

Open Enrollment Guide

2018-19 CTE Programs of Study

Overview

Each spring, all Tennessee school districts receiving Perkins funds are required to select their career and technical education (CTE) programs of study for the upcoming school year in eTIGER. In preparation for this year's open enrollment window (Jan 17 – Feb. 22) we have designed this guide to share important information about our 2018-19 courses and programs of study. Please review the following information on each career cluster prior to making your final program of study selections. If you have additional questions, please reach out to the appropriate program manager listed below or Candi.Norwood@tn.gov. If you have questions regarding eTIGER, please contact CTE.eTIGER@tn.gov.

Career Cluster	Program Manager	Phone
Advanced Manufacturing	Candi.Norwood@tn.gov	(615) 532-2844
Agriculture, Food, & Natural Resources	Steven.Gass@tn.gov	(615) 532-2847
Architecture & Construction	Candi.Norwood@tn.gov	(615) 532-6248
Arts, Audio/Visual Technology, & Communications	Tara.Campbell@tn.gov	(615) 532-6248
Business Management & Administration	Tara.Campbell@tn.gov	(615) 253-7442
Education & Training	Elizabeth.Rafferty@tn.gov	(615) 532-2840
Finance	Tara.Campbell@tn.gov	(615) 253-7442
Government & Public Administration	Sloan.Hudson@tn.gov	(615) 532-2839
Health Science	Sloan.Hudson@tn.gov	(615) 532-2839
Hospitality & Tourism	Elizabeth.Rafferty@tn.gov	(615) 532-2840
Human Services	Elizabeth.Rafferty@tn.gov	(615) 532-2840
Information Technology	Deborah.Knoll@tn.gov	(615) 253-7442
Law, Public Safety, Corrections, & Security	Sloan.Hudson@tn.gov	(615) 532-2839
Marketing	Tara.Campbell@tn.gov	(615) 253-7442
Science, Technology, Engineering, & Mathematics (STEM)	Deborah.Knoll@tn.gov	(615) 532-2844
Transportation, Distribution, & Logistics	Candi.Norwood@tn.gov	(615) 532-6248

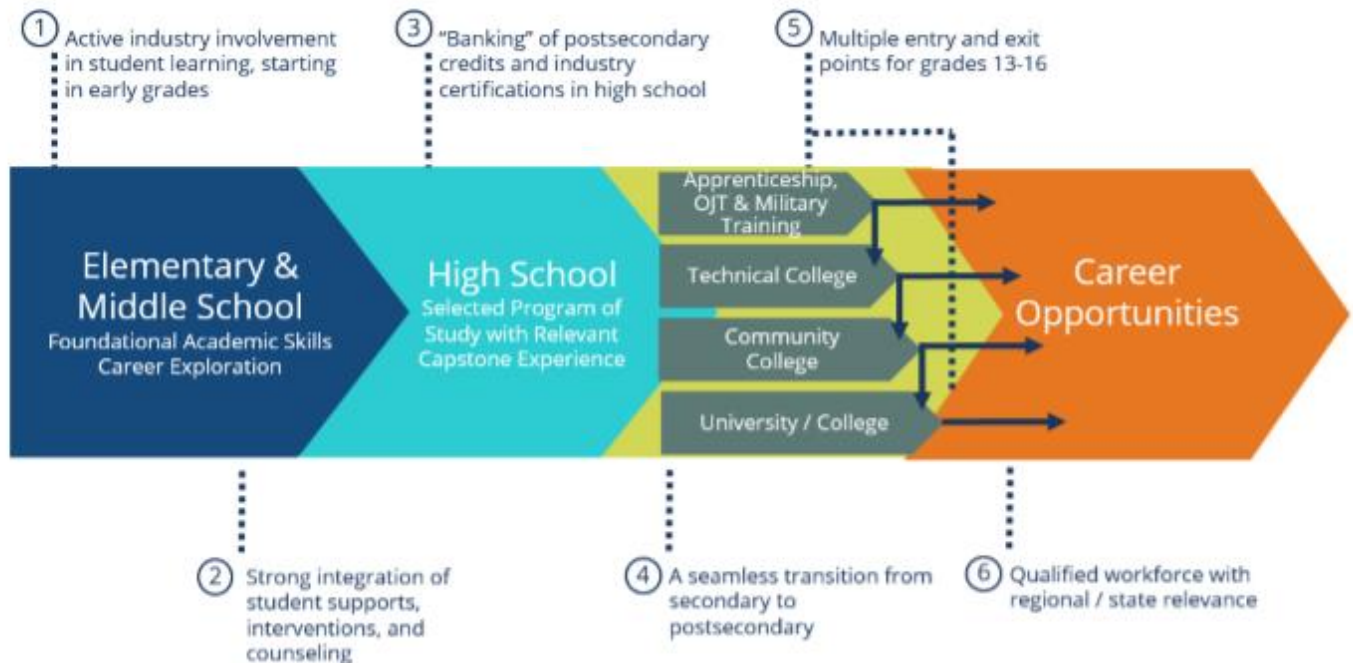
Making Your Program of Study Selections

Before you login to eTIGER to make your program of study selections for 2018-19, it is important that you take the time to review the following information and materials. This selection process should go hand-in-hand with your preparation for (1) developing your 2018-19 local plan, (2) determining your staffing decisions, and (3) building education-to-career learning pathways for your students. As you prepare to select your programs of study, we recommend having the following resource materials available:

- Definition of CTE concentrator; a student who completes three or more courses within a program of study. (To access the CTE Concentrator FAQ, click [here](#).)
- Career Cluster Considerations (pages 4-28 in this guide)
- Industry Certification Conversion Chart (pages 29-34 in this guide)
- 2018-19 [Programs of Study](#) (POS)
- 2018-19 POS and course revisions [document](#)
- 2018-19 POS [instructions](#) for eTIGER
- 2017 Tennessee Department of Economic and Community Development's [LEAP Report](#)
- Labor market/industry data for your city, county, and region
 - Useful resources for labor data:
 - *Drive to 55: Pathways to Postsecondary* reports sent to directors of schools
 - Local chamber of commerce
 - Tennessee Department of Labor and Workforce Development's Jobs 4 TN portal
- Available postsecondary program offerings and early postsecondary opportunities at local or regional postsecondary schools
 - Useful resources for postsecondary:
 - [University of Tennessee system](#)
 - [Tennessee Board of Regents system](#)
 - [CollegeforTN web portal](#)
- Input from local business and industry advisory council
- [Department-promoted industry certifications](#), embedded within the 2018-19 programs of study and aligned to specific courses
- List of your district's current CTE staff, including licensure, endorsements, and training of each and the 2017-18 Correlation of Course [Codes](#)

After collecting and reviewing this information, it is important that you have meaningful conversations with your teachers to ensure the selections of all of the programs of study for your district meet the following criteria:

- encourage and support active industry involvement in student learning;
- allow for postsecondary credit and industry certifications while progressing through a course sequence outlined in the 2018 -19 programs of study (including capstone experiences upon program of study completion);
- transition seamlessly from secondary to postsecondary;
- have multiple entry and exit points, providing a clear pathway to available **employment** and **postsecondary** training in your region; and
- have regional workforce relevance.



Career Cluster Considerations

For more information on the following career clusters, please visit our website at <https://www.tn.gov/education/career-and-technical-education.html>.

Advanced Manufacturing

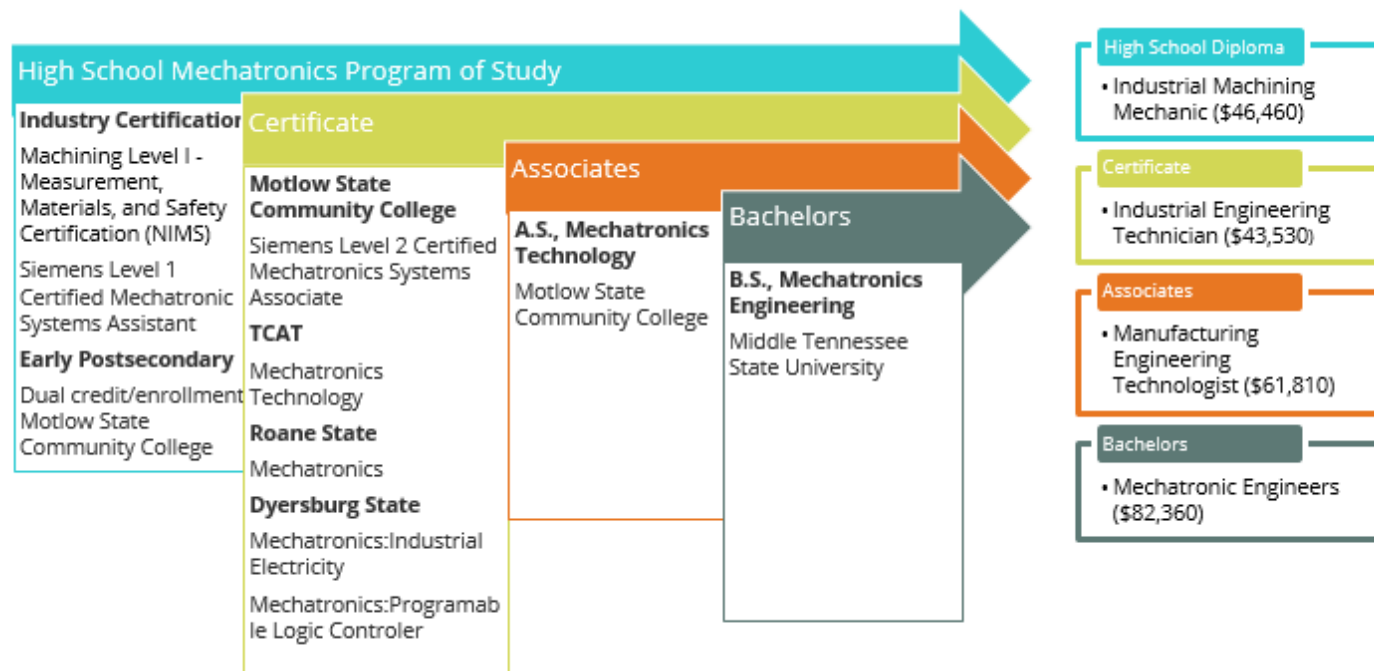
Changes from 2017-18

- In *Principles of Manufacturing*, stamping and injection molds were added to standard four.
- Standards were added in *Welding I* to include procedure specifications.
- Standards were added in *Welding II* to include increasing welding efficiency.

