Adopting a Career Pathways Framework that Supports and Sustains Innovation



CENTER FOR OCCUPATIONAL RESEARCH & DEVELOPMENT

Facilitators



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About CORD

A national nonprofit organization founded in 1979

Core tenets:

- 1. Contextual teaching in STEM disciplines
- 2. Seamless transitions from secondary to postsecondary education
- 3. Training solutions to help America's technicians remain globally competitive



Providing innovative changes in education to prepare students for greater success in careers and higher education

CENTER FOR OCCUPATIONAL RESEARCH & DEVELOPMENT



Today's Agenda

- Common Vision of Career Pathways
- Advancing Credentials through Career Pathways Framework
- Examples of and Resources for Framework Components



Building Career Pathways That Support Innovation

- Strategic employer engagement based on BILT model to drive innovation
- Career pathway mapping to reveal barriers to seamless progression and alignment to industry needs
- Credit for prior learning to accelerate time to credential and support completion
- Action Plan to guide your efforts

Workshop Resource Toolbox





Workshop Format

1 Employer Engagement

- Check-up
- Content/Examples/ Tools & Resources
- Action Plan Part 1 *Table discussion*





- Check-up
- Content/Examples/ Tools & Resources
- Action Plan Part 2 *Table discussion*

3 Supporting Completion

- Check-up
- Content/Examples/ Tools & Resources
- Action Plan Part 3 *Table discussion*



Common Vision

- Programs that match the economic development needs of your community
- Graduates that possess the skills to ensure a high-quality workforce
- A community of lifelong learners



What's Happening?

- Nature of work changing at unprecedented speeds
- Technology advancements in machine learning, AI, IoT, and robotics eliminating some jobs, creating others
- Technicians sit at the center of much of this disruption
- Education must keep up
- Our students' career paths will evolve



Top 10 Skills

Future of Jobs Report 2020 World Economic Forum

Top 10 skills of 2025

Type of skill

Problem-solving

Self-managementWorking with people

Technology use and development



Analytical thinking and innovation



Active learning and learning strategies

WORLD ECONOMIC FORUM



Complex problem-solving



Critical thinking and analysis



Creativity, originality and initiative



Leadership and social influence



Technology use, monitoring and control



Technology design and programming



Resilience, stress tolerance and flexibility



Reasoning, problem-solving and ideation

Source: Future of Jobs Report 2020, World Economic Forum.

Framework for a Cross-Disciplinary STEM Core

DATA KNOWLEDGE AND ANALYSIS

Manipulating and interpreting data to resolve issues and using Excel and other common software proficiently to accomplish tasks

Analytics tools Computational thinking Data analysis Data backup and restoration Databases Data fluency Data life cycle Data management Data modeling Data storage Data visualization Query languages Spreadsheets Statistics

ADVANCED DIGITAL LITERACY

Understanding digital communications and networking, cybersecurity, machine learning, sensors, programming, and robotics at a higher than introductory level

Artificial intelligence/ machine learning Automation/robotics Basic programming Cloud literacy Digital fluency Digital fluency Digital twins Edge computing Function block diagram programming Human-Machine Interface (HMI) Internet of Things (IoT) Network architecture Network communication Security controls

BUSINESS KNOWLEDGE AND PROCESSES

Understanding the value chain and business practices of an enterprise and applying principles of ethical adoption of new technologies

Business cycles Blockchain Communication Continuous process improvement Customer/stakeholder analysis Entrepreneurship Ethics Lean processes Logistical chains Market trends Overall Equipment Efficiency (OEE) Return on Investment (ROI) Risk management Supply and demand Vertical and horizontal integration Preparing Technicians for the Future of Work

A Framework for a Cross-Disciplinary STEM Core







Stackable Credentials Initiative





Three Essential Components:

- 1. Engaging employers in strategic and sustainable ways
- 2. Building career pathways based on industry-validated stackable credentials
- 3. Supporting completion through non-credit/credit alignment





Pathways to Career Readiness and Advancement

Programs of Study and Career Pathways

share many of the same attributes. The two terms are used interchangeably in many state and local applications. Both are defined in Federal Law.



STACKABLE CREDENTIALS

At these milestones the learner may advance to the next-higher-skill job in the sector for which they have trained, and/or continue in or reenter the learning pathway to pursue additional credentials.

*These stackable credentials may:

- Include preparation for industry certifications.
- Articulate to bachelor's degree programs.
- Be obtainable by HS students through dual credit.



Pathways to Credentials

US ED OCTAE Initiative: Build capacity of colleges to improve CTE credential attainment rates by offering **stackable credentials**, a series of incremental milestones, on the path to degree completion. Stackable credentials are...

- Developed through active employer engagement
- Responsive to workforce needs of region
- Link educational certificates to industry certifications
- Support diverse groups of learners
- Provide multiple entry and exit points
- Support earn-and-learn models through flexible scheduling
- Provide credentials with labor market value on the path to a degree

Career Pathways Embedded with Stackable Credentials



Provide flexibility for **students**



Meet the evolving skill needs of **employers**



Improve the ability of colleges and **communities** to increase postsecondary credential attainment



Give **colleges** tools for continuous upskilling

Paving a Seamless Pathway



Partnerships to Prepare for Future of Work

- **Employer** across sectors; collaborate as a team on everything from curriculum to work-based learning experiences; build your community's talent pipeline
- **Organizational** secondary and postsecondary/regional community; align, accelerate, advance; remove barriers
- Instructional academic and CTE faculty as content development partners: interdisciplinary connections, real-world context, employability skills across curriculum





Employer Engagement Check-up



Employer engagement in the design of programs embedded with stackable credentials is critical. Programs should be demand driven and industry responsive. Detailed input from employer partners regarding workplace expectations will serve as the cornerstone of program design.

1 Employer Engagement Check-up	Ð.	₽	?
Inventories of the economic development and labor needs of the community have been conducted within the past six months.			
Employers have shared the academic, technical and workforce credentials they value and prioritize when hiring and promoting employees.			
Program-specific industry advisory committees are led by employers. The work of committees is coordinated in a manner that ensures efficient use of employers' time.			
Business advisory committees meet three or more times per year.			
Business advisory committees include representation from small, medium, and large employers.			
Business advisory committees include a mix of technicians, technical managers, and high-level technical strategists.			
Our advisory committees include a strong degree of permanence as evidenced by signed agreements, a shared vision, formal decision-making, and periodic goal-setting.			
The return on investment for employer partners is documented in a manner useful to them.			
Employer partners offer work-based learning experiences for students.			
Employer partners offer work-based learning experiences for faculty.			
Totals			

Advancing Credentials THROUGH Career Pathways



What is Employer Engagement?

