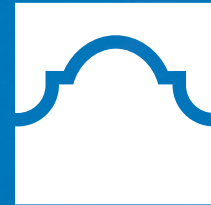


Integrating Micro-credentials in Certificate and Degree Programs: Current College Examples

Russ Frohardt & Will Fanning
Northwest Vista College & Northeast Lakeview College



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Malcolm Baldrige
National Quality Award
2018 Award Recipient

Achieving the Dream
LEADER
COLLEGE
OF DISTINCTION

Northwest Vista College

Two examples with industry partners

1. Customer Service and Sales Operations Program + Dell
2. Bachelor in Cloud Computing + Amazon Web Services



NORTHEAST LAKEVIEW COLLEGE

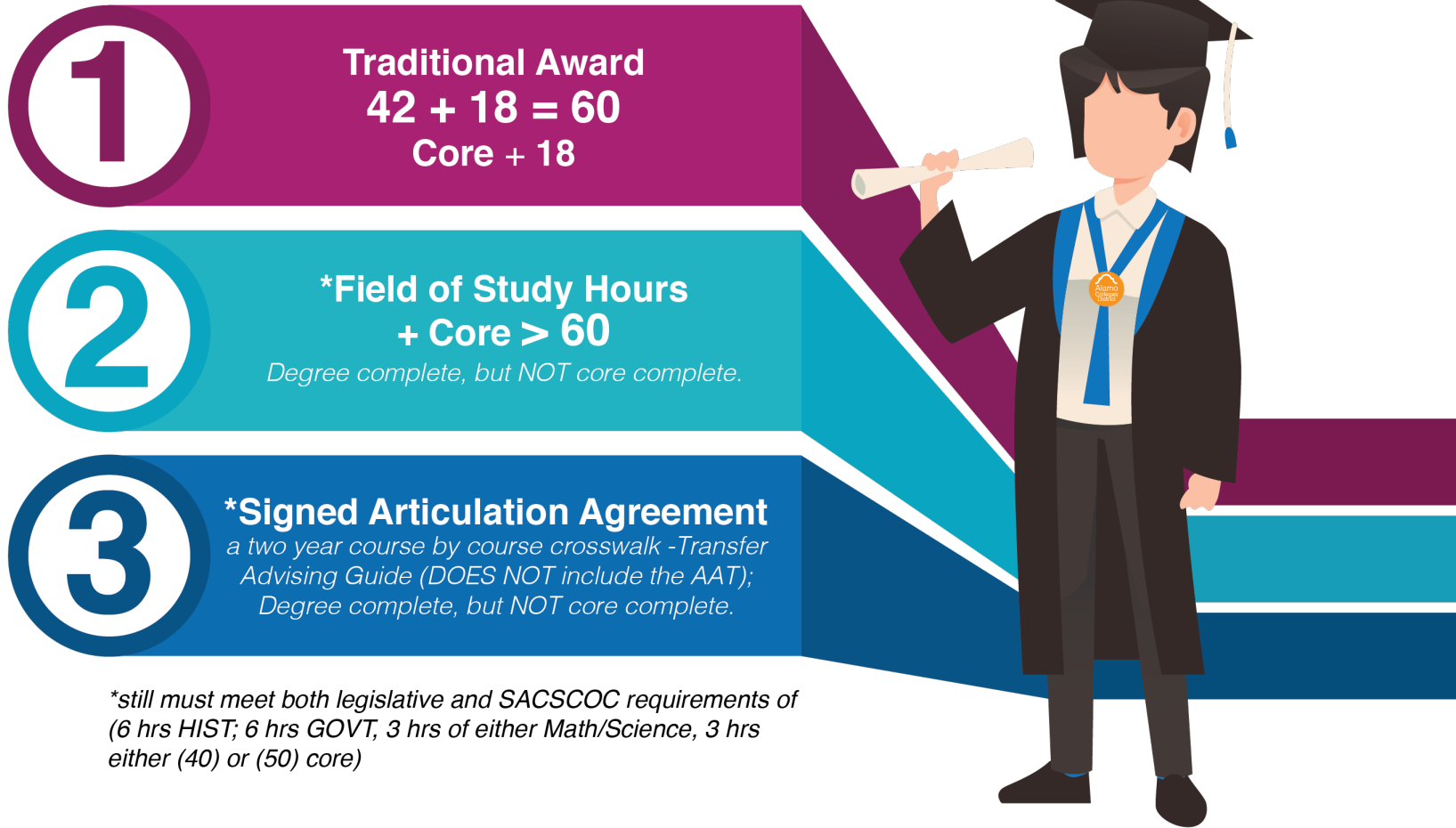
NORTHWEST VISTA COLLEGE

PALO ALTO COLLEGE

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SAN ANTONIO COLLEGE

Three Ways to Award a Degree



Alamo Colleges Process



MICRO-CREDENTIAL INSIGHTS

MICRO-PATHWAYS

CONCEPT

Micro-Pathways: Two or more stackable credentials that lead to jobs in high-growth sectors and a path to a degree ([Education Design Lab](#)).

INSIGHT

Micro-pathways are optimally tailored to help adult learners quickly achieve their education, training, and work goals. Visible pathways are key.

THE ALAMO COLLEGES STORY

OPPORTUNITY CLEAR PATHWAYS TO HIGH-DEMAND JOBS

Alamo Colleges had begun developing micro-credentials and digital badges. However, this was just the first step. We had to find a way to connect learners earning these credentials to jobs and continued education in order to support upward mobility.

PIVOT DEVELOP MICRO-PATHWAYS

Education Design Lab introduced Alamo Colleges to micro-pathways through its [Community College Growth Engine Fund](#). Micro-pathways are strategically designed for working learners and the changing economy. These pathways were just what our target populations needed.

Visibility for our learners was a driving force of this work. We realized that if we didn't create these pathways and make them visible, adult learners would not easily see the career progression opportunities from one micro-credential to the next. Developing micro-pathways would also help us bridge the non-credit to credit divide in our colleges and create a better experience for learners.

