2023-24 CTE Programs of Study

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.

Advanced Manufacturing

Program of Study	Level 1	Level 2	Level 3	Level 4
Industrial Maintenance Technology	Principles of Manufacturing (C13H05)	Introduction to Industrial Maintenance (C13H28)	Advanced Industrial Maintenance (C13H29) -or- **Dual Enrollment** Industrial Maintenance Technology I (C13H30) -or- **Dual Enrollment** Industrial Maintenance Technology II (C13H31)	Manufacturing Practicum [2] (C13H08) -or- **Dual Enrollment** Industrial Maintenance Technology III (C13H32) -or- **Dual Enrollment** Industrial Maintenance Technology IV (C13H33) -or- **WBL** Industrial Maintenance Technology Career Practicum [1] (C13H40)
Machining Technology	Principles of Manufacturing (C13H05)	Principles of Machining I (C13H09)	Principles of Machining II (C13H06) -or- **Dual Enrollment** Machining Technology I (C13H01) -or- **Dual Enrollment** Machining Technology II (C13H20)	Manufacturing Practicum [2] (C13H08) -or- **Dual Enrollment** Machining Technology III (C13H34) -or- **Dual Enrollment** Machining Technology IV (C13H35) -or- **WBL** Machining Technology Career Practicum [1] (C13H41)
Mechatronics	Principles of Manufacturing (C13H05)	Digital Electronics (C13H07)	Mechatronics I (C13H16) -or- Robotics & Automated Systems (C13H15) -or- **Dual Enrollment** Mechatronics I (C13H04) -or- **Dual Enrollment** Mechatronics II (C13H21)	Mechatronics II (C13H17) -or- Manufacturing Practicum [2] (C13H08) -or- **Dual Enrollment** Mechatronics III (C13H36) -or- **Dual Enrollment** Mechatronics IV (C13H37) -or- **WBL** Mechatronics Career Practicum [1] (C13H42)

Program of Study	Level 1	Level 2	Level 3	Level 4
Welding	Principles of Manufacturing (C13H05)	Welding I (C13H12)	Welding II (C13H10) -or- **Dual Enrollment** Welding I (C13H03) -or- **Dual Enrollment** Welding II (C13H18)	Manufacturing Practicum [2] (C13H08) -or- **Dual Enrollment** Welding III (C13H38) -or- **Dual Enrollment** Welding IV (C13H39) -or- **WBL** Welding Career Practicum [1] (C13H43)

[1] May be taught for 1 or 2 credits.
[2] A student pursuing an Industry 4.0 diploma distinction may substitute their 4th credit of math with this work-based learning course.

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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) 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
Agribusiness	Agriscience [1] (C18H19) -or- Foundational Supervised Agricultural Experience [2] (C18H58)	Principles of Farm and Agribusiness Management [3] (C18H41)	Organizational Leadership & Communications (C18H18) -or- Capstone Supervised Agricultural Experience (C18H57) -or- **Dual Enrollment** Agribusiness I (C18H03) -or- **Dual Enrollment** Agribusiness II (C18H32)	Agricultural Business & Finance [4 & 5] (C18H11) -or- **SDC** Introduction to Agriculture Business [5] (C18H10) -or- **Dual Enrollment** Agribusiness III (C18H43) -or- **Dual Enrollment** Agribusiness IV (C18H44) -or- **WBL** Agribusiness Career Practicum [6] (C18H61)
Agricultural Engineering, Industrial, and Mechanical Systems	Agriscience [1] (C18H19) -or- Foundational Supervised Agricultural Experience [2] (C18H58)	Principles of Agricultural Mechanics (C18H12)	Agricultural Power & Equipment (C18H13) -or- Capstone Supervised Agricultural Experience (C18H57) -or- **Dual Enrollment** Agricultural Engineering, Industrial, and Mechanical Systems I (C18H45) -or- **Dual Enrollment** Agricultural Engineering, Industrial, and Mechanical Systems II (C18H46)	Agricultural Fabrication and Biosystems Engineering [3] (C18H42) -or- Unmanned Aircraft Systems in Agriculture (C18H40) -or- **Dual Enrollment** Agricultural Engineering, Industrial, and Mechanical Systems III (C18H47) -or- **Dual Enrollment** Agricultural Engineering, Industrial, and Mechanical Systems IV (C18H48) -or- **WBL** Agricultural Engineering, Industrial, and Mechanical Systems Career Practicum [6] (C18H62)
Environmental and Natural Resource Management	Agriscience [1] (C18H19) -or- Foundational Supervised Agricultural Experience [2] (C18H58)	Applied Environmental Science [1] (C18H25) -or- **IGCSE** Environmental Management (C18H07)	Plant & Soil Science [1] (C18H15) -or- Capstone Supervised Agricultural Experience (C18H57) -or- **Dual Enrollment** Environmental & Natural Resources Management I (C18H06) -or-	Natural Resources Management [1] (C18H28) -or- Unmanned Aircraft Systems in Agriculture (C18H40) -or- **AP** Environmental Science (G03H25) -or-

Program of Study	Level 1	Level 2	Level 3	Level 4
			Dual Enrollment Environmental & Natural Resources Management II (C18H36) -or- **IB** Environmental Systems & Societies I SL (G03H36)	**Dual Enrollment** Environmental & Natural Resources Management III (C18H49) -or- **Dual Enrollment** Environmental & Natural Resources Management IV (C18H50) -or- **IB** Environmental Systems & Societies II SL (G03H34) -or- **WBL** Environmental and Natural Resource Management Career Practicum [6] (C18H63)
Food Science	Agriscience [1] (C18H19) -or- Foundational Supervised Agricultural Experience [2] (C18H58)	Principles of Food Production (C18H29)	Food Science & Safety [1] (C18H26) -or- Capstone Supervised Agricultural Experience (C18H57) -or- **Dual Enrollment** Food Science I (C18H04) -or- **Dual Enrollment** Food Science II (C18H37)	Advanced Food Science [1] (C18H24) -or- **Dual Enrollment** Food Science III (C18H51) -or- **Dual Enrollment** Food Science IV (C18H52) -or- **WBL** Food Science Career Practicum [6] (C18H64)
Horticulture Science	Agriscience [1] (C18H19) -or- Foundational Supervised Agricultural Experience [2] (C18H58)	Principles of Plant Science & Hydroculture (C18H30)	Greenhouse Management (C18H17) -or- Capstone Supervised Agricultural Experience (C18H57) -or- **SDC** Introduction to Plant Science [1] (C18H09) -or- **Dual Enrollment** Horticulture Science I (C18H05) -or- **Dual Enrollment** Horticulture Science II (C18H33)	Landscaping & Turf Science [7] (C18H16) -or- Unmanned Aircraft Systems in Agriculture (C18H40) -or- **Dual Enrollment** Horticulture Science III (C18H53) -or- **Dual Enrollment** Horticulture Science IV (C18H54) -or- **WBL** Horticulture Science Career Practicum [6] (C18H65)
Veterinary and Animal Science	Agriscience [1] (C18H19) -or-	Small Animal Science Technologies (C18H20)	Large Animal Science Technologies (C18H27) -or-	Veterinary Science Technologies [1] (C18H21) -or-

