

Innovative Model for Designing “Credit to CE” and “CE to Credit” Pathways

Texas Pathways Institute
November 2, 2023



Presenters

Shawnda Floyd, Ed.D., J.D.

Provost & Vice Chancellor Workforce Education

Gloria Smith

Vice Provost of Workforce Education

Veronique V. Tran, Ph.D.

Vice Provost

School of Manufacturing & Industrial Technology



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What area do you represent?

ⓘ Start presenting to display the poll results on this slide.



Paradigm Shifts at Dallas College

- Student Centered
- Aligned with Industry and/or University Transfer
- Integrated CE and Credit
- Academics and Workforce

Dallas College Mission

To transform lives and communities through higher education





Organizational Alignment

Provost &
Vice Chancellor of
Workforce

Schools

Workforce

Academic Services

Education
Partnerships

eLearning

International
Education & Global
Competitiveness

- Business Hospitality & Global Trade
- Creative Art, Entertainment, and Design
- Education
- Engineering, Technology, Math, and Sciences
- Health Sciences
- Law & Public Service
- Manufacturing & Industrial Technology

TIP:
CE Coordinators
in each School

TRUE Pathways



Texas Reskilling & Upskilling through Education

- Partner with Industry for Workforce Needs and Curriculum Alignment
- Train for High-Demand Jobs
- Embed Industry Certifications
- Accelerated completion in less than 6 months
- CE to Credit Pathway

THECB TRUE Grant

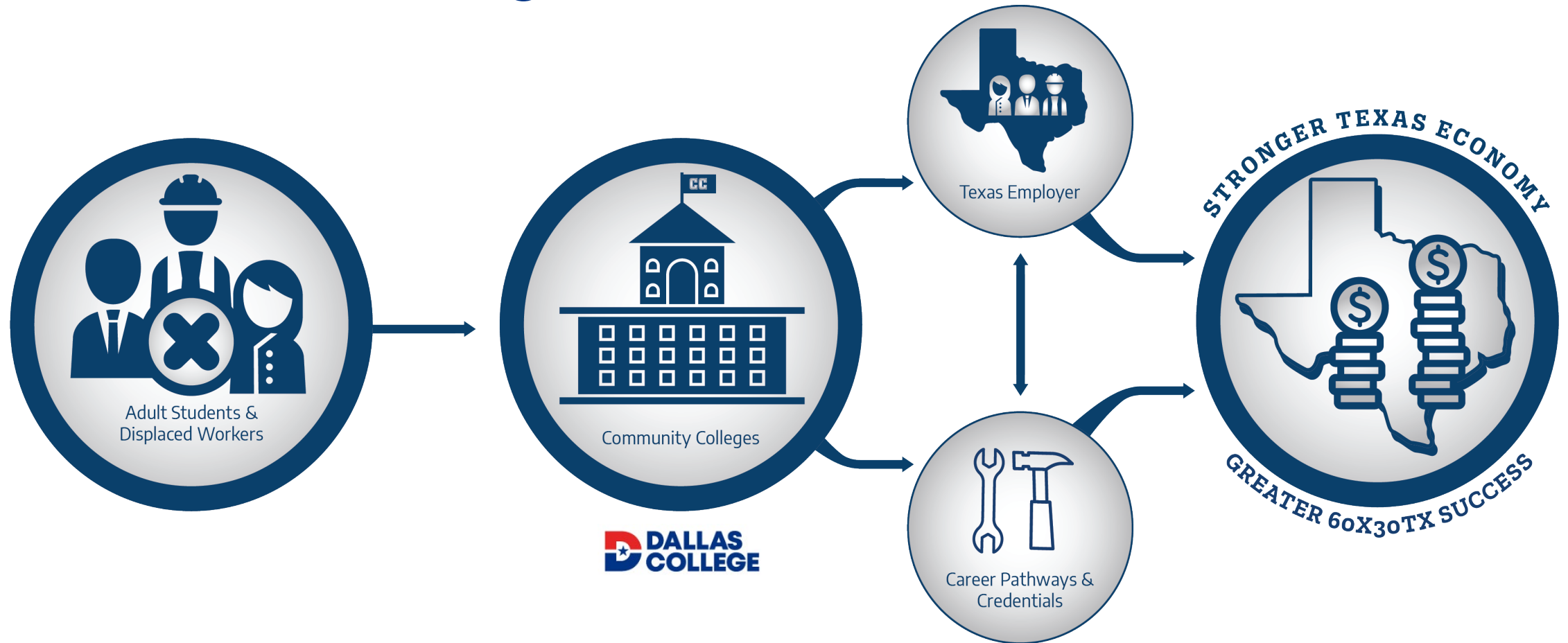
Dallas College Institutional Grant \$500K | 2022-2023

Mechatronics & Industrial Automation





TRUE EcoSystem





Align Curriculum with Industry Workforce Needs

- Industry Advisory Boards
- Onsite Curriculum Workshops w/ Industry Subject Matter Experts
- Chambers of Commerce
- Economic Development Organizations
- Trade Organizations
- Regional Convenings





ChipWorks Convening March 2023: Building Technician Training Pathways for the Texoma Semiconductor Industry