- A **strategy** to identify and integrate employer input and feedback into your college's programs and activities.
- A working **relationship** where employers and colleges view each other as strategic partners.
- A methodology to:
 - keep your programs fresh and relevant
 - place your career-ready graduates into jobs
 - increase your enrollment
 - garner financial and other support
 - join voices for program advocacy

Benefits of Strategic Employer Engagement



The Need for Strategic Thinking



Ways Businesses Can Help





The Process Starts Internally



Knowing Your Audience

- Who hires the college's graduates/completers?
- Who provides intel on evolving needs of businesses in the region?
- Who assists your college in building industry-informed programs?
- Does your college conduct an employer satisfaction survey? How often? How are the results used and/or distributed?
- Do you know who at your college provides outreach to employers?
- Do you know how information from employer outreach is gathered and shared?

Developing Your Program

- Skills Alignment to Market Demand
- Source for Future Industry Trends
- Composition of Advisory Council
- Benefits for All Stakeholders



Business Industry Leadership Team (BILT)

- Approach to curriculum development
- Co-leadership between education and industry
- Allows for annual prioritization of knowledge, skills and abilities required by local businesses
- Includes forecasting of future trends and programmatic decisions related to trends
- Industry serves as subject matter experts on current and future skill requirements
- Continuous feedback loop between educators and industry

BUSINESS & INDUSTRY LEADERSHIP TEAM

BILT

INN WAYS TO VATION





Business & Industry Leadership Team Model



- A Business Advisory Council
 "on steroids"
- 2. A structured, repeatable process that can be used for any technical program
- 3. A model that puts employers in a **co-leadership role** that greatly increases their engagement with your program





INN VATION

Roots of BILT Model

National Science Foundation (NSF) supported National Convergence Technology Center Based at Collin College (TX) [2012-2022]

Established BILT model through work with business leaders from across the nation to determine the **Knowledge, Skills, and Abilities** that "workforce ready" graduates will need

Model implemented at more than **70 colleges in multiple disciplines**.

US DOL and ED recognize BILT as a leading model for strategic employer engagement

Pathways to Innovation project launched **BILT Academy** to scale the model







Businesses co-lead programs:

- Annually prioritize Knowledge, Skills and Abilities (KSAs) they want graduates to have 12-36 months into the future (at a program level)
 - Structured, repeatable voting process
 - Synchronous discussion
 - Predict Labor Market Demand
- Identify industry trends during 2-3 other meetings annually

Faculty:

- Attend KSA mtg as active listeners and questioners
- Cross reference prioritized KSAs to existing curriculum to determine gaps and coverage
- Diligently try to update curriculum to address KSAs needed by businesses
- Provide businesses with feedback regarding implementation and discuss challenges



ESSENTIAL ELEMENT: *Co-Leadership*

Employers report they are more likely to hire graduates from programs for which they have **curricular leadership** responsibility

Employers report they will assume this role (and more) if:

- Their time is respected
- There is a method for ensuring their input is consistently and seriously considered by faculty members
- They consistently receive feedback on their recommendations



Recruit BILT Members
HOW BILT BENEFITS STUDENTS, FACULTY, AND EMPLOYERS



BILT Benefits Students

- Because BILT members feel ownership of courses, certificates, and degrees, they're likely to seek your graduates
- BILT members are engaged; students in the program are first to be considered for opportunities such as internships, even before they complete
- BILT members mentor students
- BILT members help with events, interview skills, perspectives on "a day in the life," etc.



BILT Benefits Faculty

- Faculty have assurance they are teaching what businesses want
- BILT members serve as guest speakers and assist with recruitment events, on-campus and off
- BILT members alert faculty of trends in time for curriculum adjustment
- BILT members often provide free or reduced-cost professional development for faculty
- BILT members often provide externships





BILT Benefits Employers

- Their pipeline of "workforce ready" job candidates is increased
- They develop professional relationships with other BILT members and with the college
- They're able to give back to their community in a way that makes a real difference
- They know their time is valued







Companies are representative of those who hire your grads

- High-level technical executives
- First-line hiring managers
- Technicians
- HR execs, usually not the sole rep for a company
- Faculty are ex-officio; they *listen* and ask questions



THE KSA ANALYSIS

Background/Context

- Created by NSF ATE Convergence Technology Center
- Uses PCAL7 (Performance Criteria AnaLysis) process developed by US Air Force
- Prioritizes the Knowledge, Skills, and Abilities (KSAs) businesses will need in entry-level workers 12-36 months into the future
- Consensus is not the goal
- Results of prioritization help faculty align curriculum to workforce needs

Sample KSA Mapping to Courses

	Technical Project Management							
Alpha Numeric	Knowledge	4	3	2	1	Avg	ITPM1001	ITSC1374
K-1	Knowledge of computer networking concepts, protocols, and security methodologies.	6	12	7	4	2.69		Thorough
K-2	Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).	17	9	3	0	3.48	Exposure	
K-3	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy.	4	9	12	4	2.45	Gap	Gap
K-4	Knowledge of benchmarking.	13	6	5	1	3.24	Exposure	
K-8	Knowledge of information technology (IT) architectural concepts and frameworks.	11	11	7	0	3.14		Thorough
K-9	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.	6	10	11	2	2.69	Gap	Gap
K-10	Knowledge of Risk Management Framework (RMF) requirements.	11	11	6	1	3.10	Exposure	
K-11	Knowledge of resource management principles and techniques.	17	10	1	1	3.48	Exposure	
K-12	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.	13	11	5	0	3.28	Exposure	
K-13	Knowledge of system life cycle management principles, including software security and usability.	11	6	10	2	2.90	Exposure	
K-14	Knowledge of the organization's enterprise information technology (IT) goals and objectives.	10	11	7	1	3.03	Gap	Gap

Deepening Engagement

- Tiered approach to employer engagement
- Strategies to increase breadth of engagement
- Testimonials

Generating Support

Engaged employers may:

- identify areas where new or updated equipment is called for
- connect you to their suppliers for discounts
- consider donating equipment to help in preparing your students, their future employees
- be open to sponsorship of competitions, clubs, and camps
- cover the cost of industry-recognized credentials/assessments to alleviate the financial burden on students
- provide faculty externship opportunities

Joining Voices

Collaborating on Shared Issues

- Skills
- Training
- Technology
- Apprenticeship
- Moving from Partner to Advocate
 - Legislative events
 - Economic Forums
 - Local, State and National



Comprehensive Resource:



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Using This Toolkit

Knowing Your Audience

Developing Your Program

Mining for Deeper Engagement

Generating Support

Joining Voices

Contact Us

Introduction

In a time when information is critical to success and budgets are tied to outcomes, the need for strategic employer engagement with colleges has never been greater. No longer can programs thrive with limited input from local employers. All community and technical colleges must stay informed of—and respond to—industry-specific trends that impact skill sets, national standards, and credentials.