Additional Considerations

- We are seeing an increase in the use of the *Mechatronics* program of study based on employer needs in the state. There are some dual enrollment and dual credit opportunities available at select postsecondary institutions, which may allow you to implement this program of study at a lower cost. Reach out to your local community college or college of applied technology to inquire about potential partnerships.
- Industry certification alignment: Due to the increase in the use of the *Mechatronics* program of study, we are also seeing increased interest in aligned industry certifications. It is important to note that the appropriately aligned industry certification for *Mechatronics* is the Siemens Level 1 certification and **not** the Certified Production Technician (CPT) certification. CPT is appropriately aligned with the *Machining Technology* program of study.
- *Advanced Manufacturing Practicum* is a customizable course available as a capstone for these programs of study. You can find those standards listed with the corresponding program of study.
- Programs of study in this career cluster contains industry certifications that meet ESSA's Ready Graduate indicator of one industry certification and two early postsecondary opportunities (EPSOs). See [Industry Certification Conversion Table](#).
- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Advanced Manufacturing.

Example program of study with seamless industry and postsecondary alignment:



Agriculture, Food, & Natural Resources

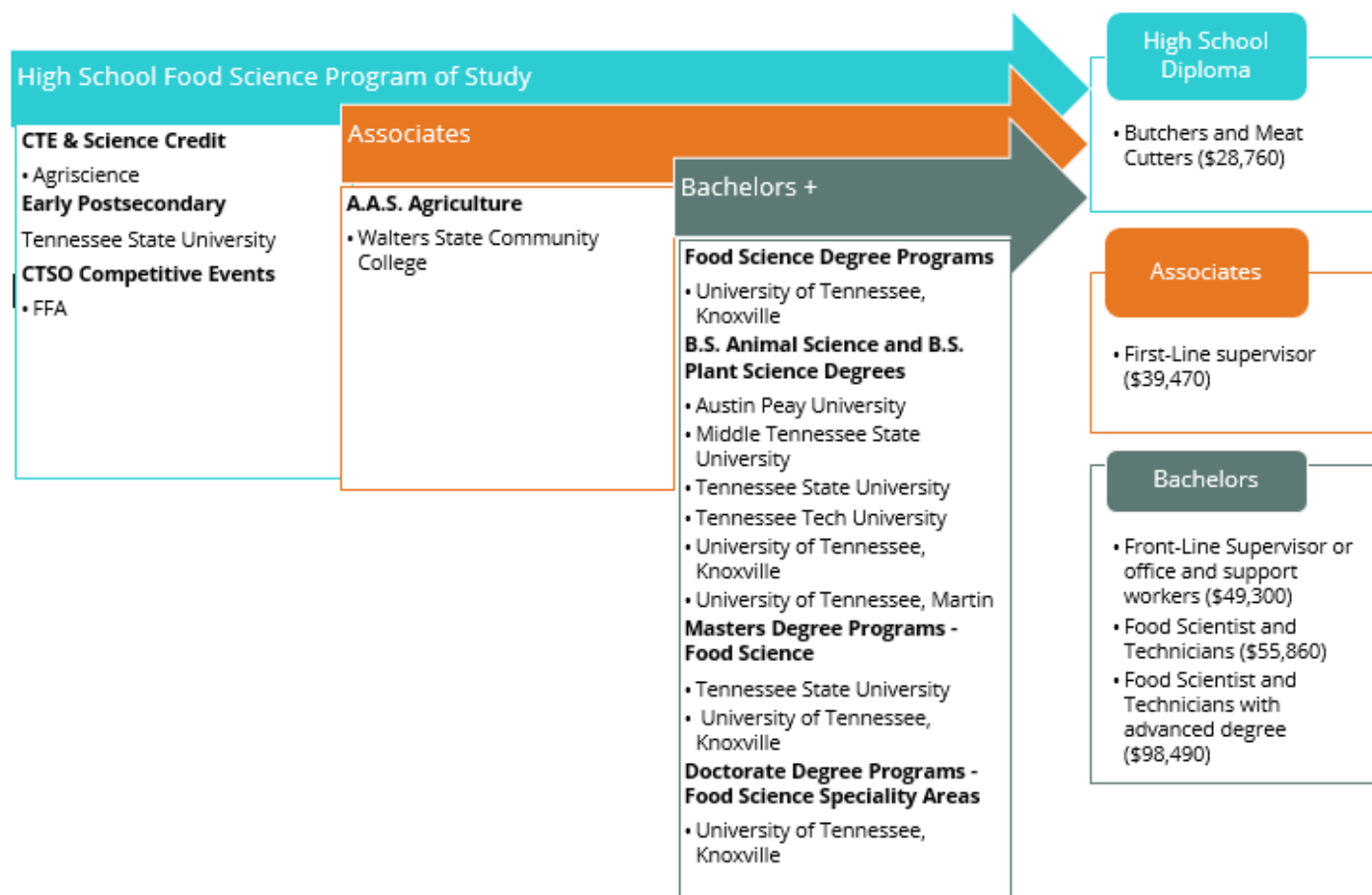
Changes from 2017-18

- There are no major changes in this career cluster.

Additional Considerations

- *Food Science* is a program of study with a positive job outlook. Industry has shown a particular interest in seeing this program of study expand at the secondary level.
- *Veterinary & Animal Science* and *Horticulture Science* have Tennessee Specific Industry Certifications available.
- Both *Work-Based Learning: Career Practicum* and *Supervised Agricultural Experience* can be used to customize credits for a student toward a concentration in Agriculture.
- For those districts with a strong Agriculture program, we recommend offering *Introduction to Agricultural Sciences* at the middle school level.

Example program of study with seamless industry and postsecondary alignment:



Architecture & Construction

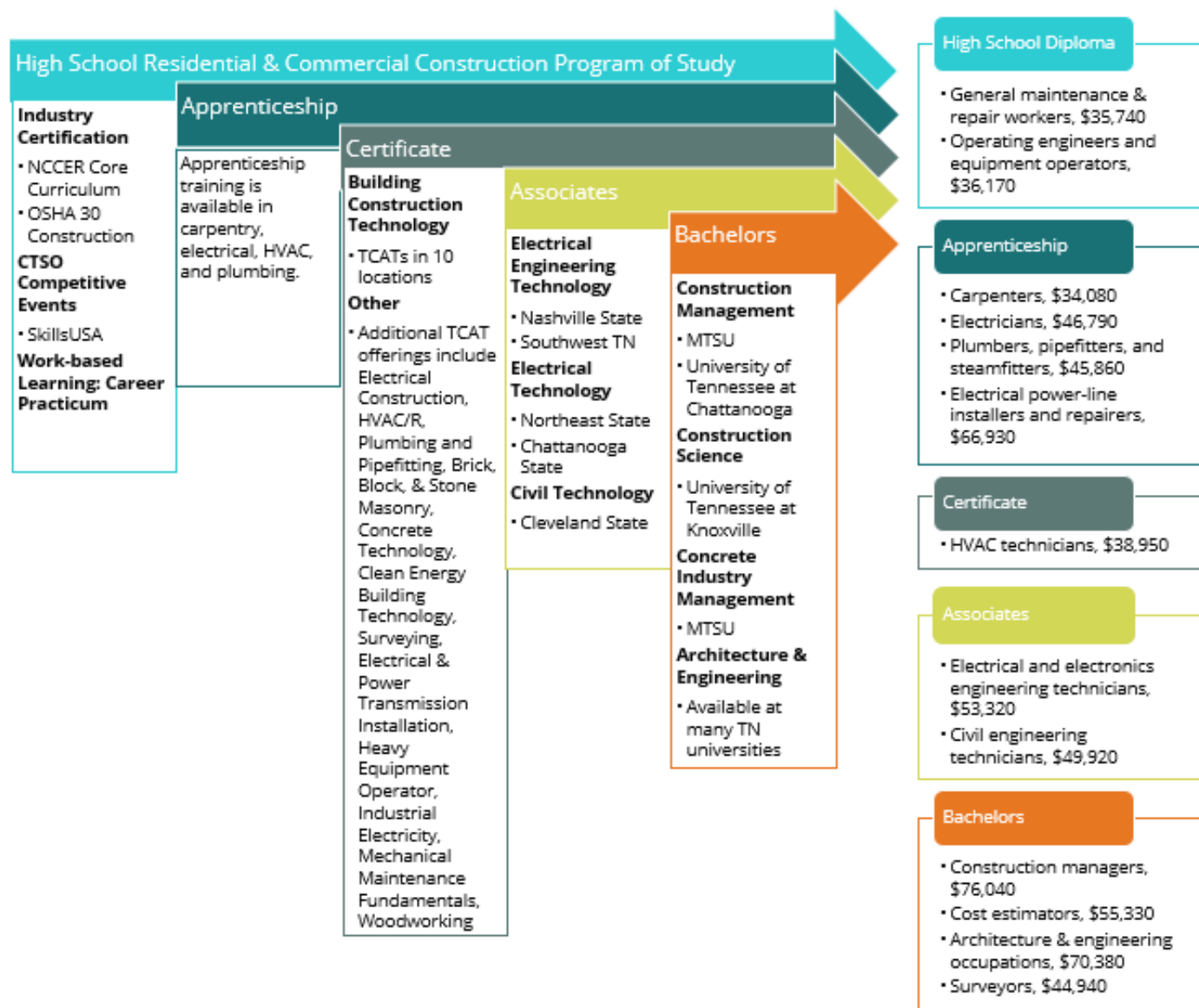
Changes from 2017-18

- There are no major changes in this career cluster.

Additional Considerations

- *Residential & Commercial Construction* works well in schools or districts that have the capacity to offer only one construction pathway, and/or job outlooks in the community need students with a diverse set of construction skills, as it focuses on basic skills useful in many construction career pathways.
- For schools or districts where two construction programs are feasible and/or job outlooks in the community need a number of students trained in a specific specialized area, *Structural Systems* and *Mechanical, Electrical, & Plumbing Systems* work well. Both allow students to select an area in which to develop a specialized skill.
- Industry certification alignment: There is a desire from industry and postsecondary to see industry certifications in this area exceed the basic NCCER Core Curriculum certification. NCCER certifications in specific content such as the NCCER Construction Technology and NCCER Electrical Level One will allow for students to earn postsecondary credit in addition to industry recognition.
- Programs of study in this career cluster contain industry certifications that meet ESSA's Ready Graduate indicator of one industry certification and two EPSOs. See the [Industry Certification Conversion Table for details](#).
- *Construction Practicum* is a customizable course available as a capstone for these programs of study. You can find those standards listed with the corresponding program of study.
- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Architecture & Construction.