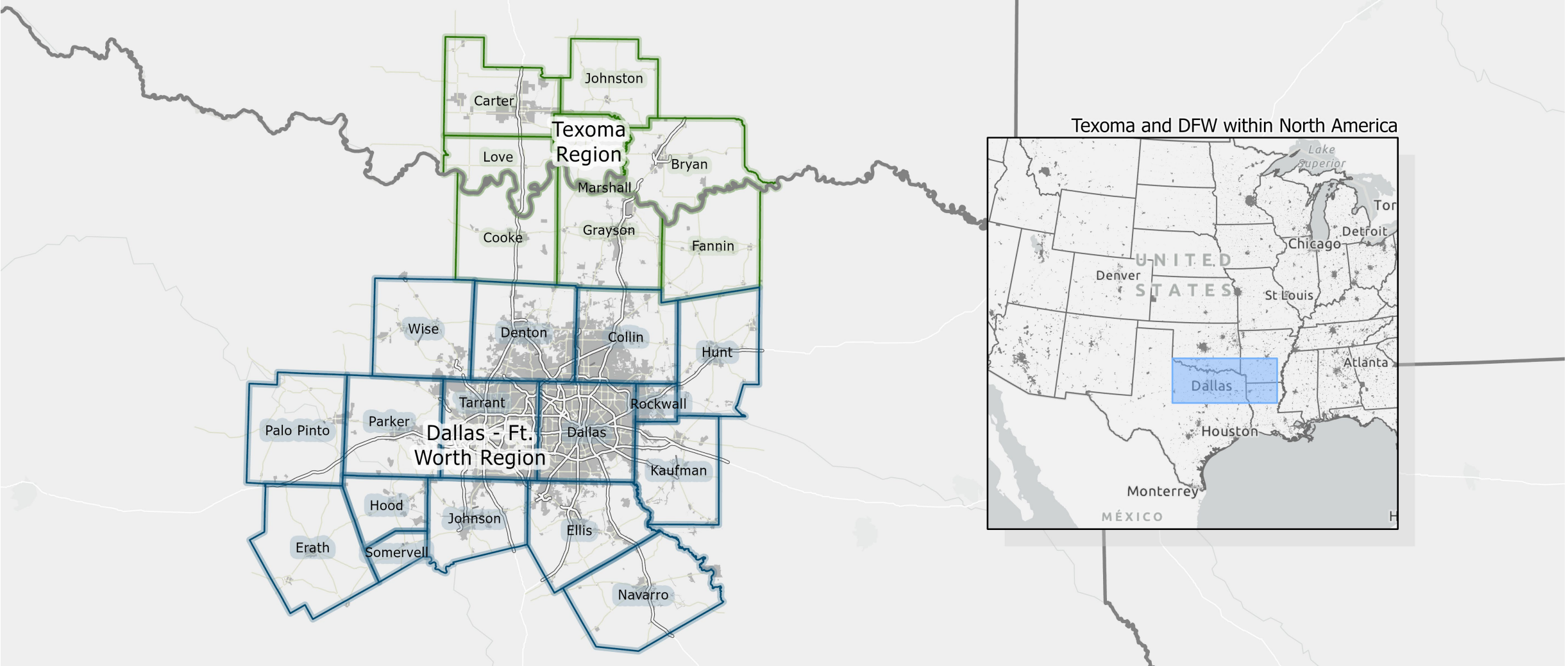
Who: ISDs, Community College, Universities, Industry

- Introduction to CHIPS & Science Act 2022
- Learn about regional Semiconductor workforce needs
- Economic impact of expanding the Semiconductor industry
- Explore how high schools and community colleges play a critical role in developing the Technician pipeline
- Funding opportunities to support upskilling and reskilling workers