Action Planning





Local Action Plan

Goal, Objective, Priority: What do we want to achieve?	Action Steps: How will we achieve it?	Lead: Who is responsible?	Intended Results: Measurable outcomes?	Timeline: By when?	Notes:			
Employer Engagement								
Gaps								
Opportunities								
Stackable Credentials/Career Pathways Program Design								
Gaps								
Opportunities								
Supporting Completion								
Gaps								
Opportunities								

✓ Use Action Plan Template at your table

or

Download Action
 Plan Template
 from Workshop
 Toolbox





Career Pathways Check-up



Your goal is to offer programs that address the skill demands of your local workforce as identified by employer partners, and to do so in a way that enables students to earn multiple credentials on the way to a degree. This series of milestones should enable learners to enter the labor market with credentials of value and to build on them to access advancing levels of employment and earnings.

2 Career Pathways Check-up Certificates, diplomas, and degrees have been validated by industry and revised as needed to support current workforce needs, and/or new credentials have been slated for development. Career pathways program curriculum is directly tied to employment opportunities for high-wage/high-demand careers. Career pathways program curriculum has been aligned to industry certifications. Career pathways program curriculum provides multiple entry and exit points to accommodate youth and adult learner populations. Career pathway maps depicting education and industry credentials aligned to career opportunities have been developed for use in recruiting and advising. We actively collaborate with employer partners to expand work-based learning opportunities for our students. Counselors and/or career advisors receive professional development on locating/using labor market data and understanding local industry workforce trends. Totals

Advancing Credentials THROUGH Career Pathways



Why Pathway Maps?



- To help learners of all ages **understand the opportunities** available to them to learn, earn, and realize success in the career path of their choice
- To identify entry points and exit points aligned to credential attainment and advancing levels of employment
- To convey that a **seamless pathway** of stackable credits and credentials is not only possible, but critical to success in today's labor market

Mapping Career Opportunities & Economic Mobility



• You're creating a visual story depicting the pathway

• What career opportunities does it comprise?

- What postsecondary credentials can you earn?
- What industry certifications will the pathway prepare you for?

Who Benefits from Pathway Maps?

Students

- Provides information students need for guided learning pathways – on and off ramps
- Identifies program outcomes relative to potential employment opportunities and wages, as well as program duration and stackable credentials
- Depicts career growth alongside education path

Employers

- Identifies multiple entry points for existing employees to upskill
- Validation of skills by industry means graduates are prepared to meet employer needs

Faculty

- Program and career information in one place at-a-glance
- Employer-validated pathways relative to occupations and wages
- Clear depiction of completion options (certificates, diplomas and degrees) within a pathway

Cybersecurity Pathway

Earn Credit for What You Already Know:

Through prior learning assessment (PLA), demonstrate mastery of core skills for college credit, or with industry certifications.

Basic Networking & Security Certificate

20 credits/aligns with Security+, Network+ certifications Core skills: networking, information assurance, network security, cloud computing

See Program Details

Career Opportunities

Entry wages: \$18 per hour With experience: \$27 per hour Potential positions: Computer User Support Specialist Computer Network Support Specialist

Learn more at:

IT Tech & Support Certificate

22 credits/aligns with A+ certification Core Skills: operating systems, project management, help desk skills, A+ technician skills

See Program Details

Career Opportunities

Entry wages: \$18 per hour With experience: \$27 per hour Potential positions: Computer User Support Specialist Help Desk Technician

Learn more at:

My Colorado Journey

Cybersecurity A.A.S.

60 credits/aligns with Security+, Network+, Cloud+, Linux+ certifications Core Skills: networking, information assurance, network security, cloud computing See Program Details

Career Opportunities

Entry wages: \$25 per hour With experience: \$35 per hour Potential positions: Cybersecurity Analyst Computer Network/Systems Administrator Tech Support Engineer

Learn more at: My Coloradio Journey

Computer Science/ Engineering with Cybersecurity concentration B.S.

128 credits

Core Skills: computer architecture, programming and system analysis, cryptography, security system design, risk and policy analysis, investigation techniques, troubleshooting

Career Opportunities

Entry wages: \$30 per hour With experience: \$50+ per hour Potential positions: Computer Network/Systems Architect Cybersecurity Engineer Business/Systems Analyst

Learn more at:

🚺 My Colorado Journey



What to Include

Academic Credentials Within the Pathway (certificate, diploma, associate degree) and # of Credits

Program Duration of Each Credential

Related Industry Certifications

Employment Opportunities at Exit Points Job Titles / Wage Range

Credit for Prior Learning (all types) Articulated 4-year Programs

Who Should Participate?



Employer Engagement

➤Work with employer partners to:

- Define job requirements
- Map the structure of jobs to certificates and degrees
- Identify related industry certifications
- Identify career advancement levels within the pathway

(i.e. Certificate A = Job Title X, Certificate B = Job Title Y, Degree = Job Title Z)

≻Gather wage data for each job title

➢ Repeat process annually



Inspiration from Sample Pathway Maps



Review pathway map examples from other programs/ institutions. Determine best flow of info for your map's target audience(s) and identify visuals/ colors that enhance understanding of pathway components/ personal options.

Work with marketing department to design map graphics that can be used across disciplines.

3

Ask students, parents and employers to review for clarity.