Example program of study with seamless industry and postsecondary alignment:



Arts, Audio/Visual Technology, & Communications

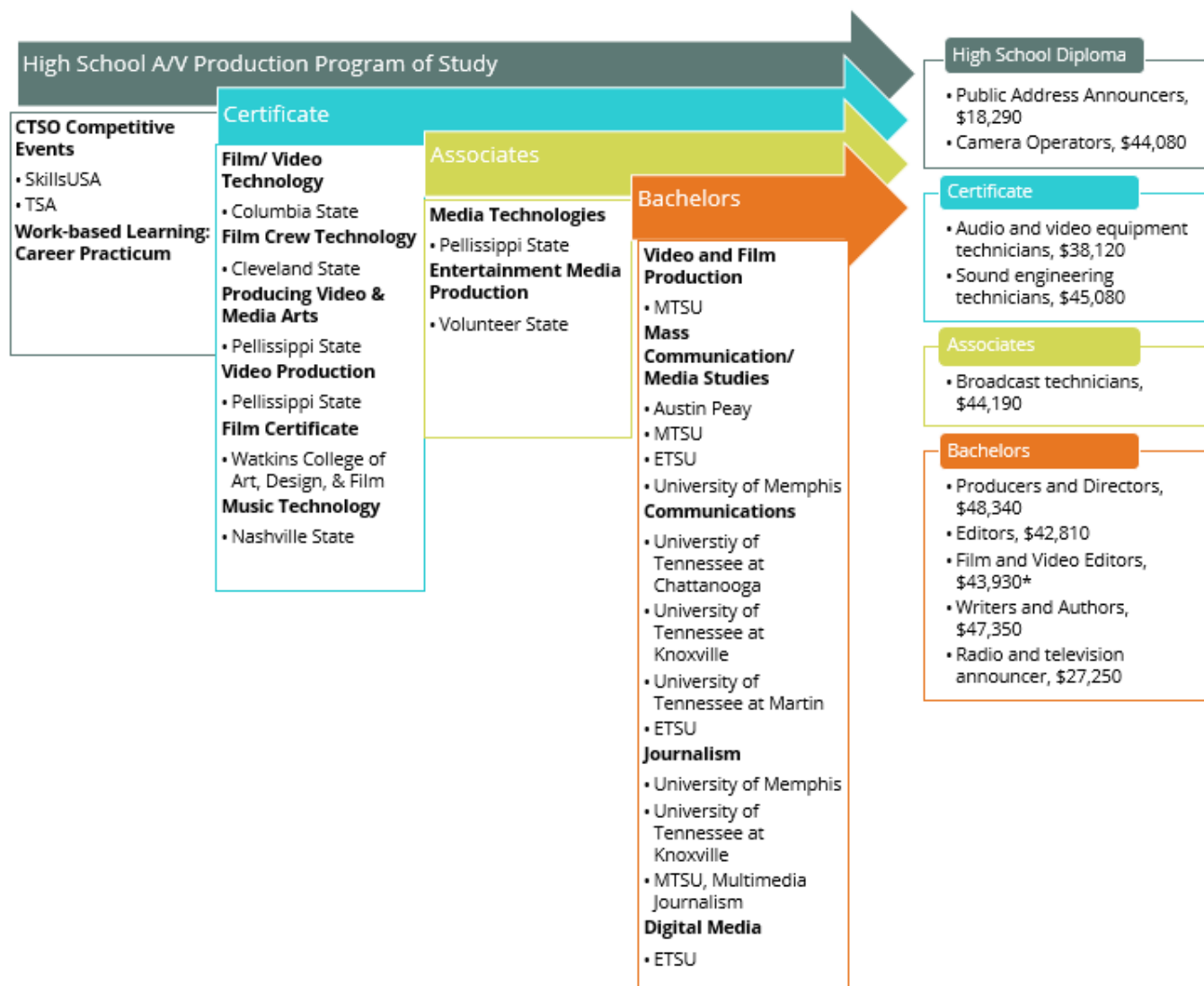
Changes from 2017-18

- There are no major changes in this career cluster.

Additional Considerations

- *Applied Arts Practicum* is a customizable course available as a capstone for these programs of study. You can find those standards listed with the corresponding program of study.
- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Arts, Audio/Visual Technology, & Communications.

Example program of study with seamless industry and postsecondary alignment:



Business Management & Administration

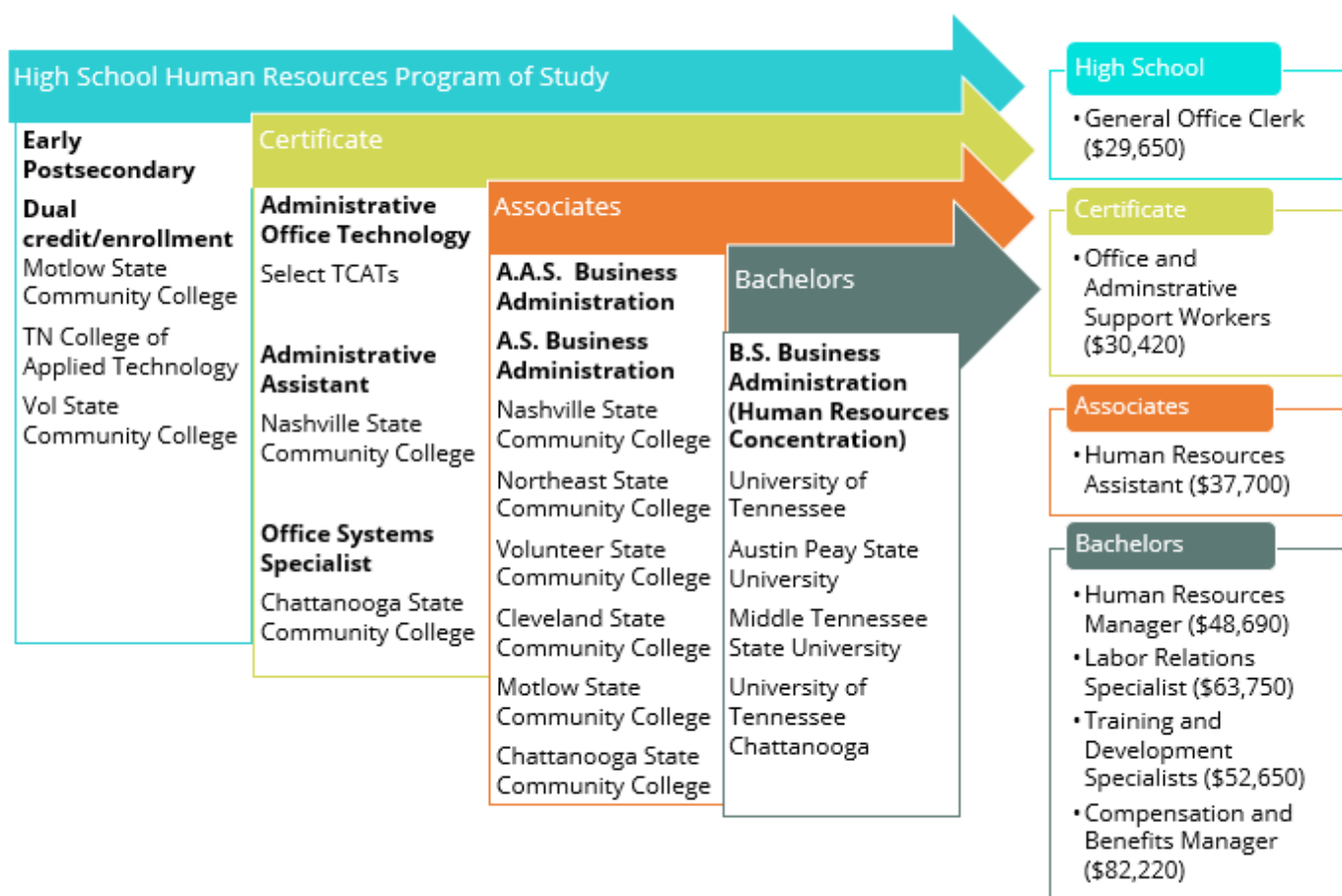
Changes from 2017-18

- Content was added in *Business Management* to include industrial psychology and situational leadership.
- One standard was revised in *Business Communication* to include information messaged through spreadsheets.
- One standard was revised in *Accounting I* to include the use of spreadsheet software.

Additional Considerations

- *Business Management* works well in schools or districts that are looking for a pathway into postsecondary business programs and/or have successful capstone business programs already in place, such as *Virtual Enterprise International*.
- For those districts looking for industry certifications in software applications that are valued by industry and prepare students for both immediate employment and matriculation to postsecondary programs (available through *Advanced Computer Applications*), we recommend offering the *Office Management* program of study.
- For those districts with a strong Business Management & Administration program, we recommend offering *Computer Applications* at the middle school level to ensure students are entering the program with the appropriate technical expertise to move effectively through the program of study's advanced courses. Students who have taken *Computer Applications* in middle school may move directly into the second-level course in the *Office Management* program of study.
- *Business & Entrepreneurship Practicum* is a customizable course available as a capstone for these programs of study. You can find those standards listed with the corresponding program of study.
- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Business Management & Administration.

Example program of study with seamless industry and postsecondary alignment:



Education & Training

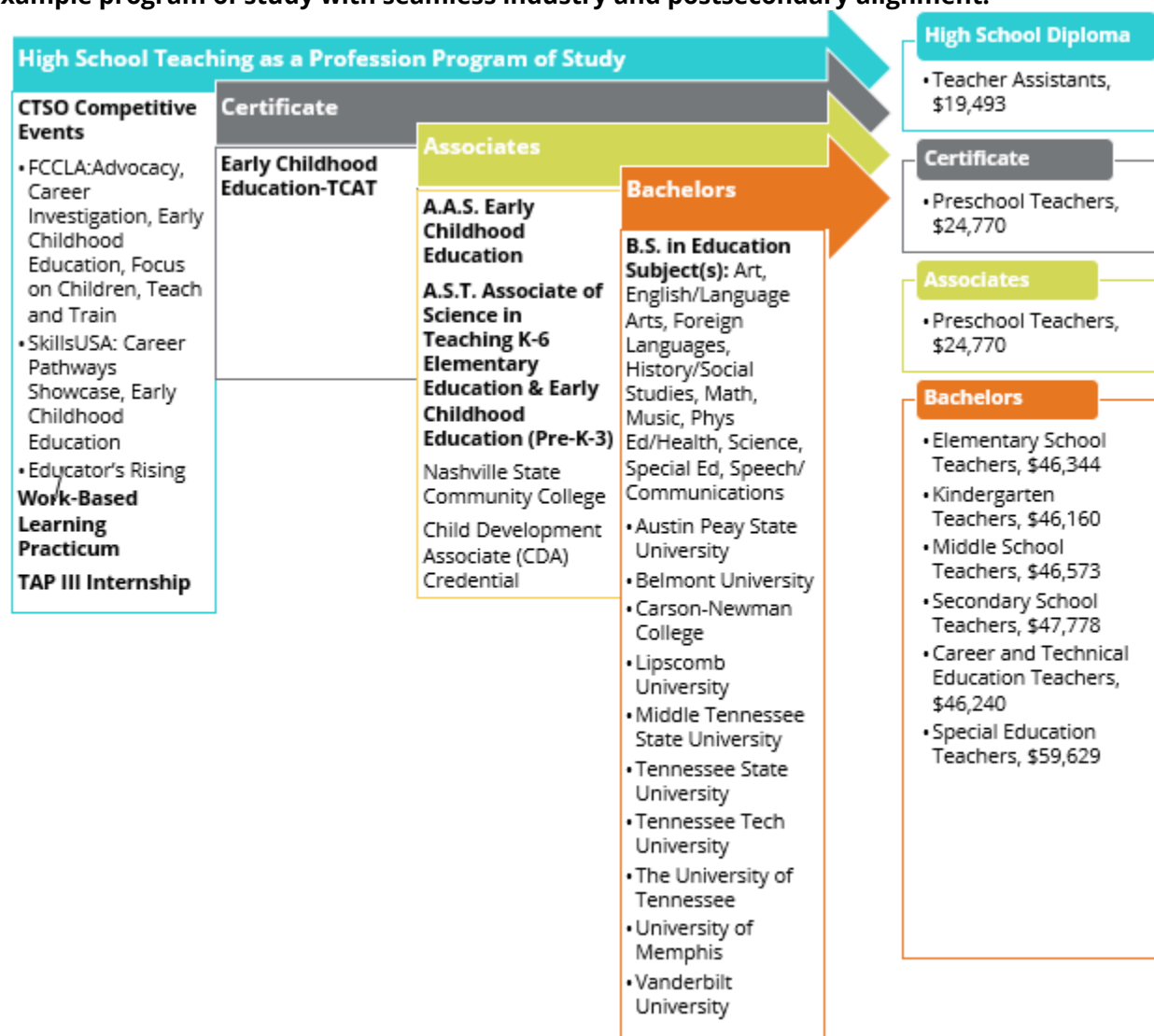
Changes from 2017-18

- There are no major changes in this career cluster.

Additional Considerations

- Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Education & Training.

Example program of study with seamless industry and postsecondary alignment:



Finance

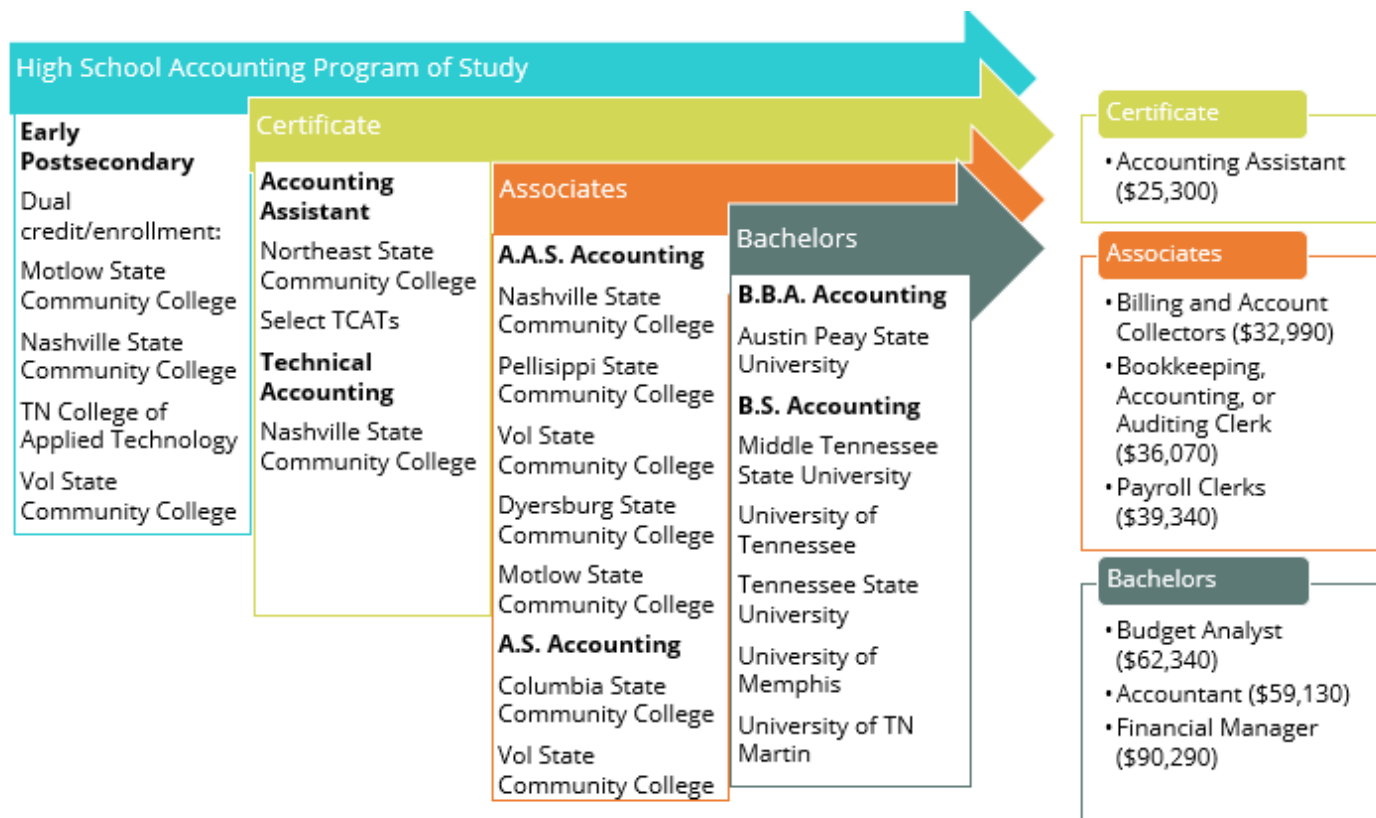
Changes from 2017-18

- *Accounting I* had one standard added to include spreadsheet software.
- *Accounting II* combined two standards and added content to include the analysis of annual reports.
- *Financial Planning* was added to the Accounting program of study as an option for concentration.

Additional Considerations

- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Finance.

Example program of study with seamless industry and postsecondary alignment:



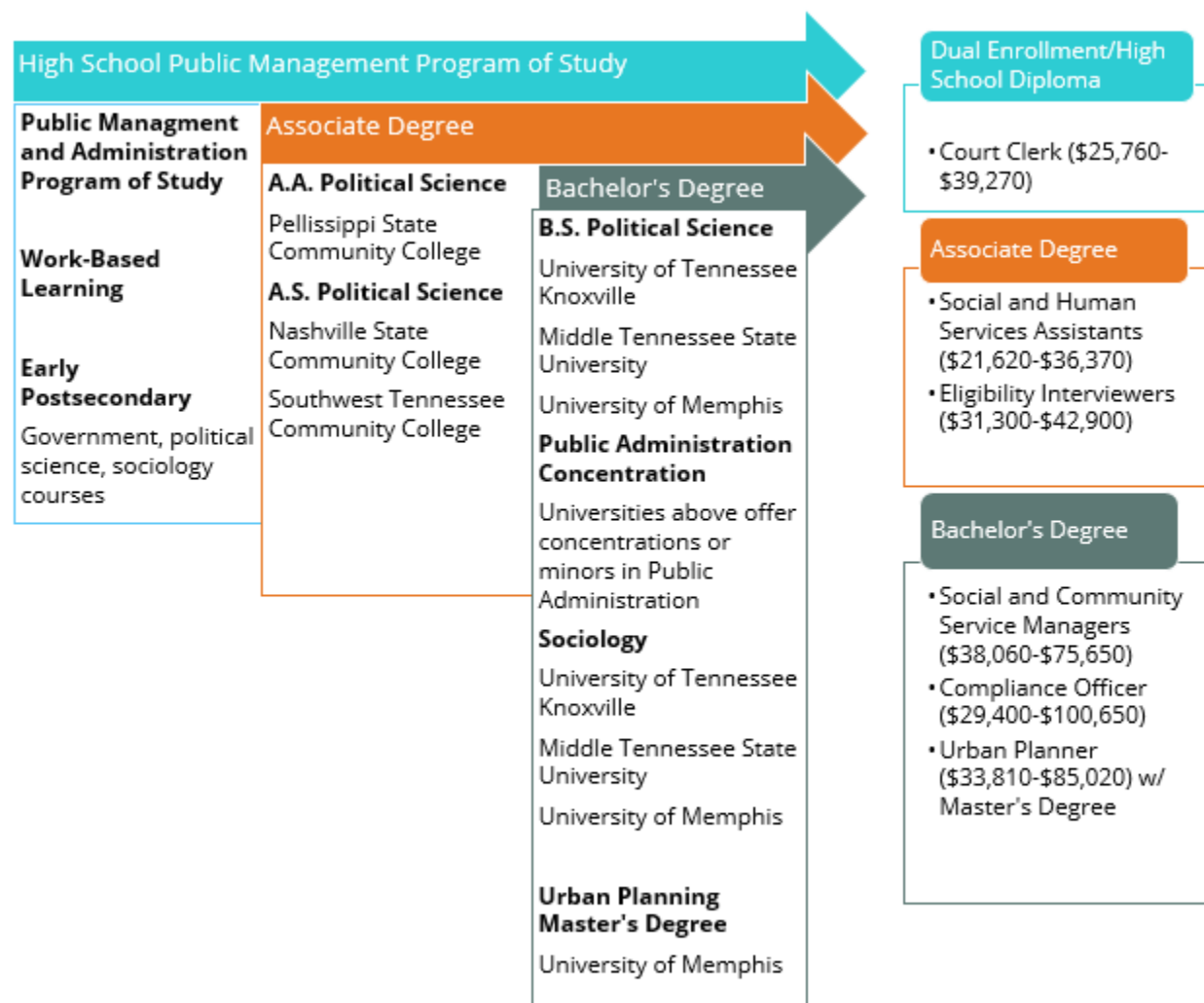
Government & Public Administration

Changes from 2017-18

- There are no major changes in this career cluster.