Defining the Texoma Megaregion

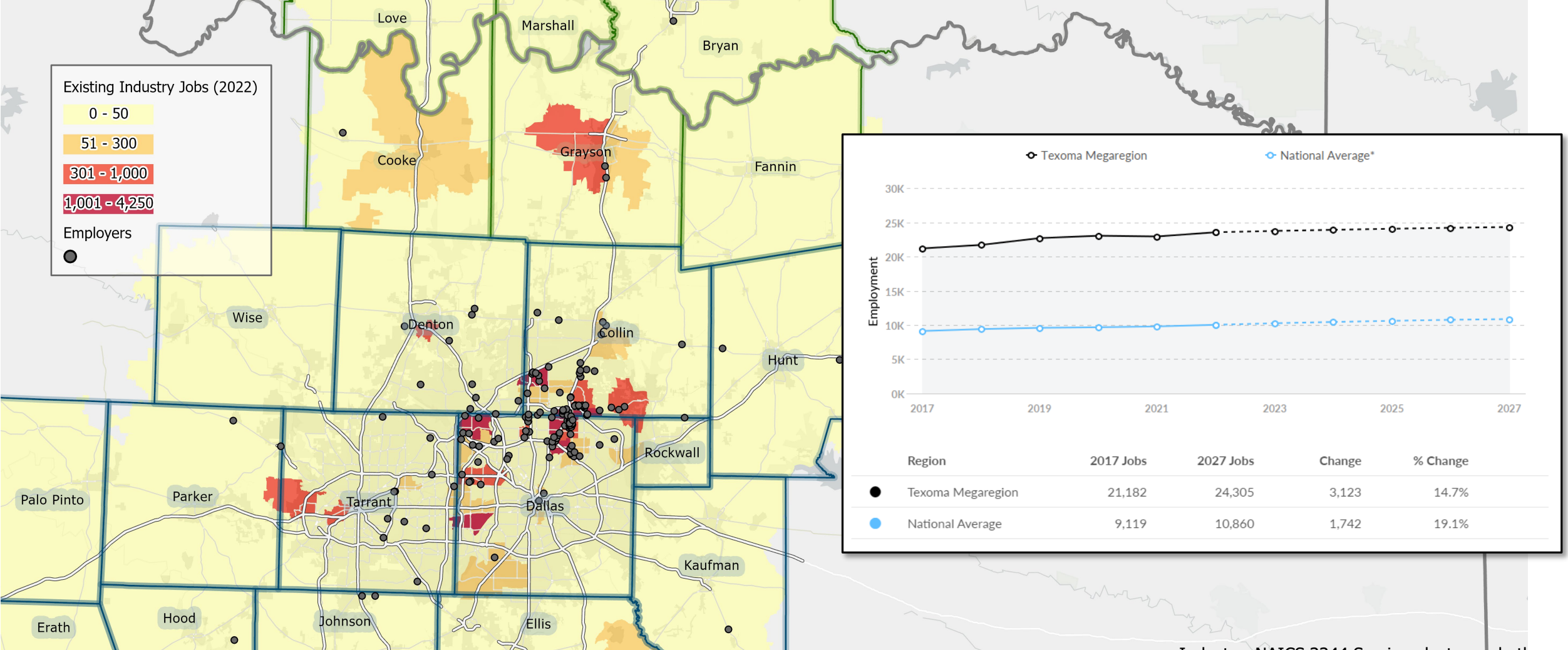


Source: NHGIS





Job Centers in Semiconductor Industry: 2022 Snapshot



Source: NHGIS, DataAxle, Lightcast

Industry: NAICS 3344 Semiconductor and other electronic component manufacturing

Dallas College | 11-02-23



TEXAS INSTRUMENTS

- Total CAPEX: \$30,000,000,000
- Total New Jobs: 3,200