MICRO-PATHWAYS STRUCTURED FOR WORKING LEARNERS

Micro-pathways at Alamo Colleges consist of the following elements, each of which is critical to ensuring a successful experience for learners:



2+ CREDENTIALS



TECHNICAL + MARKETABLE SKILLS



COMPLETED IN SIX MONTHS OR LESS

The 2+ credentials form the base of the pathway. Each credential consists of a high-value short-term program that is delivered in a flexible format based on the learners' needs. Including both technical and marketable skills in the micro-pathway ensures learners are job-ready for the first job with all the competencies employers are seeking. The first 2+ credentials are designed to be completed in six months or less, as adult learners need accelerated options to quickly get to the job and career they are seeking.

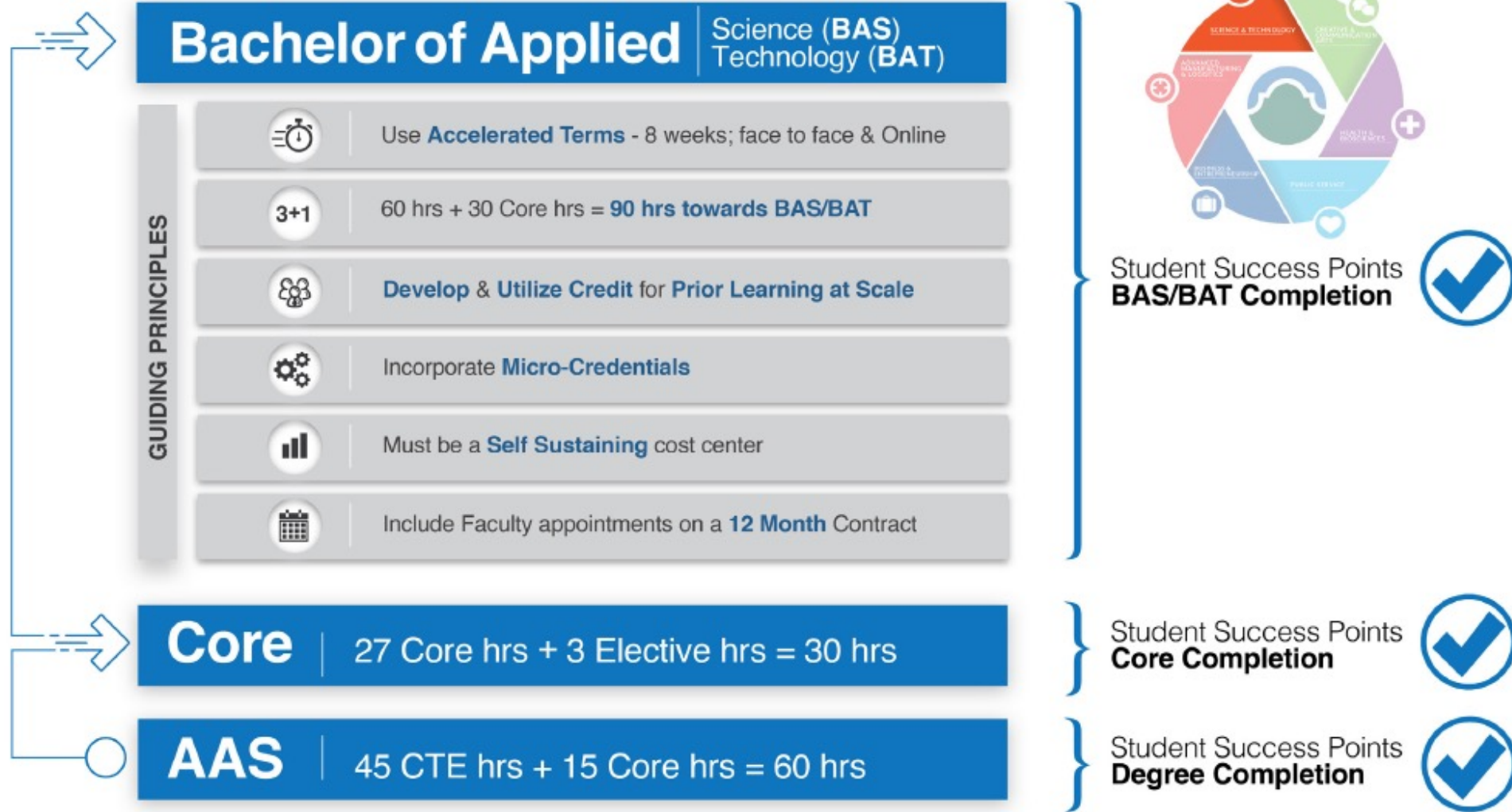
Micro-Credential Insights



ALAMO COLLEGES DISTRICT



Guiding Principles

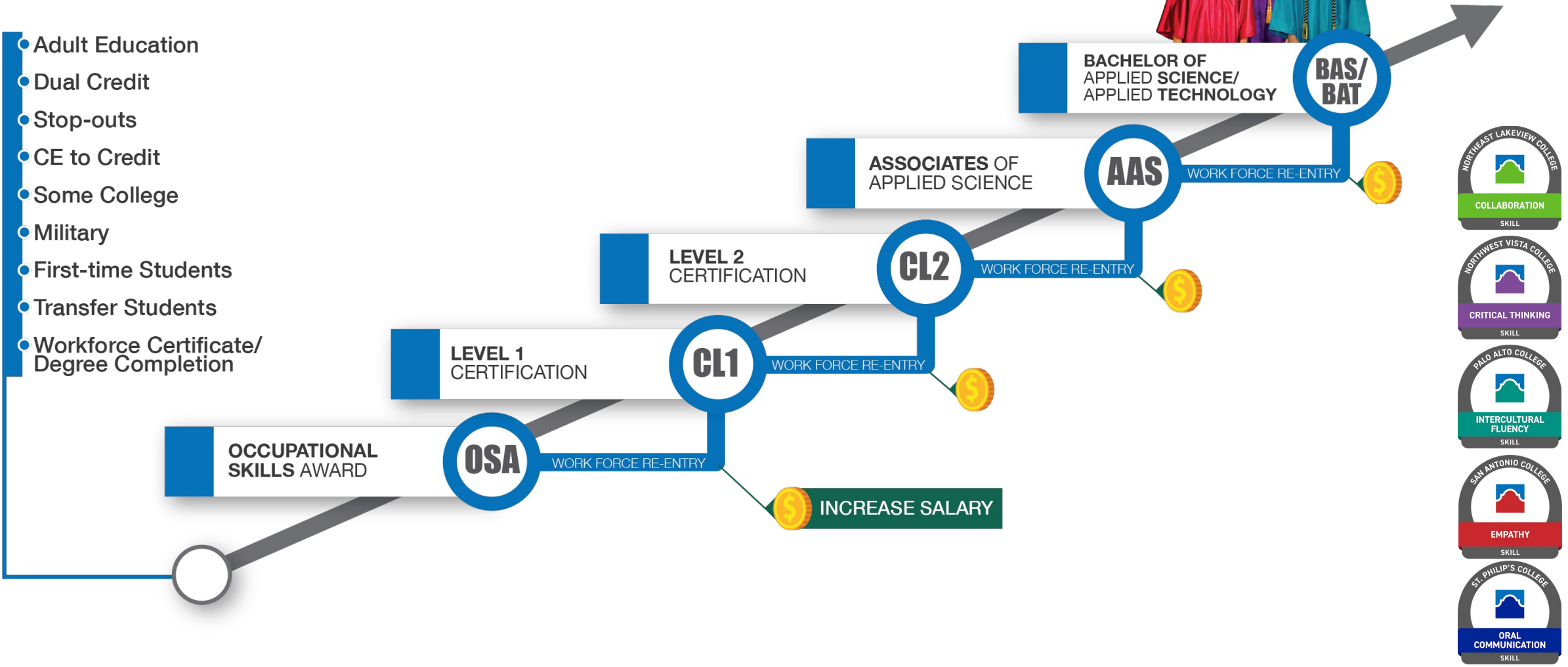


Based on 45/15 AAS hours structure; hours may fluctuate depending on AAS. Student success points must be completed in different years.



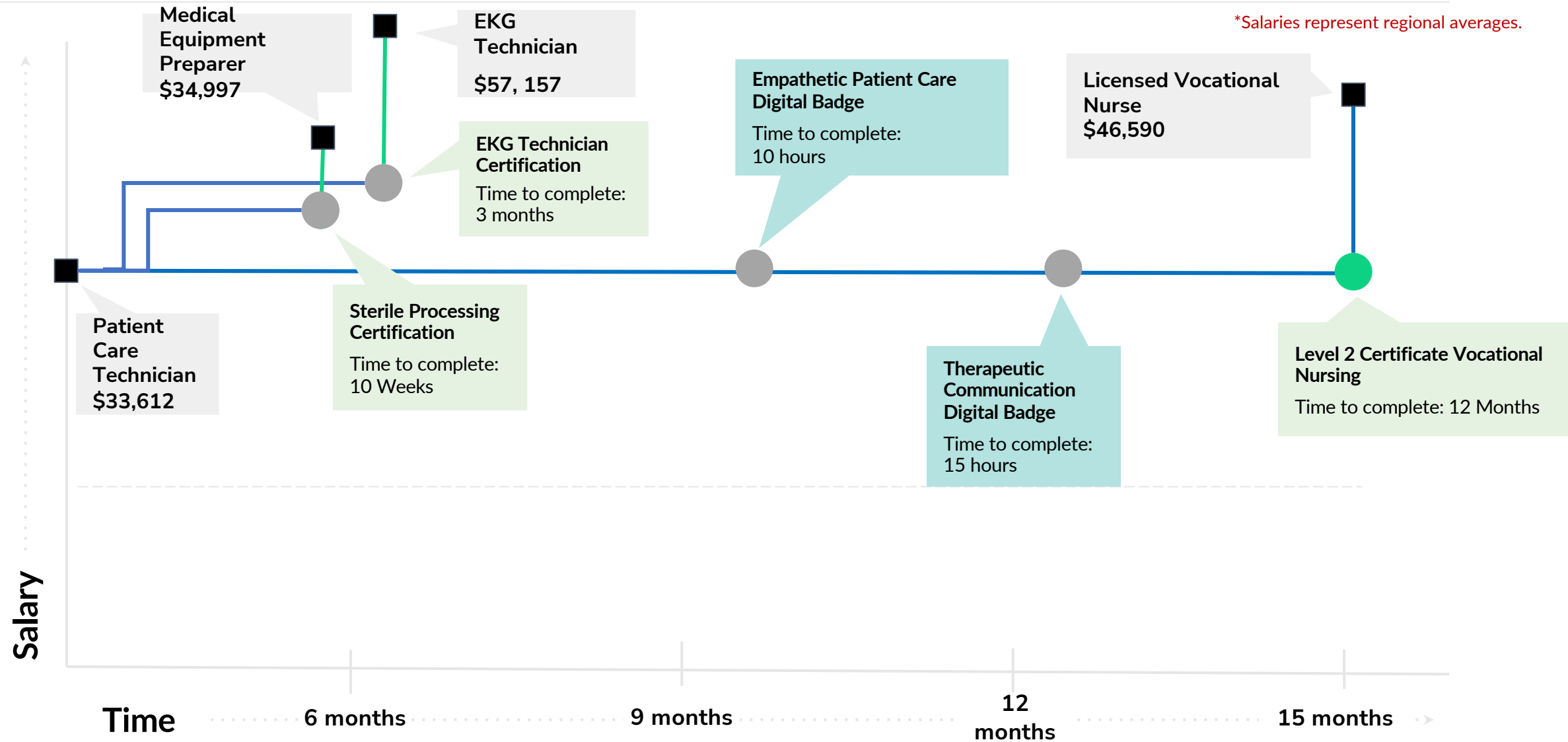
Workforce Seamless Pathways (WSPs)

