

# Trade and Industry

## Cluster: Architecture & Construction

### Pathway: Construction

Program of Study	Level One	Level Two	Level Three
Construction Technology	Construction Fundamentals 494480	Carpentry 494460	<ol style="list-style-type: none"> <li>1. Construction Lab 490040</li> <li>2. Cabinetry 494470</li> <li>3. Electrical 494500</li> <li>4. HVACR 1 495100</li> <li>5. Mechanical, Plumbing &amp; Electrical Systems 493840</li> <li>6. Plumbing 494510</li> <li>7. Furniture Manufacturing I 494850</li> <li>8. Furniture Manufacturing II 494870</li> <li>9. Furniture Manufacturing Lab 490060</li> <li>10. Youth Apprenticeship – T&amp;I: Architecture and Construction 490340</li> <li>11. Career Practicum: T&amp;I AC (490730)</li> </ol>
	NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. Fundamentals of Construction</li> <li>2. Basic Principles of Construction (Certificate)</li> <li>3. Plumbing Year 1</li> <li>4. Building Construction Occupations</li> <li>5. Electrical Occupations</li> <li>6. Building Construction Technology- Basic</li> </ol> NOCTI- Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	NOCTI- Job Ready <ol style="list-style-type: none"> <li>1. Carpentry</li> <li>2. Carpentry- Basic (Certificate)</li> <li>3. House Wiring-Basic (Certificate)</li> <li>4. Plumbing Year 2</li> <li>5. S/P2 Human Resources Certification</li> <li>6. Plumbing Basic (Certificate)</li> </ol> OSHA 10 or OSHA 30 OSHA Employability Skills NCCER Core	NOCTI -Job Ready <ol style="list-style-type: none"> <li>1. Architectural Drafting</li> <li>2. Cabinetmaking</li> <li>3. CAD</li> <li>4. Construction Masonry- Block</li> <li>5. Construction-Masonry – Brick</li> <li>6. Plumbing Year 3 (Certificate)</li> <li>7. Plumbing Advanced (Certificate)</li> </ol> OSHA Employability Interview Skills S/P2 Soft Skills Certification S/P2 Construction Certification OSHA 10 or OSHA 30 NCCER Construction Technology NCCER Electrical AC/DC Electrical

**Cluster: Architecture & Construction**

**Pathway: Construction**

Program of Study	Level One	Level Two	Level Three
Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)	HVACR I 495100	HVACR II 495110	<ol style="list-style-type: none"> <li>1. HVACR Lab 490070</li> <li>2. Cabinetry 494470</li> <li>3. Carpentry 494460</li> <li>4. Electrical 494500</li> <li>5. Mechanical, Plumbing &amp; Electrical Systems 493840</li> <li>6. Plumbing 494510</li> <li>7. Youth Apprenticeship – T&amp;I: Architecture and Construction 490340</li> <li>8. Career Practicum: T&amp;I AC (490730)</li> </ol>
	NOCTI- Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol> NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. Fundamentals of Construction</li> <li>2. Basic Principles of Construction (Certificate)</li> <li>3. Plumbing Year 1</li> <li>4. Building Construction Occupations</li> <li>5. Electrical Occupations</li> <li>6. Building Construction Technology- Basic</li> <li>7. HVAC-Basic (Certificate)</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills NCCER Core NOCTI- Job Ready <ol style="list-style-type: none"> <li>1. Carpentry</li> <li>2. Carpentry- Basic (Certificate)</li> <li>3. House Wiring-Basic (Certificate)</li> <li>4. Plumbing Year 2</li> <li>5. S/P2 Human Resources Certification</li> <li>6. Plumbing Basic (Certificate)</li> <li>7. HVACR-Installation and Start-UP</li> <li>8. Electrical</li> </ol>	NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. Architectural Drafting</li> <li>2. Cabinetmaking</li> <li>3. CAD</li> <li>4. Plumbing Year 3 (Certificate)</li> <li>5. Plumbing Advanced (Certificate)</li> <li>6. HVAC Service Tech-Advanced (Certificate)</li> <li>7. House Wiring – Advanced (Certificate)</li> </ol> ShopBot Certification S/P2 Construction Certification NCCER Construction Technology NCCER Electrical