Program of Study	Level 1	Level 2	Level 3	Level 4
	Foundational Supervised Agricultural Experience [2] (C18H58)		Capstone Supervised Agricultural Experience (C18H57) -or- **Dual Enrollment** Veterinary & Animal Science I (C18H01) -or- **Dual Enrollment** Veterinary & Animal Science II (C18H34)	Unmanned Aircraft Systems in Agriculture (C18H40) -or- **Dual Enrollment** Veterinary & Animal Science III (C18H55) -or- **Dual Enrollment** Veterinary & Animal Science IV (C18H56) -or- **WBL** Veterinary and Animal Science Career Practicum [6] (C18H66)

[1] Satisfies the third lab science credit required for graduation.
[2] Supplemental Work-Based Learning opportunity for AFNR career cluster students.
[3] Satisfies the fourth math credit required for graduation.
[4] Satisfies ½ credit of Personal Finance required for graduation.
[5] Satisfies the one economics credit required for graduation.
[6] May be taught for 1 or 2 credits.
[7] Satisfies the one fine arts credit required for graduation.

Available courses for elective credit in this cluster:
- *Floral Design and Operations* [7] (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 (GIS)* (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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) 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
Architectural & Engineering Design	Architectural & Engineering Design I (C17H13)	Architectural & Engineering Design II (C17H14)	Architectural & Engineering Design III (C17H10) -or- **Dual Enrollment** Architectural & Engineering Design I (C17H04) -or- **Dual Enrollment** Architectural & Engineering Design II (C17H28)	Engineering Practicum (C21H14) -or- **AP** Calculus AB [3] (G02H24) -or- **AP** Calculus BC [3] (G02H25) -or- **AP** Physics I: Algebra-Based [3] (G03H27) -or- **AP** Physics II: Algebra-Based [3] (G03H28) -or- **AP** Physics C: Electricity & Magnetism [3] (G03H24) -or- **AP** Physics C: Mechanics [3] (G03H29) -or- **Dual Enrollment** Architectural & Engineering Design III (C17H35) -or- **Dual Enrollment** Architectural & Engineering Design IV (C17H36) -or- **IB** Physics II SL (G03H82) -or- **WBL** Architectural & Engineering Design Career Practicum [1] (C17H45)
Interior Design	Foundations of Interior Design [2] (C17H12)	Residential Interior Design (C17H11)	Commercial Interior Design (C17H20) -or- **Dual Enrollment** Interior Design I (C17H05) -or- **Dual Enrollment** Interior Design II (C17H29)	Advanced Interior Design (C17H19) -or- **Dual Enrollment** Interior Design III (C17H37) -or- **Dual Enrollment** Interior Design IV (C17H38) -or- **WBL** Interior Design Career Practicum [1] (C17H49)

Program of Study	Level 1	Level 2	Level 3	Level 4
Mechanical, Electrical, & Plumbing (MEP) Systems	Fundamentals of Construction (C17H15)	Mechanical, Electrical, & Plumbing Systems (C17H23)	HVAC (C17H17) -or- Electrical Systems (C17H16) -or- Plumbing Systems (C17H18) -or- **Dual Enrollment** Mechanical, Electrical, & Plumbing Systems I (C17H03) -or- **Dual Enrollment** Mechanical, Electrical, & Plumbing Systems II (C17H30)	Construction Practicum (C17H22) -or- **Dual Enrollment** Mechanical, Electrical, & Plumbing Systems III (C17H39) -or- **Dual Enrollment** Mechanical, Electrical, & Plumbing Systems IV (C17H40) -or- **WBL** Mechanical, Electrical, & Plumbing (MEP) Systems Career Practicum [1] (C17H46)
Residential & Commercial Construction	Fundamentals of Construction (C17H15)	Residential & Commercial Construction I (C17H24)	Residential & Commercial Construction II (C17H25) -or- **Dual Enrollment** Residential & Commercial Construction I (C17H01) -or- **Dual Enrollment** Residential & Commercial Construction II (C17H31)	Construction Practicum (C17H22) -or- **Dual Enrollment** Residential & Commercial Construction III (C17H33) -or- **Dual Enrollment** Residential & Commercial Construction IV (C17H34) -or- **WBL** Residential & Commercial Construction Career Practicum [1] (C17H47)
Structural Systems	Fundamentals of Construction (C17H15)	Structural Systems I (C17H26)	Structural Systems II (C17H27) -or- **Dual Enrollment** Structural Systems I (C17H02) -or- **Dual Enrollment** Structural Systems II (C17H32)	Construction Practicum (C17H22) -or- **Dual Enrollment** Structural Systems III (C17H43) -or- **Dual Enrollment** Structural Systems IV (C17H44) -or- **WBL** Structural Systems Career Practicum [1] (C17H48)

[1] May be taught for 1 or 2 credits.
[2] Satisfies the one fine arts credit required for graduation.
[3] Satisfies the fourth math credit required for graduation.

