

Phase 1 Methodology to Measure Statewide Market Demand and Statewide Institutional Program Performance

Operationalizing Statewide Market Demand and Statewide Institutional Program Performance

The department developed a methodology for the annual Career and Technical Education (CTE) audit to measure each CTE program's Market Demand and Institutional Program Performance at the statewide level (Phase 1). Programs were measured separately for Market Demand (whether the program trains students for an in-demand, high-quality occupation) and Institutional Program Performance (the retention, success, and outcomes of students enrolled in a program). The unit of analysis was statewide programs such that each program was counted once. For example, all Associate in Science in Nursing (ASN) programs across the state were counted as one program.

Statewide Market Demand Indicators—Secondary and Postsecondary CTE Programs

Data for the Market Demand indicators were collected at the occupational level, based on a standard occupational code (SOC), using occupational data reported by the Florida Department of Economic Opportunity (DEO), Bureau of Labor Market Statistics. For each CTE program, Florida Department of Education (FDOE) staff examined the Market Demand indicators below based on the CTE program's primary SOC code. In other words, each CTE program (Career Preparatory and postsecondary) is designated one SOC code (occupation) for which the program of study primarily trains students.

- **Measure 1:** Indicator of whether the program trains for an occupation on the Statewide Demand Occupation List (DOL)
 - This Market Demand indicator is dichotomous, where “yes” indicates that the SOC code appears on the Statewide DOL and “no” means the SOC code does not appear on the Statewide DOL. The Statewide DOL identifies the labor market needs of Florida's business community. It encourages job training and postsecondary education based on those needs, emphasizing jobs that are both high demand and high skill/high wage. Career Preparatory and all postsecondary CTE programs were assessed on this measure.
- **Measure 2:** Indicator of whether the program trains for an occupation on any Regional DOL
 - This Market Demand indicator is dichotomous, where “yes” indicates that the SOC code appears on at least one of the 24 Regional DOL and “no” indicates the SOC code does not appear on any of the 24 Regional DOL's. Regional workforce boards develop and use their Regional DOL's to identify occupations for which eligible adults and dislocated workers may receive training assistance under the Workforce Innovation and Opportunity Act. Career Preparatory and all postsecondary CTE programs were assessed on this measure.
- **Measure 3:** Annualized indicator of whether the program trains for an occupation that is expected to grow over the next eight years
 - This Market Demand indicator is dichotomous, where “yes” indicates projected job growth from 2018 to 2026 by meeting one of the following sets of criteria: 1) 500 annual job openings and an annual growth rate of 1.26%; or 2) 1,200 annual job openings and

any positive growth rate. “No” for this Market Demand indicator signifies that neither sets of these criteria were met. Career Preparatory and all postsecondary CTE programs were assessed on this measure.

- **Measure 4: Indicator of whether the program trains for an occupation with middle or high wages**
 - This Market Demand indicator is dichotomous, where “yes” indicates the program trains for an occupation leading to middle or high wages and “no” indicates the program does not train for an occupation leading to middle or high wages. For each CTE program, the primary SOC code’s entry-level wages and mean-level wages were compared to state thresholds established by DEO. A program leads to middle wages if the entry- and mean-level wages were greater than or equal to \$12.31 and \$15.13 per hour, respectively. A program leads to high wages if the entry- and mean-level wages were greater than or equal to \$15.13 and \$23.73 per hour, respectively. Career Preparatory and all postsecondary CTE programs are assessed on this measure.
- **Additional Market Demand Measure of Technology Education Secondary Programs Only: Indicator of whether the program trains for an area identified as an Enterprise Florida Targeted Sector**
 - This Market Demand indicator is dichotomous, where “yes” indicates, the program is aligned to an Enterprise Florida Targeted Sector and “no” indicates the program does not lead to an occupation in an Enterprise Florida Targeted Sector. The following are the targeted sectors: aviation and aerospace, life sciences, manufacturing, defense and homeland security, information technology, financial and professional services, logistics and distribution, and Cleantech. Only secondary Technology Education programs are assessed on this measure.

