

## 2023-24 CTE Programs of Study

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Tennessee's career and technical education (CTE) programs of study are meant to provide a relevant framework of industry-aligned, rigorous courses that progress a student in knowledge and skills year after year. They provide invaluable opportunities for students to experience a subject that they are passionate about and explore interests that lead to postsecondary learning and future career paths. These sequenced courses also reflect and support the three-credit elective focus requirement for graduation. Level 1 courses are encouraged to be taken by students in ninth grade; however, districts may make scheduling decisions that work best for their communities and students.

### Industry Credentials

Industry Credentials are aligned to programs of study. Due to the number of available industry credentials, the listing is no longer part of this document. To review promoted industry credentials by programs of study, visit <https://www.tn.gov/education/career-and-technical-education/student-industry-certification.html>.

For additional information about courses or programs of study, please reach out to [CTE.Standards@tn.gov](mailto:CTE.Standards@tn.gov) or visit our webpage at <https://www.tn.gov/education/career-and-technical-education.html>.



**Brentwood High School**



**Centennial High School**



**Fairview High School**



**Franklin High School**



**Independence High School**



**Nolensville High School**



**Page High School**



**Renaissance High School**



**Ravenwood High School**



**Summit High School**



**Entrepreneurship and Innovation Center (Open to ALL High School Students)**

**Signifies a Course Substitution**

# College, Career, Technical Education Pathways by Location



## Brentwood High

Business Management  
Coding  
Engineering 4 USA Practicum  
Marketing/Entrepreneurship  
STEM Research  
TV and Film Production



## Centennial High

Architecture Engineering and Design  
Coding/Web Design  
Cosmetology  
Criminal Justice  
Jobs for Tennessee Graduates  
JROTC  
Marketing Management  
Nursing  
Teaching as a Profession (with Early Childhood Site)  
TV and Film Production



## Fairview

Agriculture Education  
Jobs for Tennessee Graduates  
JROTC  
Mechatronics  
Sports & Human Performance  
Structural Systems  
Teaching as a Profession (with Early Childhood Site)  
TV and Film Production



## Franklin

Architecture Engineering and Design  
Automotive and Collision Repair  
BioSTEM  
Coding (Video Game Design)/Cybersecurity  
Criminal Justice  
Culinary Arts  
Digital Arts and Design  
Early Childhood Education Careers (with Early Childhood Site)  
JROTC  
Marketing  
Pre-Law  
STEM Research  
TV and Film Production



## Entrepreneurship and Innovation Center

Entrepreneurship (open to ALL high school students)



## Independence

Architecture Engineering and Design  
Criminal Justice  
Digital Arts and Design  
Early Childhood Education Careers (with Early Childhood Site)  
Fashion Design  
JROTC  
Marketing  
Nursing  
Sports Health & Nutrition  
TV and Film Production



## Nolensville

Culinary Arts  
Engineering  
Marketing  
Nursing  
Sports & Human Performance  
TV and Film Production  
Unmanned Aerial Systems



## Page

Agriculture Education – Veterinary and Animal Science  
Diagnostic Services/Pre-Med  
Engineering – Project Lead the Way  
JROTC  
Marketing Management  
TV and Film Production



## Ravenwood

Accounting  
Architecture Engineering and Design  
BioSTEM  
Coding  
Criminal Justice  
Digital Arts and Design  
Engineering Practicum  
JROTC  
Marketing  
Nursing  
Rehabilitative Careers  
Robotics  
TV and Film Design



## Renaissance

Digital Arts and Design  
Music and Audio Production  
TV and Film Design



## Summit

Coding/Cybersecurity  
Culinary Arts  
Digital Arts and Design  
Early Childhood Education Careers (with Early Childhood Site)  
Engineering – Project Lead the Way  
Marketing  
Sports and Human Performance  
TV and Film Production



## Advanced Manufacturing

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Mechatronics</b>  OFFERING LOCATIONS: Fairview 	Principles of Manufacturing (C13H05)	Digital Electronics (C13H07)	<b>Mechatronics I<sup>1</sup></b> (C13H16) -or- Robotics & Automated Systems (C13H15) -or- <b>Dual Enrollment</b> Mechatronics I (C13H04) -or- <b>Dual Enrollment</b> Mechatronics II (C13H21)	<b>Mechatronics II<sup>1</sup></b> (C13H17) -or- <b>Manufacturing Practicum</b> (C13H08) -or- <b>Dual Enrollment</b> Mechatronics III (C13H36) -or- <b>Dual Enrollment</b> Mechatronics IV (C13H37)

<sup>1</sup> Local dual credit and/or dual enrollment opportunities exist for this course.