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 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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) is a supplemental course that can be offered in addition to courses within the programs 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
Audio/Visual Production	A/V Production I (C11H01)	A/V Production II (C11H02)	A/V Production III (C11H03) -or- **Dual Enrollment** Audio/Visual Production I (C11H00) -or- **Dual Enrollment** Audio/Visual Production II (C11H15)	Applied Arts Practicum (C11H07) -or- **AP** English Language & Composition (G01H17) -or- **Dual Enrollment** Audio/Visual Production III (C11H18) -or- **Dual Enrollment** Audio/Visual Production IV (C11H19) -or- **WBL** Audio/Visual Production Career Practicum [1] (C11H25)
Digital Arts & Design	Digital Arts & Design I [2] (C11H06)	Digital Arts & Design II (C11H05)	Digital Arts & Design III (C11H16) -or- **Dual Enrollment** Digital Arts & Design I (C11H08) -or- **Dual Enrollment** Digital Arts & Design II (C11H09)	Applied Arts Practicum (C11H07) -or- **AP** 2-D Art and Design [2] (G05H30) -or- **Dual Enrollment** Digital Arts & Design III (C11H20) -or- **Dual Enrollment** Digital Arts & Design IV (C11H21) -or- **WBL** Digital Arts & Design Career Practicum [1] (C11H26)
Fashion Design	Visual Arts: Comprehensive I (G05H08)	Foundations of Fashion Design [2] (C11H17)	Fashion Design (C11H10) -or- **Dual Enrollment** Fashion Design I (C11H13) -or- **Dual Enrollment** Fashion Design II (C11H14) -or- **CIE** Art & Design: Fashion & Design AS Level (C11H12)	Advanced Fashion Design (C11H11) -or- **Dual Enrollment** Fashion Design III (C11H22) -or- **Dual Enrollment** Fashion Design IV (C11H23) **WBL** -or- Fashion Design Career Practicum [1] (C11H24)

[1] May be taught for 1 or 2 credits.

[2] Satisfies the one fine 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.
- **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.
- **Preparing for the ACT, Postsecondary, and Career** (C25H19) 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
Business Management	Introduction to Business & Marketing (C12H26)	Business Communications (C12H16) -or- Accounting I (C29H00) -or- **IGCSE** Accounting (C29H08)	Business Management [1] (C12H17) -or- **SDC** Introduction to Business [1 & 2] (C12H44) -or- **Dual Enrollment** Business Management I [2] (C12H01) -or- **Dual Enrollment** Business Management II [2] (C12H47) -or- **CIE** Business Studies 1 AS Level (C12H14)	Business & Entrepreneurship Practicum (C12H35) -or- Virtual Enterprise International [2] (C12H23) -or- **Dual Enrollment** Business Management III [2] (C12H59) -or- **Dual Enrollment** Business Management IV [2] (C12H52) -or- **WBL** Business Management Career Practicum [3] (C12H61)
Health Services Administration	Introduction to Business & Marketing (C12H26) -or- Health Science Education (C14H14)	Health Information Technology (C12H34)	Business Management [1] (C12H17) -or- **SDC** Introduction to Business [1 & 2] (C12H44) -or- **Dual Enrollment** Health Services Administration I (C12H03) -or- **Dual Enrollment** Health Services Administration II (C12H49) -or- **CIE** Business Studies 1 AS Level (C12H14)	Health Services Administration Practicum (C12H38) -or- **Dual Enrollment** Health Services Administration III (C12H53) -or- **Dual Enrollment** Health Services Administration IV (C12H54) -or- **WBL** Health Services Administration Career Practicum [3] (C12H62)
Human Resources Management	Introduction to Business & Marketing (C12H26)	Business Communications (C12H16)	Human Resources Management (C12H36) -or- **Dual Enrollment** Human Resources Management I (C12H39) -or- **Dual Enrollment** Human Resources Management II (C12H50)	Human Resources Management Practicum (C12H37) -or- **Dual Enrollment** Human Resources Management III (C12H55) -or- **Dual Enrollment** Human Resources Management IV (C12H56) -or- **CIE** Business Studies 2 A Level (C12H15) -or- **WBL** Human Resources Management Career Practicum [3] (C12H63)

Program of Study	Level 1	Level 2	Level 3	Level 4
Office Management	Introduction to Business & Marketing (C12H26) -or- Computer Applications (C12X00)	Business Communications (C12H16)	Business Management (C12H17) [1] -or- **SDC** Introduction to Business [1 & 2] (C12H44) -or- **Dual Enrollment** Office Management I (C12H02) -or- **Dual Enrollment** Office Management II (C12H48) -or- **CIE** Business Studies 1 AS Level (C12H14)	Advanced Computer Applications (C12H25) -or- **Dual Enrollment** Office Management III (C12H57) -or- **Dual Enrollment** Office Management IV (C12H58) -or- **WBL** Office Management Career Practicum [3] (C12H60)

[1] Satisfies ½ credit of Personal Finance required for graduation.
[2] Satisfies ½ credit of Economics required for graduation.
[3] May be taught for 1 or 2 credits.
[4] Satisfies ½ credit of US Government required for graduation.

Available courses for elective credit in this cluster:

- *American Business Legal Systems* [4] (C12H20) and *Business Economics* [2] (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.
- *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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) 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
Early Childhood Education Careers	Early Childhood Education Careers I (C32H06)	Early Childhood Education Careers II (C32H07)	Early Childhood Education Careers III (C32H08) -or- **Dual Enrollment** Early Childhood Education Careers I (C32H10) -or- **Dual Enrollment** Early Childhood Education Careers II (C32H18)	Early Childhood Education Careers IV (C32H09) -or- Foundational Literacy Practicum (C32H37) -or- **Dual Enrollment** Early Childhood Education Careers III (C32H22) -or- **Dual Enrollment** Early Childhood Education Careers IV (C32H23) -or- **SDC** Introduction to Education (C32H28) -or- **WBL** Early Childhood Education Career Practicum [1] (C32H34)
Educational Guidance and Social Services	Educational Guidance and Social Services I (C32H29)	Educational Guidance and Social Services II (C32H30)	Educational Guidance and Social Services III (C32H31) -or- **Dual Enrollment** Educational Guidance and Social Services I (C32H16) -or- **Dual Enrollment** Educational Guidance and Social Services II (C32H19)	Educational Guidance and Social Services Practicum (C32H32) -or- **Dual Enrollment** Educational Guidance and Social Services III (C32H24) -or- **Dual Enrollment** Educational Guidance and Social Services IV (C32H25) -or- **WBL** Educational Guidance and Social Services Career Practicum [1] (C32H35)
Teaching as a Profession (K-12)	Introduction to Teaching as a Profession (C32H33)	Teaching as a Profession I (C32H01)	Teaching as a Profession II (C32H02) -or- **Dual Enrollment** Teaching as a Profession (K-12) I (C32H04) -or- **Dual Enrollment** Teaching as a Profession (K-12) II (C32H05)	Teaching as a Profession Practicum [2] (C32H03) -or- Foundational Literacy Practicum (C32H37) -or- **Dual Enrollment** Teaching as a Profession (K-12) III (C32H26) -or-

Program of Study	Level 1	Level 2	Level 3	Level 4
				Dual Enrollment Teaching as a Profession (K-12) IV (C32H27) -or- **SDC** Introduction to Education (C32H28) -or- **WBL** Teaching as a Profession (K-12) Career Practicum [1] (C32H36)

[1] May be taught for 1 or 2 credits.