Career Pathways

Health Service Management Associate in Science

Prior Credit High School Career Pathways Certificate	Prior Credit Technical College Certificate	College Credit Certificate	College Credit Certificate	Associate Degree	Bachelor Degree
Administrative Office Specialist Allied Health Assisting Applied Cybersecurity Applied Information Technology Business Management & Analysis Digital Design International Business Legal Administrative Specialist Nursing Assistant Web Development Industry Certifications Certified Medical Administrative Assistant (CMAA) Certified Nursing	Accounting Operations Administrative Office Specialist Medical Assisting Practical Nursing Industry Certifications Certified Medical Administrative Assistant (CMAA) Registered Medical Assistant (RMA)	Medical Information Coder/Biller (37 credit hours) Industry Certifications CCA; CCS; CCS-P; CPC Career Average Cost of Program \$4,100.00 Typical Starting Positions Medical Records/Health Information Technicians, Insurance/Billing Specialist, Coding Specialist, Coding Specialist, Coding Specialist, Coding Specialist, Coding Specialist, Coding Specialist, Coder/Biller, Insurance Specialist Average Starting Salary \$15.67 hourly	Medical Office Management (34 credit hours) Career Average Cost of Program \$3,750.00 Typical Starting Positions Medical Secretary, Medical Secretary, Medical Secretary, Medical Secretary, Billing Clerk Average Starting Salary \$15.67 hourly	Health Services Management (60 credit hours) Industry Certifications CAHIMS; CMM Career Average Cost of Program \$6,600.00 Typical Starting Positions Medical Office Manager, Health Services Department Supervisor, Billing Supervisor, Billing Supervisor, Revenue Cycle Analyst Average Starting Salary \$18.00 hourly	Strategic Leadership (120 credit hours) Career Average Cost of Program \$7,200.00 Typical Starting Positions Medical Practice Manager, Health Services Department Manager, Health Services Department Manager, Revenue Cycle Supervisor/Manager, Human Resouce Specialist, Entrepreneur Average Starting Salary \$25.66 hourly

Learn more at www.LSSC.edu/academics



Industrial Systems Career Pathway

EDUCATION GOALS

Associates in Applied Science Degree (AAS)

New York Stress Technology

OCCUPATIONS INCLUDE...

- Instrument & Electrical (I&E) Technician
- Maintenance Technician
- Industrial Mechanic

MEDIAN ANNUAL SALARY RANGE IN NC

\$40,710 - \$58,460

Career & College Promise Credit: 13

PACE Credit: 3

	HIGH SCHOOL PLAN									
			REQUIRED CO	UIRED COURSE SEQUENCE REQUIRED CTE CONG	CTE CONCENTRATOR	SUPPLEMENTAL				
N	GRADE	ENGLISH	MATHEMATICS	SCIENCE	SOCIAL STUDIES	ELECTIVES	ELECTIVES	CTE COURSES		
E	9	English I	Math I	Earth Science	World History	Health/PE		Career Management		
NO	10	English II	Math II	Biology	American History I			Microsoft Word and Powerpoint		
UCAT	11	English III	Math III	Physical Science OR Chemistry	American History II			Project Management I CTE Advanced Studies		
SECONDARY ED	12	English IV	Advanced Mathematics course where Math III is a prerequisite	Other Science Elective	Civics/Economics		FTCC High School Connections - Basic Mechanical Maintenance	CTE Internship CTE Apprenticeship		

FATE I LEVILLE TECHNICAL COMINIUM I T COLLEGE PLAN – INGUSUNAI SYSTEMIS TECHNOIO
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N PLAN	Fall 1	ACA120-Career Assessment OR ACA122-College Transfer Success	BPR111-Print Reading	CI5111-Basic PC Literacy	ELC112-DC/AC Electricity	MNT110-Intro to Maint Procedures	WLD112-Basic Welding Processes
EDUCATIO	Spring 1	ENG110-Freshman Composition OR ENG111-Writing and Inquiry	ELC128-Intro to PLC	MAC141-Machining Applications I	PHY121-Applied Physics I	PLU111-Intro to Basic Plumbing	
NDARY	Summer 1	BPR115-Elc/Fluid Power Diagrams	HYD110-Hydraulics/ Pneumatics I	MNT111-Maintenance Practices			
ST-SECOI	Fall 2	COM120-Intro Interpersonal Com OR COM231-Public Speaking	ELC228-PLC Applications	ISC110-Workplace Safety	WBL110-World of Work	WLD115-SMAW (Stick) Plate	
ğ	Spring 2	ELC117-Motors and Controls	MNT220-Rigging and Moving	MNT230-Pumps & Piping Systems	Humanities/Fine Arts Elective	Social/Behav Science Elective	



Fayetteville, NC

i•TECH Isothermal Engineering & Technology Academy

First Year						
Advanced Technology Certificate						
CCP Certificate Pathway						
(15 Credit Hours)						
DFT 151	CADI					
EGR 110	Intro to Engineering					
	Technology					
HYD 110	Hydraulics					
MAC 141	Machine Applications					
MEC 161	MFG Processes					
ACA 115	Success & Study Skills					

Second Year

Advanced Technology Diploma

CCP Diploma Pathway (37 Credit Hours combined with certificate)

CIS 110Intro to ComputersDFT 154Intro to Solid ModelingENG 111Writing and InquiryISC 121Environmental Health & SafetyISC 132QualityMAT 121Algebra/Trigonometry IMEC 180Engineering Materials



Full-Time College Year

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Mechanical Engineering Technology -Mechatronics Track Associates Degree

Mechanical Engineering Technology -Mechanical Drafting Track Associates Degree

Additional Credentials and Activities

"Portable" Industry Credentials OSHA Card FANUC Robotics Certification Tooling-U Certifications ACT Work Keys NCRC Career Exploration Career Research Guest Speakers Workplace Tours Career-Related Projects Community Service Internship options in final year

Academic Awards

- Phlebotomy Certificate
- Health Unit Coordinator (HUC) Certificate
- Practical Nursing (LPN) Diploma
- Medical Assisting (MA) AAS Degree

Industry Credentials

- CPR
- Nursing Assistant (CNA or HHA)
- Trained Medication Aid (TMA)