<sup>2</sup> May be taught for 1 or 2 credits.

### Available courses for elective credit in this cluster:

- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Agriculture, Food, & Natural Resources

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Agribusiness</b>  Fairview Page   	<b>Agriscience 1</b> (C18H19) -or- Foundational Supervised Agricultural Experience <sup>6</sup> (C18H58)	<b>Principles of Farm and Agribusiness Management<sup>3</sup></b> (C18H41)	Organizational Leadership & Communications (C18H18) -or- Capstone Supervised Agricultural Experience (C18H57) -or- <b>Dual Enrollment</b> Agribusiness I (C18H03) -or- <b>Dual Enrollment</b> Agribusiness II (C18H32)	<b>Agricultural Business &amp; Finance<sup>2</sup></b> (C18H11) -or- <b>SDC</b> <b>Introduction to Agriculture Business<sup>4</sup></b> (C18H10) -or- <b>Dual Enrollment</b> Agribusiness III (C18H43) -or- <b>Dual Enrollment</b> Agribusiness IV (C18H44)
<b>Horticulture Science</b>  Fairview  	<b>Agriscience 1</b> (C18H19) -or- Foundational Supervised Agricultural Experience <sup>6</sup> (C18H58)	Principles of Plant Science & Hydroculture (C18H30)	Greenhouse Management (C18H17) -or- Capstone Supervised Agricultural Experience (C18H57) -or- <b>SDC</b> <b>Introduction to Plant Science<sup>1</sup></b> (C18H09) -or- <b>Dual Enrollment</b> Horticulture Science I (C18H05) -or- <b>Dual Enrollment</b> Horticulture Science II (C18H33)	<b>Landscaping &amp; Turf Science<sup>5</sup></b> (C18H16) -or- Unmanned Aircraft Systems in Agriculture (C18H40) -or- <b>Dual Enrollment</b> Horticulture Science III (C18H53) -or- <b>Dual Enrollment</b> Horticulture Science IV (C18H54)
<b>Veterinary and Animal Science</b>  Page  	<b>Agriscience 1</b> (C18H19) -or- Foundational Supervised Agricultural Experience <sup>6</sup> (C18H58)	Small Animal Science Technologies (C18H20)	Large Animal Science Technologies (C18H27) -or- Capstone Supervised Agricultural Experience (C18H57) -or- <b>Dual Enrollment</b> Veterinary & Animal Science I (C18H01) -or- <b>Dual Enrollment</b> Veterinary & Animal Science II (C18H34)	<b>Veterinary Science Technologies<sup>1</sup></b> (C18H21) -or- Unmanned Aircraft Systems in Agriculture (C18H40) -or- <b>Dual Enrollment</b> Veterinary & Animal Science III (C18H55) -or- <b>Dual Enrollment</b> Veterinary & Animal Science IV (C18H56)

<sup>1</sup> Satisfies one lab science credit required for graduation.

<sup>2</sup> Satisfies ½ credit of Personal Finance required for graduation.

<sup>3</sup> Satisfies the fourth math credit required for graduation.

<sup>4</sup> Satisfies the one economics credit required for graduation.

<sup>5</sup> Satisfies the one fine arts credit required for graduation.

<sup>6</sup> Supplemental Work-Based Learning opportunity for AFNR career cluster students.

### Available courses for elective credit in this cluster:

- **Floral Design and Operations** (C18H59) is a supplemental course that can be offered in addition to courses within the Horticulture Science program of study but does not count toward concentrator status.
- **Equine Science** (C18H60) is a supplemental course that can be offered in addition to courses within the Veterinary and Animal Science program of study but does not count toward concentrator status.

- ***Introduction to Geographical Information Systems*** (C18H39) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.
- ***Jobs for Tennessee Graduates*** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Architecture & Construction

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Architectural &amp; Engineering Design</b>   	Architectural & Engineering Design I (C17H13)	Architectural & Engineering Design II (C17H14)	Architectural & Engineering Design III (C17H10) - or - <b>Dual Enrollment</b> Architectural & Engineering Design I (C17H04) - or - <b>Dual Enrollment</b> Architectural & Engineering Design II (C17H28)	<b>Engineering Practicum</b> (C21H14) - or - <b>Dual Enrollment</b> Architectural & Engineering Design III (C17H35) - or - <b>Dual Enrollment</b> Architectural & Engineering Design IV (C17H36)

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Structural Systems</b> 	Fundamentals of Construction (C17H15)	Structural Systems I (C17H26)	Structural Systems II (C17H27) - or - <b>Dual Enrollment</b> Structural Systems I (C17H02) - or - <b>Dual Enrollment</b> Structural Systems II (C17H32)	Construction Practicum (C17H22) - or - <b>Dual Enrollment</b> Structural Systems III (C17H43) - or - <b>Dual Enrollment</b> Structural Systems IV (C17H44)

### Available courses for elective credit in this cluster:

- **Introduction to Geographic Information Systems** (C18H39) is a supplemental course that can be offered in addition to courses within the Architectural and Engineering Design program of study but does not count toward concentrator status.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.
- **Work Based Learning: Interior Design Career Practicum** (C17H06) is a supplemental course that can be offered in addition to courses within the Interior Design program of study but does not count toward concentrator status.

