

## Course Offerings at CTEC 2019-2020

The following courses are scheduled to be offered at CTEC for the 2019-2020 school year. Please remember that when students are signing up for CTEC courses, they **MUST sign up for 2 courses** to be taken during a given semester. If a course has a prerequisite, it cannot be taken in the same semester simultaneously. Students can register for any combination of courses, as long as they have met the prerequisite requirements. The grade level recommendations below are only suggestions. Students may take courses at any grade level unless otherwise indicated. Courses that are highlighted in blue may be taken for honors credit. Students should register for the regular course, and will be able to change to an honors section within the first 10 days of class.

### Introductory Level Courses (Recommended for 9<sup>th</sup> and 10<sup>th</sup> graders)

<b><u>Course Name</u></b>	<b><u>Credits</u></b>	<b><u>Prerequisites</u></b>	<b><u>For the student who is interested in:</u></b>
Automotive Service Fundamentals	1	None	Developing basic automotive skills and conducting basic auto repair.
Biomedical Technology	1	None	Exploring possible careers and general topics in the health science areas. Beginning level survey course.
Python Programming I (replacing Computer Programming I)	1	Completion of Math I (recommended)	Learning Python programming language basics, introducing data types, variables, input, functions, operators, conditional statements, loops, and incrementing.
<b>Computer Science Principles AP</b>	1	Completion of Math I (recommended)	A rigorous course that looks at broad Computer Science concepts rather than programming alone. Exploring the impacts of computing on how we think, communicate, work and play. Focus on problem solving, creativity and communication.
<b>Digital Media</b>	1	None	Designing and developing projects using Adobe Photoshop, Adobe Illustrator, and basic video and audio recording.
Health Science I	1	None	Advancing their knowledge of the systems of the body, disease, and issues one might encounter in the health science field. Students should be interested in continuing in the Health Science areas.
<b>Technology, Engineering &amp; Design</b> (replacing PLTW Intro to Engineering)	1	Completion of Math I (recommended)	Through engaging activities and hands-on project-based activities, students are introduced to the following concepts: elements and principles of design, basic engineering, problem solving, and teaming.
<b>Scientific Visualization I</b>	1	None	Developing 2-D and 3-D graphics and animation using various software programs. Emphasis on scientific and mathematical skills to create computer models.
Career Management	1	None	Prepare students to locate, secure, keep and change careers. Emphasis on self-assessment of interests & values, education & career exploration, and creation of career plan
<b>Computer Engineering Technology I</b>	1	None	Learn to install and maintain computers. Complete objectives in the following five domains, a) PC Hardware, b) Networking c) Laptops, d) Printers, and e) Operational Procedures.

**Level II Courses** (Recommended for 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> graders)

<b><u>Course Name</u></b>	<b><u>Credits</u></b>	<b><u>Prerequisites</u></b>	<b><u>For the student who is interested in:</u></b>
<b>Advanced Digital Media</b>	1	Digital Media	Expanding their skills in creating animation, editing graphics, web design, and audio/video production.
Automotive Service I	1	Automotive Service Fundamentals	Basic automotive skills in suspension & steering, heating & air conditioning and engine performance.
Automotive Service II	1	Automotive Service I	Builds on Automotive Service I and develops advanced knowledge and skills in vehicle system repair/replacement of components in the brakes, electrical systems, drivetrain, engine, HVAC and steering & suspension systems.
<b>Computer Programming II Honors</b>	1	Computer Programming I	Creating applications for smartphones or tablets and games for systems like X-Box.
<b>Game Art Design</b>	1	Scientific Visualization I	Utilizing artistic as well as mathematical/scientific skills to design and construct video games using virtual modeling.
<b>Scientific Visualization II Honors</b>	1	Scientific Visualization I	Advanced 2D & 3D graphics
<b>PLTW Principles of Engineering Honors</b> *course counts for honors plus added value weight	1	Introduction to Engineering Design	Exposure to concepts they will encounter in post secondary studies of engineering. Robotics, energy, materials, and construction of various mechanisms are the focus of this course.
<b>PLTW Computer Integrated Manufacturing Honors</b> *course counts for honors plus added value weight	1	Principles of Engineering Design (Must take Flexible Automation & Robotics as pair)	Students use 3-D computer software to solve design problems. They assess their solutions through the relationship of design, function and materials, modify their designs, and use prototyping equipment to produce 3-D models.
<b>Flexible Automation &amp; Robotics Honors</b>	1	Principles of Engineering Design (Must take PLTW Computer Integrated Manufacturing as pair)	Develop understanding of skills used in the areas of distribution, assembly line management, and entrepreneurial creation. Students will work with 3D printing technology, CNC machine devices, specialized software and robotics.
<b>Health Science II</b>	1	Health Science I	Developing a career in nursing, or any career in the health science field. Offers CPR and First Aid Certifications.
<b>Biomedical Technology II</b>	1	Biomedical Technology I	Focuses on genetics, neurobiology, sleep disorder and biological rhythms, bioethics, the evolution of medicine, and use of technology to study cellular and molecular biology.
Intro to Culinary Arts and Culinary Arts I	2	Must sign up for Intro AND Culinary Arts 1 – Completion of Foods I is recommended	Discovering the business side of food service industry, as well as advancing their cooking skills. ServSafe certification can be earned in the course.