Statewide Institutional Program Performance Indicators – Secondary CTE Programs (Career Preparatory and Technology Education)

Data for the Institutional Program Performance measures were collected from the Florida Department of Education, PK-20 Education Reporting and Accessibility (PERA), and Florida Education Training and Placement Information Program (FETPIP).

- **Measure 1: Percent of students with a program concentration**
 - This Institutional Program Performance indicator reflects the percentage of 12th-grade students exiting the K-12 system who had earned credit in multiple courses in a single CTE program (three courses in programs with three or more courses; two courses for a two-course program). FDOE staff assigned points to each program by multiplying the calculated concentration rate by 10.
- **Measure 2: Graduation rate of students with a program concentration**
 - This Institutional Program Performance indicator is a four-year cohort graduation rate of students who were program concentrators in the CTE program. Only standard diplomas are included in this measure. FDOE staff assigned points to each program by multiplying the calculated graduation rate by 10.
- **Measure 3: Percent of CTE concentrator graduates who transitioned into postsecondary education or employment after high school**
 - This Institutional Program Performance indicator reflects the percentage of

concentrator graduates who are found employed or continuing their education in the year following credential completion. Job placement or continuing education rates were calculated by dividing the annual number of students found employed or continuing education by the total annual number of students with a program completion record and a valid SSN. FDOE staff assigned points to each program by multiplying the calculated transition rate by 10.

Data on two additional indicators were collected for secondary programs and courses. These were not included in the benchmarking process but were used for additional context.

- **Additional Measure: Percent of students who earned an industry certification or digital tool certificate in the course**
 - This Institutional Program Performance indicator reflects the percentage of students enrolled in a program who earned an industry certification or digital tool certificate. These percentages should be interpreted with caution because not all secondary programs have an established alignment with an industry certification. Points are not assigned for this measure in benchmarking; this information may be used for additional context.
- **Additional Measure: Average entry wage of CTE concentrator graduates**
 - This Institutional Program Performance indicator reflects the average annual wages of CTE concentrator graduates. Average annual wages for those found employed in Florida after completion were provided by FETPIP as Average Annualized Wages Employed (Best Wage), which is calculated by averaging quarterly earnings using the highest quarterly wage found for an individual within the four quarters following graduation (July-September, October-December, January-March, April-June) and then annualizing it by multiplying it by four. Points are not assigned for this measure in benchmarking; this information may be used for additional context.

Statewide Institutional Program Performance Indicators – Postsecondary CTE Programs

Data for these measures were collected from the Florida Department of Education, PERA, and FETPIP. All postsecondary CTE programs were evaluated on the four Institutional Program Performance indicators, summarized below.

- **Measure 1: Year-to-year retention rate (accounting for programs less than one year in length)**
 - This Institutional Program Performance indicator reflects the percentage of students enrolled in a CTE program each year who are retained into any postsecondary program the subsequent reporting year. For example, the number of students found enrolled in any semester in 2017-2018 who are retained into any semester in 2018-2019. The initial cohort includes all enrollments in a single reporting year (e.g., 2017-2018) and is not limited to first-time-in-college students. In order to account for shorter programs, students who complete their program within the year are also counted in the numerator and the denominator as retained. Points are assigned to each program by multiplying the calculated retention rate by 10 for a possible score of 0 to 10 points.

- **Measure 2: Student “success” rate among program exiters**
 - This Institutional Program Performance indicator reflects the percentage of students exiting their program of study with either a credential (degree or certificate), industry certification, or completing a terminal Occupational Completion Point (OCP). Completion rates are calculated by dividing the number of students with any completion (degree or certificate, industry certification, or terminal OCP) from a cohort of students who were found enrolled in one year (e.g., 2017-2018) and not found enrolled in the subsequent year (e.g., 2018-2019). Points are assigned by multiplying the calculated retention rate by 10 for a possible score of 0 to 10 points.
- **Measure 3: Job placement or continuing education rate among program completers**
 - This Institutional Program Performance indicator reflects the percentage of graduates who are found either employed or continuing their education in the year following program completion. The job placement or continuing education rate is calculated by dividing the annual number of students found employed or continuing education by the total annual number of students with a program completion record and a valid SSN. Points are assigned based on a continuous scale where a 50 percent rate is awarded 0 points, and a 100 percent rate is awarded 10 points.
- **Measure 4: Average annualized wages for program completers found employed in Florida**
 - This Institutional Program Performance indicator is based on the average annualized earnings of program completers in the first year after program completion. The average earnings of program completers (based on 10- digit CIP codes) are compared to the average entry-level earnings of all Floridians employed in the occupation (based on SOC code) associated with the program. A percent difference between these two salaries is calculated. In other words, this Institutional Program Performance indicator determines if program completers are earning the same, higher, or lower annualized salaries than the entry-level annualized salaries of those employed in the occupation associated with the program of study. For example, if the average annualized salary of program completers is equal to the average annualized entry-level wages, there is a 0 percent difference. Points are awarded on a continuous scale such that a –40 percent difference is awarded 2.5 points, and a +20 percent difference is awarded 10 points. Note, all programs that have less than a –40 percent difference are awarded 0 points. All programs that have a higher than +20 percent difference are awarded 10 points. All postsecondary programs are assessed on this measure.