Additional Considerations

- Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Government & Public Administration.
- Example program of study with seamless industry and postsecondary alignment:**



Health Science

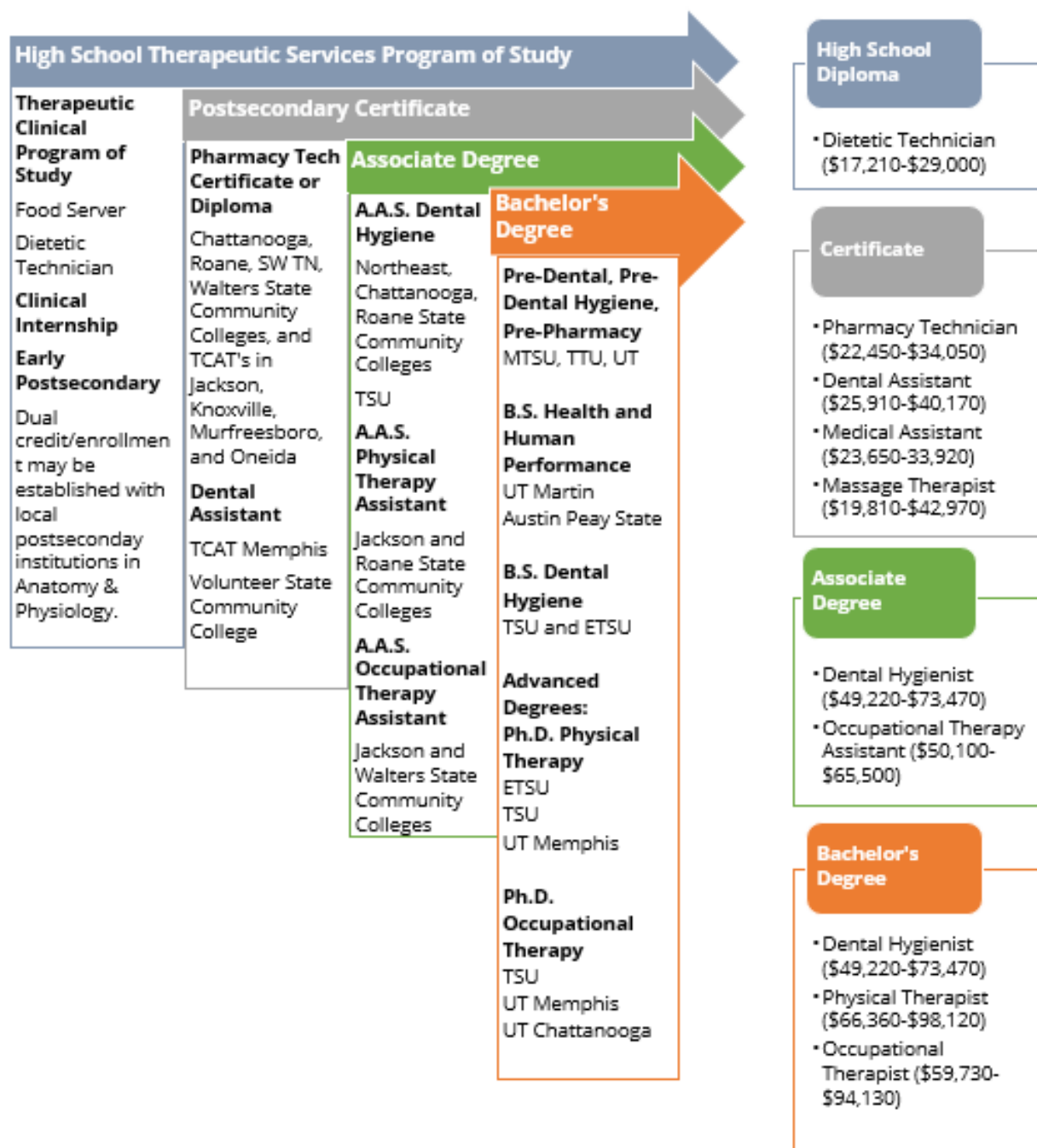
Changes from 2017-18

- The *Exercise Physiology* program of study is now called *Sport and Human Performance*.

Additional Considerations

- For those districts with a strong Health Science program, we recommend offering *Introduction to Health Science* at the middle school level.
- Programs of study in this career cluster contain industry certifications that meet ESSA's Ready Graduate indicator of one industry certification and two EPSOs. See the [Industry Certification Conversion Table for details](#).
- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Health Science.

Example program of study with seamless industry and postsecondary alignment:



Hospitality & Tourism

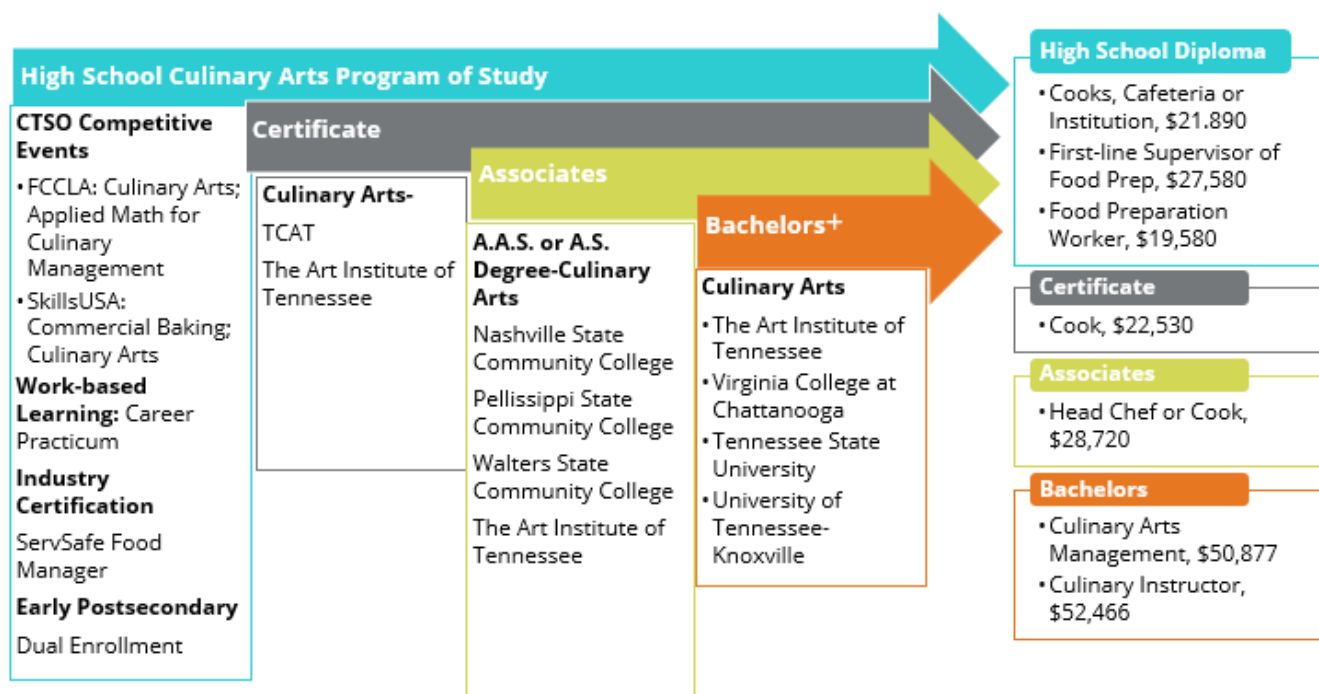
Changes from 2017-18

- There are no major changes in this career cluster.

Additional Considerations

- The *Hospitality and Tourism Management* program of study is highly customizable based on local community needs. It can be used to address not only available employment opportunities, but also continued postsecondary training in the hospitality and hotel management, sports, and entertainment fields of study. The *Event Planning & Management* course is designed to build on partnerships with local businesses and organizations and includes flexibility to focus on a particular area of interest for your students.
- Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Hospitality & Tourism.

Example program of study with seamless industry and postsecondary alignment:



Human Services

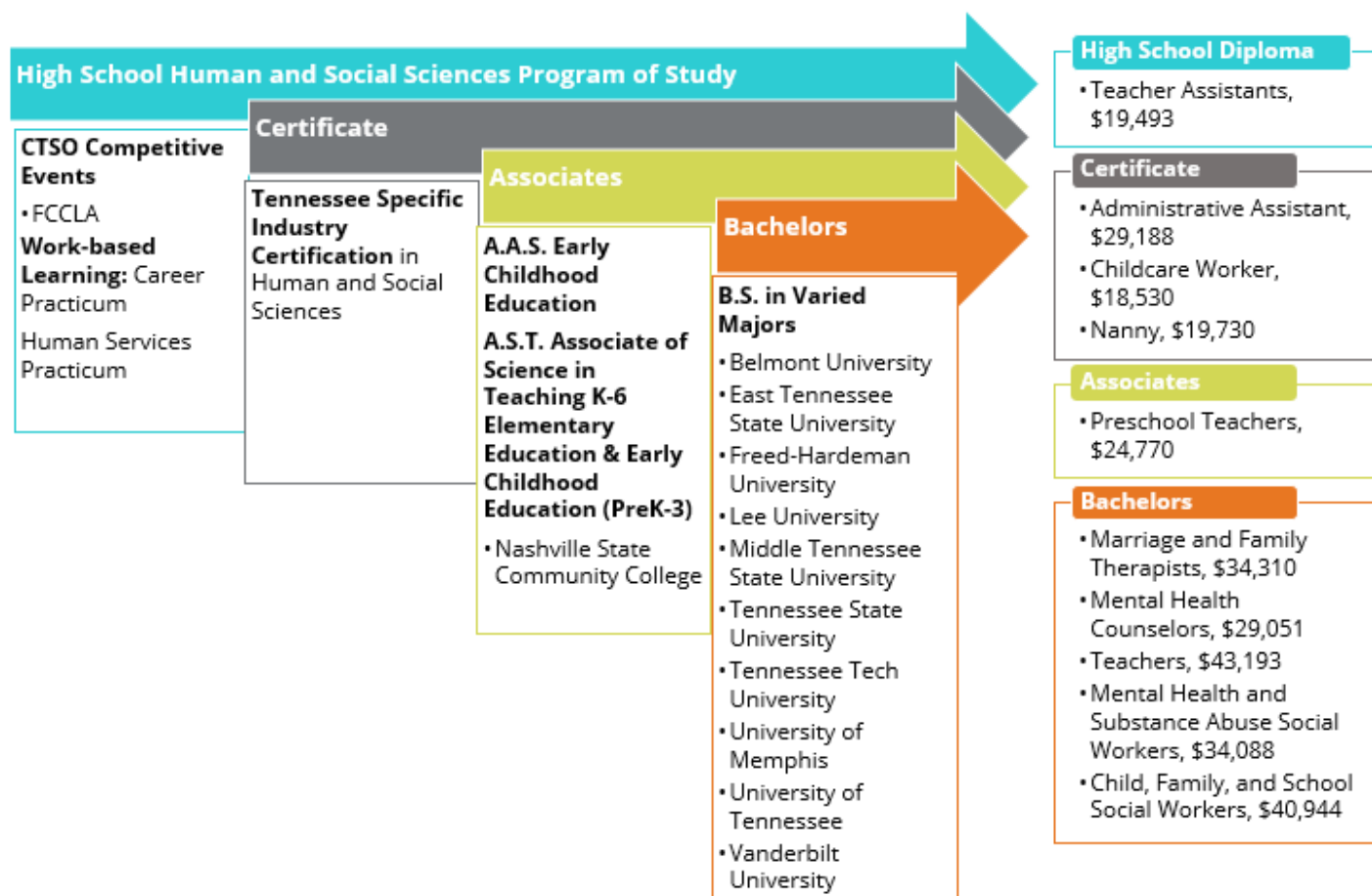
Changes from 2017-18

- The *Social Health Services* program of study will now be called *Human and Social Sciences*.