	SEMESTER 1		SEMESTER 2		
YEAR	COURSES		COURSES		
_	Health Care Core Found	ations (Nursing, MA, & HUC Prereq)	Medical Terminology 🕷	ursing, MA, Phieb, & HUC Prerequisite)	
SUMMER		HEALTH CARE EXPL	ORATION WITH CPR		
_					
	SEMESTER 1		SEMESTER 2		
•	COURSES		COURSES		
YEAR 2	Anatomy (Nursing & MA Prerequis	fte)	Lifespan Psychology (M	A & Nursing Prerequisite)	
	English Composition (Nur	sing & MA Prerequisite)	Interpersonal Commun	ICATION (MA & Phileb Prerequisite)	
			Intro to Health Unit Coo	roinating (HUC Prerequisite)	
		APPLY TO DI	ESIRED PATH		
SUMMER	NUDRINO			HEALTH UNIT	
	NUKSING	MEDICAL ASSISTING	PHLEBOTOMY	COORDINATOR	
		0.1-1-11			
	Nursing Assistant (CNA & HHA)	Urientation			
		1			
	CNA CAREER READY				
•	SEMESTER 1		SEMESTER 2		
YEAR 3	COURSES		COURSES		
	Foundation of Nursing		Clinical Foundations - P	art 2	
	Nursing Interventions		Medication Administration		
	Clinical Foundations - Pa	rt 1	Pharmacology for Nursi	ng	
	Madiaal Office December		Flasters's Haskk Deser	1.	
	Computer Software for C	S	Electronic Health Records		
MAD .	Computer Contware for C	onege			
G 1 83	Introduction to Phleboto	mv	Phlehotomy Skills		
a, 19, 2			Phlebotomy Internship	(3 weeks/100 hrs)	
ODFE	Medical Office Procedure	lS	Electronic Health Record	ds	
ASTW			Health Unit Coordinator	Procedures	
-					
Nursing students will c	omplete one additional semester of classes	at SCC to earn their Diploma.		+	
Medical Assisting stud	ents will complete one additional year of cla	isses at SCC to earn their AAS degree.	TMA, HUC & PHI	E CAREER READY	







Allina Health 🔆



Program Benefits



• Time & Cost Savings

Students may earn up to 36 college credits while in high school, which saves time & tuition. Can earn a degree in 1-2 semesters post-high school

• Early Entry into Workforce

Students who complete Health Unit Coordinator, Phlebotomy, or CNA (with or without TMA) may enter the workforce

• Year 1 Data

- 56 total students enrolled in Year 1 courses
- 22% are Students of Color
- 89% earned an "A" or "B" in the Year 1 Semester 1 course



ER IT - Computer Support Specialist

Previous Credit

There are many opportunities, both in high school and through previous college, work, and/or military experience, to earn credit at Gateway.

GATEWAY TECHNICAL COLLEGE

For more information about earning credit in high school and opportunities for credit for prior learning, please see reverse side.

Technical Diploma

IT-Computer Support Technician (32 Credits)

Potential Jobs: - Personal Computer Technician - Help Desk Tier 1

Median Income*: \$18.63 per hour \$38,750 annually *Based on locally reported wage data.

Students who complete this program are prepared to earn industry-recognized certifications, including: - CompTIA A+

Associate Degree

IT-Computer Support Specialist (62 Credits)

Potential Jobs:

- Hardware Analyst - Computer Support Specialist
- Help Desk Tier 2
- Computer User Support Analyst

Median Income*: \$22.00 per hour \$45,760 annually *Based on locally reported wage data.

Students who complete this program are prepared to earn industry-recognized certifications, including: - ITIL - IT Infrastructure Library - ITSM - IT Service Management

Career

Students are prepared to enter their career field at any point along the pathway and advance as they complete higher-level credentials.

Bachelor's Degree

Transfer up to 62 credits via existing articulation agreements with colleges such as:

-Cardinal Stritch University -Carthage College -Herzing University -Lakeland University -Ottawa University -UW-Parkside (A to B agreement) -UW-Stout



Salary and employment data courtesy of EMSI.

gtc.edu/computer-support-specialist



Have questions or need assistance with getting started?

Gateway's New Student Specialists are ready to help. Call 1-800-247-7122 or stop into any Student Services Center to make an appointment or register for an upcoming new student event.

Elkhorn Campus

400 County Road H Elkhorn, WI 53121

Kenosha Campus

3520 30th Ave. Kenosha, WI 53144

Racine Campus

1001 S. Main St. Racine, WI 53403

IT - Computer Support Specialist

Credit for Prior Learning

Experience Pays! You've been there You've done that . . . Let us give you credit for it!

Gateway Technical College recognizes you have knowledge and skills gained through previous educational, life and work experiences. We want to help you receive credit for those experiencessaving you time, money and helping you enter your new career more quickly.

There are various ways to earn credit including Degree Course Substitution, Prior Learning Assessment and Transfer Credit, Credit for Prior Learning opportunities for this program include:

107-011 IT in Business

107-193 IT Essentials

154-119 System Software Support

154-113 IT Apps Server & Support

Earn College Credit in **High School**

Get an edge by earning college credit before you graduate and save money at the same time.

Get started at

Gateway today!

Visit gtc.edu to request information

or to apply.

There are many ways to earn college credit while you're still in high school, including transcripted and advanced standing credit, Start College Now and youth apprenticeship. Suggested courses to take in high school for this program include:

107-011 IT in Business

107-193 IT Essentials

150-145 IT Scripting

PATHWAYS TO CREDENTIALS

Perspectives from the Cohort



- <u>Multiple Audiences Entry and Exit Points</u>
 - Pathway Map



OCC CAREER PATHWAY ENVIRONMENTAL SUSTAINABILITY & INDUSTRIAL HYGIENE

These OCC programs are designed to prepare students for careers in the field of environmental science, which is concerned with sustainability of environmental resources, monitoring humanity's impact on the Earth, and solving environmental problems. Students graduating from these programs might work in environmental education centers, public relations firms, testing labs, environmental research organizations, acotourism, food/beverage manufacturing, waste management companies, government agencies and consulting.