During the process of gaining stakeholder feedback, there were several Institutional Program Performance indicators identified for which the department could not readily collect data. As a result of limitations with data collection, these indicators were tabled for the 2019-2020 audit. At the postsecondary level, they include: 1) passage rates for licensure exams; 2) the number of industry certifications earned in the program; and 3) return on investment. Recognizing the importance of these measures, FDOE staff will work to include them in future audits.

Benchmarking (Assigning Points) for Statewide Market Demand and Statewide Institutional Program Performance

Secondary CTE Programs (Career Preparatory and Technology Education)

Benchmarking Statewide Market Demand

Market demand for Career Preparatory programs was demonstrated by meeting at least one of the following indicators:

- the program trains for an occupation on the Statewide Demand Occupation List (DOL);
- the program trains for an occupation on at least one regional DOL;
- the occupation is expected to grow over the next eight years;
- the program trains for an occupation with middle to high wages; or

For Technology Education programs, the program frameworks do not include SOC codes for analysis. Technology Education programs are not career preparatory in nature but rather provide broad foundational knowledge and skills in fields that generally require a baccalaureate degree such as engineering. As such, they do not contain SOC codes. Therefore, the programs were only evaluated for Market Demand by:

- the program trains for an area identified as an Enterprise Florida Targeted Sector

Programs that did not meet any of the Market Demand indicators did not demonstrate market demand using statewide indicators; these programs required further review of local market demand.

Benchmarking Statewide Institutional Program Performance

Secondary CTE programs (Career Preparatory and Technology Education) were assessed for Institutional Program Performance. In determining scoring on Institutional Program Performance indicators, each program had the opportunity to receive 30 points; each of the three Institutional Program Performance indicators had a value of up to 10 points.

For district programs with a point total greater than 20.03, they were marked as demonstrating adequate/sufficient Institutional Program Performance. **Programs with total points at or below 20.03 did not demonstrate adequate/sufficient Institutional Program Performance using statewide indicators; these programs require further review of Institutional Program Performance** (via the program status template).

Postsecondary CTE Programs

Benchmarking Statewide Market Demand

The postsecondary CTE programs underwent a two-step process to evaluate program quality. First, each program was assessed for Market Demand. Districts/institutions that established meeting Market Demand met at least one of the four Market Demand indicators:

- the program trains for an occupation on the Statewide Demand Occupation List (DOL);
- the program trains for an occupation on at least one regional DOL;
- the program trains for an occupation that is projected to have high annual growth over the next eight years; or
- the program trains for an occupation with middle to high wages.

Programs that did not meet any of the Market Demand indicators did not demonstrate market demand using statewide indicators; these programs require further review of local market demand.

Benchmarking Statewide Institutional Program Performance

Each postsecondary CTE program was assessed for Institutional Program Performance. In determining scoring on Institutional Program Performance indicators, each program had the opportunity to receive 40 points. Each of the four institutional Program Performance indicators had a maximum value of up to 10 points. Programs that had total points of 25.31 or higher demonstrated program performance.

Programs with total points below 25.31 did not demonstrate performance using statewide indicators; these programs require further review of institutional performance. Programs with insufficient data were automatically referred for review of institutional performance (via the program status template).