- Construction: Began June 2022
- Size: 4.7M SF when completed
- Product: Analog & Embedded Processing Chips using 300mm Wafer Technology
- Direct Economic Impact: \$435M (30 years)
- Indirect Economic Impact: \$123M
- Total Induced Impact: \$82M



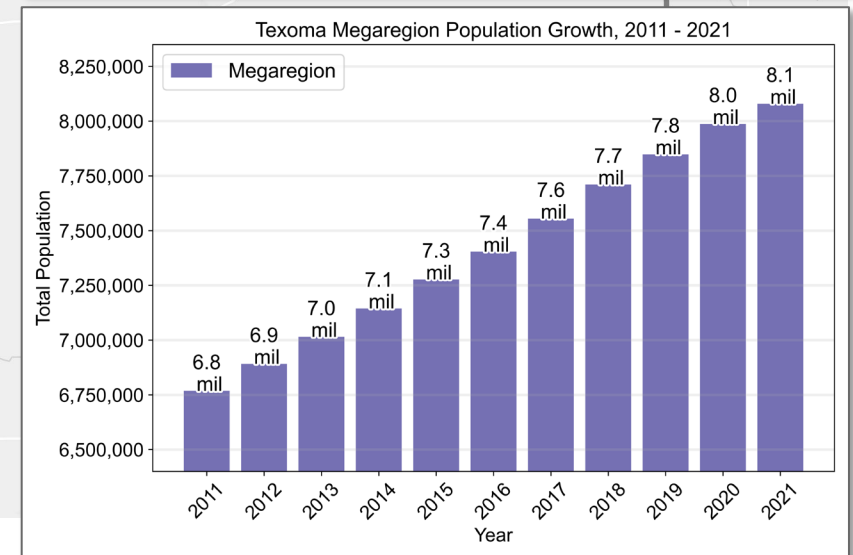
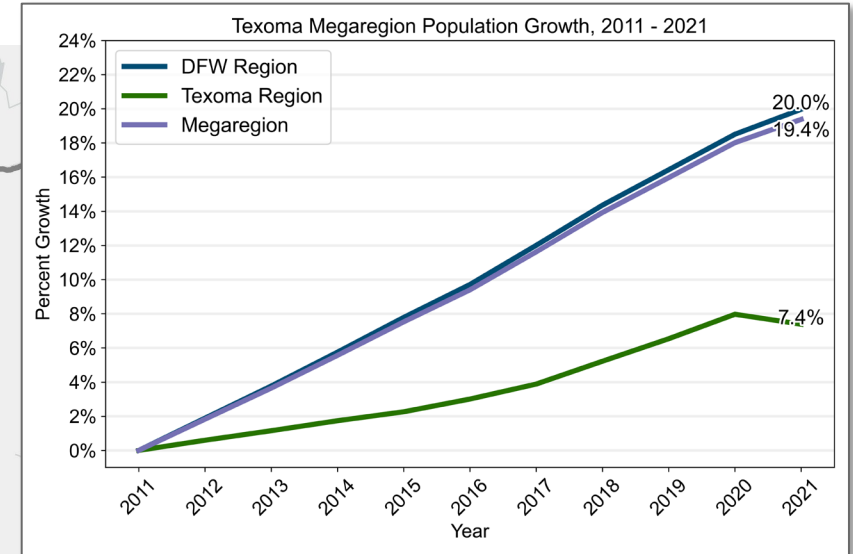
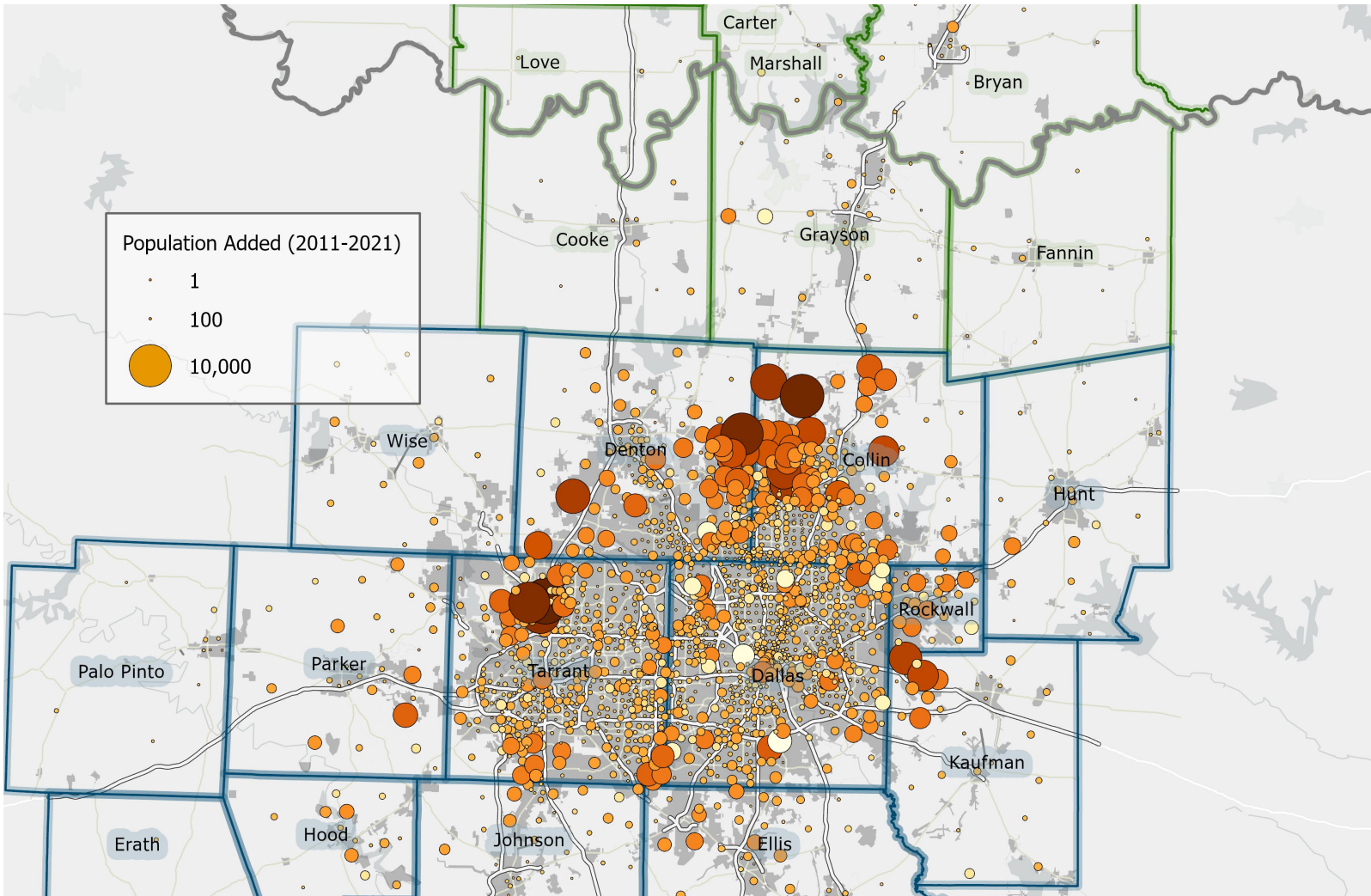
GLOBALWAFERS USA

