmental & Natural Resource Management	Agriscience	Applied Environmental Science	Plant and Soil Science	Natural Resources Management	Dual Enrollment Resource Management	STEM

*denotes Industry Certification
**denotes EPSO opportunity

Hardin Valley Academy
Academy Pathways

Pathway	Course #1	Course #2	Course #3	Course #4 (Optional)	Course #5 (Optional)	Academy
Fire Management Services	Principles of Fire & Emergency Services	Fire Prevention	Fire Science I	Fire Science II		BL
Hospitality and Tourism	Hospitality & Tourism Management 1	Hospitality & Tourism Management 2	Hospitality & Tourism Management 3	Event Planning & Management		Liberal Arts
Journalism	Journalism 1	Journalism 2	Journalism 3	Dual Enrollment Journalism		BLPA
Marketing	Intro to Business	Marketing 1	Social Media Marketing*	Advertising or Event Planning	Dual Enrollment Marketing**	BLPA
Mechanical, Electrical, & Plumbing Systems	Fundamentals of Construction*	MEP Systems*	HVAC* or Electrical* or Plumbing*	Construction Practicum		STEM
Nursing Services	Intro to Health Science	Medical Therapeutics	Anatomy & Physiology	Nursing Education*	Clinical Internship*	Health Science
Pharmacology	Intro to Health Science	Anatomy & Physiology	Pharmacological Science	Clinical Internship*	Dual Enrollment Therapeutic Services**	Health Science
Performing Arts	Second Performing Art	Third Performing Art	Fourth Performing Art	Dual Enrollment / AP Performing Art**		Liberal Arts
Pre-Law	Pre-Law 1	Pre-Law 2	Pre-Law 3	Dual Enrollment Pre-Law**		BLPA

*denotes Industry Certification
**denotes EPSO opportunity

Hardin Valley Academy
ACADEMY PATHWAYS

Pathway	Course #1	Course #2	Course #3	Course #4 (Optional)
Sport and Human Performance	Intro to Health Science	Rehab Careers	Anatomy & Physiology	Exercise Physiology
Structural Systems	Fundamentals of Construction*	Structural Systems I*	Structural Systems II*	Construction Practicum
Supply Chain	Intro to Business	Foundations of Supply Chain Management	Supply Chain Management*	Business & Entrpreneurship Practicum
Teaching as a Profession	Fundamentals of Education	Teaching as a Profession 1	Dual Enrollment Teaching as a Profession**	Teaching as a Profession Practicum
Visual Arts	Second Visual Art	Third Visual Art	Fourth Visual Art	Dual Enrollment / AP Visual Art**
Welding	Principles of Manufacturing*	Welding I*	Welding II*	Manufacturing Practicum*