

Entity Information	
Owner	Record Type
Alexandra Yadav	Workforce
Proposal Name	Proposal Status
WF-06930	In Review
Name of Entity	Stage
Valencia College	Proposed
FIN	

Program Requirements

Training Title and Description

Please see Attachment A: Project Narrative

Training Title and Description

Please see Attachment A: Project Narrative

Transferable Skills Description

Please see Attachment A: Project Narrative

Support Public Program(s)

Please see Attachment A: Project Narrative

Description of Criteria Match

Please see Attachment A: Project Narrative

Demand Occupation Lists

Yes

Demand Occupation Lists Description

Please see Attachment A: Project Narrative

Not exclude unemployed or underemployed

Yes

Economic Opportunity Description

Please see Attachment A: Project Narrative

FL Targeted Industries

Yes

FL Targeted Industries Description

Please see Attachment A: Project Narrative

Local Match Amount

Yes

Local Match Amount Details

Please see Attachment A: Project Narrative

Program Specifics

Existing Program Expansion

Yes

Existing Program Expansion Description

Please see Attachment A: Project Narrative

Training Delivery Description

Please see Attachment A: Project Narrative

Program Sustainability Description

Please see Attachment A: Project Narrative

Length of Program

Please see Attachment A: Project Narrative

Number Enrolled

210

Number Completers

192

Certifications, degrees with CIP codes

Please see Attachment A: Project Narrative

Program Begin Date

7/1/2024

Program End Date

6/30/2029

Detailed Budget Narrative

Please see Attachment C: Budget Narrative for more details related to expenses and project timing.

Requested Total

\$6,108,466.00

Source - City / County

\$0.00

Source - Private

\$0.00

Source - Other

\$250,000.00

Source - Other Details

Valencia will leverage funds from partnership commitments (federal grant funding, nonprofit organizations, private foundations, and CareerSource Central Florida) to support tuition assistance for low-income students, and other program expenses.

Cost - Equipment

\$4,130,709.00

Cost - Personnel

\$1,496,409.00

Cost - Facilities

\$0.00

Cost - Training Materials

\$0.00

Cost - Tuition

\$0.00

Cost - Other

\$731,348.00

Travel: \$23,460; Contractual Services: \$133,995; and Indirect Costs: \$573,893. Please see Attachment C: Budget Narrative for more details.

Cost - Total

\$6,358,466

✓ Approvals and Authority	
Authorized signatory on Board's behalf ⓘ	Attestation Name of Entity ⓘ Valencia College
Approvals Needed ⓘ The Valencia College Board of Trustees will approve all grant projects at monthly board meetings.	Attestation Name and Title of Auth Rep ⓘ Kristeen Gammon, Assistant Vice President of Resource Development
Meeting Schedule ⓘ The next board meeting is December 7, 2023. The board meetings monthly, and will meet again in February, March, May, June, August, and September. The group is willing to hold a special meeting with five days notice.	Attestation Representative Signature ⓘ Kristeen Gammon
Meeting Notice Days ⓘ The group is willing to hold a special meeting with five days notice.	Attestation Signature Date ⓘ 11/8/2023
Authority Proof ⓘ	

**Florida Commerce Florida Job Growth Grant
Workforce Training Proposal**
*Valencia College Expansion and Growth of Training Programs to Support Florida's
Semiconductor Industry*

Program Requirements

A. Provide the title and a detailed description of the proposed workforce training.

Valencia College requests workforce training funds for the *Valencia College Expansion and Growth of Training Programs to Support Florida's Semiconductor Industry* project to promote growing industry needs aligned with today's rapidly changing technology. Serving Central Florida since 1967, Valencia College (Valencia) is an open access, federally designated Hispanic-Serving Institution. Valencia provides an educational entry point for a significant number of Central Florida residents (over 70,000 in 2022/23), many of whom identify as low-income, first generation in college, or from a racially or ethnically marginalized population. As the second largest public community college in Florida and providing both degree and non-degree programs, Valencia serves the metro-Orlando area via eight strategically located campuses and five Centers for Accelerated Skills Training (AST) sites in Orange and Osceola counties. Valencia exists to provide an outstanding yet lower-cost pathway to quality careers, which will build the skilled workforce needed by today's employers.

The requested Florida Job Growth Grant workforce training funds will support personnel, equipment, and other costs to enable the expansion of the existing Robotics and Semiconductor Technician program to serve more students (doubling the current program capacity), as well as upgrade current program equipment to align with the technology now being utilized in clean rooms in the semiconductor industry. This project supports the College's ongoing endeavors to develop industry-standard training in robotics, semiconductors, and optics technology supporting students on pathways to the area's emerging high wage jobs. This project's budget is \$6,608,466, which includes requested funding support from the Florida Job Growth Grant Fund and funds leveraged by Valencia and its partners in support of these programs. Grant funding supports hiring program personnel needed to double program capacity. **These College will sustain the positions after Year 5 of the project,** evidencing Valencia's commitment to the successful growth of the training programs.