- Total CAPEX: \$5,000,000,000
- Total New Jobs: 1,500
- Construction: Beginning Feb 2023
- Size: 3.2M SF when completed
- Product: 300mm Silicon Wafers
- Total Direct Economic Impact: \$193M (30 years)
- Total Indirect Economic Impact: \$55M
- Total Induced Impact: \$37M





Population Growth, 2011 - 2021



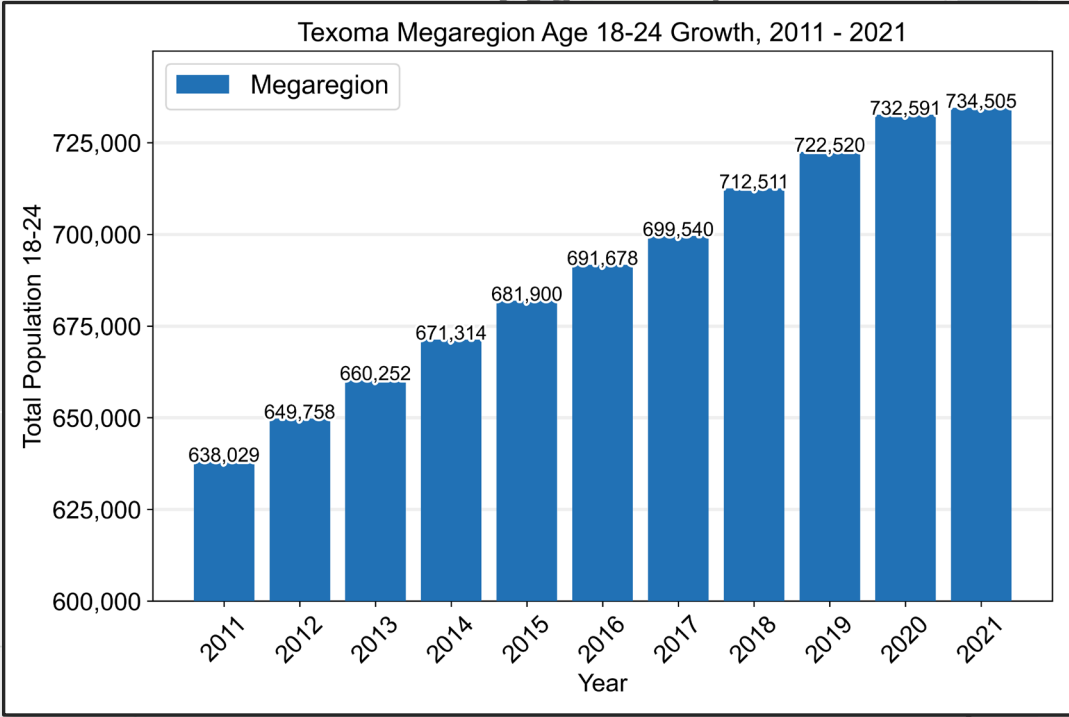
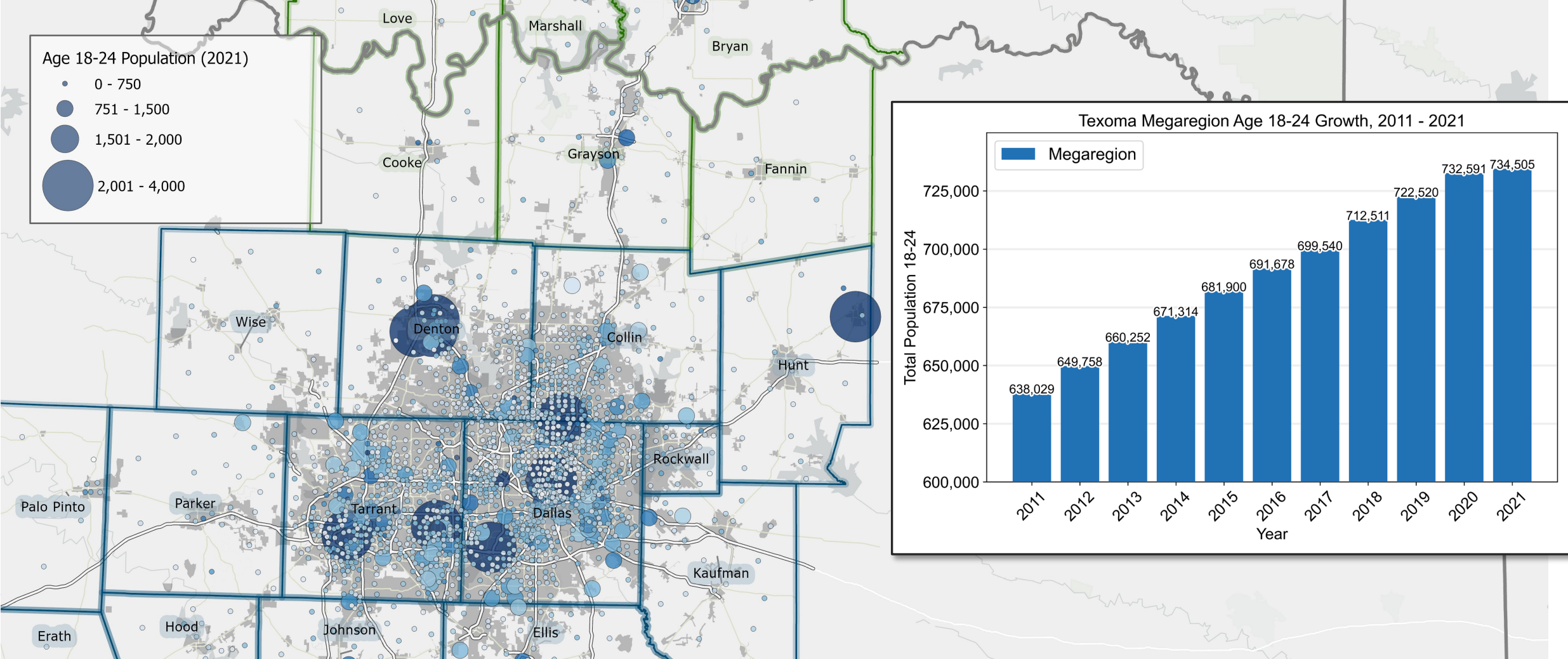
Source: NHGIS, ACS