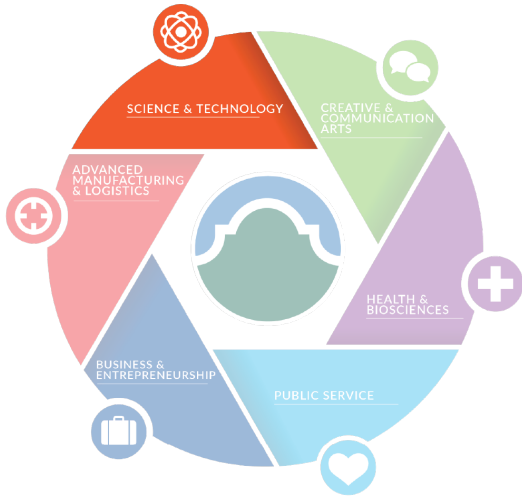
- Adult Education
- Dual Credit
- Stop-outs
- CE to Credit
- Some College
- Military
- First-time Students
- Transfer Students
- Workforce Certificate/
Degree Completion



Micro-Credentialing Strategy | June 2022

Example: Nursing| Micro-pathway [3 - 15 months]





Network and Computer Information Systems Administrator

Students earning this degree will be prepared to pursue information technology and networking careers in a variety of industries, including health care, financial services, education, entertainment, and more. With an emphasis on practical experience, students learn the basics of network protocols, routing, switching, wireless, troubleshooting, and other advanced technologies. Students prepare for the globally-recognized Cisco CCNA® certification, Microsoft Certified Solutions Associate (MCSA) certification, continued education, and for entry-level career opportunities such as Network Administrator, Network Engineer, Network Installer, Network Technician, or IT Technician.

Points of Entry

College Options

- Transfer students - both academic and workforce
- FTIC

High School Options

- Dual credit
- Graduate

Adult Options

- Adult Learners
- Continuing Education
- Prior Learning

Windows Server Administrator

Computer Programing Basics

Level 1 Certificate –
16 Semester Credit Hours

Time: **6 months – 1 year**
Average Salary - up to **\$42,000**



Network Administrator CCNA

Computer Programming Intermediate

Level 2 Certificate –
25 additional Semester Credit Hours
(16 LVL1 + 25 LVL2 = 41 SCH)

Additional Time: **1 year**
Average Salary - up to **\$77,000**



Computer System Administrator

Associate of Applied Science – 60 Semester Credit Hours

19 additional Semester Credit Hours
(19 AAS + 25 LVL2 + 16 LVL1 = 60 SCH)

Time: **1 - 1.5 years**
Average Salary - up to **\$89,000**



BACHELOR OF APPLIED TECHNOLOGY (BAT), CLOUD COMPUTING

• **All 60 semester credit hours of AAS will transfer as degree applicable** towards the BAT

• **2 years remaining** (60 semester credit hours) for **4-year degree completion**

• Flexible delivery

• Alignment to market demand



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Customer Service & Sales Operations + DELL

- NVC and Dell Leaders
- Align AAS Curriculum to Dell's Curriculum
 - Changing the Face of Tech
- Embed Digital Badges



Develop with Dell Curriculum

Supporting your career goals

Earn a Career Ready Professional Credential

After successfully completing all the Develop with Dell Program requirements, you will be issued the Develop with Dell – Career Ready Tech Support or Sales Professional credential!

This digital badge is a verifiable representation of the skills you have obtain throughout the Develop with Dell Program that provides potential employers with concrete evidence of your knowledge and skills. In addition, earning this credential gives you:

- A web-enabled, digital representation of your achievement that is issued by Credly, an industry leading trusted credential verification tool
- The ability to easily share your credential on social media platforms like LinkedIn, email signatures and digital resumes
- The opportunity to apply for jobs relating to the new skills you have developed using Credly's "Insight" tool
- Lifetime access to the achievement