Additional Considerations

- If you are currently offering the *Cosmetology* or *Barbering* programs of study, we recommend that you build relationships with your local postsecondary institution to ensure appropriate transition of student hours toward a license. This is also a good area to establish a dual enrollment program.
- There are Tennessee Specific Industry Certifications in the *Human and Social Sciences* and *Dietetics & Nutrition* programs of study. For more information, contact Elizabeth.Rafferty@tn.gov.
- Programs of study in this career cluster contains industry certifications that meet ESSA's Ready Graduate indicator of one industry certification and two EPSOs. See the [Industry Certification Conversion Table for details](#).
- For those districts with a strong Human Services program, we recommend offering *Introduction to Social Health* at the middle school level.
- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Human Services.

Example program of study with seamless industry and postsecondary alignment:



Information Technology

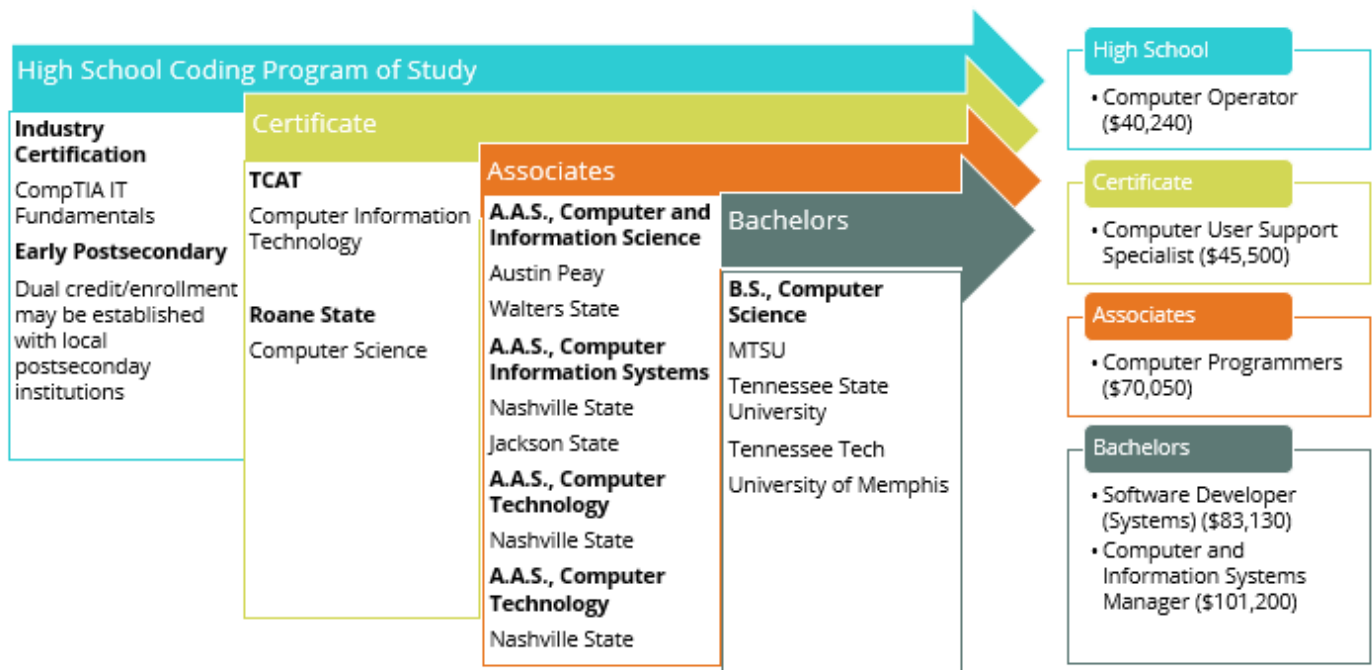
Changes from 2017-18

- Standards were added in *Computer Science Foundations* to include content to cover emerging technologies such as the Internet of Things (IoT) and cloud technology.

Additional Considerations

- For those districts with a strong Information Technology program, we recommend offering *Computer Applications* at the middle school level to ensure students are entering the program with the appropriate technical expertise to move effectively through the advanced courses.
- Coding Practicum* and *Web Design Practicum* are customizable courses available as capstones for these programs of study. You can find those standards listed with the corresponding program of study.
- Programs of study in this career cluster contain industry certifications that meet ESSA's Ready Graduate indicator of one industry certification and two EPSOs. See the [Industry Certification Conversion Table for details](#).
- Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Information Technology.

Example program of study with seamless industry and postsecondary alignment:



Law, Public Safety, Corrections, & Security

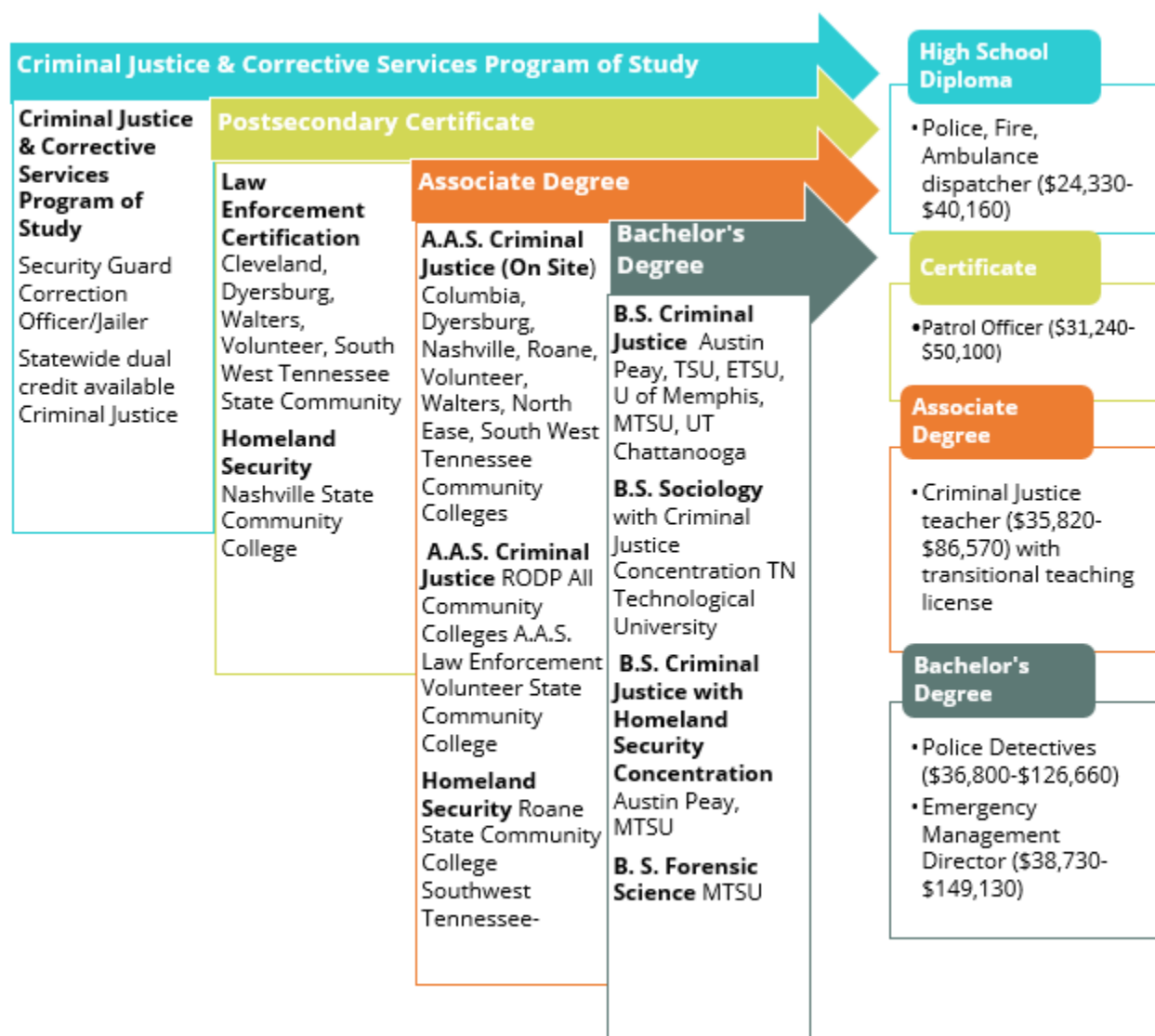
Changes from 2017-18

- The *Law Enforcement Services* program of study has been revised to combine duplicative course content and add standards to include corrections. The program of study, now called *Criminal Justice and Corrective Services*, includes *Criminal Justice I, II, III, and Practicum*. *Principles of Law, Corrections, and Security* has been retired.
- The *Legal and Correction Services* program of study has been revised to combine duplicative course content and add standards to include corrections. The program of study, now called *Pre-Law*, includes *Pre-Law I, II, III, and Service Learning Practicum*. *Principles of Law, Corrections, and Security* and *Court Systems and Practices* have been retired.

Additional Considerations

- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Law, Public Safety, Corrections, & Security.