Darker color = faster rate of growth





Key Population: Young Adults 18-24



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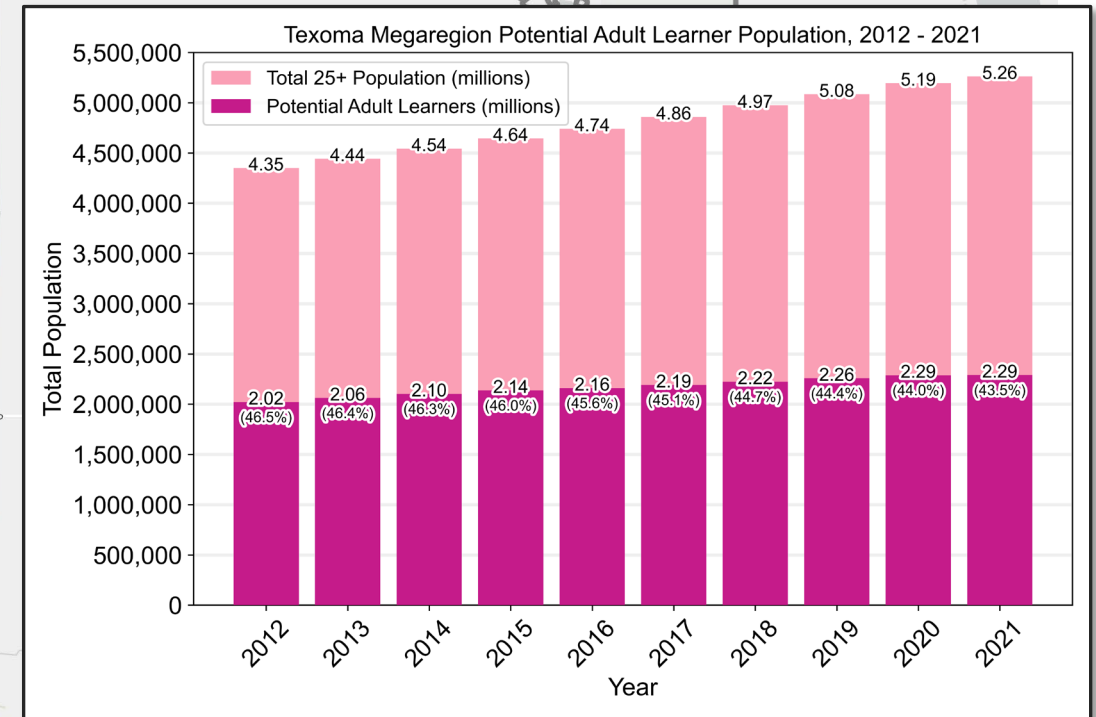
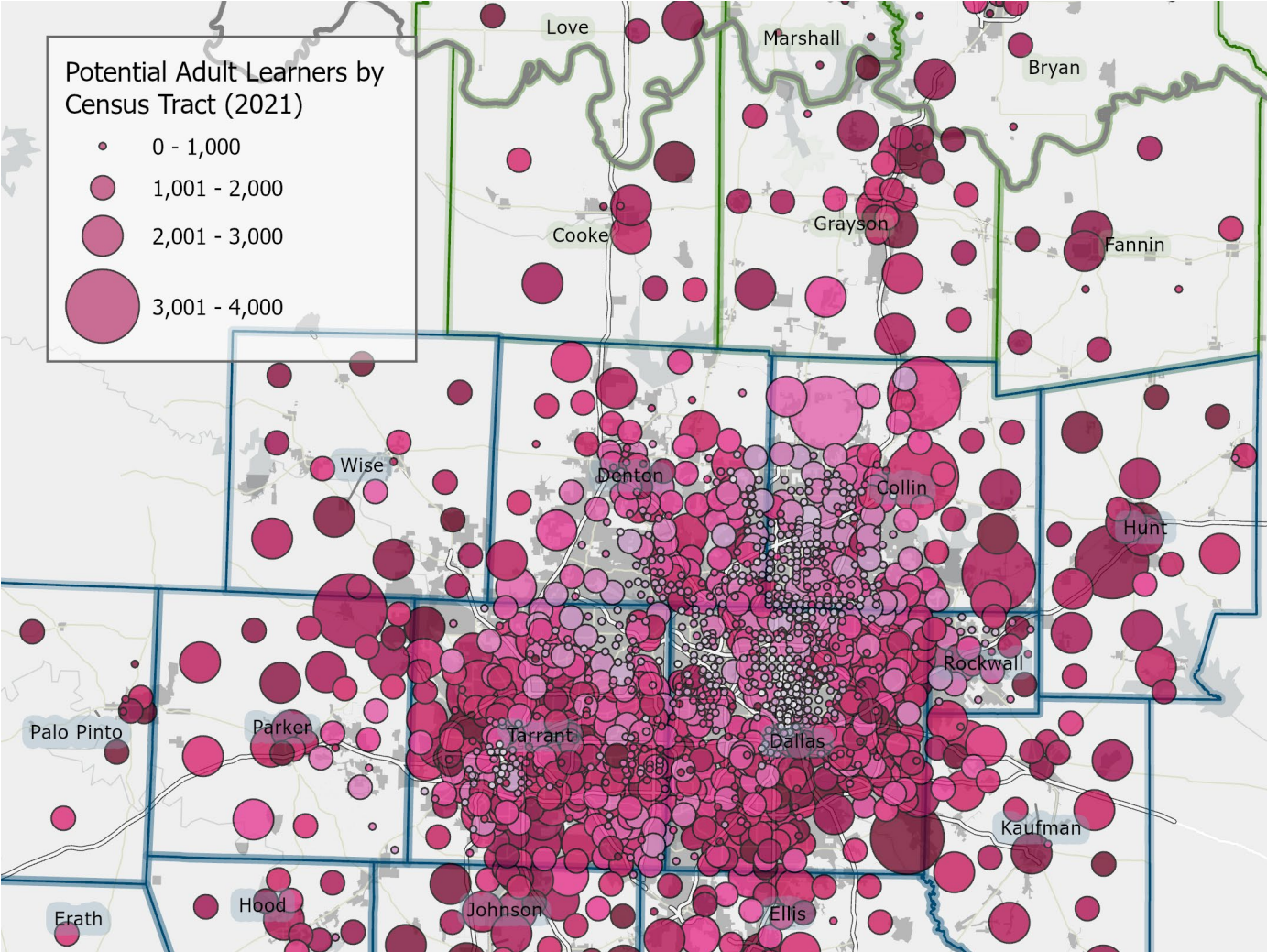
Source: NHGIS, ACS

Darker color = Higher % of overall population





Key Population: Adult Learners



Source: NHGIS, ACS

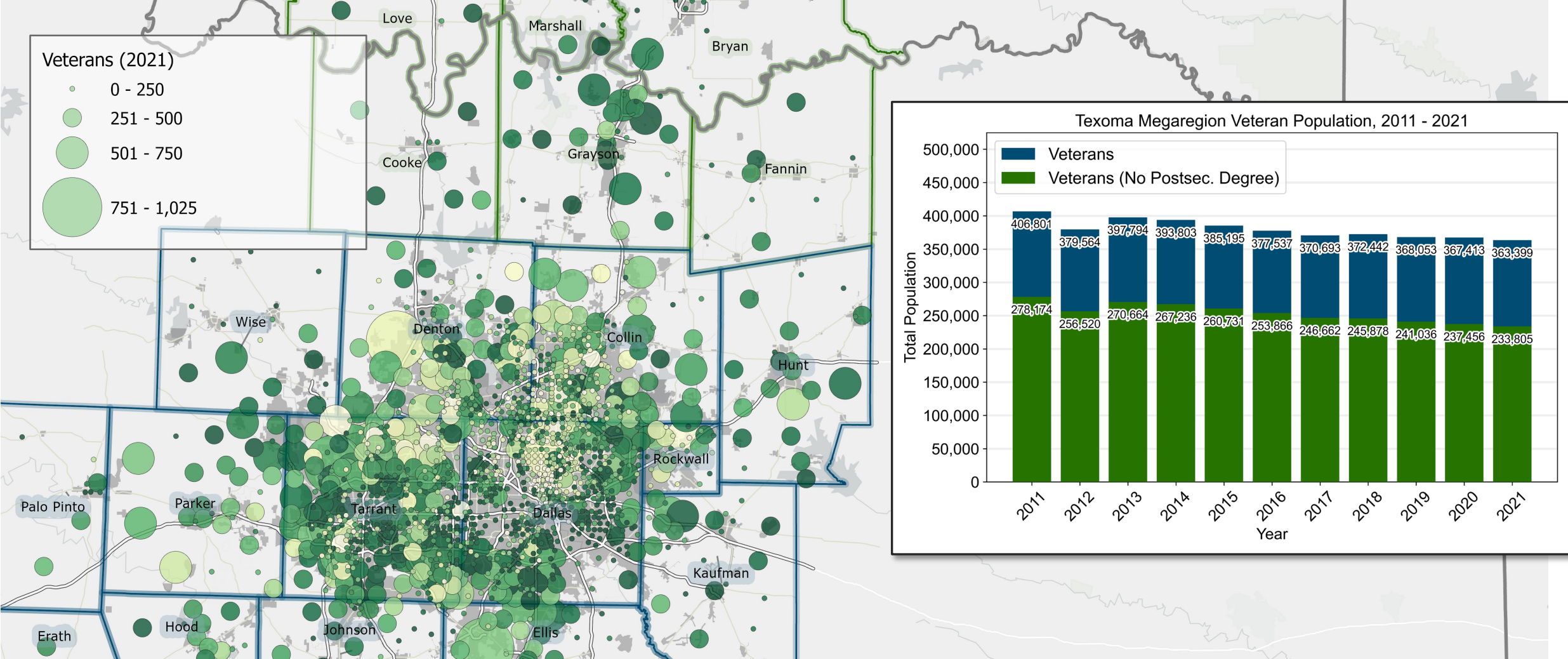
Darker color = Higher % of overall population