Develop with Dell Sales Curriculum

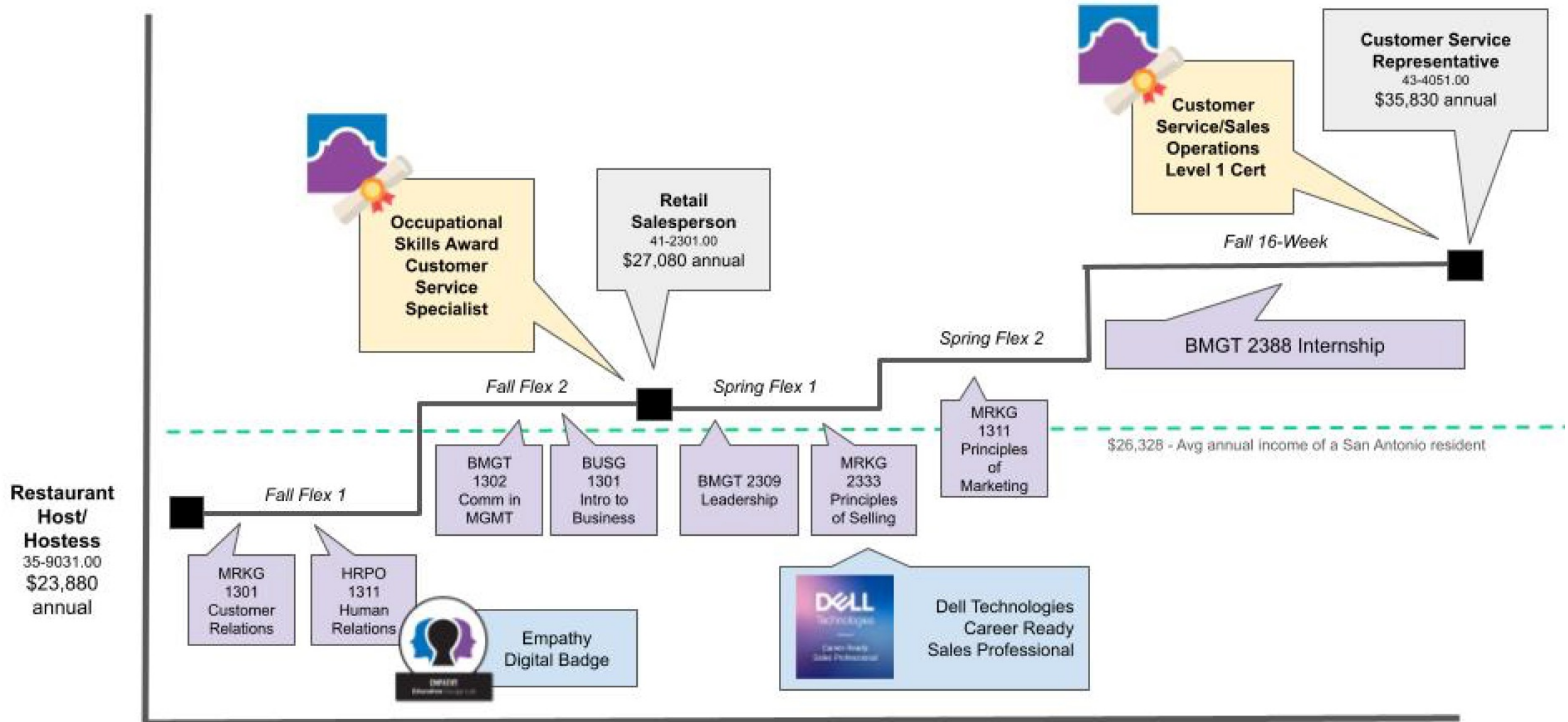


What are the main components of the Develop with Dell: Sales Track?

- **17 on-demand eLearning courses:** ranging from 10-45 minutes in length with 4 quizzes
- **Virtual live sessions:** four required sessions
- **RNMKRS:** an artificial intelligence app for you to apply and develop your sales skills and get real-time feedback with role plays and hone your elevator pitch with SpeedSell
 - RNMKRS Role Plays: You will role play with the AI bot, acting as a Dell seller. Role plays will culminate in a global, virtual sales competition
 - RNMKRS SpeedSell: You will use this training simulator to help you develop your elevator pitch
- **ePoster:** You will design an ePoster slide (template provided) and complete a 10 min presentation on your experience to sales leaders as part of your final assessment



Sales Professional



Bachelor of Applied Technology (BAT) Cloud Computing

Debi Gaitan, Interim President

Dr. Daniel Powell, Vice President for Academic Success

Dr. Russell Frohardt, Dean for Academic Success

Teri Dimas, Department Chair

Dr. John Grillo, Dr. Bobby Yeater, Matthew Burch, Program Faculty

Rita Perez, Director for CTE



Program Highlights & Opportunities



- **Industry Partnerships** for Curriculum and Occupational Placement
 - Amazon, IBM, Palo Alto Networks, Microsoft – CompTIA, Linux, Rackspace, Dell, Accenture
- Available **fully online** – maximum **accessibility** and **flexibility** for students
- Students will be able to **complete** the **30 hours** of upper-division courses for the BAT degree in **9 months**.



Pathways and Success Points



- **Success points earned for NVC**
 - Year 1: Level 1 Certificate
 - Year 2: Associate of Applied Science
 - Year 3: Core Complete
 - Year 4: Bachelor of Applied Technology – Cloud Computing

- **Micro-Credential Opportunities**
 - Each of the upper-division CTE courses completed results in a micro-credential along with embedded industry certifications in the pathway



Micro-Credential & AWS Academy Pathway



Upper-Division Course

- ITEC 3365 – Network & Data Communication
- ITES 4371 – Cloud Computing with AWS
- INFS 3380 – Global Information Technology
- ITSS 4382 – Applied AI Machine Learning
- ITSS 4383 – Advanced Applied AI Machine Learning
- ITSS 4354 – Advanced Big Data Analytics
- ITEC 4313 – Emerging Information Technology
- ITSS 4370 – Information Technology Infrastructure
- CIS 4370 – Data Communications & Network Mgmt.
- ITEC 4388 – Senior Project in Information Technology

AWS Micro-Credential

- Introduction to Cloud-Semester 1
- Introduction to Cloud-Semester 2
- Cloud Computing Architecture
- Machine Learning Foundations
- Machine Learning/Nat. Language Proc.
- Data Analytics
- Cloud Operations
- Data Center Technician
- Engineering Operations Technician

AWS Certification

Cloud Practitioner
Solutions Architect

Machine Learning
Data Analytics
SysOps Administrator



Challenges and Successes

- **THECB Request for Revised Curriculum**

- Faculty own curriculum; Needs to be generalizable
- Modified curriculum on both Canvas and AWS platforms

- **Micro-Credential Modifications**

- AWS micro-credentials run parallel to BAT curriculum
- AWS partnership with Credly.com
- Will use Perkins for testing fees
- Plan to have onsite testing facility for all testing; Possibly WETC too