PROGRAM PRE-	Certificate		Associate Degree	Careers
REQUISITES: Students who have completed HS Chemistry and Algebra II and who do not need any remedial mathematics will be eligible to take CHEM 181 with no restrictions.	Industrial Hygiene/Hazardous Materials Management Certificate (22 Credits) 5 academic courses & short-term courses Potential Jobs: ~ Occupational Health and Safety Technician, Environmental Field Technician, and Industrial Hygiene Technician	ſ	AAS Technical Studies: Industrial Hygiene/ Haz-Mat Option (60 credits)	Students are prepared to enter their career field at any point along the pathway and advance as they complete higher level credentials (industry, certificate and degree programs). Industrial Hygienist in New Jersey pay ranges from \$70,522 to \$131,420 See <u>https://www.salary.com/tools/salary-</u> calculator/industrial-hygienist/nj?
PRIOR LEARNING CREDIT: There are opportunities both in high school and through previous college, work, military experience and achievement of industry certificates to earn credit at OCC ~ Workers with OSHA cards	Students who complete this program are prepared to earn industry-recognized certifications, including NIOSH 582, OSHA 30 Construction or General Industry, OSHA Hazwhoper 40, Lead Inspector, Risk Assessor, and Asbestos Inspector. Students will also obtain membership as a IHHM Student CHHM member. Sustainability Certificate (17 Credits) 5 academic courses		AS Environmental Studies Industrial Hygiene/ Haz-Mat Option (60 credits)	edu=edlev3&drpt=DR01&rptto=RL03&yrs=0 https://www.bls.gov/ooh/healthcare/occupational-health-and- safety-specialists-and-technicians.htm https://www.salary.com/research/salary/benchmark/industrial- hygienist-salary/nj Bachelor's Degree
 receive credit for some lab components Students can also complete a college exam and performance component Standardized test such as CLEP, DSST, TECEP, AP For additional detail contact Eileen Schilling at eschilling@ocean.edu. 	 Potentail Jobs: Environmental Technician and Sustainability Auditor Students who complete this program are prepared to earn industry-recognized certifications, including LEED Accredited Professional (AP) and GRI Professional Certification. These certifications require additional outside training and an exam. Students will also obtain membership as a IHHM Student CHHM member. 	l	AAS Environmental Studies: Sustainability Option (60 credits)	Transfer up to xx credits via existing articulation agreements with other four-year colleges and universities. Visit https://www.ocean.edu/student-services/start-here-finish- there-transfer-agreements/ for further information on these agreements. Students pursuing the Environmental Studies degree can transfer into majors such as Environmental Studies or Environmental Science. Many colleges offer opportunities for transfer both in and out of state. Students are encouraged to work closely with OCC faculty and Advising Transfer Services. Students planning to transfer to a four-year institution in NJ can explore the "Transfer Programs" feature on NJ Transfer www.njtransfer.org.

Institute of Hazardous Materials Management's (IHMM)'s Student Certified Hazardous Materials Manager (ST/CHMM ®) credential recognizes students who wish to demonstrate their development of knowledge and skills in hazardous materials management while pursuing their undergraduate degree. The National Institute for Occupational Safety and Health (NIOSH) is responsible for conducting research and making recommendations for the prevention of work-related injury and illness. The NIOSH 582 certification ensures students are capable of correctly analyzing PCM air sampling in accordance with NIOSH analytical methods.

NORTH CENTRAL TEXAS COLLEGE

Electrical/Industrial Mechanics Career Pathway

Indusmechanics.nctc.edu

Career Overview	Short-term Certificates	Level 1 Certificates	AAS Degree	Bachelor's Degree
Opportunity exists working as an electrician, in manufacturing or in industrial mechanics. Each step in the pathway can lead to industry certifications and licensing. Student can work in many of these fields while attending classes and working toward additional certifications or a degree.	 Electrical Skills Course Self-paced online Potential starting wage is \$14+ per hour Potential 3 hrs credit toward Electrical or Industrial Mechanics Level 1 Certificate Industry certification through SACA C-201 	 Electrical Certificate 15 credit hours Potential starting wage is \$14+ per hour Educational credit toward electrical journeyman licensing through TDLR Industry certification through NC3 	 AAS Industrial Mechanics 60 credit hours Potential starting income \$18 per hour Educational credit toward electrical journeyman licensing through TDLR OSHA certification Industry certifications through NOCE 	The AAS degree is part of the North Texas Community College Consortium Transfer Collaborative and can lead to BAAS programs at numerous universities. Visit the site below and input the program title and college to check a pathway: <u>NTXCCC</u>
Other Credit	Mechatronics and Industrial Automation Technician Course:	Industrial Mechanics Certificate	NC3	LEGEND OF TERMS SACA Smart Automation Certifications
May be awarded from the following areas: Non-credit training Industry certifications College credit Military service Work experience Technical schools	 Self-paced online Potential starting wage is \$18+ per hour Potential 6 hrs credit toward Electrical or Industrial Mechanics Level 1 Certificate Industry certification through SpaceTEC® and CTS. 	 30 credit hours Includes Electrical certificate Potential starting wage is \$16+ per hour Educational credit toward electrical journeyman licensing through TDLR Industry certifications through NC3 		 CTS Credential Testing Services TDLR Texas Department of Licensing & Regulation NC3 National Coalition of Certification Centers OSHA Occupational Safety & Health Administration. AAS Associate of Applied Science
Study abroadDual Credit	Questions? ACE@nctc.edu	Questions? industech@nctc.edu	Questions? industech@nctc.edu	BAAS Bachelor of Applied Arts & Sciences

Name of Career Pathway

<Program Hyperlink>

Previous Credit	Certificate	Additional Certificate or Diploma	Associate Degree	Bachelors Degree
Use this space to provide information about the opportunities your institution provides for students to earn college credits while in high school, or to earn credit for prior learning such as previous college, work, and/or military experiences.	Use this space to identify certificates within this pathway that stack toward the degree. For each, list: • Name of certificate • # of college credits • Potential job and median income • Aligned industry certification(s)	Use this space to identify additional certificates and/or a diploma that stacks toward the degree. For each, list: • Name of certificate/diploma • # of college credits • Potential job and median income • Aligned industry certification(s)	Use this space to describe the remaining credits in the pathway sequence needed to earn an AS or AAS degree. For the degree, list: • # of college credits • Potential job and median income • Aligned industry certification(s)	<i>Example:</i> Bachelors Degree in at University
Career Provide details or links to external resources for further exploration on career opportunities in this pathway		COPD		
Name of Career Pathway

<Program Hyperlink>

Previous Credit	Certificate	Additional Certificate or Diploma	Associate Degree	Bachelors Degree
Career				
		CORD.org		

Using the Map Template



 Download "Generic Template" from the Workshop Toolbox (PPTX file)

or

• Use paper template at your table

Consider the gaps moving from one credential or institution to the next:

- What needs to be done to address the gap?
- Is it a barrier related to process or policy?
- Who needs to be at the table to discuss the gap?
- What are the opportunities that haven't been mapped yet?

Alternate Mapping Activity for Secondary Partners

Pick a program offered at your high school

How does it align with your postsecondary partner institution?

What is the next step a student can take after the first postsecondary credential in that career field?

Look up the program for the next step what is the name of the program and where is it offered?

Where can you find reliable wage and occupation info?

Action Planning







Supporting Completion Check-up

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Pathways built on stackable credential offer learners accessible options for earning industry-valued credentials on the road to degree completion. Multiple exit points aligned to employment opportunities help students maximize their investment of time and financial resources.