Example program of study with seamless industry and postsecondary alignment:



Marketing

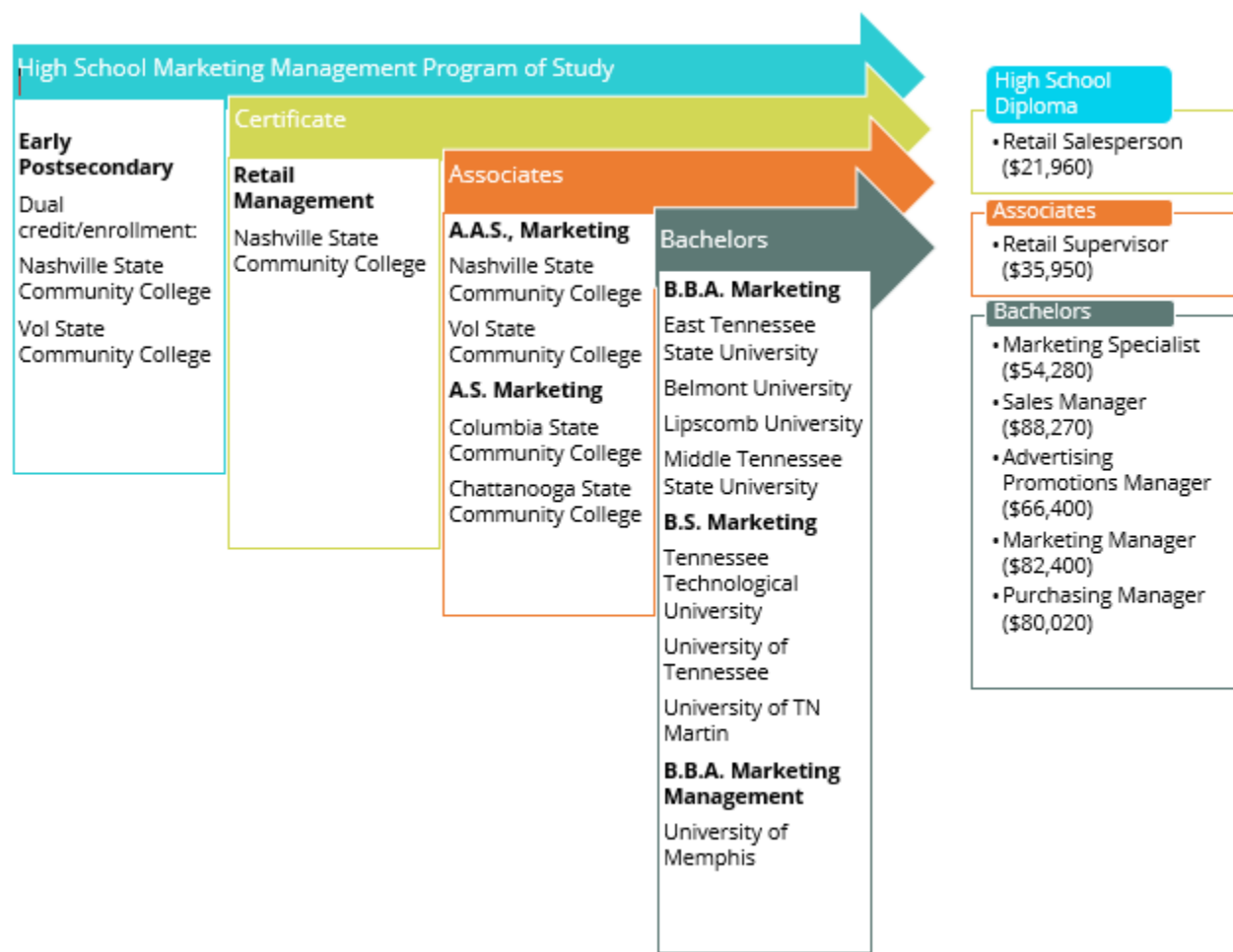
Changes from 2017-18

- The *Distribution and Logistics* program of study has been revised to be called *Supply Chain Management* and has been moved to the Marketing career cluster. Courses include *Foundations of Supply Chain Management*, *Supply Chain Management I*, *Supply Chain Management II*, and *Supply Chain Practicum*. *Supply Chain Management II* and *Practicum* are similar. *Practicum* should be chosen if the LEA has opportunities for work-based learning. If not, *Supply Chain Management II* contains comparable content but standards can be taught to mastery in the classroom. There will be mandatory two-day training for teachers of *Supply Chain Management* at the Institute for CTE Educators in 2018.

Additional Considerations

- A capstone course, *Business & Entrepreneurship Practicum*, is available to further customize the experience for students in the *Entrepreneurship* program of study. Students now have an additional year to work on ideas for start-up business ventures while earning credit toward a concentration.
- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Marketing.

Example program of study with seamless industry and postsecondary alignment:



Science, Technology, Engineering, & Mathematics (STEM)

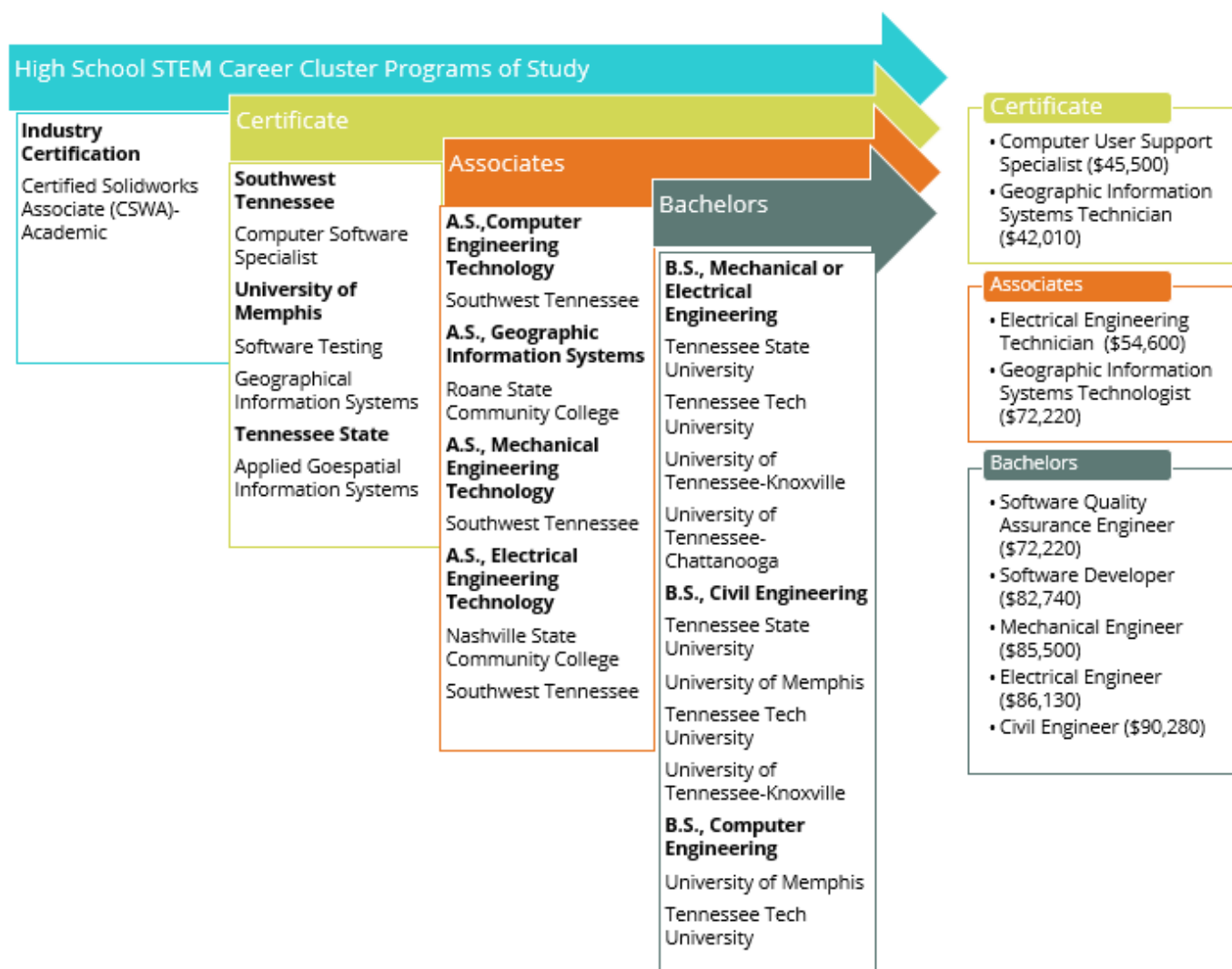
Changes from 2017-18

- The *STEM* program of study is now called *Advanced STEM Applications* and includes multiple AP course options.

Additional Considerations

- For districts with excelling STEM programs, the department, in conjunction with Tennessee STEM Innovation Network, offers a [STEM School Designation](#).
- For those districts with a strong STEM program, we recommend offering the suite of available middle school STEM courses between sixth and eighth grade in order to prepare students for advancement in high school.
- *STEM Practicum* is a customizable course available as a capstone for these programs of study. You can find those standards listed with the corresponding program of study.
- *Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in STEM.

Examples of programs of study with seamless transitions to industry and postsecondary



Transportation, Distribution, & Logistics

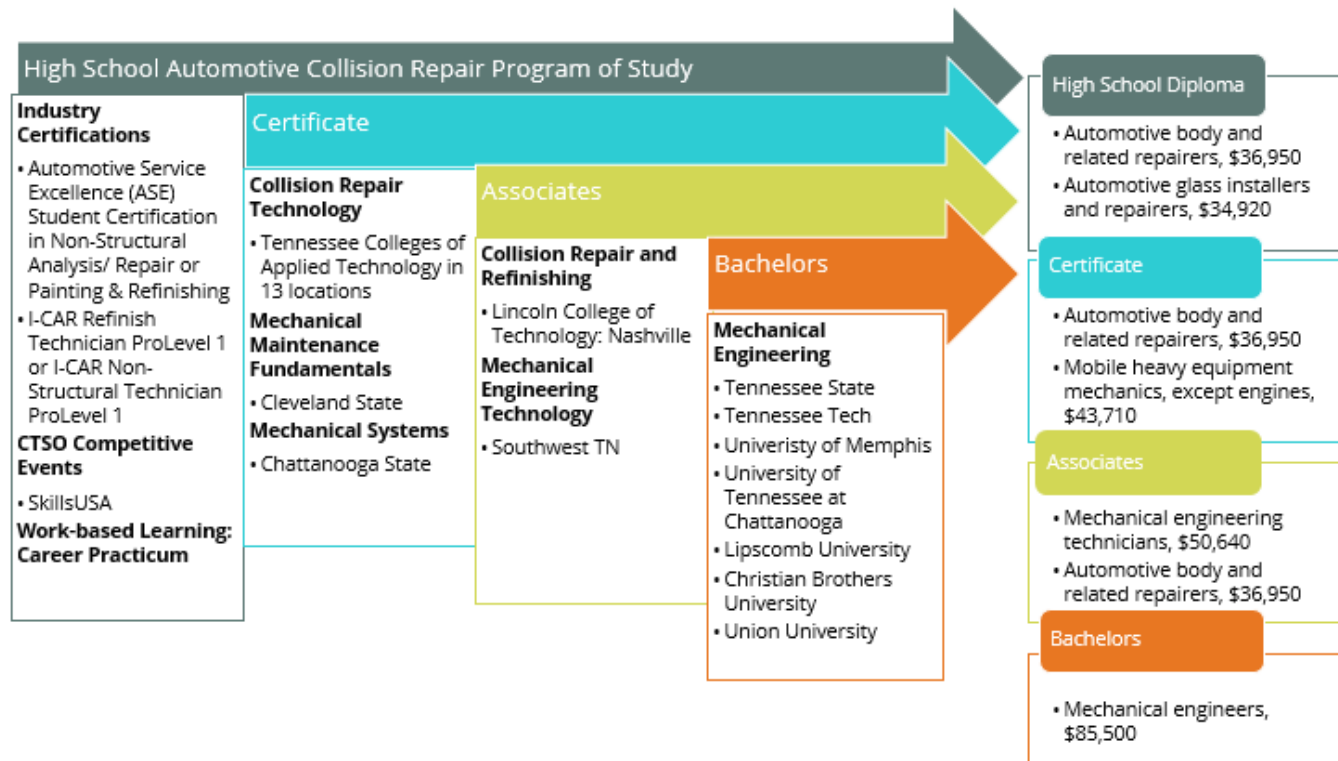
Changes from 2017-18

- The *Distribution and Logistics* program of study has been moved out of this career cluster and into Marketing.