As a regional workforce educational provider, Valencia received a Florida Job Growth Grant in 2022, and used this grant funding to develop a Robotics and Semiconductor Technician program launched this past year.

- The Robotics Track of the program spans 13 weeks of training supporting skills attainment for working with robots and equipment on complicated production and conveyor systems. The program features a simulated medallion processing line.
- The Robotics Technician Semiconductor Specialized Track focuses on robotics technicians for the semiconductor industry and features a simulated wafer processing production line. Students can enter this nine-week program after completing the Robotics Track.

Together, the skills training on the medallion line and robotic wafer processing line comprise the Robotics and Semiconductor Technician offering a comprehensive 22-week training program. Valencia seeks grant funding to expand the 13-week Robotics track of the program, which provides an entry point for several career pathways, including into the semiconductor field via the specialized track offered at the next level of the AST Program. Completers also have the option to directly enter other Industry 4.0 careers, including joining companies who need technicians with knowledge of how to maintain and operate robots in multiple industries. Further, Valencia will use grant funding to enhance the mock clean room training area to better align with current industry-standard technology. Based on industry feedback, Valencia will develop training outcomes around optics technologies for semiconductor chip manufacturing within the context of the role of a technician. Students choosing to continue with the specialized track aligned with the semiconductor industry will train in this mock clean room. The Careers in Industry and Technology (CIT) and Center for Accelerated Training facilities (CAT), both on the Osceola Campus, currently houses these programs. The facilities were designed with computer labs, classrooms and simulation labs for technology-enhanced skills training. CareerSource Central Florida is also co-located nearby on the Osceola Campus to provide career counseling, job placement, assistance with Individual Training Accounts (ITAs), and wraparound services to participants of the targeted workforce training programs.

In October 2023, Valencia launched a Precision Optics, Photonics, and Fiber Optics Technician Program AST program, which aligns with and supports the semiconductor industry. Valencia continues to advance education and training in the semiconductor field by collaborating with the Florida Department of Education and representatives from industry partner Skywater Technology. This collaboration will develop a curriculum framework for a new associate in science (A.S.) degree program and college credit certificate related to semiconductors. Osceola County is a hub for Central Florida's growing semiconductor and microelectronic industry cluster. Osceola County is also home to NeoCity, a 500-acre technology campus, and BRIDG, a nonprofit, public-private partnership, creating new opportunities to accelerate semiconductor research, development, and manufacturing capabilities. Valencia is a member of a regional coalition comprised of these partners, as well as other economic and community development organizations, local government entities, academic institutions, and industry partners. Consultation with these partners and local semiconductor industry representatives emphasized the need for increased capacity in AST programs training skilled technicians as well as enhanced equipment to mirror industry standards for operating and monitoring equipment for the fabrication of semiconductors or microchips.

Valencia AST programs originated with a Department of Labor grant focused on Advanced Manufacturing and piloted six programs that served 191 students in 2015/2016. In less than 10 years, this approach to workforce development has seen tremendous success, providing a career pathway to thousands of Central Floridians via AST programs. Eighteen (18) programs, including two programs launched this year, are now offered in industry areas including Advanced Manufacturing, Construction and Maintenance, Healthcare, Information and Technology, and Logistics and Transportation. In 2022/2023, AST programs served 1,030 students who earned 3,453 industry credentials. The overall program completion rate was 91%, and 81% of students were placed in their field. This success is based on a model that includes short-term intensive hands-on learning based on employers' specific needs, frequent course

offerings (AST programs do not follow an academic calendar), a case management approach to provide support based on individual needs, job placement assistance, and “soft skills” training ranging from interviewing skills, workplace communication, and financial literacy.

Valencia AST programs are designed to not only meet growing employer needs for a skilled workforce, but to provide Central Floridians with a pathway to employment opportunity and economic stability. The average starting wage across AST programs is \$18.49, far exceeding Florida’s current minimum wage of \$12/hour or \$8.98/hour for tipped employees.

B. Describe how this proposal supports programs at state colleges or state technical centers.

As part of the Continuing Education (CE) division and launched in 2015, Valencia’s AST programs were designed to meet the immediate and fast-changing workforce needs of local employers. Developed in collaboration with industry partners, programs are designed for rapid skills training using a small group cohort-based model which provides significant support services. The mission of Valencia AST programs is to provide innovative solutions to close the workforce gap by uplifting individuals in our community. The proposed project aligns with the mission of the Florida State College System, of which Valencia is a member, to further workforce development by providing the community access to the necessary facilities and equipment to prepare for tomorrow's workforce needs. The current Robotics and Semiconductor Technician program aligns with regional and statewide goals to increase job growth and economic development by preparing a skilled workforce to support and grow Florida’s semiconductor manufacturing. In their *Target Industry Update 2022* (<https://www.selectflorida.org/wp-content/uploads/Target-Industry-Update-2022.pdf>) report, Enterprise Florida indicates that robotics and semiconductors are key areas that will see significant growth now and through the upcoming decade. This report further indicates that new and established companies are seeking to expand production and distribution, specifically in Florida including at NeoCity in Osceola County.