3 Supporting Completion Check-up	Ð	₽	?
Articulation agreements are in place to award credits earned through early college and dual-credit courses.			
Our community/technical college has a policy for awarding credit for prior learning (CPL and/or PLA).			
A list of all CPL/PLA opportunities offered at our college is available (and easily found) on our website.			
Faculty are aware of noncredit training offered at our college related to their program area(s).			
Faculty are aware of industry-recognized certifications related to their academic programs.			
A standard process is used to crosswalk learning outcomes from noncredit courses (offered by our college) and/or industry-recognized certifications to our credit-bearing courses.			
An articulation policy or procedure is in place between noncredit and credit divisions that provides students the opportunity and guidance to avoid duplicative coursework and accelerate their accumulation of credentials.			
Student services such as tutoring, career counseling, access to case management, financial aid, mental health resources, and job placement are available to all learners enrolled at our institution.			
All courses (noncredit and credit) are taught at times that offer flexibility for adult learners who are working and/or have family responsibilities.			
Totals			

Advancing Credentials THROUGH Career Pathways



Five Common Strategies to Support Completion

- 1. Support pathways aligned to local needs
- 2. Award credit for prior learning
- 3. Schedule courses to accommodate working students
- 4. Leverage online instruction
- 5. Make college more affordable



What is Credit for Prior Learning

- Credit for prior learning, or CPL, is a term for various methods that colleges, universities, and other education or training providers use to evaluate learning that has occurred outside of the traditional academic environment.
- It is used to grant college credit, certification, or advanced standing toward further education or training. Other common terms for this process include prior learning assessment (PLA), recognition of prior learning, and recognition of learning.

Types of Credit for Prior Learning

- Registered Apprenticeships
- Industry Certifications and Licensures
- High School to Community College Articulation Agreement
- Military Education and Training
- Standardized Examinations
- Challenge Examinations/Proficiency
- Portfolio Assessment
- Internal Articulation of Non-credit to Credit

Benefits of Credit for Prior Learning

	STUDENT PERSPECTIVE		INSTITUTIONAL PERSPECTIVE		EMPLOYER PERSPECTIVE
•	Accelerates Completion	•	Attracts New Students Increased Enrollments	•	Clarifies Pathway
•	Reduces Duplication of Learning	•	Promotes Retention and Higher Persistence Levels with CPL Students	-	Recognized Industry Credentials
-	Lowers Education Costs	-	Results in More Institutional Credits	•	Reduces Employee Time to Degree
-	Reduces Student Debt	-	Strengthens Employer Partnerships	-	Lowers Investment of Business and Higher ROI
•	Increases Likelihood of Graduation	-	Enhances the Ability to Stay Competitive with Higher Education Institutions		

Source: Credit for Prior Learning Guide: A Practical Guide for Community Colleges

How CPL Helps Students



CPL SAVES STUDENTS TIME AND MONEY

On average, adult degree earners with 12 or more CPL credits saved 9 to 14 months earning it. Adult students who earned CPL saved \$1,500 to \$10,200 in tuition dollars.



MORE ADULTS GRADUATE AND KEY GROUPS BENEFIT

Overall, adults who earn credit for prior learning are 17% more likely to graduate than adults who do not. The CPL completion benefit is 25% for adults at community colleges, 24% for Hispanic adults, 13% for Black adults, and 19% for Pell Grant recipients.



CPL EMPOWERS ADULT STUDENTS BY VALIDATING THEM AS LEARNERS

The CPL process of reflecting on past learning is often a positive experience that improves adult learners' confidence in themselves as learners.

How CPL Helps Colleges



CPL IS A PROVEN TOOL FOR BOOSTING STUDENTS' CHANCES OF COMPLETING A DEGREE

Adult students who earn CPL credits are 17 percent more likely to complete, compared to those without CPL.



STUDENTS WHO EARN CPL CREDITS ARE MORE LIKELY TO ENROLL IN MORE CREDITS

Adult learners who earn CPL end up taking an average of 17 more course credits from their institution compared to students without it.



CPL HAS A POWERFUL INFLUENCE ON A PROSPECTIVE STUDENT'S CHOICE OF COLLEGE

Among students who identify themselves as "likely to enroll," an opportunity to receive credit for prior learning strongly influences their decision about where to attend college.

SOURCES: The PLA Boost Report, WICHE-CAEL, 2020, Klein-Collins & Olson, 2014, Strada Market Impact Report. More resources at CAEL.org

Most common ways to bridge non-credit and credit programs



Responsibility on Student

Credit by Exam Portfolio Demonstration



Responsibility on Institution

Internal Articulation Agreements, Credit Matrices and Equivalency Agreements

Third-Party Industry Credentials (Crosswalks)

Portfolio Review Example

Credit for Prior Learning (CPL)

FACULTY RATING RUBRIC

Use the following or attach your validation of student competencies.

Candidates must demonstrate the equivalency of the course based on meeting 75% of the learning outcomes/competencies. Faculty will indicate if competency is mandatory to receive CPL for this course. Faculty will specify what outcomes are met and what outcomes are not met to clearly illustrate whether or not the stated goal of 75% equivalency has or has not been met. If the candidate met a portion of the learning outcomes, the faculty evaluator may consider other Credit for Prior Learning options or credit awards (for example: partial credit award and/or an independent study).

Student must provide and clearly specify:

- What the source of learning/experience was: the time spent in the activity, description of duties including an indication of the level, and appropriateness of the activity in relation to the targeted course learning outcome/competencies.
- How it relates to and aligns with the targeted course learning outcomes/competencies; how the learning is reflected beyond the experience itself.
- Documentation as evidence of the experience towards the targeted course learning outcomes/competencies, and as an indication of the level and appropriateness of content.