**Cluster: Arts, A/V Technology & Communications**

**Pathway: A/V Technology & Film**

Program of Study	Level One	Level Two	Level Three
A/V Tech and Film	Fundamentals of Audio/Video Tech & Film 493640	Intermediate Audio/Video Tech & Film 493650	<ol style="list-style-type: none"> <li>1. Advanced Audio/Video Tech &amp; Film 493660</li> <li>2. Audio/Video Tech and Film Lab 493670</li> <li>3. Youth Apprenticeship – T&amp;I: Arts, Audio/Video Technology and Communications 490350</li> <li>4. Career Practicum: T&amp;I AVTC (490740)</li> </ol>
	<p>NOCTI-Employability Skills</p> <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Career Skills (Middle School)</li> <li>3. Employability Skills</li> <li>4. Workplace Readiness</li> <li>5. Workplace Success Skills (Middle School) Adobe Certified Associate:</li> </ol> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Media Communications Flash</li> <li>4. Premiere Pro</li> <li>5. Rich Media Communication- Flash</li> <li>6. Photoshop</li> <li>7. Photoshop (CS3)</li> <li>8. Photoshop (CS4)</li> <li>9. Dreamweaver</li> </ol> <p>Adobe Certified Expert</p> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Photoshop</li> <li>4. Premiere Pro</li> </ol>	<p>NOCTI-Job Ready</p> <ol style="list-style-type: none"> <li>1. Audio-Video Communications</li> <li>2. Graphic Production Technology</li> <li>3. Television Production</li> <li>4. Visual Communications and Interactive Media Design</li> </ol>	

**Cluster: Arts, A/V Technology & Communications**

**Pathway: Journalism & Broadcasting**

Program of Study	Level One	Level Two	Level Three
Radio Broadcasting	Fundamentals of Radio 493380	Intermediate Radio 493390	<ol style="list-style-type: none"> <li>1. Advanced Radio 493400</li> <li>2. Radio Lab 493410</li> <li>3. Youth Apprenticeship – T&amp;I: Arts, Audio/Video Technology and Communications 490350</li> <li>4. Career Practicum: T&amp;I AVTC (490740)</li> </ol>
	<p>NOCTI-Employability Skills</p> <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Career Skills (Middle School)</li> <li>3. Employability Skills</li> <li>4. Workplace Readiness</li> <li>5. Workplace Success Skills (Middle School)</li> </ol> <p>Adobe Certified Associate</p> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Media Communication – Flash</li> <li>4. Premiere Pro</li> <li>5. Rich Media Communication-Flash</li> <li>6. Photoshop</li> <li>7. Photoshop (CS3)</li> <li>8. Photoshop (CS4)</li> <li>9. Dreamweaver</li> </ol> <p>Adobe Certified Expert</p> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Photoshop</li> <li>4. Premiere Pro</li> </ol>	<p>NOCTI-Job Ready</p> <ol style="list-style-type: none"> <li>1. Audio-Video Communications</li> <li>2. Graphic Production Technology</li> <li>3. Television Production Visual Communications and Interactive Media Design</li> </ol>	

**Cluster: Arts, A/V Technology & Communications**  
**Pathway: Journalism & Broadcasting**

Program of Study	Level One	Level Two	Level Three
Television Production	Fundamentals of Television 493420	Intermediate Television 493430	<ol style="list-style-type: none"> <li>1. Advanced Television 493440</li> <li>2. Television Lab 493450</li> <li>3. Youth Apprenticeship – T&amp;I: Arts, Audio/Video Technology and Communications 490350</li> <li>4. Career Practicum: T&amp;I AVTC (490740)</li> </ol>
	<p>NOCTI-Employability Skills</p> <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Career Skills (Middle School)</li> <li>3. Employability Skills</li> <li>4. Workplace Readiness</li> <li>5. Workplace Success Skills (Middle School)</li> </ol> <p>Adobe Certified Associate</p> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Media Communication – Flash</li> <li>4. Premiere Pro</li> <li>5. Rich Media Communication- Flash</li> <li>6. Photoshop</li> <li>7. Photoshop (CS3)</li> <li>8. Photoshop (CS4)</li> <li>9. Dreamweaver</li> </ol> <p>Adobe Certified Expert</p> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Photoshop</li> <li>4. Premiere Pro</li> </ol>	<p>NOCTI-Job Ready</p> <ol style="list-style-type: none"> <li>1. Audio-Video Communications</li> <li>2. Graphic Production Technology</li> <li>3. Television Production</li> <li>4. Visual Communications and Interactive Media Design</li> </ol>	