[2] A student pursuing an Industry 4.0 diploma distinction may substitute their 4th credit of math with this work-based learning course.

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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) 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
Accounting	Introduction to Business & Marketing (C12H26)	Accounting I (C29H00) -or- **IGCSE** Accounting (C29H08)	Accounting II (C29H01) -or- **Dual Enrollment** Accounting I (C29H05) -or- **Dual Enrollment** Accounting II (C29H07) -or- **CIE** Accounting 1 AS Level (C29H06)	Financial Planning (C29H02) -or- Statistics (G02H37) -or- **AP** Statistics (G02H26) -or- **Dual Enrollment** Accounting III (C29H12) -or- **Dual Enrollment** Accounting IV (C29H13) -or- **WBL** Accounting Career Practicum [1] (C29H16)
Banking and Finance	Introduction to Business & Marketing (C12H26)	Accounting I (C29H00) -or- **IGCSE** Accounting (C29H08)	Banking & Finance (C29H03) -or- **Dual Enrollment** Banking & Finance I (C29H09) -or- **Dual Enrollment** Banking & Finance II (C29H10)	Financial Planning (C29H02) -or- **Dual Enrollment** Banking & Finance III (C29H14) -or- **Dual Enrollment** Banking & Finance IV (C29H15) -or- **WBL** Banking and Finance Career Practicum [1] (C29H17)

[1] May be taught for 1 or 2 credits.

Available courses for elective credit in this cluster:
- *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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) 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
Leadership in Government	JROTC I [1&2] (G08H04)	JROTC II [1&2] (G08H05) -or- Public Management & Administration (C15H16)	U.S. Government & Civics (G04H12) -or- JROTC III [1] (G08H06) -or- **Dual Enrollment** Leadership in Community Emergency Response I (C15H22) -or- **Dual Enrollment** Leadership in Community Emergency Response II (C15H23)	Success Skills through Service Learning (C25H15) -or- JROTC IV (G08H07) -or- **Dual Enrollment** Leadership in Community Emergency Response III (C15H25) -or- **Dual Enrollment** Leadership in Community Emergency Response IV (C15H26) -or- **WBL** Leadership in Government Career Practicum [3] (C15H29)

[1] 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.
[2] JROTC I and II satisfies credit the graduation requirement for Wellness for students who complete both courses.
[3] 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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) 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
Diagnostic Services	Health Science Education (C14H14)	Human Anatomy & Physiology [1] (G03H31) -or- Anatomy & Physiology [1] (C14H09) -or- **Dual Enrollment** Human Anatomy & Physiology I [1] (G03H43)	Diagnostic Medicine (C14H12) -or- **Dual Enrollment** Diagnostic Services I (C14H02) -or- **Dual Enrollment** Diagnostic Services II (C14H26) -or- **Dual Enrollment** Human Anatomy & Physiology II [1] (G03H44)	Cardiovascular Services (C14H18) -or- Clinical Internship [3] (C14H11) -or- **Dual Enrollment** Diagnostic Services III (C14H37) -or- **Dual Enrollment** Diagnostic Services IV (C14H38) -or- **WBL** Diagnostic Services Career Practicum [2] (C14H19)
Emergency Services	Health Science Education (C14H14)	Human Anatomy & Physiology [1] (G03H31) -or- Anatomy & Physiology [1] (C14H09) -or- **Dual Enrollment** Human Anatomy & Physiology I [1] (G03H43)	Medical Therapeutics (C14H15) -or- **Dual Enrollment** Emergency Services I (C14H04) -or- **Dual Enrollment** Emergency Services II (C14H29) -or- **Dual Enrollment** Human Anatomy & Physiology II [1] (G03H44)	Emergency Medical Services [1] (C14H13) -or- Emergency Medical Services Practicum [3] (C14H24) -or- **Dual Enrollment** Emergency Services III (C14H35) -or- **Dual Enrollment** Emergency Services IV (C14H36) -or- **WBL** Emergency Services Career Practicum [2] (C14H45)
Nursing Services	Health Science Education (C14H14)	Human Anatomy & Physiology [1] (G03H31) -or- Anatomy & Physiology [1] (C14H09) -or- **Dual Enrollment** Human Anatomy & Physiology I [1] (G03H43)	Medical Therapeutics (C14H15) -or- **Dual Enrollment** Nursing Services I (C14H03) -or- **Dual Enrollment** Nursing Services II (C14H27) -or- **Dual Enrollment** Human Anatomy & Physiology II [1] (G03H44)	Nursing Education [3] (C14H16) -or- Clinical Internship [3] (C14H11) -or- **Dual Enrollment** Nursing Services III (C14H33) -or- **Dual Enrollment** Nursing Services IV (C14H34) -or- **WBL** Nursing Services Career Practicum [2] (C14H46)
Sport and Human Performance	Health Science Education (C14H14)	Human Anatomy & Physiology [1] (G03H31) -or- Anatomy & Physiology [1] (C14H09) -or-	Rehabilitation Careers (C14H08) -or- **Dual Enrollment** Sport and Human Performance I (C14H39)	Exercise Science (C14H22) -or- Clinical Internship (C14H11) -or-