Note: For each course learning outcome an experience must be applied and detailed. Sources of Learning/Experiences:

- Employment, Work Experience, Assignments, Projects
- Military Service Experience, Occupations, Training, Coursework, Evaluations
- Non-credit Courses, Workshops, Webinars, Training, Seminars, Professional Development
- Technical or Professional Certification/Credential
- Technical or Professional Apprenticeship
- Technical or Professional Licensure
- Self-directed Study, Independent Reading, Open Online Courseware, Free Educational Resources (may have earned Digital Badge)
- Volunteer Activities, Community Service, Committees, Groups
- Recreation, Hobbies, Travel
- Awards, Publications
- Other

Course Learning Outcome	Mandatory for CPL	Comments Relative to Equivalency Demonstration	Competency Met? (%)
1			Yes 🚺 No 🚺 ()%
2			Yes 🚺 No 🚺 ()%
3			Yes 🚺 No 🚺 ()%
4			Yes 🚺 No 🚺 ()%
5			Yes 🚺 No 🚺 ()%



Internal Articulation Agreement

A formal written agreement developed by a postsecondary institution that specifies the conditions under which equivalent credit may be awarded for noncredit programs at their institution. Institutions using this approach:

- Assess the learning objectives of their credit programs and compare the learning objectives to the competencies being taught in the noncredit program to ensure alignment
- Develop a credit matrix or course equivalency matrix outlining which noncredit programs are eligible for course credit
- Provide course credit to students who complete the noncredit program and subsequently enroll in the institution's credit program

Industry Certification Example

- Statewide community college system with over 40 locations in Indiana
- Developed a certification crosswalk lists amount of credit awarded for industry-based certifications
- Crosswalk includes over 100 industry-recognized certifications
 - Aligned to credit for students wishing to pursue degree programs
 - Incorporate a stackable credential model that starts with 18-credit hour certificates that stack into 30-hr technical certificates and then into the Associate's degree



Ivy Tech Industry Certification Crosswalk

ADVANCED MANUFACTURING	
Society of Manufacturing Engineers - Certified Manufacturing Technologist	ADMF 115 Materials and Processes for Manufacturing
MSSC (Manufacturing Skills Standards Council) Production Technician Certification	ADMF 101 Key Principles of Advanced Manufacturing AND ADMF 102 Technology in Advanced Manufacturing
MSSC (Manufacturing Skills Standards Council) Safety and Quality Practices & Measurement	ADMF 101 Key Principles of Advanced Manufacturing
MSSC (Manufacturing Skills Standards Council) Manufacturing Processes & Production and Maintenance Awareness	ADMF 102 Technology in Advanced Manufacturing
Fanuc HandlingPro and Programming or NOCTI Certificaiton (FCR-01)	ADMF 116 Automation and Robotics I & ADMF 206 ADMF Automation and Robotics II
Motoman Basic, Accelerated, or Advanced Robotic Programming (Yaskawa)	ADMF 117 Motoman Robotic Programming
NTMC Data Area 1. Melintenence Organitions	
NIMS Duty Area 1 - Maintenance Operations	ADMF 102 Technology in Advanced Manufacturing
NIMS Duty Area 2 - Basic Mechanical Systems	INDT 203 Machine Maintenance and Installation
NIMS Duty Area 3 - Basic Hydraulic Systems	INDT 104 Fluid Power Basics
NIMS Duty Area 4 - Basic Pneumatic Systems	ADMF 222 Mechatronics Pressurized Systems

CPL Promising Practices

Organizational Culture & Faculty Development

- Assess organizational culture & faculty
- Single point of contact at institution or group of champions
- Ongoing professional development for faculty and administrators
- Faculty support of noncredit to credit integration

Student-Friendly Policies

- Application of credits to degree/major requirements
- Number of credits a student can earn/residency requirements
- Credits appear on the student transcript
- No fees charged to students

CPL Promising Practices

Create CPL Crosswalks

- Related industry recognized certifications
- Continuing education/workforce development courses
- Standardized crosswalk tool

Marketing & Awareness

- Create web portal–list all PLA opportunities in one place
- Create program-specific career pathway maps that illustrate CPL options
- Support student success with trained student advisors to guide students

Stackable Credentialing at RCCC

- Mapping coursework to industry recognized professional certifications.
- Update course content where needed to better address student learning outcomes from those professional certifications.
- Formalize a process for paying for/funding certifications.
- Use Credit by Professional Certification in NC to award credit when possible.
- Have multiple entry and exit points for students interested in Information Technology



Test Fest at RCCC

To increase student participation in certification testing, RCCC organized an Annual Event called "Test Fest"

- Faculty Proctor exams for 1 day each year.
- Tests are provided free of charge for students.
- Students can take as many exams as they like in the 8-hour period.
- Credit by Professional Certification is awarded as appropriate.

Test Fest Certification Exams

Rowan-Cabarrus Community College

Course	Exam Type	Exam Name	
CIS-110	IC3	IC3 Exam (Global Standard 5)	
CIS-115	MTA	Introduction to Programming Using Python - Exam 98-381	
CSC-139	MTA	Software Development Fundamentals (VB Version)- Exam 98-361	
CSC-151	MTA	Introduction to Programming Using Java - Exam 98-388	
CSC-153	MTA	Software Development Fundamentals (C# Version) - Exam 98-361	
CTI-120	MTA	Networking Fundamentals - Exam 98-366 AND Security Fundamentals - Exam 98-367	
CTS-130	MOS	Microsoft Office Specialist – Excel Core	
CTS-230	MOS	Microsoft Office Specialist – Excel Expert	
DBA-110	MOS	Microsoft Office Specialist - Access	
DBA-120	MTA	Database Administration Fundamentals - Exam 98-364	
NOS-130	MTA	Windows Operating System Fundamentals- Exam 98-349	
NOS-230	MTA	Windows Server Administration Fundamentals - Exam 98-365	
OST-136	MOS	Microsoft Office Specialist – Word Core	
OST-236	MOS	Microsoft Office Specialist – Word Expert	
WEB-110	MTA	Introduction to Programming Using HTML and CSS - Exam 98-383	

Forms and Artifacts

Suggested Program of Study for Cyber Security

	First Year Fall			
Course Number Description		Professional	Credit Hours	Course Availability
		Certification		
CIS-110	Introduction to Computers	IC3	3.0	FA / SP / SU
CTI-110	Web, Programming & DB Foundations	MTA	3.0	FA / SP / SU
CTI-120	Network & Security Foundations	MTA	3.0	FA / SP / SU
NET-125	Networking Basics		3.0	Fall Only
NET-126	Routing Basics	CCENT	3.0	Fall Only
	Total Credit Hours		15	



Student Name:	ID Number:	

Program Title:

Program Code:

The original professional certification and one photocopy must be submitted to the program chair. **The program chair will view the original certification,** and provide a high quality photocopy. The original certification is **not** attached to this form and should be returned to the student.

Course Credit Requested

	Course Name	Course Number	Professional Certification	Certification Authority	Date of Certification
h					



Refocus Our Perspective

Industry Informed
Viewed through Student Lens

Action Planning



Share and Discuss



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