**Cluster: Arts, A/V Technology & Communications**

**Pathway: Visual Arts**

Program of Study	Level One	Level Two	Level Three
Advertising and Graphic Design	Fundamentals of Advertising and Graphic Design 494150	Intermediate Advertising and Graphic Design 494170	<ol style="list-style-type: none"> <li>1. Advanced Advertising and Graphic Design 494130</li> <li>2. Advertising and Graphic Design Lab 494160</li> <li>3. Youth Apprenticeship – T&amp;I: Arts, Audio/Video Technology and Communications 490350</li> <li>4. Career Practicum: T&amp;I AVTC (490740)</li> </ol>
	<p>NOCTI-Employability Skills</p> <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Career Skills (Middle School)</li> <li>3. Employability Skills</li> <li>4. Workplace Readiness</li> <li>5. Workplace Success Skills (Middle School)</li> </ol> <p>Adobe Certified Associate</p> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Media Communication – Flash</li> <li>4. Premiere Pro</li> <li>5. Rich Media Communication-Flash</li> <li>6. Photoshop</li> <li>7. Photoshop (CS3)</li> <li>8. Photoshop (CS4)</li> <li>9. Dreamweaver</li> </ol> <p>Adobe Certified Expert</p> <ol style="list-style-type: none"> <li>10. Illustrator</li> <li>11. InDesign</li> <li>12. Photoshop</li> <li>13. Premiere Pro</li> </ol>	<p>NOCTI-Job Ready</p> <ol style="list-style-type: none"> <li>1. Audio-Video Communications</li> <li>2. Graphic Production Technology</li> <li>3. Television Production</li> <li>4. Visual Communications and Interactive Media Design</li> </ol>	

**Cluster: Arts, A/V Technology & Communications**

**Pathway: Visual Arts**

Program of Study	Level One	Level Two	Level Three
Commercial Photography	Digital Photography I 494350	Digital Photography II 494370	<ol style="list-style-type: none"> <li>1. Digital Photography III 494380</li> <li>2. Digital Photography Lab 494360</li> <li>3. Youth Apprenticeship – T&amp;I: Arts, Audio/Video Technology and Communications 490350</li> <li>4. Career Practicum: T&amp;I AVTC (490740)</li> </ol>
	<p>NOCTI-Employability Skills</p> <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Career Skills (Middle School)</li> <li>3. Employability Skills</li> <li>4. Workplace Readiness</li> <li>5. Workplace Success Skills (Middle School)</li> </ol> <p>Adobe Certified Associate</p> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Media Communication – Flash</li> <li>4. Premiere Pro</li> <li>5. Rich Media Communication- Flash</li> <li>6. Photoshop</li> <li>7. Photoshop (CS3)</li> <li>8. Photoshop (CS4)</li> <li>9. Dreamweaver</li> </ol> <p>Adobe Certified Expert</p> <ol style="list-style-type: none"> <li>1. Illustrator</li> <li>2. InDesign</li> <li>3. Photoshop</li> <li>4. Premiere Pro</li> </ol>	<p>NOCTI-Job Ready</p> <ol style="list-style-type: none"> <li>1. Audio-Video Communications</li> <li>2. Graphic Production Technology</li> <li>3. Television Production</li> <li>4. Visual Communications and Interactive Media Design</li> </ol>	

**Cluster: Government & Public  
Administration Pathway: National Security**

Program of Study	Level One	Level Two	Level Three
Air Force JROTC	Air Force JROTC I 495760	Air Force JROTC II 495770	Air Force JROTC III 495780 Air Force JROTC IV 495880
	-or-		
	JROTC Health (480950) JROTC Physical Education (485950)		
<b>Students can take JROTC Health and Physical Education at any level</b>			

**Cluster: Government & Public  
Administration Pathway: National Security**

Program of Study	Level One	Level Two	Level Three
Army JROTC	Army JROTC I 495790	Army JROTC II 495800	Army JROTC III 495810 Army JROTC IV 495890
	-or-		
	JROTC Health 480950 JROTC Physical Education 485950		
<b>Students can take JROTC Health and Physical Education at any level</b>			