C. Describe how this proposal provides participants transferable, sustainable workforce skills applicable to more than a single employer.

As the nation’s economy changes, the skills and credentials that employers are seeking change as well. Today, more than half of all job openings require what are called “middle skills,” technical skills acquired through technical certificates or industry-based certification programs. Valencia, partners with more than 600 business and industry advisory panel members to learn what types of training, skills and degree programs are needed to ensure that Central Florida’s workforce is strong and vibrant.

Training provided through Valencia’s Robotics & Semiconductor Technician AST program is intentionally designed to ensure program completers earn credentials that are applicable and transferable across the targeted industries of Manufacturing (NAICS 31-33) and Global Logistics and Trade (NAICS 42, 48-49). The number of Central Florida manufacturers and distribution companies using robotics technology continues to grow with the introduction of Industry 4.0 practices and the number of distribution/logistics/and supply chain organizations locating to

Central Florida. Valencia’s industry partners not only express immediate needs for Robotics Technicians to work on or fix current robots, but also indicate situations where a robot sits unused because the company does not have the expertise to repair it. Students completing the 13 weeks Robotics track of the program receive job offers even before they can complete the additional specialized instruction in semiconductor technology. Other companies express that they want to introduce robotic technology to their production/distribution systems but do not know how. Additionally, the Florida Semiconductor Institute at the University of Florida indicates that the state has the 5th largest semiconductor workforce in the nation and has aspirations to double or possibly triple in the next decade (<https://fsi.institute.ufl.edu/florida-ecosystem/#prettyPhoto>.)

The Robotics & Semiconductor Technician Program provides a pathway for completers to earn nationally recognized industry certifications, conferring skills that are in high demand, including:

- Certified Industry 4.0 Operations Specialist (SACA)
- Certified Industry 4.0 Basic Operations Associate (SACA)
- Certified Industry 4.0 Advanced Operations Associate (SACA)
- Certified Industry 4.0 Robotics System Associate (SACA)
- Certified Industry 4.0 Total Productive Maintenance Management (SACA)
- ROOTS® CIP Certification (Cobot Integration and Processing)
- ROOTS® SAT Certification (Semiconductor Automation Technician)
- UR e-Series Core Track
- UR e-Series Pro Track
- UR e-Series Application Track
- OSHA 10 General Industry

Examples of employers or industry associations requiring and advocating for the skills training provided through Robotics & Semiconductor Technician Program, and who can provide letters of support for this project, include members of the Florida Semiconductor Institute:

Table 1: Florida Semiconductor Institute, Florida Ecosystem of Industry Partners in support of and in alignment with the <i>Valencia College Expansion and Growth of Training Programs to Support Florida’s Semiconductor Industry Project</i>			
Design	Fabrication	Packaging	Tools and Testing
<ul style="list-style-type: none"> • AMD • Ansys • Apple • Cadence • Intel • Marvell • NVIDIA • Qorvo • Renesas • Synopsys • Texas Instruments 	<ul style="list-style-type: none"> • ANT • Intel • IMEC • JABIL • NVIDIA • Renesas • Siemens • SkyWater • TSMC • Texas Instruments 	<ul style="list-style-type: none"> • Finetech • Jabil • QORVO • IMEC • SkyWater • Micross • Renesas • Hyperion 	<ul style="list-style-type: none"> • Advantest • ANT • Intel • PlasmaTherm • SkyWater • TSMC • Applied Materials • Evatec • Dupont

The following topics are covered through the Robotics & Semiconductor Technician Program:

Table 2: Valencia College Robotics & Semiconductor Technician Program Topics Per Program Track	
Robotics Track (13 weeks)	Robotics Technician Semiconductor Specialized Track (9 weeks)
<ul style="list-style-type: none"> • Workplace Safety • Automate a 3D Bin Picking Process • Automate a CNC Tending Process • Automate a Surface Prep, Polishing, and Cleaning Process • Automate a Metrology Process • Automate a Quality Inspection Process • Automate a Packaging Process • Automate an Autonomous Mobile Robot Delivery Process • Financial Literacy • Resume Writing and Interview Skills 	<ul style="list-style-type: none"> • Cleanroom Cassette Handling System • Bonding Process • Surface Prep, Deposition, and Polishing Process • Photolithography Process • Debonding Process • Strip and Clean Process • Metrology Process • Probing Process • Clean Room Protocols • Troubleshoot a facility management system

Valencia all AST programs with the support of industry advisory councils and recommendations from regional partners. The College engages in on-going environmental scans for continuous program improvement and development of relevant workforce programming by engaging the regional workforce investment board (CareerSource Central Florida), and economic development organizations and partners, such as NeoCity and BRIDG. The integration of this ongoing review and industry feedback in the AST program model ensures workforce skills are transferable, sustainable, and applicable to more than a single employer.