## Arts, Audio/Visual Technology, & Communications

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Audio/Visual Production</b>  <b>Offered at All High Schools</b>	A/V Production I (C11H01)	A/V Production II (C11H02)	A/V Production III (C11H03)	Applied Arts Practicum (C11H07) - <b>Dual Enrollment</b> Audio/Visual Production III (C11H18) - <b>Dual Enrollment</b> Audio/Visual Production IV (C11H19)
<b>Digital Arts &amp; Design</b> 	Digital Arts & Design I <sup>1</sup> (C11H06)	Digital Arts & Design II (C11H05)	Digital Arts & Design III (C11H16) - <b>Dual Enrollment</b> Digital Arts & Design I (C11H08) - <b>Dual Enrollment</b> Digital Arts & Design II (C11H09)	Applied Arts Practicum (C11H07) - <b>AP</b> 2-D Art and Design <sup>1</sup> (G05H30) - <b>Dual Enrollment</b> Digital Arts & Design III (C11H20) - <b>Dual Enrollment</b> Digital Arts & Design IV (C11H21)
<b>Fashion Design</b> 			Fashion Design (C11H10)	

<b>Music Industry Audio Production</b> 	Music Industry Audio Production I (Y26H55)	Music Industry Audio Production II (Y26H56)	Music Industry Audio Production III (Y26H57)	
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<sup>1</sup> Satisfies Visual and Performing Arts credit required for graduation.

**Available courses for elective credit in this cluster:**

- ***Journalism*** (G01H15) is a supplemental course that can be offered in addition to courses within the Audio/Visual Production program of study but does not count toward concentrator status.
- ***Work-Based Learning: Fashion Design Career Practicum*** (C11H24) is a supplemental course that can be offered in addition to courses within the Fashion Design program of study but does not count toward concentrator status.
- ***Jobs for Tennessee Graduates*** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Business Management & Administration

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Business Management</b> 	Introduction to Business & Marketing (C12H26)	Accounting I (C29H00)	<b>Business Management<sup>2</sup></b> (C12H17) -or- <b>SDC</b> <b>Introduction to Business<sup>1</sup></b> (C12H44)	

<sup>1</sup> Satisfies ½ credit of Economics required for graduation.

<sup>2</sup> Satisfies ½ credit of Personal Finance required for graduation.

### Available courses for elective credit in this cluster:

- **American Business Legal Systems** (C12H20) and **Business Economics** (C12H21) are supplemental courses that can be offered in addition to courses within the Business Management and Human Resources Management programs of study but do not count toward concentrator status.
- **Work-Based Learning: Office Management Career Practicum** (C12H60) is a supplemental course that can be offered in addition to courses within the Office Management program of study but do not count toward concentrator status.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Education & Training

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Early Childhood Education Careers</b>   	Early Childhood Education Careers I (C32H06)	Early Childhood Education Careers II (C32H07)	Early Childhood Education Careers III (C32H08)	Early Childhood Education Careers IV (C32H09) -or- <b>SDC</b> Introduction to Education (C32H28)
<b>Teaching as a Profession (K-12)</b>   	Introduction to Teaching as a Profession (C32H33)	Teaching as a Profession I (C32H01)	Teaching as a Profession II (C32H02)	<b>Teaching as a Profession Practicum</b> (C32H03) -or- <b>SDC</b> Introduction to Education (C32H28)

### Available courses for elective credit in this cluster:

- **Work-Based Learning: Early Childhood Education Career Practicum** (C32H34) is a supplemental course that can be offered in addition to courses within the Early Childhood Education Careers program of study but do not count toward concentrator status.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Finance

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Accounting</b> 	Introduction to Business & Marketing (C12H26)	Accounting I (C29H00) -or- <b>IGCSE</b> Accounting (C29H08)	Accounting II (C29H01)	Financial Planning (C29H02) -or- <b>Dual Enrollment</b> Accounting III (C29H12) -or- <b>Dual Enrollment</b> Accounting IV (C29H13)
<b>Banking and Finance</b> 	Introduction to Business & Marketing (C12H26)	Accounting I (C29H00) -or- <b>IGCSE</b> Accounting (C29H08)	Banking & Finance (C29H03) -or- <b>Dual Enrollment</b> Banking & Finance I (C29H09) -or- <b>Dual Enrollment</b> Banking & Finance II (C29H10)	Financial Planning (C29H02) -or- <b>Dual Enrollment</b> Banking & Finance III (C29H14) -or- <b>Dual Enrollment</b> Banking & Finance IV (C29H15)

