Aligning CTE Programs with an Appropriate Transfer Pathway
By the end of this session, CTE Directors will be able to

- articulate the vision for the “Ready Graduate” indicator in the draft ESSA state plan and how it represents our vision for postsecondary and career readiness for all students,

- accurately defend the selection of early postsecondary opportunities (EPSOs) that are in alignment with students’ postsecondary aspirations and programs of study, and

- seek out and implement appropriate EPSOs for their student population and postsecondary pathways – including selecting courses, vertically aligning to postsecondary, and funding opportunities.
Understanding Federal Requirements and TN Policies
Every Student Succeeds Act (ESSA)

Federal law:
- advances **equity** by upholding critical protections for America's disadvantaged and high-need students.

- requires that **all students** in America be taught to high academic standards that will prepare them to **succeed in college and careers**.

- helps to support and grow local innovations—including evidence-based and place-based interventions developed by local leaders and educators.

- maintains an expectation that there will be accountability and action to effect positive change by differentiating performance at school level.

Source: U.S. Department of Education
Tennessee’s ESSA State Plan

- Maintains the goal of achieving high quality education for all students

- Builds on the objectives and successes outlined in the state’s pre-existing strategic plan, Tennessee Succeeds.

- Includes same five priority areas: Early Foundations and Literacy, High School and Bridge to Postsecondary, All Means All, Educator Support, and District Empowerment.
Districts and schools in Tennessee will exemplify excellence and equity such that all students are equipped with the knowledge and skills to successfully embark upon their chosen path in life.
In High School and Bridge to Postsecondary, the department is focused on increasing student postsecondary and career readiness through, but not limited to, Early Postsecondary Opportunities (EPSOs).

Tennessee’s commitment is demonstrated by the school quality and student success measure added to the state’s accountability model, specifically, through the “Ready Graduate” indicator.

Source: Tennessee ESSA Plan
Ready Students & Effective Pathways

So how do we know if a student is “ready” and a school is providing effective pathways?

Indicators of success:

- Course-taking patterns of students
- Student achievement measures
- Student enrollment in postsecondary following graduation
Defining the “Ready Graduate”
Critically low numbers of students are underprepared at graduation

National Trends:
- 8 percent of students graduate high school with a “college and career ready” curriculum.
- 31 percent of students graduate with only a “college ready” curriculum.
- 13 percent of students graduate with a “career ready” curriculum.
- 47 percent of students graduate with no cohesive curriculum.

Tennessee:
- 32 percent of students graduate high school with a “college and career ready” curriculum.
- 32 percent of students graduate with only a “college ready” curriculum.
- 17 percent of students graduate with a “career ready” curriculum.
- 19 percent of students graduate with no cohesive curriculum.

Source: EdTrust report Meandering Toward Graduation: Transcript Outcomes of High School Graduates
Students who completed the full set of graduation requirements were significantly more likely to matriculate to postsecondary

- 68% of graduates who met all course requirements enrolled in postsecondary
- 53% of graduates who did not meet all course requirements enrolled in postsecondary
Students who graduated from high school and entered the workforce earned an average salary of $9,161 annually, far below the poverty line.

71,403 Students
2008 Cohort of High School Freshmen

- **13%** 9,089 students graduated from high school and entered the workforce.
- **31%** 22,444 students did not graduate from high school.
- **56%** 39,748 students enrolled in postsecondary education.

After one year:
- **25%** Not enrolled.
- **75%** Still enrolled.

Only 6 percent of students who were enrolled after one year completed a degree or certificate within two years.
In Tennessee, career-ready students are those who graduate K-12 education with the knowledge, abilities and habits to enter and complete postsecondary education without remediation and to seamlessly move into a career that affords them the opportunity to live, work, and sustain a living wage.