D. Describe how this proposal supports a program(s) that is offered to the public?

Access and inclusion are core to Valencia's AST programs. Valencia’s service area has 29 Opportunity Zones, federally designated economically distressed communities associated with low income, low educational attainment, and high poverty rates. While any adult may enroll in AST programs, Valencia staff actively recruits vulnerable groups including low-income individuals and minoritized populations. In partnership with CareerSource Central Florida and other community organizations, such as The Council on Aging, The Community Hope Center, The Salvation Army, and Goodwill, the AST programs are able to reach individuals in distressed circumstances. The CE team also works with the many veteran’s support groups in Central Florida to make sure returning service members are aware of AST as a career path upon return, along with providing programs for military spouses who would benefit from up-skilling. Valencia also partners with Orlando Bridge, a transition program designed to provide a variety of services to Florida Department of Corrections inmates during the last 11 months of their sentence. The mission of Bridge International is to “provide criminal justice involved individuals and their families with comprehensive therapeutic services according to their recovery and re-

entry needs.” Securing employment is a core component for successful re-entry and Valencia stands ready with not only job training, but additional workplace skills and individualized supports.

Free food and personal/hygiene items are available at all AST sites for those struggling with food insecurity. Mental health and wellness support is available through Baycare, providing 24/7 assistance via phone or chat. Through Baycare, Valencia also provides a repository of webinars and articles accessible to students anytime, covering topics such as caring for aging parents/loved ones, gender issues, health assessments, emotional wellbeing, and resources for veterans. Through an agreement with Lynx, the Metro-Orlando bus system, Valencia students can take advantage of free transportation throughout Orange, Osceola, and Seminole counties. All of these resources are free and available to all students, including individuals participating in AST programs. These services remove barriers to learning. The Robotics & Semiconductor Technician Program prepares and engages the current and future workforce for careers by offering relevant education through technical instruction and training resulting in career pathways leading to high-skill; high-wage employment.

E. Describe how this proposal is based on criteria established by the state colleges and state technical centers.

Valencia’s AST programs are continuing education programs, aligned with local industry needs, and resulting in stackable, nationally recognized industry credentials. AST workforce training programs align with career clusters and learning competencies detailed in the Florida Department of Education’s Career and Technical Education Curriculum Frameworks to support articulation into credit programs. As a result, AST programs provide a pathway to in-demand, high wage employment, as well as into Valencia’s Career and Technical Education programs. Resources, such as an articulation chart, are shared with students upon enrollment to illustrate the available choices and pathways within the College. Completion of AST programs results in attainment of a certification listed on the State of Florida’s CAPE Industry Certification List, further evidencing the College’s commitment to alignment with criteria set by the Florida Department of Education around offering programs that ensure students are career ready.

F. Does this proposal support a program(s) that will not exclude unemployed or underemployed individuals?

Yes. The Robotics & Semiconductor Technician Program, as with all Valencia’s AST programs, intentionally targets individuals who are unemployed, under-employed, or working multiple jobs to earn a family sustainable wage. Through partnership with CareerSource Central Florida to verify income levels and identify potential successful candidates, AST programs assist the state’s unemployed and under-employed individuals, providing economic security to Central Floridians

G. Describe how this proposal will promote economic opportunity by enhancing workforce training. Please include the number of program completers anticipated to be created from the proposed training. Further, please include the economic impact on the community, region, or state and the associated metrics used to measure the success of the proposed training.

The planned expansion and enhancements to the Robotics & Semiconductor Technician Program proposed by this project will increase access to and better prepare individuals for in-demand, high wage careers in the semiconductor and robotics industries. The Robotics & Semiconductor Technician Program launched in Spring 2023, and completion data for this program is limited. The program is currently serving its second cohort and will have enrolled 60 students since its launch. The program currently aims to enroll 60 students per year. The proposed project will support the integration of learning outcomes around optics technologies for semiconductor chip manufacturing. Valencia’s Precision Optics, Photonics, and Fiber Optics Technician AST program launched October 2023. While data for both programs is not yet available, the regional impact of this project can be projected from current AST programs. The mean hourly wage across all AST programs for course completers is \$18.49 an hour after a few weeks of specialized training. Student success is the result of a case management approach, individualized wraparound services, soft skills training, and job preparation workshops. Strong industry partnerships also play a critical role, defining the latest needs of their industries and supporting student learning through site tours, job fairs, and presentations about careers and the workplace. The project team anticipates an additional 300 program completers over five years, or 60 additional completers per year, who will enter high-wage jobs. The savings on social services such as unemployment compensation, welfare, food stamps and other related services are not yet estimated but have the potential to be a significant amount. The following metrics will measure and indicate the success of the proposed training:

Table 3: Project Metrics for Enrollment, Completion, Credentials Achieved, Job Placement, and Wages for Program Completers
Enrollment:
The <i>Robotics Track</i> will enroll an additional 60 participants annually with a focus on distressed economic areas in Central Florida, specifically in Osceola County. This will result in 300 participants enrolled over the five-year grant period, and a minimum of 900 participants enrolled over a ten-year period of outcome tracking due to anticipated continued enrollment growth. Increased capacity in this “front door” program will lead to more students entering the workforce with industry credentials or continue with the Robotics Technician Semiconductor Specialized Track.
The <i>Robotics Technician Semiconductor Specialized Track</i> will enroll an additional 30 participants annually, resulting in 150 participants enrolled over the five-year grant period or 450 participants enrolled over a ten-year period of outcome tracking due to anticipated continued enrollment growth. This program will expand due to the increase in the robotics technician track and grant funds will support enhancements to equipment to train students on industry-recognized clean room technology.
Completion Rate:
Both the Robotics Track and the Robotics Technician Semiconductor Specialized Track (collectively called the Robotics & Semiconductor Technician Program) will achieve a 91% completion rate. This mirrors the 2022/23 completion rate across Valencia’s AST programs and is supported by the AST Program Model integrating participant case management and ongoing support.
Certifications/Credentials Obtained:
<i>Both Robotics Track and the Robotics Technician Semiconductor Specialized Track –</i>

<ul style="list-style-type: none"> • Certified Industry 4.0 Operations Specialist (SACA) • Certified Industry 4.0 Basic Operations Associate (SACA) • Certified Industry 4.0 Advanced Operations Associate (SACA) • Certified Industry 4.0 Robotics System Associate (SACA) • Certified Industry 4.0 Total Productive Maintenance Management (SACA) • ROOTS® CIP Certification (Cobot Integration and Processing) • ROOTS® SAT Certification (Semiconductor Automation Technician) • UR e-Series Core Track • UR e-Series Pro Track • UR e-Series Application Track • OSHA 10 General Industry
<p><i>Robotics Technician Semiconductor Specialized Track Only –</i></p> <ul style="list-style-type: none"> • ROOTS® SAT Certification (Semiconductor Automation Technician)
<p>Job Placement Rate:</p>
<p>81% completers across both tracks will be placed into a job or work-experience program (internship). This rate mirrors the 2022/23 job placement rate across all of Valencia’s AST Programs and is also supported by the AST Program Model integrating partnerships with CareerSource Central Florida and industry.</p>
<p>Obtainment of High Wage Job Rate:</p>
<p>Completers of Valencia’s Robotics & Semiconductor Technician AST Program are eligible for occupations in SOC 17-2072 Electronic Engineers, except computers. Florida Commerce job projections reports that SOC 17-2072 statewide is expected to grow 13.5% between 2022 and 2030 and has a 2021 Median Hourly Wage of \$48.07. This SOC is on the State’s Demand Occupation List and is listed as high skill, high wage. In Region 12, Valencia’s service district, this occupation is expected to grow 17.6% between 2022 and 2030 representing 823 total job openings. CareerSource Central Florida anticipates the Region 12 Entry Wage for Robotic Technician program completers at \$16.15 per hour. The semiconductor field is growing and evolving in Central Florida, and the region anticipates high wage jobs for occupations within the semiconductor field.</p>

Valencia’s partner, the University of Florida, Florida Semiconductor Institute indicates that the semiconductor workforce will double, possibly triple, in the next decade. Much of this growth is anticipated for Central Florida due to its proximity to NeoCity in Osceola County. NeoCity is a technology district that supports burgeoning concepts to evolve into mature technologies, from smart sensors and photonics to software applications and process improvements in science and engineering. Population growth estimates for the Central Florida region are startling, with the Orlando Economic Partnership (OEP) stating that more than 1,000 people move to the region each week. OEP reports industries urgently require skilled talent ready to join the local area’s rapidly growing STEM sector and rely on Valencia graduates to power their technical workforce. While the local area’s population continues to grow, many do not yet have the training to fill these roles. In Central Florida, 42% of the region’s households live paycheck to paycheck, mostly employed in low-paying hospitality jobs. The United Way’s ALICE (Asset Limited, Income Constrained, Employed) Report indicates that while many individuals are employed, a significant portion (34% in Orange County; 35% in Osceola County) of workers are paid by the hour in roles more likely to have fluctuations in income and less likely to receive benefits. This