### Available courses for elective credit in this cluster:

- **Work-Based Learning: Accounting Career Practicum** (C29H16) is a supplemental course that can be offered in addition to courses within the Accounting program of study but do not count toward concentrator status.
- **Work-Based Learning: Banking and Finance Career Practicum** (C29H17) is a supplemental course that can be offered in addition to courses within the Banking and Finance program of study but do not count toward concentrator status.
- **Personal Finance** (C29H11) is a course required for graduation but does not count toward concentrator status in a program of study.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Government & Public Administration

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Leadership in Government</b> 	<b>JROTC I</b> <sup>1&amp;2</sup> (G08H04)	<b>JROTC II</b> <sup>1&amp;2</sup> (G08H05) - or - Public Management & Administration (C15H16)	U.S. Government & Civics (G04H12) - or - <b>JROTC III</b> <sup>1</sup> (G08H06) - or - <b>Dual Enrollment</b> Leadership in Community Emergency Response I (C15H22) - or - <b>Dual Enrollment</b> Leadership in Community Emergency Response II (C15H23)	Success Skills through Service Learning (C25H15) - or - JROTC IV (G08H07) - or - <b>Dual Enrollment</b> Leadership in Community Emergency Response III (C15H25) - or - <b>Dual Enrollment</b> Leadership in Community Emergency Response IV (C15H26)

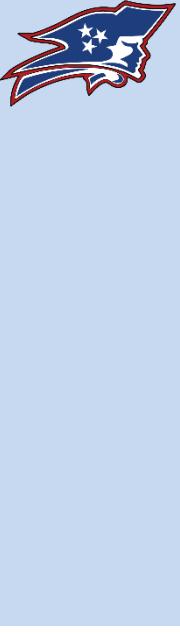
<sup>1</sup>JROTC I, II, and III satisfies the graduation requirement for Physical Education, Personal Finance and U.S. Government & Civics for students who complete all three courses.

<sup>2</sup>JROTC I and II satisfies credit the graduation requirement for Wellness for students who complete both courses.

### Available courses for elective credit in this cluster:

- **Work-Based Learning: Leadership in Government Career Practicum** (C15H29) is a supplemental course that can be offered in addition to courses within the Leadership in Government program of study but do not count toward concentrator status.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Health Science

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Diagnostic Services</b> 	Health Science Education (C14H14)	Anatomy & Physiology (C14H09)	Diagnostic Medicine (C14H12)	<b>Clinical Internship</b> (C14H11)
<b>Sport and Human Performance</b> 	Health Science Education (C14H14)	Human Anatomy & Physiology <sup>1</sup> (G03H31) - or - <b>Anatomy &amp; Physiology</b> (C14H09) - or - <b>Dual Enrollment</b> Human Anatomy & Physiology I <sup>1</sup> (G03H43)	Rehabilitation Careers (C14H08) - or - <b>Dual Enrollment</b> Sport and Human Performance I (C14H39) - or - <b>Dual Enrollment</b> Sport and Human Performance II (C14H40) - or - <b>Dual Enrollment</b> Human Anatomy & Physiology II <sup>1</sup> (G03H44) - or - <b>IB</b> Sports, Exercise, & Health Science I SL/HL (G03H39)	Exercise Science (C14H22) - or - <b>Clinical Internship</b> (C14H11) - or - <b>Dual Enrollment</b> Sport and Human Performance III (C14H41) - or - <b>Dual Enrollment</b> Sport and Human Performance IV (C14H42) - or - <b>IB</b> Sports, Exercise, & Health Science II SL/HL (G03H40)
<b>Therapeutic Services</b> 	Health Science Education (C14H14)	Human Anatomy & Physiology <sup>1</sup> (G03H31) - or - <b>Anatomy &amp; Physiology</b> (C14H09) - or - <b>Dual Enrollment</b> Human Anatomy & Physiology I <sup>1</sup> (G03H43)	Dental Science (C14H21) - or - Pharmacological Sciences (C14H20) - or - Nutrition Science & Diet Therapy <sup>1</sup> (C19H16) - or - Medical Therapeutics (C14H15) - or - Medical Assisting (C14H10) - or - Public Health & Epidemiology (C14H17) - or - <b>Dual Enrollment</b> Therapeutic Services I (C14H05) - or - <b>Dual Enrollment</b>	<b>Clinical Internship</b> (C14H11) - or - <b>Dual Enrollment</b> Therapeutic Services III (C14H43) - or - <b>Dual Enrollment</b> Therapeutic Services IV (C14H44) - or - <b>Dual Enrollment</b> Medical Assisting (C14H32)