Program of Study	Level 1	Level 2	Level 3	Level 4
		Dual Enrollment Human Anatomy & Physiology I [1] (G03H43)	-or- **Dual Enrollment** Sport and Human Performance II (C14H40) -or- **Dual Enrollment** Human Anatomy & Physiology II [1] (G03H44) -or- **IB** Sports, Exercise, & Health Science I SL/HL (G03H39)	**Dual Enrollment** Sport and Human Performance III (C14H41) -or- **Dual Enrollment** Sport and Human Performance IV (C14H42) -or- **IB** Sports, Exercise, & Health Science II SL/HL (G03H40) -or- **WBL** Sport and Human Performance Career Practicum [2] (C14H47)
Therapeutic Services	Health Science Education (C14H14)	Human Anatomy & Physiology [1] (G03H31) -or- Anatomy & Physiology [1] (C14H09) -or- **Dual Enrollment** Human Anatomy & Physiology I [1] (G03H43)	Dental Science (C14H21) -or- Pharmacological Sciences (C14H20) -or- Nutrition Science & Diet Therapy [1] (C19H16) -or- Medical Therapeutics (C14H15) -or- Medical Assisting (C14H10) -or- Public Health & Epidemiology (C14H17) -or- **Dual Enrollment** Therapeutic Services I (C14H05) -or- **Dual Enrollment** Therapeutic Services II (C14H28) -or- **Dual Enrollment** Human Anatomy & Physiology II [1] (G03H44)	Clinical Internship [3] (C14H11) -or- **Dual Enrollment** Therapeutic Services III (C14H43) -or- **Dual Enrollment** Therapeutic Services IV (C14H44) -or- **Dual Enrollment** Medical Assisting (C14H32) -or- **WBL** Therapeutic Services Career Practicum [2] (C14H48)

[1] Satisfies the third lab science credit for graduation.

[2] May be taught for 1 or 2 credits.

[3] A student pursuing an Industry 4.0 diploma distinction may substitute their 4th credit of math with this work-based learning course.

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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) 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
Culinary Arts	Culinary Arts I (C16H06)	Culinary Arts II (C16H07)	Culinary Arts III (C16H08) -or- **Dual Enrollment** Culinary Arts I (C16H01) -or- **Dual Enrollment** Culinary Arts II (C16H14)	Culinary Arts IV (C16H09) -or- **Dual Enrollment** Culinary Arts III (C16H20) -or- **Dual Enrollment** Culinary Arts IV (C16H11) -or- **WBL** Culinary Arts Career Practicum [1] (C16H21)
Hospitality and Tourism Management	Hospitality & Tourism Management I (C16H17) -or- **IGCSE** Travel & Tourism (C16H03)	Hospitality & Tourism Management II (C16H18) -or- **CIE** Travel & Tourism 1 AS Level (C16H04)	Hospitality & Tourism Management III (C16H19) -or- **Dual Enrollment** Hospitality & Tourism Management I (C16H02) -or- **Dual Enrollment** Hospitality & Tourism Management II (C16H15)	Event Planning & Management (C16H12) -or- **Dual Enrollment** Hospitality & Tourism Management III (C16H10) -or- **Dual Enrollment** Hospitality & Tourism Management IV (C16H13) -or- **WBL** Hospitality and Tourism Management Career Practicum [1] (C16H22)

[1] 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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) 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
Cosmetology	Cosmetology I (C19H12)	Cosmetology II (C19H14)	Cosmetology III (C19H13) -or- **Dual Enrollment** Cosmetology I (C19H04) -or- **Dual Enrollment** Cosmetology II (C19H23)	Cosmetology IV (C19H21) -or- **Dual Enrollment** Cosmetology III (C19H27) –or– **Dual Enrollment** Cosmetology IV (C19H28) -or- **WBL** Cosmetology Career Practicum [4] (C19H35)
Barbering	Barbering I (C19H09)	Barbering II (C19H10)	Entrepreneurship [1 & 3] (C31H05) -or- **Dual Enrollment** Barbering I (C19H05) -or- **Dual Enrollment** Barbering II (C19H24)	Barbering III (C19H11) -or- **Dual Enrollment** Barbering III (C19H29) -or- **Dual Enrollment** Barbering IV (C19H30) -or- **WBL** Barbering Career Practicum [4] (C19H36)
Dietetics and Nutrition	Introduction to Human Studies (C19H19)	Nutrition Across the Lifespan (C19H15) -or- **IGCSE** Food & Nutrition (C19H08)	Nutrition Science & Diet Therapy [2] (C19H16) -or- **Dual Enrollment** Dietetics & Nutrition I (C19H03) -or- **Dual Enrollment** Dietetics & Nutrition II (C19H22)	Human Services Practicum (C19H20) -or- Psychology (G04H15) -or- Sociology (G04H14) -or- **Dual Enrollment** Dietetics & Nutrition III (C19H31) -or- **Dual Enrollment** Dietetics & Nutrition IV (C19H32) -or- **WBL** Dietetics and Nutrition Career Practicum [4] (C19H37)
Human and Social Sciences	Introduction to Human Studies (C19H19)	Lifespan Development (C19H17)	Family Studies (C19H18) -or- **Dual Enrollment** Human & Social Sciences I (C19H02) -or- **Dual Enrollment** Human & Social Sciences II (C19H26) -or-	Human Services Practicum (C19H20) -or- Psychology (G04H15) -or- Sociology (G04H14) -or- **Dual Enrollment** Human & Social Sciences III (C19H33)

Program of Study	Level 1	Level 2	Level 3	Level 4
			IGCSE Sociology (G04H65)	-or- **Dual Enrollment** Human & Social Sciences IV (C19H34) -or- **WBL** Human and Social Sciences Career Practicum [4] (C19H38)

[1] Satisfies ½ credit of Economics required for graduation.
[2] Satisfies the third lab science credit for graduation.
[3] Satisfies ½ credit of Personal Finance required for graduation.
[4] 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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