is a significant issue because data indicates that many in Orange and Osceola Counties lack the credentials that will support their movement into high wage, high growth fields better protected from economic volatility, like that experienced during the recent COVID-19 pandemic. A regional analysis by The Burning Glass Institute indicates that Valencia needs to “pull up” local talent through supporting students to acquire employers’ most needed skills (Valencia College Internal Data: Finding & Building Paths to the Jobs that Matter for Central Florida, a presentation prepared by The Burning Glass Institute, February 2023.) OEP indicates that focusing on “reskilling, upskilling, and understanding skill advantages” are essential to the local area’s economic recovery from COVID-19 and economic growth in the coming years (The Foundation for Orlando’s Future. (2020). *Re-Imagining Orlando’s Talent Supply: Skills-Based Hiring for Upward Mobility. Orlando Economic Partnership*. https://orlando.org/wp-content/uploads/sites/4/2020/08/Skills-based_hiring_report_2020_FINAL.pdf) Residents without an industry or college credential typically find themselves stuck in the area’s low-paying hospitality jobs without a pathway to greater prosperity.

Access and inclusion are core to Valencia's AST programs. The target audience for programs consists of unemployed, furloughed, underemployed, women in non-traditional careers, and veterans returning from service. Unlike traditional students typically enrolled in the credit-bearing programs at Valencia where the average age is 21, the average age of AST students is 33. The majority have had multiple jobs, but not careers, and many had not previously considered a college degree, or the role education plays in advancing opportunities. Valencia and the Robotics & Semiconductor Technician Program are one step in a students’ potential education and career pathway, and the collaborative partnerships built and maintained in Osceola County create opportunities for many Floridians. The semiconductor field is growing and evolving in Central Florida, and partnerships between local government, industry partners, academic institutions, and workforce development agencies are actively working to create a robust semiconductor talent pipeline. Through the Osceola Prosper program, local graduates from the class of 2022, 2023, and now 2024, receive free college tuition from Osceola County. Students can select to enroll in AST programs and earn an industry certification in 4-28 weeks, not only in Robotics & Semiconductors, but also Mechatronics, Electronic Board Assembly, and Precision Optics Technician. Completers can enter the workforce or continue into an Associate of Science Degree in engineering from Valencia. This is another exit point for students who can choose to enter the workforce or transfer to the University of Central Florida via the DirectConnect Program that guarantees admission for Valencia graduates. The University of Central Florida now offers 20 semiconductor-related degree programs. This pathway, built through collaboration across industry, government, economic development organizations, and academia, allows for multiple entry and exit points that incorporate recognized postsecondary credentials and creates opportunities for individuals in an area once dominated by low-wage hourly employment.

Additional Information

A. Is this an expansion of an existing training program?

Yes. The proposed project seeks to increase capacity and enhance training in the Robotics & Semiconductor Technician AST Program. This program launched Spring 2023. There will also be integration of applicable training concepts from the Precision Optics, Photonics, and Fiber

Optics Technician Program launched Fall 2023. Additionally, the curriculum is modeled after the successful workforce education programs offered by Valencia's AST programs. The Robotics & Semiconductor Technician AST Program was originally an expansion of the current distribution operations and mechatronics program curriculum. As the industry landscape continues to evolve, Valencia works in collaboration with industry partners and others to nimbly revise programs and launch new training opportunities.

Please provide an explanation for how the funds from this grant will be used to enhance the existing program.

Grant funding will support personnel, equipment, and other costs to enable the expansion of the existing Robotics Technician program to double current student capacity. An additional Medallion Processing Line will prepare more students to enter employment by providing training on assembling, integrating, and programming a robot. Grant funding supports the Robotics Technician Semiconductor Specialized Track to enhance current program equipment to align with the technology now being utilized in clean rooms in the semiconductor industry, including integration of optics technology concepts. This project supports the College's ongoing endeavors to develop industry-standard training in robotics, semiconductors, and optics technology supporting students on pathways to the area's emerging high wage jobs.

B. Does the proposal align with Florida's Targeted Industries?

Yes.

If yes, please indicate the specific targeted industries with which the proposal aligns. If no, with which industries does the proposal align?

Most directly, this proposal aligns with Manufacturing (NAICS 31-33) and Global Logistics and Trade (NAICS 42, 48-49). However, Enterprise Florida indicates that Robotics aligns with multiple target industries in Florida, including life sciences, innovation and technology, aerospace and aviation, and manufacturing. The Semiconductor Industry Association reports that the industry supported \$1.85 million Information Technology (another of Florida's Targeted Industries) jobs in 2020 globally and 277,000 direct domestic jobs. For each direct job created, 5.7 indirect jobs are created by the industry, such as the technician roles outlined in this proposal.

C. Does the proposal align with an occupation(s) on the Statewide Demand Occupations List and/ or the Regional Demand Occupations List?