Additional Considerations

- Work-Based Learning: Career Practicum* can be used to customize credits for a student toward a concentration in Transportation, Distribution, & Logistics.

Examples of programs of study with seamless transitions to industry and postsecondary



Industry Certification Conversion Table

The department partnered with the Tennessee Colleges of Applied Technology to determine the number of clock hours each industry certification would carry. Upon doing so, the calculation of 30 clock hours to one credit hour (the formula used to determine financial aid from TSAC) was utilized to conduct an ESSA Ready Graduate indicator conversion. The conversion took into account the equivalency of a typical three-credit postsecondary course. If the credit hour conversion was more than nine credit hours, then the industry certification would satisfy the entirety of the ESSA Ready Graduate indicator option of completing two EPSOs and earning an industry certification.

Certification	Aligned Course	Program(s) of Study	Career Cluster(s)	ESSA Conversion
American Welding Society Certified Welder	Welding II (6033)	Welding	Advanced Manufacturing	industry certification + 2 EPSOs
Associate of ISC²	Cybersecurity Practicum (6177)	Cybersecurity	Information Technology	industry certification + 1 EPSO
Autodesk Inventor from AutoCAD	Engineering Practicum (6141) STEM IV: Practicum (6147)	Engineering, Technology, and Applied STEM	STEM	industry certification + 1 EPSO
Automotive Service Excellence Student Certification: Maintenance & Light Repair Certification	Maintenance & Light Repair IV (5882)	Automotive Maintenance and Light Repair	Transportation, Distribution, & Logistics	industry certification only
Automotive Service Excellence Student Certification: Nonstructural Analysis/Repair	Collision Repair: Nonstructural (6062)	Automotive Collision Repair	Transportation, Distribution, & Logistics	industry certification only
Automotive Service Excellence Student Certification: Painting and Refinishing	Collision Repair: Painting & Refinishing (6063)	Automotive Collision Repair	Transportation, Distribution, & Logistics	industry certification only
AWS SENSE Entry Level Welder	Welding I (6078)	Welding	Advanced Manufacturing	Industry certification + 2 EPSO

Certification	Aligned Course	Program(s) of Study	Career Cluster(s)	ESSA Conversion
AWS SENSE Advanced Level Welder	Welding II (6033)	Welding	Advanced Manufacturing	industry certification + 2 EPSO
CCNA Cisco Certified Network Associate	Networking (6097)	Networking Systems	Information Technology	industry certification + 1 EPSO
Certified Clinical Medical Assistant	Medical Therapeutics (5999) followed by Clinical Internship (5993)	Therapeutic Services	Health Science	Industry certification + 2 EPSO
Certified EKG Technician	Cardiovascular Services (6131)	Diagnostic Services	Health Science	industry certification only
Certified Nursing Assistant	Nursing Education (6000)	Nursing Services	Health Science	industry certification only
Certified Personal Trainer	Exercise Science (6170) followed by Clinical Internship (5993)	Sport and Human Performance	Health Science	industry certification + 1 EPSO
Certified Pharmacy Technician	Pharmacological Science (6133)	Therapeutic Services	Health Science	Industry certification + 2 EPSOs
Certified Solidworks Associate (CSWA)-Academic	Engineering Practicum (6141) STEM IV: Practicum (6147)	Engineering, Technology, and Applied STEM	STEM	industry certification + 1 EPSO
Child Development Associate (CDA) Credential	Early Childhood Education Careers (ECEC) III (6017)	Early Childhood Education Careers	Human Services	industry certification + 1 EPSO
Cisco Certified Entry Network Tech (CCENT)	Computer Systems (6094)	Networking Systems	Information Technology	industry certification + 1 EPSO
CIW Web Design Specialist	Web Site Development (6101)	Web Design	Information Technology	industry certification + 1 EPSO
Commercial Pesticide Certification – Core (03)	Landscaping and Turf Science (5951)	Horticulture Science	Agriculture, Food, & Natural Resources	industry certification only

Certification	Aligned Course	Program(s) of Study	Career Cluster(s)	ESSA Conversion
CompTIA A+	Cybersecurity I (6175)	Cybersecurity	Information Technology	industry certification + 1 EPSO
CompTIA A+	Computer Systems (6094)	Networking Systems	Information Technology	industry certification + 1 EPSO
CompTIA A+	Coding II (6099)	Coding	Information Technology	industry certification + 1 EPSO
CompTIA IT Fundamentals	Computer Science Foundations (6905)	All Information Technology POS	Information Technology	industry certification only
CompTIA Network+	Cybersecurity II (6176)	Cybersecurity	Information Technology	industry certification + 2 EPSO
CompTIA Network+	Networking (6097)	Networking Systems	Information Technology	industry certification + 2 EPSO
CompTIA Security +	Cybersecurity Practicum (6177)	Cybersecurity	Information Technology	industry certification + 2 EPSO
Emergency Medical Responder (First Responder)	Emergency Medical Services (5995)	Emergency Services	Health Science	industry certification + 1 EPSO
EPA Section 608 Universal	HVAC (6077)	Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification only
FANUC	Robotics & Automated Systems (6143)	Mechatronics	Advanced Manufacturing	industry certification + 1 EPSO
FANUC	Robotics & Automated Systems (6143)	Technology	STEM	industry certification + 1 EPSO

Certification	Aligned Course	Program(s) of Study	Career Cluster(s)	ESSA Conversion
HVAC Excellence Employment Ready Certifications	HVAC (6077)	Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification + 2 EPSOs
HVAC Excellence, Heating, Electrical, Air Conditioning Technology (H.E.A.T.)	HVAC (6077)	Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification only
I-CAR Refinish Technician ProLevel 1 or I-CAR Non-Structural Technician ProLevel 1	Collision Repair: Nonstructural (6062)	Automotive Collision Repair	Transportation, Distribution, & Logistics	industry certification only
Level I Siemens Certified Mechatronic Systems Assistant	Mechatronics II (6157)	Mechatronics	Advanced Manufacturing	industry certification + 2 EPSOs
Machining Level I - Measurement, Materials, and Safety Certification (NIMS)	Principles of Manufacturing (5922)	Machining Technology	Advanced Manufacturing	industry certification only
Microsoft Office Expert (pass the two-part Expert Exam in Excel)	Advanced Computer Applications (5904)	Office Management	Business Management & Administration	industry certification only
Microsoft Office Expert (pass the two-part Expert Exam in Word)	Advanced Computer Applications (5904)	Office Management	Business Management & Administration	industry certification only
Microsoft Office Master - Track 1 (Word Expert + Excel Core + Elective)	Advanced Computer Applications (5904)	Office Management	Business Management & Administration	industry certification only
Microsoft Office Master - Track 2 (Excel Expert + Word Core + Elective)	Advanced Computer Applications (5904)	Office Management	Business Management & Administration	industry certification only
Microsoft Office Master - Track 3 (Word Expert + Excel Expert)	Advanced Computer Applications (5904)	Office Management	Business Management & Administration	industry certification only
Microsoft Office Specialist (Excel)	Advanced Computer Applications (5904)	Office Management	Business Management & Administration	industry certification only

Certification	Aligned Course	Program(s) of Study	Career Cluster(s)	ESSA Conversion
Microsoft Office Specialist (PowerPoint)	Advanced Computer Applications (5904)	Office Management	Business Management & Administration	industry certification only
Microsoft Office Specialist (Word)	Advanced Computer Applications (5904)	Office Management	Business Management & Administration	industry certification only
Microsoft Technology Associate Software Development Fundamental	Coding II (6099)	Coding	Information Technology	industry certification + 1 EPSO
NCCER Carpentry Level One	Structural Systems I (6164)	Structural Systems	Architecture & Construction	industry certification only
NCCER Carpentry Level Two	Structural Systems II (6165)	Structural Systems	Architecture & Construction	industry certification only
NCCER Construction Technology	Residential & Commercial Construction I (6162)	Residential & Commercial Construction	Architecture & Construction	industry certification only
NCCER Core Curriculum	Fundamentals of Construction (6073)	Residential & Commercial Construction; Structural Systems; Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification only
NCCER Electrical Level One	Electrical Systems (6075)	Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification only
NCCER Plumbing Level One	Plumbing Systems (6082)	Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification only
OSHA 10	Fundamentals of Construction (6073)	Residential & Commercial Construction; Structural Systems; Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification only

Certification	Aligned Course	Program(s) of Study	Career Cluster(s)	ESSA Conversion
OSHA 30 Construction	Residential & Commercial Construction II (6163), Structural Systems II (6165), Electrical Systems (6075)	Residential & Commercial Construction Structural Systems Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification only
Certified Production Technician (CPT)	Principles of Manufacturing (5922) Principles of Machining (5929) Principles of Machining II (5923) Manufacturing Practicum (5926)	Machining Technology	Advanced Manufacturing	industry certification + 1 EPSO
ServSafe Food Manager	Culinary Arts III (5981)	Culinary Arts	Hospitality & Tourism	industry certification + 1 EPSO
Snap-On Precision Measurement	Principles of Manufacturing (5922)	All Advanced Manufacturing	Advanced Manufacturing	industry certification only
Tennessee Specific Industry Certification-Animal Science (currently in pilot year)	Veterinary Science (5961)	Veterinary and Animal Science	Agriculture, Food, & Natural Resources	industry certification + 1 EPSO
Tennessee Specific Industry Certification Dietetics and Nutrition (currently in pilot year)	Nutrition Science and Diet Therapy (6007)	Dietetics and Nutrition	Human Services	industry certification + 1 EPSO
Tennessee Specific Industry Certification Horticulture Science (currently in pilot year)	Landscaping & Turf Science (5951)	Horticulture Science	Agriculture, Food, & Natural Resources	industry certification + 1 EPSO
Tennessee Specific Industry Certification-Social Health Services (currently in pilot year)	Family Studies (6136)	Social Health Services	Human Services	industry certification + 1 EPSO
TN Board of Cosmetology & Barbering - TN Cosmetology 1010	Cosmetology IV (6179)	Cosmetology	Human Services	industry certification + 2 EPSOs
TN Board of Cosmetology & Barbering - TN Master Barber 1010	Barbering III (5974)	Barbering	Human Services	industry certification + 2 EPSOs

Certification	Aligned Course	Program(s) of Study	Career Cluster(s)	ESSA Conversion
Universal R-410A	HVAC (6077)	Mechanical, Electrical, & Plumbing (MEP) Systems	Architecture & Construction	industry certification only