**Cluster: Government & Public  
Administration Pathway: National Security**

Program of Study	Level One	Level Two	Level Three
Marine JROTC	Marine JROTC I 495820	Marine JROTC II 495830	Marine JROTC III 495840 Marine JROTC IV 495900
	-or-		
	JROTC Health 480950 JROTC Physical Education 485950		
<b>Students can take JROTC Health and Physical Education at any level</b>			

**Cluster: Government & Public  
Administration Pathway: National Security**

Program of Study	Level One	Level Two	Level Three
Navy JROTC	Navy JROTC I 495850	Navy JROTC II 495860	Navy JROTC III 495870 Navy JROTC IV 495910
	-or-		
	JROTC Health 480950 JROTC Physical Education 485950		
<b>Students can take JROTC Health and Physical Education at any level</b>			



**Cluster: Health Science**

**Pathway: Therapeutic Services**

Program of Study	Level One	Level Two	Level Three
Medical Professions	Foundations of Health Care 495350	Anatomy/Physiology 424030	<ol style="list-style-type: none"> <li>1. Abnormal Psychology 495370</li> <li>2. First Responder 494140</li> <li>3. Human Behavior &amp; Disorders 495320</li> <li>4. Introduction to Medical Professions Expanded 495380</li> <li>5. Medical Lab (1.0) 490520</li> <li>6. Medical Lab (.5) 490510</li> <li>7. Medical Math 495240</li> <li>8. Medical Procedures Expanded 495390</li> <li>9. Medical Terminology 495360</li> <li>10. Pathology 495290</li> <li>11. Pharmacy Technology Fundamentals 495280</li> <li>12. Certified Nursing Assistant (CNA) (.5) 490030</li> <li>13. Certified Nursing Assistant (CNA) (1) 490500</li> <li>14. Youth Apprenticeship – T&amp;I: Health Science 490370</li> <li>15. Career Practicum: T&amp;I HS (490760)</li> </ol>

	<p>NOCTI-Employability Skills</p> <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	<p>NOCTI-Job Ready</p> <ol style="list-style-type: none"> <li>1. Biotechnology</li> <li>2. Health Assisting</li> <li>3. Dental Assisting</li> <li>4. Home Health Aide</li> <li>5. Medical Assisting</li> <li>6. Nursing Assisting</li> <li>7. Practical Nursing</li> <li>8. Basic Life Saver</li> </ol> <p>CNA Certified Nursing Assistant Emergency Telecommunications Emergency Medical Technician FEMA-CERT First Aid First Aid/CPR/AED First Aid/CPR/AED Instructor Infant &amp; Child CPR HIPAA Pharmacy Technician</p>
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**Cluster: Health Science**

**Pathway: Therapeutic Services**

Program of Study	Level One	Level Two	Level Three
Sports Medicine	Foundations of Sports Medicine 494050	Anatomy/Physiology 424030	<ol style="list-style-type: none"> <li>1. Sports Medicine Injury Assessment 494070</li> <li>2. First Responder 494140</li> <li>3. Human Behavior &amp; Disorders 495320</li> <li>4. Introduction Medical Professions Expanded 495380</li> <li>5. Medical Math 495240</li> <li>6. Medical Procedures Expanded 495390</li> <li>7. Medical Terminology 495360</li> <li>8. Medical Lab (1.0) 490520</li> <li>9. Medical Lab (.5) 490510</li> <li>10. Pathology 495290</li> <li>11. Certified Nursing Assistant (.5) 490030</li> <li>12. Certified Nursing Assistant (1) 490500</li> <li>13. Pharmacy Technology Fundamentals 495280</li> <li>14. Youth Apprenticeship – T&amp;I: Health Science 490370</li> <li>15. Career Practicum: T&amp;I HS (490760)</li> </ol>

	<p>NOCTI-Employability Skills</p> <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	<p>NOCTI-Job Ready</p> <ol style="list-style-type: none"> <li>1. Biotechnology</li> <li>2. Health Assisting</li> <li>3. Dental Assisting</li> <li>4. Home Health Aide</li> <li>5. Medical Assisting</li> <li>6. Nursing Assisting</li> <li>7. Practical Nursing</li> <li>8. Basic Life Saver Emergency</li> </ol> <p>Medical Technician First Aid First Aid/CPR/AED First Aid/CPR/AED Instructor Infant &amp; Child CPR HIPAA</p>
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**Cluster: Health Science**