Program of Study	Level 1	Level 2	Level 3	Level 4
			<p>Therapeutic Services II (C14H28)</p> <p>-or-</p> <p><b>Dual Enrollment</b> Human Anatomy &amp; Physiology II<sup>1</sup> (G03H44)</p>	
<b>Nursing Services</b>   	Health Science Education (C14H14)	<b>Anatomy &amp; Physiology</b> (C14H09)	Medical Therapeutics (C14H15)	<b>Nursing Education</b> (C14H16) <p>-or-</p> <b>Clinical Internship</b> (C14H11)

<sup>1</sup> Satisfies one lab science credit for graduation.

**Available courses for elective credit in this cluster:**

- **Medical Terminology** (C14H07) is a supplemental course that can be offered in addition to courses within the Health Science career cluster but does not count toward concentrator status.
- **Dual Enrollment Medical Terminology** (C14H31) is a supplemental dual enrollment course that can be offered in addition to courses within the Health Science career cluster but does not count toward concentrator status.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Human Services

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Cosmetology</b> 	Cosmetology I (C19H12)	Cosmetology II (C19H14)	Cosmetology III (C19H13)	Cosmetology IV (C19H21)
<b>Dietetics and Nutrition</b> 	Introduction to Human Studies (C19H19)	Nutrition Across the Lifespan (C19H15) -or- <b>IGCSE</b> Food & Nutrition (C19H08)	<b>Nutrition Science &amp; Diet Therapy</b> <sup>2</sup> (C19H16) -or- <b>Dual Enrollment</b> Dietetics & Nutrition I (C19H03) -or- <b>Dual Enrollment</b> Dietetics & Nutrition II (C19H22)	Human Services Practicum (C19H20) -or- Psychology (G04H15) -or- Sociology (G04H14) -or- <b>Dual Enrollment</b> Dietetics & Nutrition III (C19H31) -or- <b>Dual Enrollment</b> Dietetics & Nutrition IV (C19H32)

<sup>1</sup>Satisfies ½ credit of Economics required for graduation.

<sup>2</sup>Satisfies one lab science credit for graduation.

<sup>3</sup>Satisfies ½ credit of Personal Finance required for graduation.

### Available courses for elective credit in this cluster:

- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.
- **Work-Based Learning: Cosmetology Career Practicum** (C19H35) is a supplemental course that can be offered in addition to courses within the Cosmetology program of study but does not count toward concentrator status.
- **Work Based Learning: Barbering Career Practicum** (C19H36) is a supplemental course that can be offered in addition to courses within the Barbering program of study but does not count toward concentrator status.

## Information Technology

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Coding</b>      	<b>Computer Science Foundations</b> (C10H11)	<b>Coding I</b> (C10H14)	<b>Coding II</b> (C10H15) -or- <b>AP Computer Science Principles</b> (G02H44) -or- <b>Dual Enrollment</b> Coding I (C10H01) -or- <b>Dual Enrollment</b> Coding II (C10H28)	<b>Coding Practicum</b> (C10H08) -or- <b>AP Computer Science A</b> (G02H45) -or- <b>Dual Enrollment</b> Coding III (C10H32) -or- <b>Dual Enrollment</b> Coding IV (C10H33) -or- <b>CIE Computer Science 1 AS Level</b> (C10H25)
<b>Cybersecurity</b>  	<b>Computer Science Foundations</b> (C10H11)	<b>Cybersecurity I</b> (C10H19)	<b>Cybersecurity II</b> (C10H20) -or- <b>AP Computer Science Principles</b> (G02H44) -or- <b>Dual Enrollment</b> Cybersecurity I (C10H24) -or- <b>Dual Enrollment</b> Cybersecurity II (C10H31)	<b>Cybersecurity Practicum</b> (C10H21) -or- <b>Dual Enrollment</b> Cybersecurity III (C10H34) -or- <b>Dual Enrollment</b> Cybersecurity IV (C10H35)

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Web Design</b> 	<p><b>Computer Science Foundations</b> (C10H11) -or- <b>IGCSE</b> Information and Communication Technology (C10H26)</p>	<p><b>Web Design Foundations</b> (C10H16)<sup>1</sup></p>	<p>Web Site Development (C10H17) -or- <b>AP</b> <b>Computer Science Principles</b> (G02H44) -or- <b>Dual Enrollment</b> Web Design I (C10H03) -or- <b>Dual Enrollment</b> Web Design II (C10H30)</p>	<p><b>Web Design Practicum</b> (C10H18) -or- <b>Dual Enrollment</b> Web Design III (C10H38) -or- <b>Dual Enrollment</b> Web Design IV (C10H39)</p>

<sup>1</sup> Satisfies Visual and Performing Arts credit required for graduation.