Completers of Valencia's Robotics & Semiconductor Technician AST Program are eligible for occupations in SOC 17-2072. Florida Commerce job projections reports that SOC 17-2072 statewide is expected to grow 13.5% between 2022 and 2030. In Region 12, Valencia's service district, this occupation is expected to grow 17.6% between 2022 and 2030 representing 823 total job openings.

If yes, please indicate the specific occupation(s) with which the proposal aligns. If no, with which occupation does the proposal align?

The Robotics Technician AST program supports future Programmers using robotic languages, vision system languages, calibration and metrology languages, mathematics to define force, convert payloads, determine reach and orientation principles; Process Experts determining quality and operational improvements for the Medallion production offering significant process variation. When combining the programming, process, and maintenance expertise learned in this training, completers may find roles as an Integration Expert at a Manufacturer or a key member for an Automation Integrator. Completers of the additional Robotics Technician Semiconductor Specialized Track may be employed in a variety of introductory level positions related to the semiconductor Industry such as a Facility Operator, Equipment Technician, and Cleanroom Operator.

D. Indicate how the training will be delivered (e.g., classroom-based, computer-based, other). If in-person, identify the location(s) (e.g., city, campus, etc.) where the training will be available. If computer-based, identify the targeted location(s) (e.g. city, county, statewide, etc.) where the training will be available.

The training will be offered in-person with simulation learning labs and technology-enhanced classrooms for computer-based training and hands-on learning at the Valencia College-Osceola Campus. The programs are strategically located in the heart of Osceola County. Program schedules are flexible with both traditional training hours and evening/weekend hours to accommodate adults already working. The project will develop talent across a three-county region including Orange, Osceola and Poinciana (a census designated area split between Polk and Osceola counties) encompassing over 4,341 square miles with approximately 2.3 million residents.

E. Indicate the number of anticipated annual enrolled students and completers in the proposed program.

Table 4: Project Projections for Enrollment and Completion	Robotics Track	Robotics Technician Semiconductor Specialized Track
Additional Annual Enrollment Amount Anticipated as a Result of Grant Funding	60	30
Current Enrollment Amount*	60	60
<i>Enrollment Subtotal:</i>	120	90
<i>Enrollment for Both Tracks:</i>	210	
Additional Annual Completers Anticipated as a Result of Grant Funding	55	27
Current Anticipated Number of Completers**	55	55
<i>Number of Completers Subtotal:</i>	110	82
<i>Number of Completers for Both Tracks:</i>	192	
*The Robotics & Semiconductor Program, comprised of the Robotics Track and additional Robotics Technician Semiconductor Specialized Track, is an existing training program. Requested Workforce Training Funding supports program expansion.		

** The Robotics & Semiconductor Program is currently in its first year of operation, and completion figures are estimates.

F. Indicate the length of program (e.g., quarters, semesters, weeks, etc.), including anticipated beginning and ending dates.

The expanded Robotics and Semiconductor Program will begin enrolling additional students, due to increased capacity supported by grant funding, by August 2025. During the first year of the grant period, Valencia will procure equipment and onboard new personnel. During that time, the Valencia team will focus on recruiting students for enrollment. The Robotics and Semiconductor Program is 22 weeks in length, with some sessions held during the day and some at night, to accommodate student schedules. Programs begin at various points through the year and last between 13 weeks (Robotics track) with an additional 9 weeks (Robotics Technician Semiconductor Specialized Track) comprising the entire Robotics and Semiconductor Program.

G. Describe the plan to support the sustainability of the program after grant funds have been exhausted.

Valencia has a well-established history as a national leader in developing and implementing replicable, innovative solutions to a variety of educational challenges specific to preparing and engaging the current and future workforce. Over the past decade, the College has proven its ability to successfully administer a variety of workforce education programs supported by grants, including National Science Foundation Advanced Technological Education, Department of Education Title V, and Department of Labor Trade Adjustment Assistance for Community Colleges and Career Training (TAACCCT) grants. The proposed project is aligned with Valencia College’s strategic plan and supports the core work of the College. As a result, the College plans to sustain the project’s personnel costs to ensure ongoing program delivery after the grant period ends valued minimally at \$330,000 annually.

H. Identify any certifications, degrees, or other credentials that students may obtain through completion of the program. Please include the Classification of Instructional Programs (CIP) code and the percent of completers in each code, corresponding with Section E.