Information Technology

Program of Study	Level 1	Level 2	Level 3	Level 4
Coding	Computer Science Foundations [1] (C10H11) -or- **IGCSE** Computer Science [1] (C10H07)	Coding I [1] (C10H14)	Coding II [1] (C10H15) -or- Mobile App Development [1] (C10H22) -or- **AP** Computer Science Principles [1] (G02H44) -or- **Dual Enrollment** Coding I [1] (C10H01) -or- **Dual Enrollment** Coding II [1] (C10H28)	Coding Practicum [1 & 4] (C10H08) -or- **AP** Computer Science A [1] (G02H45) -or- **Dual Enrollment** Coding III [1] (C10H32) -or- **Dual Enrollment** Coding IV [1] (C10H33) -or- **CIE** Computer Science 1 AS Level [1] (C10H25) -or- **WBL** Coding Career Practicum [2] (C10H40)
Cybersecurity	Computer Science Foundations [1] (C10H11)	Cybersecurity I [1] (C10H19)	Cybersecurity II [1] (C10H20) -or- **AP** Computer Science Principles [1] (G02H44) -or- **Dual Enrollment** Cybersecurity I [1] (C10H24) -or- **Dual Enrollment** Cybersecurity II [1] (C10H31)	Cybersecurity Practicum [1 & 4] (C10H21) -or- **Dual Enrollment** Cybersecurity III [1] (C10H34) -or- **Dual Enrollment** Cybersecurity IV [1] (C10H35) -or- **WBL** Cybersecurity Career Practicum [2] (C10H41)
Networking Systems	Computer Science Foundations [1] (C10H11)	Computer Systems (C10H10)	Networking (C10H13) -or **Dual Enrollment** Networking Systems I (C10H02) -or- **Dual Enrollment** Networking Systems II (C10H29)	Cabling & Internetworking (C10H09) -or- IT Clinical Internship [4] (C10H12) -or- **Dual Enrollment** Networking Systems III (C10H36) -or- **Dual Enrollment** Networking Systems IV (C10H37) -or- **WBL** Networking Systems Career Practicum [2] (C10H42)

Program of Study	Level 1	Level 2	Level 3	Level 4
Web Design	Computer Science Foundations (C10H11) [1] -or- **IGCSE** Information and Communication Technology (C10H26)	Web Design Foundations (C10H16) [3]	Web Site Development (C10H17) -or- **AP** Computer Science Principles [1] (G02H44) -or- **Dual Enrollment** Web Design I (C10H03) -or- **Dual Enrollment** Web Design II (C10H30)	Web Design Practicum [4] (C10H18) -or- **Dual Enrollment** Web Design III (C10H38) -or- **Dual Enrollment** Web Design IV (C10H39) -or- **WBL** Web Design Career Practicum [2] (C10H43)

[1] May count for the computer science graduation requirement.
[2] May be taught for 1 or 2 credits.
[3] Satisfies the one fine arts credit required for graduation.
[4] A student pursuing an Industry 4.0 diploma distinction may substitute their 4th credit of math with this work-based learning course.

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 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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) is a supplemental course that can be offered in addition to courses within the programs 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
Criminal Justice and Correction Services	Criminal Justice I (C30H00)	Criminal Justice II (C30H01)	Criminal Justice III: Forensic Criminal Investigations (C30H02) -or- **SDC** Criminal Justice [1] (C30H11) -or- **Dual Enrollment** Criminal Justice and Correction Services I (C30H12) -or- **Dual Enrollment** Criminal Justice and Correction Services II (C30H13)	Criminal Justice Practicum (C30H03) -or- **Dual Enrollment** Criminal Justice and Correction Services III (C30H20) -or- **Dual Enrollment** Criminal Justice and Correction Services IV (C30H21) -or- Unmanned Aircraft Systems for Criminal Justice (C30H18) -or- **WBL** Criminal Justice and Correction Services Career Practicum [4] (C30H27)
Fire Management Services	Principles of Fire & Emergency Services (C30H04)	Fire Prevention (C30H05)	Fire Science I (C30H06) -or- **Dual Enrollment** Fire Management Services I (C30H14) -or- **Dual Enrollment** Fire Management Services II (C30H15)	Fire Science II (C30H07) -or- **Dual Enrollment** Fire Management Services III (C30H22) -or- **Dual Enrollment** Fire Management Services IV (C30H23) -or- **WBL** Fire Management Services Career Practicum [4] (C30H26)
Pre-Law	Pre-Law I [2] (C30H08)	Pre-Law II [2] (C30H09)	Pre-Law III [2] (C30H10) -or- **Dual Enrollment** Pre-Law I (C30H16) -or- **Dual Enrollment** Pre-Law II (C30H17)	Pre-Law Practicum (C30H19) -or- **AP** U.S. Government & Politics [2] (G04H26) -or- **Dual Enrollment** Pre-Law III (C30H24) -or- **Dual Enrollment** Pre-Law IV (C30H25) -or- **WBL** Pre-Law Career Practicum [4] (C30H28)

[1] 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.

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

[3] Satisfies ½ credit of US Government required for graduation.

[4] May be taught for 1 or 2 credits.

Available courses for elective credit in this cluster:

- ***American Business Legal Systems*** [3] (C12H20) 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.
- ***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.
- ***Preparing for the ACT, Postsecondary, and Career*** (C25H19) 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
Entrepreneurship	Introduction to Entrepreneurship (C31H23)	Marketing & Management I: Principles [1] (C31H00)	Entrepreneurship [1 & 4] (C31H05) -or- **Dual Enrollment** Entrepreneurship I (C31H12) -or- **Dual Enrollment** Entrepreneurship II (C31H14) -or- **IGCSE** Enterprise (C31H13)	Business & Entrepreneurship Practicum (C12H35) -or- Virtual Enterprise International [1] (C12H23) -or- **Dual Enrollment** Entrepreneurship III (C31H17) -or- **Dual Enrollment** Entrepreneurship IV (C31H18) -or- **WBL** Entrepreneurship Career Practicum [2] (C31H29)
Marketing Management	Introduction to Business & Marketing (C12H26)	Marketing & Management I: Principles [1] (C31H00)	Marketing & Management II: Advanced Strategies (C31H01) -or- Social Media and Analytics (C31H02) -or- **Dual Enrollment** Marketing Management I (C31H10) -or- **Dual Enrollment** Marketing Management II (C31H11) -or **SDC** Principles of Marketing (C31H27)	Advertising & Public Relations (C31H03) -or- Retail Operations [1] (C31H04) -or- Event Planning & Management (C16H12) -or- **Dual Enrollment** Marketing Management III (C31H19) -or- **Dual Enrollment** Marketing Management IV (C31H20) -or- **WBL** Marketing Management Career Practicum [2] (C31H28)
Supply Chain Management	Introduction to Business & Marketing (C12H26)	Supply Chain Management I: Principles and Foundations (C31H24)	Supply Chain Management II: Warehousing and Distribution (C31H25) -or- **Dual Enrollment** Supply Chain Management I (C31H15) -or-	Supply Chain Management III: Management and Logistics (C31H26) -or- Supply Chain Management Practicum [3] (C31H09) -or- **Dual Enrollment** Supply Chain Management III (C31H21) -or-