**Available courses for elective credit in this cluster:**

- **Introduction to Geographic Information Systems** (C18H39) is a supplemental course that can be offered in addition to courses within the Cybersecurity program of study but does not count toward concentrator status.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Hospitality & Tourism

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Culinary Arts</b>   	Culinary Arts I (C16H06)	Culinary Arts II (C16H07)	Culinary Arts III (C16H08)	Culinary Arts IV (C16H09)

### Available courses for elective credit in this cluster:

- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.
- **Work-Based Learning: Culinary Arts Career Practicum** (C16H21) is a supplemental course that can be offered in addition to courses within the Culinary Arts program of study but does not count toward concentrator status.
- **Work-Based Learning: Hospitality and Tourism Management Career Practicum** (C16H22) is a supplemental course that can be offered in addition to courses within the Hospitality and Tourism Management program of study but does not count toward concentrator status.

## Law, Public Safety, Corrections, & Security

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Criminal Justice and Correction Services</b>     	Criminal Justice I (C30H00)	Criminal Justice II (C30H01)	Criminal Justice III: Forensic Criminal Investigations (C30H02) -or- <b>SDC</b> <b>Criminal Justice<sup>1</sup></b> (C30H11)	Criminal Justice Practicum (C30H03)
<b>Pre-Law</b>  	<b>Pre-Law I<sup>2</sup></b> (C30H08)	<b>Pre-Law II<sup>2</sup></b> (C30H09)	<b>Pre-Law III<sup>2</sup></b> (C30H10) -or- <b>Dual Enrollment</b> Pre-Law I (C30H16) -or- <b>Dual Enrollment</b> Pre-Law II (C30H17)	Pre-Law Practicum (C30H19) -or- <b>AP</b> U.S. Government & Politics (G04H26) -or- <b>Dual Enrollment</b> Pre-Law III (C30H24) -or- <b>Dual Enrollment</b> Pre-Law IV (C30H25)

<sup>1</sup>Statewide Dual Credit Criminal Justice **requires** Criminal Justice I **and** Criminal Justice II as prerequisite courses. Students cannot take Statewide Dual Credit Criminal Justice without having already completed the first two courses in the program of study.

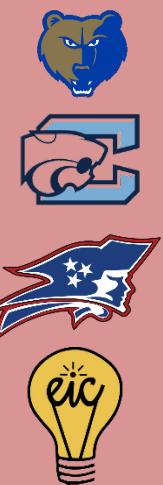
<sup>2</sup>Pre-Law I, II, and III satisfies credit the graduation requirement for U.S. Government and Civics for students who complete all three courses.

<sup>3</sup>Satisfies ½ credit of US Government required for graduation.

### Available courses for elective credit in this cluster:

- **American Business Legal Systems** (C12H20)<sup>3</sup> is a supplemental course that can be offered in addition to courses within the Pre-Law program of study but does not count toward concentrator status.
- **Work-Based Learning: Fire Management Career Practicum** (C30H26) is a supplemental course that can be offered in addition to courses within the Fire Management Services program of study but does not count toward concentrator status.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Marketing, Distribution & Logistics

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Entrepreneurship</b>  	Introduction to Entrepreneurship (C31H23)	<b>Marketing &amp; Management I: Principles<sup>1</sup></b> (C31H00)	<b>Entrepreneurship I</b> (C31H05) -or- <b>Dual Enrollment</b> Entrepreneurship I (C31H12) -or- <b>Dual Enrollment</b> Entrepreneurship II (C31H14) -or- <b>IGCSE</b> Enterprise (C31H13)	<b>Business &amp; Entrepreneurship Practicum</b> (C12H35) -or- <b>Virtual Enterprise International<sup>1</sup></b> (C12H23) -or- <b>Dual Enrollment</b> Entrepreneurship III (C31H17) -or- <b>Dual Enrollment</b> Entrepreneurship IV (C31H18)
<b>Marketing Management</b>  	Introduction to Business & Marketing (C12H26)	<b>Marketing &amp; Management I: Principles<sup>1</sup></b> (C31H00)	<b>Marketing &amp; Management II: Advanced Strategies</b> (C31H01) -or- <b>Social Media and Analytics</b> (C31H02) -or- <b>SDC</b> Principles of Marketing (C31H27)	<b>Advertising &amp; Public Relations</b> (C31H03) -or- <b>Retail Operations<sup>1</sup></b> (C31H04) -or- <b>Event Planning &amp; Management</b> (C16H12)

<sup>1</sup> Satisfies ½ credit of Economics required for graduation.