To achieve these outcomes, students should have a clear understanding of their learning pathways from as early as middle school and possess academic and technical knowledge that can be exhibited successfully and consistently across settings and experiences. They must also possess employability skills exhibited through critical thinking, written and oral communications, collaboration, problem solving, work ethic, and persistence. With such knowledge and skills, students can pursue their career opportunities with confidence and be engaged citizens, positively contributing to their communities.

— Career Forward Taskforce, 2016
Graduation Rate multiplied by the % of students who:

- Complete 2 EPSOs and earn an Industry Certification
- Score a 21 or higher on the ACT
- Complete 4 EPSOs

Statewide approach to check for evidence that graduates have demonstrated postsecondary and workforce readiness.
Our belief

- Students should experience a robust offering of EPSOs. Options for all students, regardless of background, should be differentiated by the following:
  - Student interest and pathway
  - Student postsecondary aspirations
  - Student knowledge, skills, and abilities
  - Student support needs (financial, access, transportation, etc.)
Clear and Guided Pathways for Students
Nearly all Tennessee high schools offer EPSOs.

- **None**: 8%
- **One option**:
  - **DE Only**: 21%
  - **AP only**: 7%
  - **Other**: 1%
- **Two options**:
  - **DE & AP**: 30%
  - **AP & SDC/IB**: 2%
- **More than 3**: 21%
Still, just over 40 percent of the 2011 graduating cohort (2015 graduates) attempted an EPSO.
We see a number of areas of concern as it comes to equitable access for all students.
We see significant gaps in ED student access and many “ready” students are not taking EPSO courses.
For each score band, students who took an EPS course were more likely to enroll in postsecondary immediately following graduation.
Early Postsecondary Courses are key to increasing postsecondary enrollment, eliminating gaps between student sub-groups.
Discussion

- What was most surprising about the EPSO landscape in Tennessee?

- What role can educators play in increasing equity in EPSOs?

- What are some ways to increase diversity in access to and enrollment in EPSOs?
Aligning CTE Programs with an appropriate Transfer Pathway
What is an effective Learning Pathway?

In your words...
- What are the elements of a student learning pathway?
- What characteristics make these pathways effective?

- Early career awareness and industry involvement
- Strong student supports and counseling
- Applied capstone experience, like WBL
- Ability to “bank” postsecondary credits and certifications
- Seamless transition to postsecondary
- Qualified workforce has regional relevance
- Multiple entry and exit points for grades 13-16 (TCAT, CC, 4-Year)
What Should a Learning Pathway Look Like?

High School Mechatronics Program of Study

Industry Certification
Siemens Level 1 Certified Mechatronics Systems Assistant
Early Postsecondary
Dual credit/enrollment: Motlow State Community College

Certificate
Industry Certification
Siemens Level 2 Certified Mechatronics Systems Associate
TCAT
Mechatronics Technician (TCAT Nashville)
Dyersburg Community College
Industrial Electricity Certificate
Mechanical Components I
Programmable Logic Controller I
CPT

Associates
A.S., Mechanical Pre-Engineering
Motlow State Community College
A.S., Advanced Integrated Technology
Columbia State Community College

Bachelors
B.S., Mechatronics Engineering
Middle Tennessee State University
B.S., Mechanical Engineering
Middle Tennessee State University

High School Diploma
• Industrial Machining Mechanic ($51,300)

Certificate
• Industrial Engineering Technician ($53,110)
• Electromechanical Technician ($58,540)

Associates
• Industrial Engineering Technologist ($61,900)
• Electromechanical Technologist ($61,900)

Bachelors
• Mechatronic Engineers ($76,300)
• Mechanical Engineer ($85,060)
• Industrial Engineer ($80,270)

Early postsecondary opportunities, including certifications
Seamless transition into postsecondary
## EPSOs in a CTE Program of Study

<table>
<thead>
<tr>
<th>POS</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
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<td>Coding</td>
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<td>Coding I (6098)</td>
<td>Coding II (6099)</td>
<td>Coding Practicum (5908)</td>
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<td>- Mobile App Development (6178)</td>
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<td>- or-</td>
<td><strong>AP Computer</strong></td>
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<td><strong>Dual Enrollment</strong></td>
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<td>Coding (4113)</td>
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<td>Available Industry</td>
<td>Comp TIA IT Fundamentals</td>
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<td>Microsoft Technology Associate Developer</td>
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<td>Certifications:</td>
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So, how do you begin?