Program of Study	Level 1	Level 2	Level 3	Level 4
			Dual Enrollment Supply Chain Management II (C31H16)	**Dual Enrollment** Supply Chain Management IV (C31H22) -or- **WBL** Supply Chain Management Career Practicum [2] (C31H30)

[1] Satisfies ½ credit of Economics required for graduation.
[2] May be taught for 1 or 2 credits.
[3] A student pursuing an Industry 4.0 diploma distinction may substitute their 4th credit of math with this work-based learning course.
[4] 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.
- *Preparing for the ACT, Postsecondary, and Career* (C25H19) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

STEM

Program of Study	Level 1	Level 2	Level 3	Level 4
Advanced STEM Applications	STEM I: Foundation [1] (C21H15)	STEM II: Applications [1] (C21H16)	STEM III: STEM in Context [1] (C21H17) -or- **AP** Computer Science Principles [4 & 5] (G02H44) -or- **Dual Enrollment** Advanced STEM Applications I (C21H32) -or- **Dual Enrollment** Advanced STEM Applications II (C21H33)	STEM IV: STEM Practicum [3] (C21H18) -or- **AP** Calculus AB [5] (G02H24) -or- **AP** Calculus BC [5] (G02H25) -or- **AP** Computer Science A [4 & 5] (G02H45) -or- **AP** Biology (G03H10) -or- **AP** Chemistry (G03H16) -or- **AP** Physics I: Algebra-Based [5] (G03H27) -or- **AP** Physics II: Algebra-Based [5] (G03H28) -or- **AP** Physics C: Electricity & Magnetism [5] (G03H24) -or- **AP** Physics C: Mechanics [5] (G03H29) -or- **Dual Enrollment** Advanced STEM Applications III (C21H35) -or- **Dual Enrollment** Advanced STEM Applications IV (C21H36) -or- **IB** Biology II SL/HL (G03H69) -or- **IB** Physics II SL (G03H82) -or- **WBL** Advanced STEM Applications Career Practicum [2] (C21H45)

Program of Study	Level 1	Level 2	Level 3	Level 4
BioSTEM	BioSTEM I [1] (C21H07)	BioSTEM II [1] (C21H08)	BioSTEM III [1] (C21H09) -or- **Dual Enrollment** BioSTEM I (C21H37) -or- **Dual Enrollment** BioSTEM II (C21H38)	BioSTEM Practicum (C21H10) -or- **Dual Enrollment** BioSTEM III (C21H39) -or- **Dual Enrollment** BioSTEM IV (C21H40) -or- **WBL** BioSTEM Career Practicum [2] (C21H46)
Engineering	Principles of Engineering & Technology (C21H04)	Engineering Design I [1] (C21H05) -or- **IGCSE** Design & Technology (C21H03)	Engineering Design II [1] (C21H06) -or- **AP** Computer Science Principles [4 & 5] (G02H44) -or- **Dual Enrollment** Engineering I (C21H00) -or- **Dual Enrollment** Engineering II (C21H11)	Engineering Practicum [3] (C21H14) -or- **AP** Physics I: Algebra-Based [5] (G03H27) -or- **AP** Physics II: Algebra-Based [5] (G03H28) -or- **AP** Physics C: Electricity & Magnetism [5] (G03H24) -or- **AP** Physics C: Mechanics [5] (G03H29) -or- **AP** Computer Science A [4 & 5] (G02H45) -or- **Dual Enrollment** Engineering III (C21H41) -or- **Dual Enrollment** Engineering IV (C21H42) -or- **CIE** Design & Technology 1 AS Level (C10H05) -or- **IB** Physics II (SL) (G03H82) -or- **WBL** Engineering Career Practicum [2] (C21H47)

Program of Study	Level 1	Level 2	Level 3	Level 4
Technology	Principles of Engineering & Technology (C21H04)	Digital Electronics (C13H07)	Robotics & Automated Systems (C13H15) -or- **AP** Computer Science Principles [4 & 5] (G02H44) -or- **Dual Enrollment** Technology I (C21H01) -or- **Dual Enrollment** Technology II (C21H12)	Engineering Practicum [3] (C21H14) -or- **AP** Physics I: Algebra-Based [5] (G03H27) -or- **AP** Physics II: Algebra-Based [5] (G03H28) -or- **AP** Physics C: Electricity & Magnetism [5] (G03H24) -or- **AP** Physics C: Mechanics [5] (G03H29) -or- **AP** Computer Science A [4 & 5] (G02H45) -or- **Dual Enrollment** Technology III (C21H43) -or- **Dual Enrollment** Technology IV (C21H44) -or- **IB** Physics II SL (G03H82) -or- **WBL** Technology Career Practicum [2] (C21H48)

[1] Satisfies the third lab science credit required for graduation.
[2] May be taught for 1 or 2 credits.
[3] A student pursuing an Industry 4.0 diploma distinction may substitute their 4th credit of math with this work-based learning course.
[4] May count for the computer science graduation requirement.
[5] Satisfies the fourth math credit required for graduation.