Northeast Lakeview College

Examples

1. Newly Developed Cloud Computing A.A.S. Pathway
2. In Development Social Media and Digital Marketing

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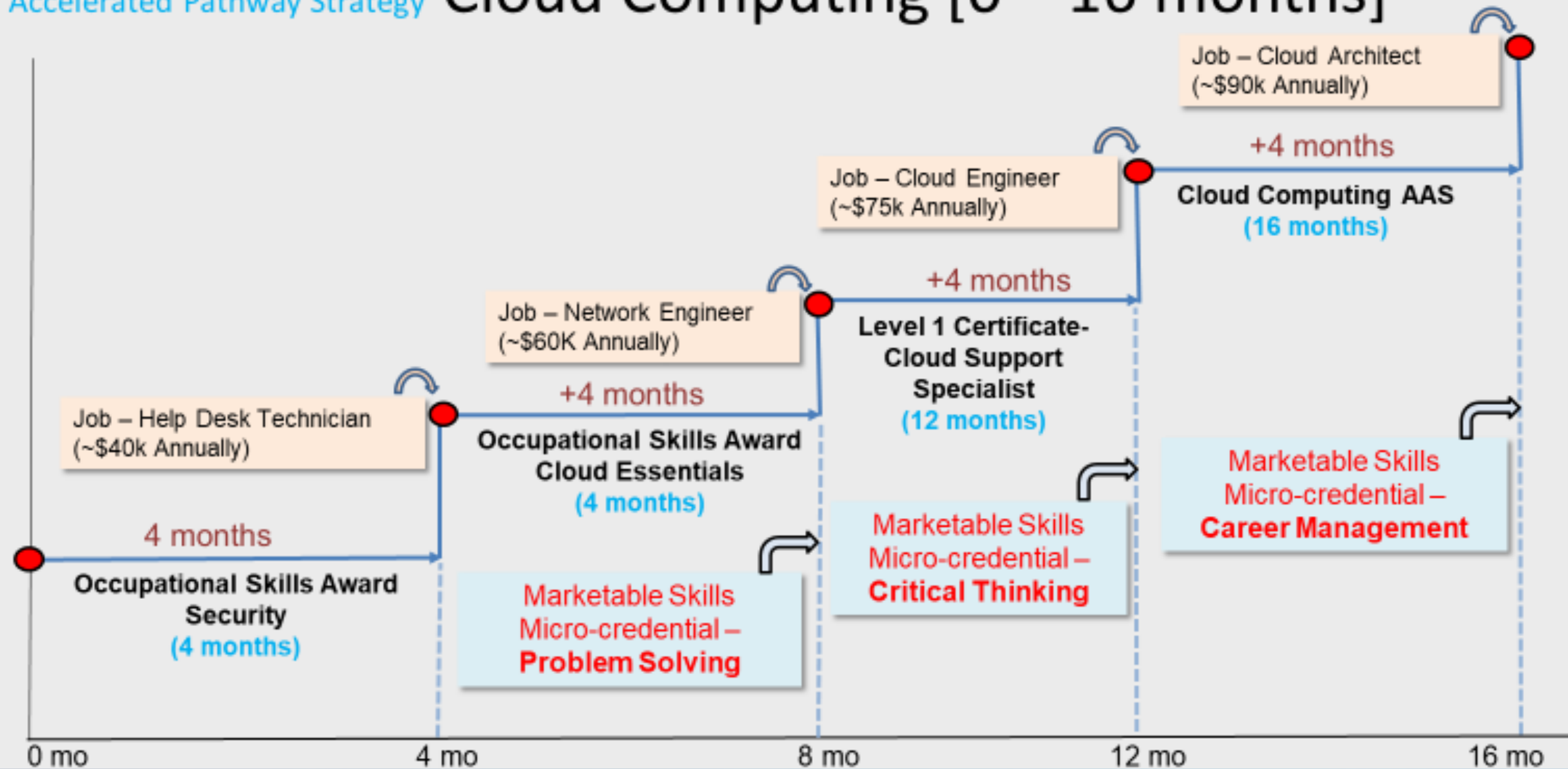
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Accelerated Pathway Strategy Cloud Computing [0 – 16 months]



Micro Pathway 1- Occupational Skills Award Security - 10CR

Courses

ITSY 1342 – Information Technology Security

ITNW 1308 – Implementing and Supporting Client Operating System

ITNW 1425 – Fundamentals of Networking Technology

Micro Credential Equivalent

CompTIA Security+

CompTIA A+

Cisco CCNA or CompTIA Network+



Micro Pathway 2 - Occupational Skills Award Cloud Essentials - 10CR

Courses

ITNW 1309 – Cloud Essentials

ITSC 1316 – Linux Installation & Configuration

ITNW 2412 – Routers

Micro Credential Equivalent

CompTIA Cloud Essentials+

CompTIA Linux+

Cisco CCNA



Micro Pathway 3 - Level 1 Certificate Cloud Support Specialist - 20CR

Courses

ITSC 2325 – Advanced Linux



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Micro Pathway 4 - Level 1 Certificate Cloud Support Specialist - 19CR

Courses

ITNW 1436 – Cloud Deployment & Infrastructure Support

ITNW 1453 – Supporting Network Server Infrastructure

ITCC 2443 – Network Security (Cloud)

ITNW 2327 – Advanced Cloud Concepts

ITNW 2405 – Network Administration



Micro Pathway 5 - AAS Cloud Computing - 60CR

Courses

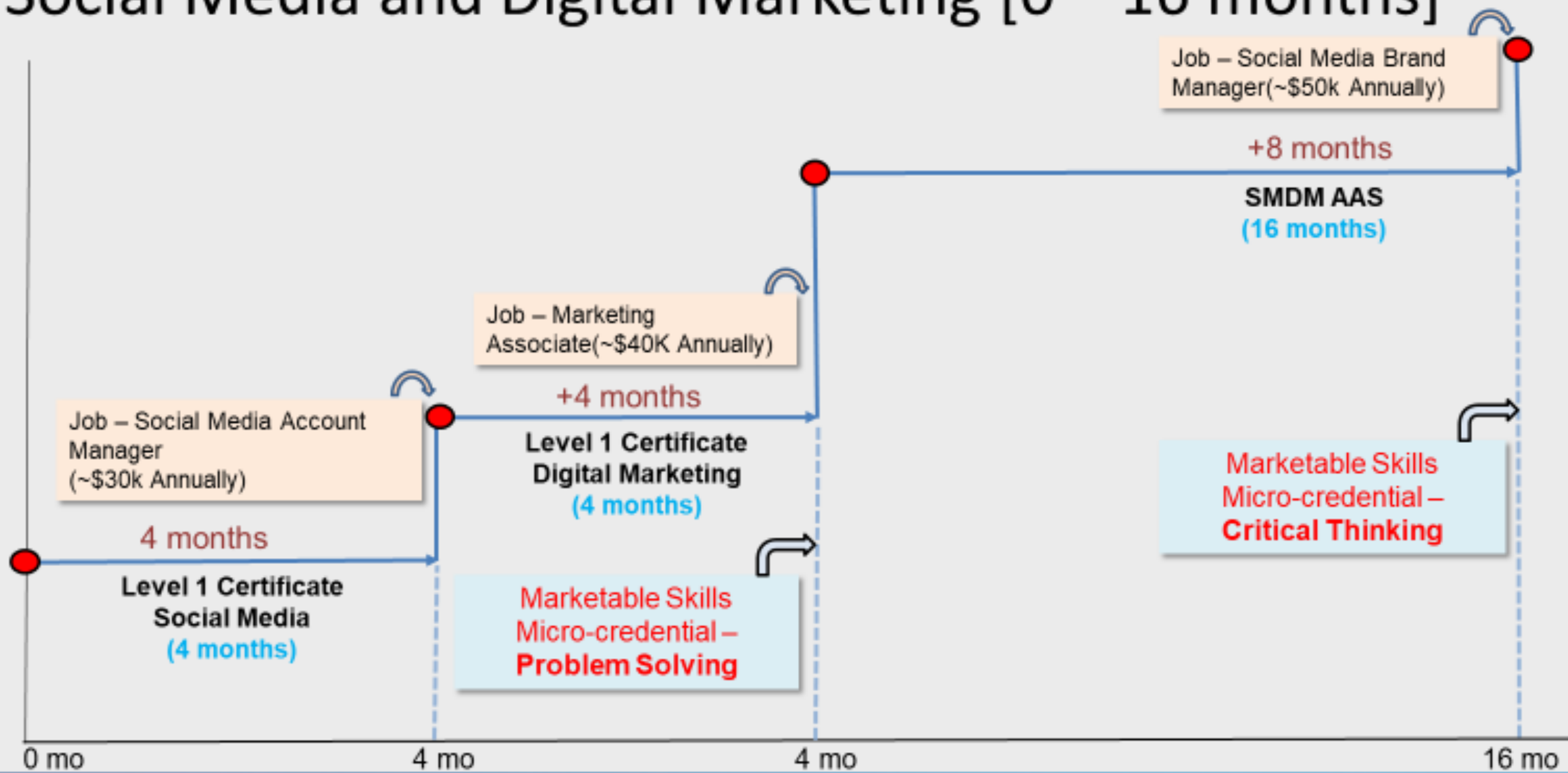
ITNW 2264 – Internship – Cloud Computing