### Available courses for elective credit in this cluster:

- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.
- **Work-Based Learning: Marketing Management Career Practicum** (C31H28) is a supplemental course that can be offered in addition to courses within the Marketing Management program of study but does not count toward concentrator status.

## STEM

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Advanced STEM Applications</b>	STEM I: Foundation (C21H15)	STEM II: Applications (C21H16)	<b>STEM III: STEM in Context</b> (C21H17) -or- <b>AP</b> Computer Science Principles (G02H44) -or- <b>Dual Enrollment</b> Advanced STEM Applications I (C21H32) -or- <b>Dual Enrollment</b> Advanced STEM Applications II (C21H33)	<b>STEM IV: STEM Practicum</b> (C21H18) -or- <b>AP</b> Calculus AB (G02H24) -or- <b>AP</b> Calculus BC (G02H25) -or- <b>AP</b> Computer Science A (G02H45) -or- <b>AP</b> Biology (G03H10) -or- <b>AP</b> Chemistry (G03H16) -or- <b>AP</b> Physics I: Algebra-Based (G03H27) -or- <b>AP</b> Physics II: Algebra-Based (G03H28) -or- <b>AP</b> Physics C: Electricity & Magnetism (G03H24) -or- <b>AP</b> Physics C: Mechanics (G03H29) -or- <b>Dual Enrollment</b> Advanced STEM Applications III (C21H35) -or- <b>Dual Enrollment</b> Advanced STEM Applications IV (C21H36) -or- <b>IB</b> Biology II SL/HL (G03H69) -or- <b>IB</b> Physics II SL (G03H82)

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>BioSTEM</b> 	<p>BioSTEM I (C21H07)</p> <p><i>Alternate Course Name</i> <i>BioMedical Interventions</i> <i>(Ravenwood)</i> <i>PLTW (Franklin)</i></p>	BioSTEM II (C21H08)	<p><b>BioSTEM III</b> (C21H09) -or- <b>Dual Enrollment</b> BioSTEM I (C21H37) -or- <b>Dual Enrollment</b> BioSTEM II (C21H38)</p>	<p><b>BioSTEM Practicum</b> (C21H10) -or- <b>Dual Enrollment</b> BioSTEM III (C21H39) -or- <b>Dual Enrollment</b> BioSTEM IV (C21H40)</p>
<b>Engineering</b> 	Principles of Engineering & Technology (C21H04)	<p>Engineering Design I (C21H05) -or- <b>IGCSE</b> Design &amp; Technology (C21H03)</p>	<p><b>Engineering Design II</b> (C21H06) -or- <b>AP</b> Computer Science Principles (G02H44)</p>	Engineering Practicum (C21H14)
<b>Technology</b>	Principles of Engineering & Technology (C21H04)	Digital Electronics (C13H07)	<p>Robotics &amp; Automated Systems (C13H15) -or- <b>AP</b> Computer Science Principles (G02H44) -or- <b>Dual Enrollment</b> Technology I (C21H01) -or- <b>Dual Enrollment</b> Technology II (C21H12)</p>	<p>Engineering Practicum (C21H14) -or- <b>AP</b> Physics I: Algebra-Based (G03H27) -or- <b>AP</b> Physics II: Algebra-Based (G03H28) -or- <b>AP</b> Physics C: Electricity &amp; Magnetism (G03H24) -or-</p>

Program of Study	Level 1	Level 2	Level 3	Level 4
				<p><b>AP</b> Physics C: Mechanics (G03H29) -or- <b>AP</b> Computer Science A (G02H45) -or- <b>Dual Enrollment</b> Technology III (C21H43) -or- <b>Dual Enrollment</b> Technology IV (C21H44) -or- <b>IB</b> Physics II SL (G03H82)</p>

**Available courses for elective credit in this cluster:**

- **Introduction to Geographical Information Systems (GIS)** (C18H39) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Foundations of Technology (EBD)** (C21H27) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Technological Design (EBD)** (C21H28) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Advanced Design Applications (EBD)** (C21H29) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Advanced Technological Applications (EBD)** (C21H30) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Engineering Design (EBD)** (C21H31) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Introduction to Engineering Design (PLTW)** (C21H19) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Principles of Engineering (PLTW)** (C21H20) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Aerospace Engineering (PLTW)** (C21H21) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Civil Engineering & Architecture (PLTW)** (C21H22) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Biotechnical Engineering (PLTW)** (C21H23) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Digital Electronics (PLTW)** (C21H24) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Computer Integrated Manufacturing (PLTW)** (C21H25) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Engineering Design & Development (PLTW)** (C21H26) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Medical Detectives (PLTW)** (C14801) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status.
- **Energy & the Environment (PLTW)** (C25802) is a supplemental course that can be offered in addition to courses within these programs of study but does not count toward concentrator status
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