Adult learner = 25+ with at least a HS diploma/GED but no higher degree





Key Population: Potential Veteran Candidates



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Source: NHGIS, ACS

Darker color = Higher % with no post secondary degree



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In just ONE (1) word, how would you describe the current state of Pathways from CE (non-credit) to Credit at your institution?

ⓘ Start presenting to display the poll results on this slide.



Reverse Engineer: Credit to CE

Fast-Track CE
Electronics Technology
CE Non-Credit + SACA Certificates

- CETT 1003 DC circuits
- CETT 1025 Digital Fundamentals
- CETT 1049 Digital Systems
- CETT 1005 AC Circuits
- CETT 1029 Solid State Devices
- CETT 1041 Solid State Circuits
- SACA Cert:
C-201 Electrical Systems I

TIP:
Use WECM Rubrics
Zero Credits

TIP:
Design 18 Credits
Level 1 Certificates

Level I Certificate
Electronics Technology
16 Credit Hrs. Articulated CEU + 2 Hrs. CO-OP

- CETT 1403 DC circuits
- CETT 1425 Digital Fundamentals
- CETT 1405 AC Circuits
- CETT 1429 Solid State Devices
- CETT 2280/2480 CO-OP -OR-
EECT 1104 & EECT 1191

Credit to CE

TIP:
Embed Industry
Certification

TIP:
Build Institutional
CE Credentials and
OSAs (144 – 359 CH)





Forward Articulation: CE to Credit

Fast-Track CE
Electronics Technology
CE Non-Credit + SACA Certificates

- CETT 1003 DC circuits
- CETT 1025 Digital Fundamentals
- CETT 1049 Digital Systems
- CETT 1005 AC Circuits
- CETT 1029 Solid State Devices
- CETT 1041 Solid State Circuits
- SACA Cert:
- C-201 Electrical Systems I

TIP:
Build Equivalency
Tables and CE to
Credit Articulation
Process

Level I Certificate
Electronics Technology
16 Credit Hrs. Articulated CEU + 2 Hrs. CO-OP

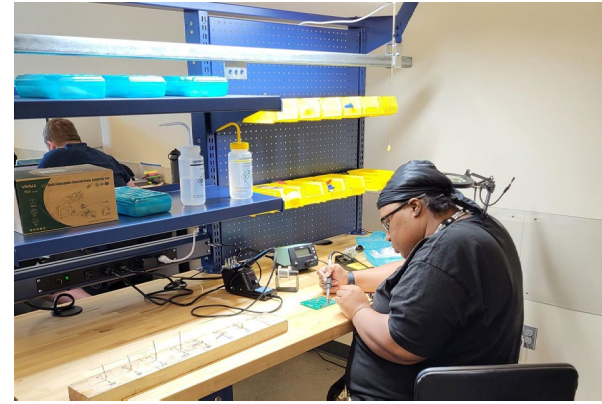
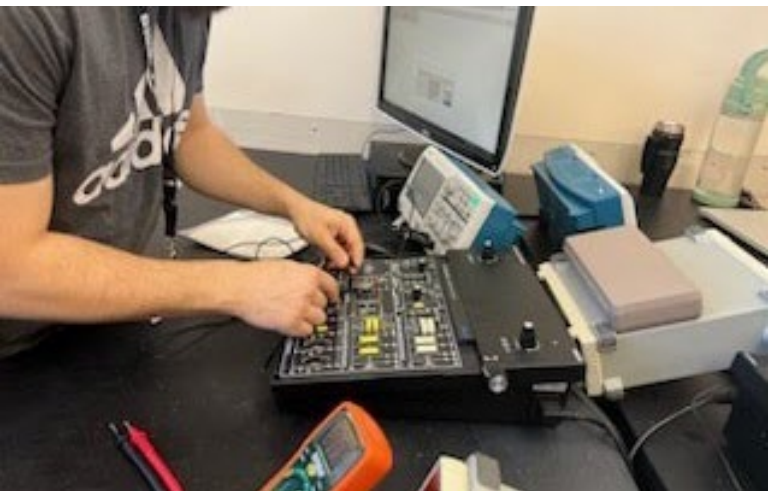
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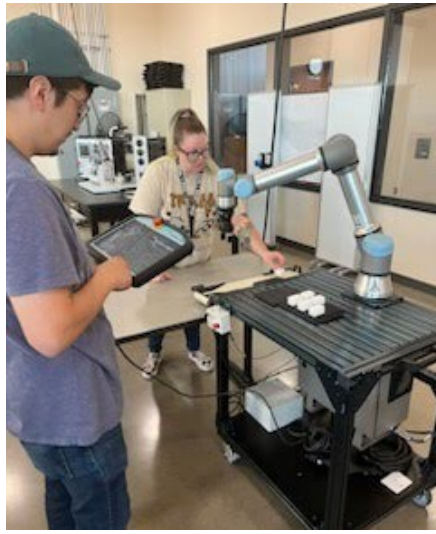
TIP:
Must Pass Industry
Certification for
Articulation to Credit