COSC 1436 – Programming Fundamentals

15 Hours of General Education



Social Media and Digital Marketing [0 – 16 months]



Micro Pathway 1 - Level 1 Certificate Social Media - 19CR

Courses

MRKG 1372 – Introduction to Social Media Marketing)

MRKG 1471 – Social Media Tools 1: Design and Implementation

MRKG 1472 – Graphics for Marketing

MRKG 2470 – Story Telling in a Digital Environment

MRKG 2472 – Social Media Tools II: Monitoring and Analysis



Micro Pathway 2 - Level 1 Certificate Digital Marketing - 18CR

Courses

MRKG 1370 – Introduction to Digital Marketing

MRKG 1479 – Writing and Editing Business Information

MRKG 1472 – Graphics for Marketing

MRKG 2479 – Web Based Content Management

ATRC 1302 – Digital Imaging I



Micro Pathway 3 - AAS Social Media and Digital Marketing - 60CR

Courses

MRKG 2370 – Social Media Law and Ethics

MRKG 2473 – Social Media Tools III: Capstone

MRKG 2288 – Internship

MRKG 1311 – Principles of Marketing

15 Hours of General Education



Micro-Pathway Improvements

- Embedded Marketable skills Micor Credentials
- Industry recognized credential equivalencies where appropriate



Workshop Activity

Expectations for Pathways:

Develop credential maps. Consider how the credential map(s) applies to various learners: dual credit programs leading to workforce or academic transfer programs, adult education and literacy programs leading to workforce or academic transfer programs, or academic programs with embedded continuing education credentials mapped to transfer partner programs.

Breakout: Share your examples and discuss best practices and opportunities.

NORTHEAST LAKEVIEW COLLEGE

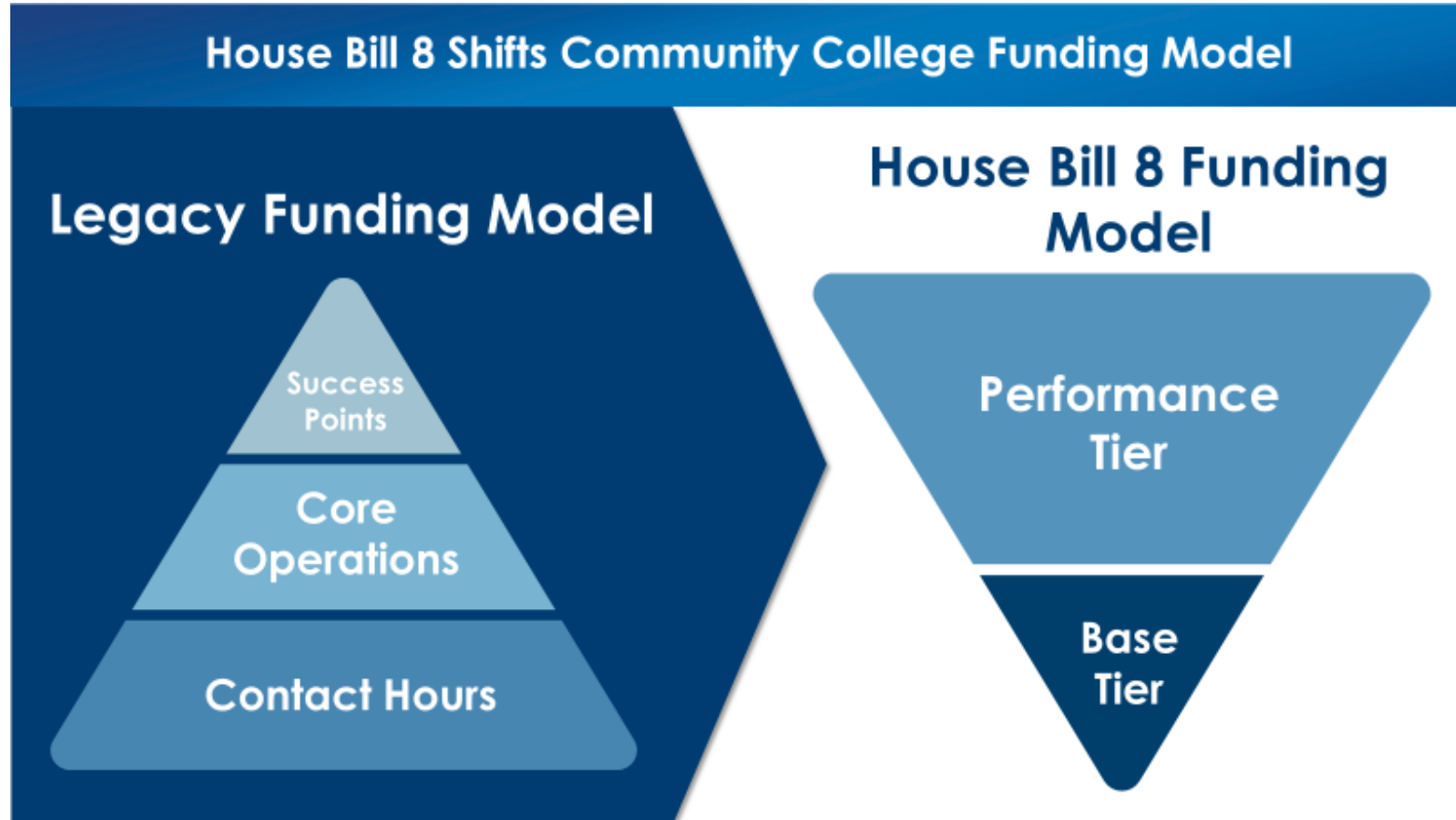
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SAN ANTONIO COLLEGE