## Transportation

Program of Study	Level 1	Level 2	Level 3	Level 4
<b>Automotive Collision Repair</b> 	Introduction to Collision Repair (C20H20)	Collision Repair: Non-Structural <sup>1</sup> (C20H13)	Collision Repair: Painting & Refinishing <sup>1</sup> (C20H14) -or- <b>Dual Enrollment</b> Automotive Collision Repair I (C20H02) -or- <b>Dual Enrollment</b> Automotive Collision Repair II (C20H23)	Collision Repair: Damage Analysis, Estimating, and Customer Service (C20H19) -or- <b>Dual Enrollment</b> Automotive Collision Repair III (C20H24) -or- <b>Dual Enrollment</b> Automotive Collision Repair IV (C20H31)

<sup>1</sup> May be taught for up to three credits. Implementation options vary; contact the career cluster consultant for more information.

### Available courses for elective credit in this cluster:

- **Work-Based Learning: Automotive Maintenance and Light Repair Career Practicum** (C20H34) is a supplemental course that can be offered in addition to courses within the Automotive Maintenance and Light Repair program of study but does not count toward concentrator status.
- **Work-Based Learning: Automotive Collision Repair Career Practicum** (C20H35) is a supplemental course that can be offered in addition to courses within the Automotive Collision Repair program of study but does not count toward concentrator status.
- Programs of study in the areas of *Aviation Flight* can be found at a Tennessee College of Applied Technology. Please look at the regional campus to determine course offerings. The following dual enrollment course codes apply **Dual Enrollment Aviation Maintenance I** (C20H04) and **Dual Enrollment Diesel Technology I** (C20H06).
- **Work-Based Learning: Aviation Flight Career Practicum** (C20H36) is a supplemental course that can be offered in addition to courses within the Aviation Flight program of study but does not count toward concentrator status.
- **Jobs for Tennessee Graduates** (C25H09) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status

## WCS College, Career, and Technical Education Programs



### Brentwood High

Business Management  
Coding  
Engineering 4 USA Practicum  
Marketing/Entrepreneurship  
STEM Research  
TV and Film Production



### Centennial High

Architecture Engineering and Design  
Coding/Web Design  
Cosmetology  
Criminal Justice  
Jobs for Tennessee Graduates  
JROTC  
Marketing Management  
Nursing  
Teaching as a Profession (with Early Childhood Site)  
TV and Film Production



### Fairview

Agriculture Education  
Jobs for Tennessee Graduates  
JROTC  
Mechatronics  
Sports & Human Performance  
Structural Systems  
Teaching as a Profession (with Early Childhood Site)  
TV and Film Production



### Franklin

Architecture Engineering and Design  
Automotive and Collision Repair  
BioSTEM  
Coding (Video Game Design)/Cybersecurity  
Criminal Justice  
Culinary Arts  
Digital Arts and Design  
Early Childhood Education Careers (with Early Childhood Site)  
JROTC  
Marketing  
Pre-Law  
STEM Research  
TV and Film Production



### Independence

Architecture Engineering and Design  
Criminal Justice  
Digital Arts and Design  
Early Childhood Education Careers (with Early Childhood Site)  
Fashion Design  
JROTC  
Marketing  
Nursing  
Sports Health & Nutrition  
TV and Film Production



### Nolensville

Culinary Arts  
Engineering  
Marketing  
Nursing  
Sports & Human Performance  
TV and Film Production  
Unmanned Aerial Systems



### Page

Agriculture Education – Veterinary and Animal Science  
Diagnostic Services/Pre-Med  
Engineering – Project Lead the Way  
JROTC  
Marketing Management  
TV and Film Production



### Ravenwood

Accounting  
Architecture Engineering and Design  
BioSTEM  
Coding  
Criminal Justice  
Digital Arts and Design  
Engineering Practicum  
JROTC  
Marketing  
Nursing  
Rehabilitative Careers  
Robotics  
TV and Film Design



### Renaissance

Digital Arts and Design  
Music and Audio Production  
TV and Film Design



### Summit

Coding/Cybersecurity  
Culinary Arts  
Digital Arts and Design  
Early Childhood Education Careers (with Early Childhood Site)  
Engineering – Project Lead the Way  
Marketing  
Sports and Human Performance  
TV and Film Production