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)* [1] (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.
- ***Preparing for the ACT, Postsecondary, and Career*** (C25H19) 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
Automotive Maintenance and Light Repair	Maintenance & Light Repair I (C20H09)	Maintenance & Light Repair II (C20H10)	Maintenance & Light Repair III (C20H11) -or- **Dual Enrollment** Automotive Maintenance & Light Repair I (C20H01) -or- **Dual Enrollment** Automotive Maintenance & Light Repair II (C20H21)	Maintenance & Light Repair IV (C20H12) -or- **Dual Enrollment** Automotive Maintenance & Light Repair III (C20H22) -or- **Dual Enrollment** Automotive Maintenance & Light Repair IV (C20H30) -or- **WBL** Automotive Maintenance and Light Repair Career Practicum [1] (C20H34)
Automotive Collision Repair	Introduction to Collision Repair (C20H20)	Collision Repair: Non-Structural (C20H13)	Collision Repair: Painting & Refinishing (C20H14) -or- **Dual Enrollment** Automotive Collision Repair I (C20H02) -or- **Dual Enrollment** Automotive Collision Repair II (C20H23)	Collision Repair: Damage Analysis, Estimating, and Customer Service (C20H19) -or- **Dual Enrollment** Automotive Collision Repair III (C20H24) -or- **Dual Enrollment** Automotive Collision Repair IV (C20H31) -or- **WBL** Automotive Collision Repair Career Practicum [1] (C20H35)
Aviation Flight	Introduction to Aerospace (C20H15)	Aviation I: Principles of Flight (C20H16)	Aviation II: Advanced Flight (C20H18) -or- **Dual Enrollment** Aviation Flight I (C20H03) -or- **Dual Enrollment** Aviation Flight II (C20H28)	Unmanned Aircraft Systems Pilot (C20H29) -or- **Dual Enrollment** Aviation Flight III (C20H32) -or- **Dual Enrollment** Aviation Flight IV (C20H33) -or- **WBL** Aviation Flight Career Practicum [1] (C20H36)

[1] 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.
- ***Preparing for the ACT, Postsecondary, and Career*** (C25H19) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

Middle School

Career Cluster	6th Grade	7th Grade	8th Grade
Advanced Manufacturing	STEM Explorers (C25600) Career Awareness (C25X06)	STEM Innovators (C25701) Career Exploration (C25X07)	STEM Designers (C25801) Career Advising and Planning (C25X08)
Agriculture, Food, & Natural Resources	Career Awareness (C25X06)	Introduction to Agriculture Sciences (C18X00) Career Exploration (C25X07)	Introduction to Agriculture Sciences (C18X00) Career Advising and Planning (C25X08)
Architecture & Construction	STEM Explorers (C25600) Career Awareness (C25X06)	STEM Innovators (C25701) Career Exploration (C25X07)	STEM Designers (C25801) Career Advising and Planning (C25X08)
Arts, Audio/Visual Technology, & Communication	Keyboarding[1] (G10600) Career Awareness (C25X06)	Keyboarding[1] (G10700) Career Exploration (C25X07)	Computer Applications (C12X00) Keyboarding[1] (G10800) Career Advising and Planning (C25X08)
Business Management & Administration	Keyboarding[1] (G10600) Career Awareness (C25X06)	Keyboarding[1] (G10700) Career Exploration (C25X07)	Computer Applications (C12X00) Keyboarding[1] (G10800) Career Advising and Planning (C25X08)
Education & Training	Introduction to Social Health[2] (C19X00) Career Awareness (C25X06)	Introduction to Social Health[2] (C19X00) Career Exploration (C25X07)	Introduction to Social Health[2] (C19X00) Career Advising and Planning (C25X08)
Finance	Keyboarding[1] (G10600) Career Awareness (C25X06)	Keyboarding[1] (G10700) Career Exploration (C25X07)	Computer Applications (C12X00) Keyboarding[1] (G10800) Career Advising and Planning (C25X08)
Government & Public Administration	Career Awareness (C25X06)	Career Exploration (C25X07)	Career Advising and Planning (C25X08)
Health Science	Career Awareness (C25X06)	Introduction to Health Science (C14X00) Career Exploration (C25X07)	Introduction to Health Science (C14X00) Career Advising and Planning (C25X08)
Hospitality & Tourism	Career Awareness (C25X06)	Career Exploration (C25X07)	Career Advising and Planning (C25X08)
Human Services	Introduction to Social Health[2] (C19X00) Career Awareness (C25X06)	Introduction to Social Health[2] (C19X00) Career Exploration (C25X07)	Introduction to Social Health[2] (C19X00) Career Advising and Planning (C25X08)
Information Technology	Keyboarding[1] (G10600) STEM Explorers (C25600) Computer Science Discoveries (C25X04) Career Awareness (C25X06)	Keyboarding[1] (G10700) STEM Innovators (C25701) Computer Science (G25X40) Computer Science: Flexible Scheduling (G25X41) Computer Science Discoveries (C25X04) Career Exploration (C25X07)	Computer Applications (C12X00) Keyboarding[1] (G10800) STEM Designers (C25801) Career Advising and Planning (C25X08) Computer Science (G25X40) Computer Science: Flexible Scheduling (G25X41) Computer Science Discoveries (C25X04)
Law, Public Safety, Corrections, & Security	Career Awareness (C25X06)	Career Exploration (C25X07)	Career Advising and Planning (C25X08)

Career Cluster	6th Grade	7th Grade	8th Grade
Marketing, Distribution & Logistics	Keyboarding[1] (G10600) Career Awareness (C25X06)	Keyboarding[1] (G10700) Career Exploration (C25X07)	Computer Applications (C12X00) Keyboarding[1] (G10800) Career Advising and Planning (C25X08)
STEM	STEM Explorers (C25600) Computer Science Discoveries (C25X04) Career Awareness (C25X06)	STEM Innovators (C25701) Computer Science Discoveries (C25X04) Career Exploration (C25X07)	STEM Designers (C25801) Career Advising and Planning (C25X08) Computer Science Discoveries (C25X04)
Transportation	STEM Explorers (C25600) Career Awareness (C25X06)	STEM Innovators (C25701) Career Exploration (C25X07)	STEM Designers (C25801) Career Advising and Planning (C25X08)

[1] *Keyboarding* may also be used with 4th and 5th-grade students (G10400, G10500).

[2] *Introduction to Social Health* may also be used with 5th-grade students (C19X00).

Middle School *Engineering by Design (EBD)* and *Project Lead the Way (PLTW)* curriculum package courses. Note, these courses may require additional costs and training to implement.

C25700 – Inventions & Innovators (EBD)
C25800 – Technological Systems (EBD)
C25802 – Energy & the Environment (PLTW)
C25803 – Flight & Space (PLTW)
C25804 – Green Architecture (PLTW)
C25805 – Magic of Electrons (PLTW)
C25806 – Science & Technology (PLTW)
C25X01 – Exploring Technology (EBD)
C25X02 – Design & Modeling (PLTW)
C25X03 – Automation & Robotics (PLTW)