House Bill 8 – Performance Funding



House Bill 8 - New Performance Tier Funding



Outcomes

- **Credentials of value**, including credentials from credit and non-credit programs
- Credentials of value awarded in **high-demand fields**
- Students who **transfer with at least 15 SCH** to four-year universities (only Tx Public Universities)
- Students who complete a **sequence of at least 15 SCH in dual credit** courses

Weights

- Economically disadvantaged (Pell recipients) (.25)
- Academically disadvantaged (not TSI ready) (.25)
- Adult learners (25 years of age or older) (.50)



How Performance Tiers Are Funded

Below is a chart with the **breakdown of the dollars and weights associated** with each outcome in the new performance tier:

Performance Tier Inputs	Standard Value	High-Demand Field Value
Dollars per Weighted Outcome Completion		
15 SCH Dual Credit	\$ 1,700	N/A
GAI Transfer with 15 SCH	\$ 3,500	N/A
GAI Co-enrollment with 15 SCH	\$ 3,500	N/A
Licensure/Certification (no credential)	\$ 1,000	\$ 1,250
Institutional Credential leading to Licensure	\$ 1,000	\$ 1,250
Occupational Skills Award	\$ 750	\$ 1,000
Certificate I or II	\$ 1,750	\$ 3,500
Advanced Technical Certificate	\$ 1,750	\$ 3,500
Associate Degree	\$ 3,500	\$ 4,500
Bachelor's Degree	\$ 3,500	\$ 4,500
Outcome Completion Weights		
Academic Disadvantage	0.25	0.25
Economic Disadvantage	0.25	0.25
Adult Learner	0.50	0.50

Source: [THECB House Bill 8-Community College Finance Webpage](#)



House Bill 8 – High Demand Fields

CIP Code	Field	CIP Code	Field
• 11	Computer and Information Sciences and Support Services	• 1907	Human Development, Family Studies, and Related Services
• 14	Engineering	• 2200	Non-Professional Legal Studies
• 15	Engineering/Engineering-Related Technologies/Technicians	• 2203	Legal Support Services
• 27	Mathematics and Statistics	• 3001	Biological and Physical Sciences
• 40	Physical Sciences	• 4102	Nuclear and Industrial Radiologic Technologies/Technicians
• 0101	Agricultural Business Management	• 4103	Physical Science Technologies/Technicians2
• 0102	Agricultural Mechanization	• 4302	Fire Protection
• 0302	Environmental/Natural Resources Management and Policy	• 4604	Building/Construction Finishing, Management, and Inspection
• 1302	Bilingual, Multilingual, and Multicultural Education	• 4701	Electrical/Electronics Maintenance and Repair Technologies/Technicians
• 1312	Teacher Education and Professional Development, Specific Levels and Methods	• 4702	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician (HAC, HACR, HVAC, HVACR)
• 1314	Teaching English or French as a Second or Foreign Language	• 4703	Heavy/Industrial Equipment Maintenance Technologies/Technicians2



House Bill 8 – High Demand Fields

CIP Code	Field	CIP Code	Field
• 4706	Vehicle Maintenance and Repair Technologies	• 5123	Rehabilitation and Therapeutic Professions
• 4707	Energy Systems Maintenance and Repair Technologies/Technicians	• 5126	Health Aides/Attendants/Orderlies
• 4902	Ground Transportation	• 5127	Medical Illustration and Informatics
• 5102	Communication Disorders Sciences and Services	• 5131	Dietetics and Clinical Nutrition Services
• 5106	Dental Support Services and Allied Professions	• 5132	Health Professions Education, Ethics, and Humanities
• 5107	Health and Medical Administrative Services	• 5133	Alternative and Complementary Medicine and Medical Systems
• 5108	Allied Health and Medical Assisting Services	• 5134	Alternative and Complementary Medical Support Services
• 5109	Allied Health Diagnostic, Intervention, and Treatment Professions	• 5138	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing
• 5110	Clinical/Medical Laboratory Science/Research and Allied Professions	• 5139	Practical Nursing, Vocational Nursing and Nursing Assistants
• 5118	Ophthalmic and Optometric Support Services and Allied Professions	• 5203	Accounting and Related Services



Workshop Activity

Performance Funding Considerations: How have the new HB 8 rules affected your program curricula?

Breakout: Discuss changes that you have made or are considering making in light of House Bill 8 requirements.

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Summary and Action Items

What we learned ...

- Know your community and industry needs
- Have a clear communication plan and implementation strategy for embedding micro-credentials into programs
- There are several approaches for connecting micro-credentials to programs
- Considerations for working with industry partners
- Alignment with state, system, and college requirements



Thank you.

Questions and Discussion



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