

## GIS Certificate Program - 2025 CTE Two-Year Program Review

### NARRATIVE RESPONSES

#### 1. Meets a documented labor market demand

Yes. The Geographic Information Systems (GIS) Certificate Program continues to meet documented labor market demand. According to the U.S. Bureau of Labor Statistics (BLS), employment of cartographers and photogrammetrists is projected to grow 6 percent from 2023 to 2033, faster than the average for all occupations. Similarly, employment of surveying and mapping technicians is projected to grow 6 percent over the same period (U.S. Bureau of Labor Statistics, 2024a; 2024b). These projections indicate a sustained demand for professionals skilled in GIS technologies.

In California, the demand is even more pronounced. The California Employment Development Department (EDD) projects that employment for surveying and mapping technicians will grow by 8.5 percent between 2020 and 2030, reflecting the state's ongoing investments in infrastructure, environmental management, and urban planning.

Cuesta College's GIS Certificate Program is strategically designed to address this demand by equipping students with practical skills in industry-standard software such as ArcGIS Pro, as well as competencies in data management and geospatial analysis. The program's curriculum is continually updated to align with current industry practices, ensuring that graduates are well-prepared to meet the evolving needs of employers in both the public and private sectors.

#### 2. Does not represent unnecessary duplication of other manpower training programs in the area

Yes. The GIS Certificate Program at Cuesta College offers unique training within the region, with no comparable community college-level GIS certificate offered locally within San Luis Obispo County. While Cal Poly San Luis Obispo offers GIS coursework, it is embedded within four-year degree programs and does not provide an accessible or standalone CTE certificate. Cuesta's program is designed to be flexible and accessible to working professionals, recent high school graduates, and re-entry students seeking a targeted skillset and pathway to employment. The certificate's emphasis on technical GIS software training, project-based learning, and integration with real-world data makes it complementary, not duplicative, of nearby academic programs.

#### 3. Is of demonstrated effectiveness as measured by the employment and completion success of its students

Yes. Based on Core Indicator Reports (TOP code: 2206.10 – Geographic Information Systems), the GIS Certificate Program demonstrates effectiveness in both student completion and employment outcomes. The most recent report indicates a completion rate

above the statewide average for similar programs, and job placement data shows that a majority of graduates find employment within six months in related fields such as environmental consulting, planning, public works, and natural resource management. Anecdotal evidence from alumni surveys and employer feedback confirms that students are being hired into positions requiring GIS proficiency. Additionally, articulation with local industry partners and applied internship opportunities contribute to student success.

## **PUBLIC SUMMARY**

The Geographic Information Systems (GIS) Certificate Program at Cuesta College continues to demonstrate strong alignment with regional and statewide workforce needs. As a Career Technical Education (CTE) program, GIS prepares students for employment in a variety of growing industries where spatial data and mapping technologies are essential, including environmental consulting, public infrastructure, land use planning, and emergency management.

Recent labor market analyses from the U.S. Bureau of Labor Statistics project a 6 percent growth in employment for both cartographers and photogrammetrists as well as surveying and mapping technicians from 2023 to 2033—faster than the average for all occupations. California’s Employment Development Department projects even stronger growth, with an estimated 8.5 percent increase in surveying and mapping technician jobs from 2020 to 2030.

Cuesta’s GIS program responds to this need by offering accessible, hands-on training in industry-standard software such as ArcGIS Pro and remote sensing platforms, with a curriculum designed to support both immediate employment and continued education.

The program stands out locally, with no redundant offerings within San Luis Obispo County. It fills a critical educational and workforce gap by providing affordable, targeted instruction not otherwise available outside four-year institutions. Cuesta’s GIS Certificate is designed for working professionals, career changers, and students seeking entry-level skills for high-demand technical roles.

Program outcomes continue to meet and exceed state benchmarks. Core Indicator Reports show strong completion and employment rates among students, supported by project-based learning, industry partnerships, and internship opportunities. Graduates of the program are contributing to real-world geospatial projects throughout the region and beyond.

Cuesta College remains committed to supporting this high-value certificate program as part of its broader mission to provide career-relevant education aligned with labor market needs.

## References

U.S. Bureau of Labor Statistics. (2024a). Cartographers and Photogrammetrists. Occupational Outlook Handbook. <https://www.bls.gov/ooh/architecture-and-engineering/cartographers-and-photogrammetrists.htm>

U.S. Bureau of Labor Statistics. (2024b). Surveying and Mapping Technicians. Occupational Outlook Handbook. <https://www.bls.gov/ooh/architecture-and-engineering/surveying-and-mapping-technicians.htm>

California Employment Development Department. (2023). Occupational Projections: Surveying and Mapping Technicians. <https://www.labormarketinfo.edd.ca.gov>