**Advanced Level Courses** (Recommended for 11<sup>th</sup> and 12<sup>th</sup> graders)

<b><u>Course Name</u></b>	<b><u>Credits</u></b>	<b><u>Prerequisites</u></b>	<b><u>For the student who is interested in:</u></b>
<b>AP Computer Science</b>	1	Completion of Math III (Recommended)	A challenging college level course exploring the creation of complex programs and problem solving. Students can receive college credit by taking and scoring well on the AP Exam.
<b>Advanced Game Art Design</b>	1	Game Art Design	A continuation of the study of Game Design and interactivity. Students will compile a game portfolio, and work in collaborative teams to develop a final 3-D game project.
Automotive Service III	1	Automotive Service II	Building advanced automotive skills and knowledge in vehicle servicing, testing, repair, and diagnosis of brakes, electrical systems, drivetrain, engine, HVAC and steering & suspension systems, while emphasizing hands-on experience.
<b>Computer Engineering Tech II Honors</b>	1	Computer Engineering Tech I	Students learn operating systems, security, mobile devices, and troubleshooting
Culinary Arts II	2	2 block class Intro to Culinary/Culinary Arts I	Interacting with the public, ordering supplies, advertising and helping to run a school based culinary business.
<b>Nursing Fundamentals Honors</b>	2	2 block class Health Science II, 12 <sup>th</sup> grade only Completion of Application	Seeking Nurse Aide Certification (CNA). Clinical internship in a long-term care facility is included and required in the course.
<b>Pharmacy Technician Honors</b>	1	Health Science II, 12 <sup>th</sup> grade only	Prepare high school seniors for a pharmacy technician career. Topics include federal law, medication used in major body systems, calculations, and pharmacy operations. Eligible to take the Pharmacy Technician Certification Board (PTCB) exam.
<b>PLTW Engineering Design &amp; Development Honors</b>	1	Computer Integrated Manufacturing	Capstone Project Lead the Way (PLTW) course, students will work in teams to research, design, test and construct a solution to an open-ended engineering problem.

## **Additional Learning Opportunities at CTEC for 2019-2020**

### **Online Courses offered through North Carolina Virtual Public High School (NCVPS):**

Students may choose to take an online course through NCVPS as their second course choice at CTEC. Students will have a period devoted to working on their chosen course and can also work on their courses anywhere internet access is available. It is suggested that students taking online courses have strong computer navigation, time management, and reading skills in order to be successful in an online course.

A full listing of the courses offered in both fall and spring are available on the NCVPS website: [www.ncvps.org/](http://www.ncvps.org/)

Students should register for 'NCVPS CTEC Host' in PowerSchool in order to show enrollment in 2 courses at CTEC. Please inform your counselor of the actual course choice so you can be properly registered.