TIP:
Determine "Bridge"
Course(s) for Credit
Enrollment





Fast-Track CE Training at Community-Embedded Workforce Centers





Partnership and Grant Opportunities

Grants Awarded

- TRUE Mechatronics & Industrial Automation [Dallas College]
- Dept of Education Semiconductor Community Project [UTD Lead; Dallas College Subaward]
- NSF Engines Logistics Focus [UNT Lead, Dallas College Subaward]
- EDA Tech Hub Semiconductors [SMU Lead]

Grants Pending

- NSF Experiential Learning for Emerging and Novel Technologies (ExLENT) – Pivot Track [Dallas College Lead, Tarrant County College Partner]

Partnerships

- North Texas Semiconductor Workforce Development Consortium
- Dallas County Manufacturers Association (DCMA)
- Federation for Advanced Manufacturing through Education (FAME)
- TWC Workforce Solutions
- North Central Texas InterLink
- ESC Region 10, Region 11, Region 12 and ISDs
- Economic Development Organizations; Non-Profit Organizations



House Bill 8 Outcomes Performance Funding



Category	Outcomes	Description	Standard Value	High-Demand Field Value
Dual Credit Outcomes	15 SCH Dual Credit	Students who completed 15 semester credit hours (SCHs) of fundable dual credit or dual enrollment that meets requirements for a degree or workforce credential.	\$1,700	N/A
	Transfer Outcomes	GAI Transfer with 15 SCH	Students who earn at least 15 SCHs or equivalent and transfer to a Texas Public University	\$3,500
GAI Co-enrollment after 15 SCH		Students who earn at least 15 SCHs or equivalent and were enrolled in a reported, structured co-enrollment program with	\$ 3,500	N/A
Credential Outcomes	Licensure/Certification (no credential)	Certifications administered by a certification body, usually an organization such as a trade association or industry-approved testing entity.	\$ 1,000	\$1,250
	Institutional Credential leading to Licensure	Institutional Credential leading to Licensure	\$1,000	\$ 1,250
	Occupational Skills Award	9-14 semester credit hours for credit courses or 144-359 contact hours for workforce continuing education courses	\$ 750	\$1,000
	Certificate I or II	Level I certificate: awarded for completing a program consisting of at least 15 and no more than 42 semester credit hours Level II certificate: awarded for completing a program of at least 30 but not more than 51 semester credit hours	\$1,750	\$3,500
	Advanced Technical Certificate	16-50 hours and a previously awarded associate degree, a previously awarded bachelor's degree, or junior status toward a baccalaureate, depending on the program	\$1,750	\$3,500
	Associate Degree	Associate Degree	\$ 3,500	\$4,500
	Bachelor's Degree	Bachelor's Degree	\$ 3,500	\$4,500
	9			

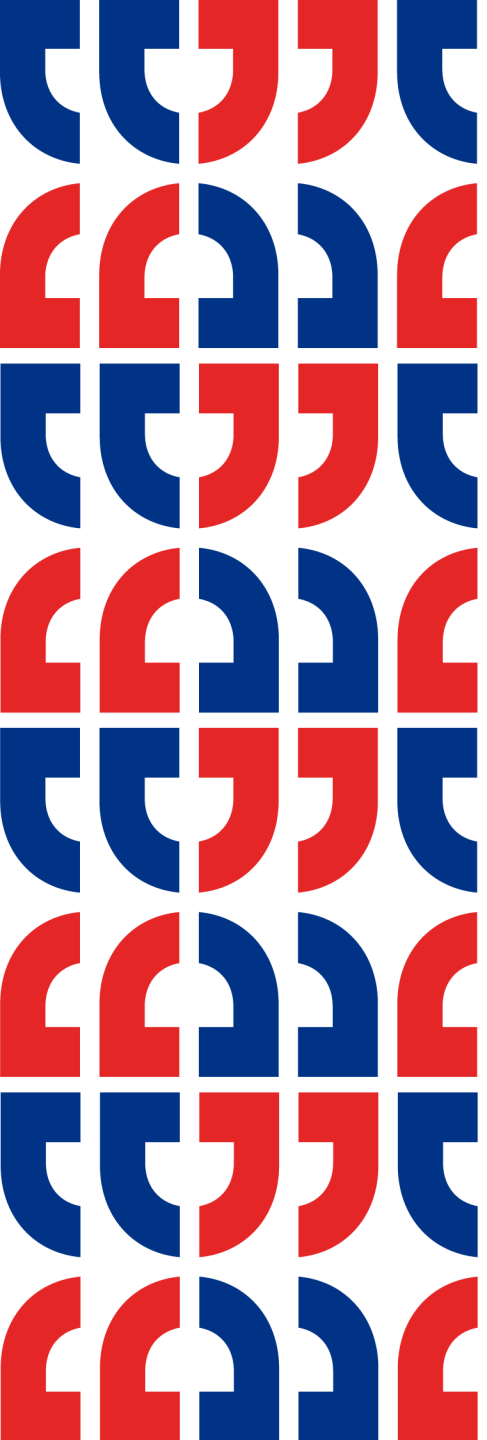


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I plan to use at least one (1) of the strategies or tips I learned today to build CE to Credit Pathways for our students.

ⓘ Start presenting to display the poll results on this slide.



Email Dr. Veronique Tran

AskMIT@DallasCollege.edu

Please reference “Texas Pathways – your institution name” in subject line

Contact us with questions or if you are interested in any of the following:

Semiconductor Technician Training Pathways

Developing “Credit to CE” Pathways

Developing “CE to Credit” Pathways and TRUE Pathways

Partnerships and Grant Opportunities/Consortiums