1. **Start with your STUDENTS**: What do they want to do?
2. Build the PATHWAY: What postsecondary do they need to get there?
3. BRIDGE the gap: What will help them get to and through postsecondary?

- Industry certifications articulate for hours at TCATs
- General education requirements (DE, AP, IB) accelerate two- and four-year degree attainment
- Statewide dual credit articulates to all public institutions
- Local dual credit, dual enrollment, and CLEP enable students to earn credit in a specific major or focus area
Selecting Appropriate EPSOs for your Pathways

- TBR's Academic Focus Areas: [http://www.tntransferpathway.org/academic-focus-areas](http://www.tntransferpathway.org/academic-focus-areas)
Building your Transition to Postsecondary

Academic Focus Areas
- Applied Technology
- Arts
- Business
- Education
- Health Sciences
- Humanities
- Social Sciences
- STEM

Tennessee Transfer Pathways (sample)
- Engineering Technology
- Foreign Language
- Mass Communication
- Accounting
- Business Administration
- Marketing
- Early Childhood Education
- English
- Psychology
- Political Science
- Sociology
- Agriculture
- Chemistry
- Computer Science
Choosing EPSOs for your Pathways

- English Comp.
- College Algebra
- Microeconomics

- Business

- Principal of Accounting
- Statistics

- Accounting

General Education Requirements

Academic Focus Area

Area of Emphasis Requirements

TN Transfer Pathway (sample)
Choosing EPSOs for your Pathways

General Education Requirements
- English Composition
- College Algebra/Pre-Cal
- Microeconomics

Area of Emphasis Requirements
- Principals of Accounting
- Statistics
# Funding: How to pay for EPSOs

<table>
<thead>
<tr>
<th>EPSO:</th>
<th>Available Funding:</th>
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<tbody>
<tr>
<td>Advanced Placement (AP)</td>
<td>• State Exam Fee Assistance Pilot</td>
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<tr>
<td>International Baccalaureate (IB)</td>
<td>• Federal Grants: ESSA Title IV Block Grant (TBD), Title I</td>
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<td>Cambridge International Exams (CIE)</td>
<td>• Perkins Basic (only w/ POS)</td>
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<td>• College Board ED Fee Waiver</td>
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<td>• Local Chamber of Commerce</td>
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<tr>
<td>Dual Enrollment</td>
<td>• Dual Enrollment Grant</td>
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<td>• Perkins Basic (only w/ POS)</td>
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<tr>
<td></td>
<td>• Scholarships/Gap costs covered by some CCs</td>
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<td>Statewide Dual Credit</td>
<td>• Tennessee Department of Education</td>
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<tr>
<td>Local Dual Credit</td>
<td>• Standard fee of $25 across all CCs</td>
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<tr>
<td>Industry Certification</td>
<td>• Perkins Basic</td>
</tr>
<tr>
<td></td>
<td>• Perkins Reserve Grant</td>
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<tr>
<td>CLEP Exam</td>
<td>• Perkins Basic (only w/ POS)</td>
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</tbody>
</table>
Discussion

- What data do you use to determine your EPSOs offerings at your school(s)?

- What data are you using to determine student placement and encourage completion in EPSOs?

- Are your students taking advantage of EPSOs offered in both general education and CTE courses? Why or why not?

- How do you communicate your EPSOs to students and parents?
Districts and schools in Tennessee will exemplify excellence and equity such that all students are equipped with the knowledge and skills to successfully embark on their chosen path in life.