### **Interactive Video Conferencing Courses through the North Carolina School of Science and Mathematics (NCSSM)**

Select courses will be offered at CTEC via live video conferencing with an instructor from NCSSM. These courses are tuition free, and students will receive credit from NCSSM. Students must meet the prerequisites for all chosen courses. Fees and textbooks will be paid for by CTEC. All NCSSM courses carry honors credit and are very rigorous. Full course descriptions and prerequisites can be found here: [http://uniapp.ncssm.edu/registrar/catalog/ivc\\_courses.php](http://uniapp.ncssm.edu/registrar/catalog/ivc_courses.php), along with information about taking courses through video conferencing.

#### **Courses offered are:**

<b>FALL 2019</b>	<b>SPRING 2020</b>
<b>1<sup>st</sup> block</b> – <i>Must have transportation to CTEC because class begins before regular CTEC classes</i> <ul style="list-style-type: none"> <li>- <b>(8:00-9:10AM) Honors Aerospace Engineering</b></li> <li>- <b>(8:15-9:25AM) Honors Forensic Science</b></li> </ul>	<b>1<sup>st</sup> block</b> – <i>Must have transportation to CTEC because class begins before regular CTEC classes</i> <ul style="list-style-type: none"> <li>- <b>(8:05-9:15AM) Honors Aerospace Engineering</b></li> <li>- <b>(8:05-9:15AM) Honors Forensic Science</b></li> </ul>
<b>2<sup>nd</sup> block</b> <ul style="list-style-type: none"> <li>- <b>Honors Genetics &amp; Biotechnology</b></li> </ul>	<b>2<sup>nd</sup> block</b> <ul style="list-style-type: none"> <li>- <b>Honors Forensic Science</b></li> <li>- <b>Honors Intro to Artificial Intelligence</b></li> </ul>
<b>4<sup>th</sup> block</b> <ul style="list-style-type: none"> <li>- <b>Honors African American Studies</b></li> <li>- <b>Honors Connected Computing: Solving Global Challenges with Code</b></li> <li>- <b>Honors Physics</b></li> </ul>	<b>4<sup>th</sup> block</b> <ul style="list-style-type: none"> <li>- <b>Honors African American Studies</b></li> <li>- <b>Honors Physics</b></li> </ul>

## Alamance Community College - Career & College Promise

### University Transfer Pathway

#### 3rd block @ CTEC - 12:25-1:15PM - Transportation provided

Eligibility Requirements:

- Must be a junior or senior with at least 2.8 unweighted GPA
- Must meet testing benchmarks through Pre-ACT, ACT, PSAT, or SAT, or placement test if below a 2.8 unweighted GPA.

Fall	Spring
ENG 111: Writing and Inquiry T/TH	ENG 111: Writing and Inquiry T/TH
ART 111: Art Appreciation T/TH	ENG 112: Writing/Research in the Disc T/TH
PSY150: General Psychology MWF	MAT152: Statistics MWF
HIS131: American History 1 MWF	HIS132: American History 2 MWF

**Pick two courses each semester. Courses count as 1 extra GPA point.**

*The courses listed above are guaranteed to transfer to all 16 public universities and many private colleges as general education credit through the state Comprehensive Articulation Agreement.*

- The combination of ENG 111+112, and 231 or 232 can be taken in place of ENGLISH 3 in high school.
- The combination of ENG 111+112, and 241 or 242 can be taken in place of ENGLISH 4 in high school.
- SOC210 or PSY150 can be taken to fulfill the fourth social studies requirement **if a student takes AP US History**.
- HIS131 and HIS132 can be taken to fulfill the high school American History 1 and 2 requirements.
- MAT152 can be taken to fulfill 4th math requirement after Math 3.
- A score of 3 on the AP English exam = placement out of ENG 111 and a score of 4 on the AP English exam = placement out of ENG 111 and ENG 112.

### CTE pathway: Advertising and Graphic Design – Visual Arts

#### 5th Block @ CTEC: Monday-Thursday 3:45-5:15PM (Transportation not provided)

2.8 or higher unweighted GPA is recommended but not required. Courses **do not** have additional GPA point value.

Fall 2019 Semester

- PHO 222 & 242 Videography

Spring 2020 Semester

- GRD 167 & 168 Photography

Students earn an ACC certificate if they complete all 4 courses successfully.