Training Program Track Name	Certifications	CIP	Percent Completers
Robotics Track	<ul style="list-style-type: none"> • Certified Industry 4.0 Operations Specialist (SACA) • Certified Industry 4.0 Basic Operations Associate (SACA) • Certified Industry 4.0 Advanced Operations Associate (SACA) • Certified Industry 4.0 Robotics System Associate (SACA) 	The Florida Department of Education has not yet determined a CIP Code associated with	100% (All Completers of this entry track will receive the listed certifications)

	<ul style="list-style-type: none"> • Certified Industry 4.0 Total Productive Maintenance Management (SACA) • ROOTS® CIP Certification (Cobot Integration and Processing) • UR e-Series Core Track • UR e-Series Pro Track • UR e-Series Application Track • OSHA 10 General Industry 	these industry certifications.	
Robotics Technician Semiconductor Specialized Track	<ul style="list-style-type: none"> • ROOTS® SAT Certification (Semiconductor Automation Technician) 	The Florida Department of Education has not yet determined a CIP Code associated with this industry certification.	100% (All completers of this additional track will receive the listed certification)

I. Does this project have a local match amount?

Valencia will leverage funds from partnership commitments (federal grant funding, nonprofit organizations, private foundations, and CareerSource Central Florida) to support tuition assistance for low-income students needing financial assistance to attend AST programs and other program expenses.

Attachment C: Budget Narrative

Project Name: Valencia College Expansion and Growth of Training Programs to Support Florida’s Semiconductor Industry

1. Project Funding Sources:

- City/County: None
- Private Sources: None
- Other (grants, etc.): Valencia College local funds and partnership commitments
Please specify: see below
- **Total Other Funding: \$250,000**

Valencia will leverage funds from partnership commitments (federal grant funding, nonprofit organizations, private foundations, and CareerSource Central Florida) to support tuition assistance for low-income students needing financial assistance to attend AST programs and other program expenses.

2. Project Costs (5 years):

- **Equipment: \$4,130,709**
Industrial grade equipment supports student learning to understand the complex principles of robotics and semiconductors. A majority of the equipment comprises the medallion line and robotic wafer processing line, providing hands-on lab exercises to become familiar with these systems. All equipment will be purchased through Valencia College’s Procurement Office and follow established procedures for procuring and maintaining equipment. Equipment will be purchased during the first year of the project.
- **Personnel and Fringe: \$1,496,409**
Personnel costs support the hiring of four positions, each to be sustained by Valencia College after the grant period:
 - *Advanced Manufacturing Program Manager* with estimated starting salary of \$59,020
 - *Operations Manager* with estimated starting salary of \$44,105
 - *Implementation Coordinator* with estimated starting salary of \$40,832
 - *Optics Semiconductor Instructor* with estimated starting salary of \$54,396
- **Facilities: None**
- **Tuition: None**
- **Training Materials: None**
- **Other: \$731,348**
 - **Travel: \$23,460** for project staff and instructors to make site visits or attend conferences to support new program development and student success.
 - **Contractual Services: \$133,995** for equipment installation and onsite training and other vendor services.
 - **Indirect Costs: \$573,893.** Valencia College is applying the US Department of Health and Human Services negotiated Indirect Cost Rate of 34.7% MTDC to include all personnel costs, travel, and contractual services.
- **Total Project Costs: \$6,608,466** (inclusive of other funding)
- **Total Grant Funds Requested: \$6,358,466**

3. Additional Information including timing and steps necessary to obtain funding:

The expanded Robotics and Semiconductor Program will begin enrolling additional students due to increased capacity by August 2025. During the first year of the grant period, Valencia will procure equipment and onboard new personnel. During that time, the Valencia team will focus on recruiting students for enrollment. The Robotics and Semiconductor Program is 22 weeks in length, with some sessions held during the day and some at night, to accommodate student schedules. Programs begin at various points through the year and last between 13 weeks (Robotics track) with an additional 9 weeks (Robotics Technician Semiconductor Specialized Track) comprising the entire Robotics and Semiconductor Program.

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osceola.org

November 3, 2023

The Honorable J. Alex Kelly
Secretary
Florida Department of Commerce
107 E. Madison Street
Tallahassee, FL 32399

Dear Secretary Kelly,


Osceola County strongly supports Valencia College's Florida Job Growth Grant application to fund the expansion and enhancements of the Robotics and Semiconductor Technician and semiconductor related Optics programs. This grant request supports funding for the necessary equipment and staffing to double enrollment in these programs.

As a regional workforce educational provider, Valencia received a Florida Commerce, Florida Job Growth grant in the fall of 2021. Valencia used grant funding to launch the Robotics and Semiconductor Technician program. Valencia continues to develop training in robotics, semiconductors, and optics technology supporting students on pathways to the area's emerging high-wage, high-skill jobs. Valencia is a member of a coalition of economic and community development organizations, local government, academic institutions, and industry partners supporting the growth of Central Florida's semiconductor and microelectronics industry cluster.

Osceola County is home to NeoCity, a burgeoning 500-acre technology campus that is centered around the semiconductor advanced packaging industry, with more than \$300 million in federal, state, local, and private place-based investments. Valencia College plays a critical role in the NeoCity ecosystem, by providing workforce training for the semiconductor industry.

Valencia has a long history of providing opportunity for local citizens by providing education and training leading to employment. Osceola County strongly supports Valencia College's Florida Job Growth grant application.

Sincerely,



Don Fisher
County Manager

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