**Pathway: Therapeutic Services**

Program of Study	Level One	Level Two	Level Three
Emergency Preparedness	Emergency Preparedness I 490050	Emergency Preparedness II 490420	<ol style="list-style-type: none"> <li>Emergency Preparedness Lab (.5) 490530</li> <li>Emergency Preparedness Lab (1) 490540</li> <li>Youth Apprenticeship – T&amp;I: HS 490370</li> <li>Career Practicum: T&amp;I HS (490760)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>21<sup>st</sup> Century Skills for Workforce Success</li> <li>Employability Skills</li> <li>Workplace Readiness</li> </ol>		NOCTI-Job Ready <ol style="list-style-type: none"> <li>Firefighting</li> <li>Medical Assisting</li> </ol> Emergency Telecommunications Emergency Medical Technician FEMA-CERT First Aid First Aid/CPR/AED First Aid/CPR/AED Instructor

**Cluster: Law, Public Safety, Corrections & Security**

**Pathway: Law Enforcement Services**

Program of Study	Level One	Level Two	Level Three
Criminal Justice	Introduction to Criminal Justice 494620	Foundations of Law Enforcement 494630	<ol style="list-style-type: none"> <li>Crime Scene Investigation 494600</li> <li>Criminal Law 494610</li> <li>First Responder 494140</li> <li>Youth Apprenticeship- T&amp;I: Law, Public Safety, Corrections and Security 490380</li> <li>Youth Apprenticeship- T&amp;I : Government / Public Administration 490360</li> <li>Career Practicum: T&amp;I LPSCS (490770)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>21<sup>st</sup> Century Skills for Workforce Success</li> <li>Employability Skills</li> <li>Workplace Readiness</li> </ol>		NOCTI- Job Ready <ol style="list-style-type: none"> <li>Criminal Justice</li> <li>Protective Services</li> </ol>

**Cluster: Manufacturing**

**Pathway: Maintenance, Installation, and Repair**

Program of Study	Level One	Level Two	Level Three
Industrial Equipment Technologies	Industrial Technologies I 495150	Industrial Technologies II 495170	<ol style="list-style-type: none"> <li>1. Industrial Technologies Lab 495160</li> <li>2. Electronics I 494800</li> <li>3. Electronics II 494820</li> <li>4. Electronics Lab 494810</li> <li>5. Machine Tool I 495200</li> <li>6. Machine Tool II 495220</li> <li>7. Machine Tool Lab 495210</li> <li>8. Youth Apprenticeship – T&amp;I: Manufacturing 490450</li> <li>9. Career Practicum: T&amp;I MIRP (490780)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation  NOCTI-Certificate <ol style="list-style-type: none"> <li>1. Additive Manufacturing Fundamentals</li> </ol>	NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. CAD-Cam</li> <li>2. Manufacturing Technology</li> <li>3. Precision Machining</li> <li>4. Welding</li> </ol> NOCTI-Certificate <ol style="list-style-type: none"> <li>5. Maintenance Awareness</li> <li>6. Manufacturing Processes and Production</li> <li>7. Quality Practices and Measurement</li> <li>8. Safety</li> </ol> Autodesk Certified User- Inventor Autodesk Certified User- Revit  Immerse2learn <ol style="list-style-type: none"> <li>1. 3-Axis CNC Milling Machine Programming</li> <li>2. 3-Axis CNC Milling Machine Setup (Classic Control)</li> <li>3. 3-Axis CNC Milling Machine Setup (GUI Control)</li> <li>4. Blueprint Reading</li> <li>5. CNC Lathe Programming</li> <li>6. CNC Lathe Setup (Classic Control)</li> <li>7. Safety for Machining</li> </ol>

**Cluster: Manufacturing**

**Pathway: Maintenance, Installation, and Repair**

Program of Study	Level One	Level Two	Level Three
Major Appliance Technology	Major Appliance Technology I 495250	Major Appliance Technology II 495270	<ol style="list-style-type: none"> <li>1. Major Appliance Technology Lab 490080</li> <li>2. Youth Apprenticeship – T&amp;I: Manufacturing 490450</li> <li>3. Career Practicum: T&amp;I MIRP (490780)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation	NOCTI-Certificate <ol style="list-style-type: none"> <li>1. Maintenance Awareness</li> <li>2. Manufacturing Processes and Production</li> <li>3. Quality Practices and Measurement</li> <li>4. Safety</li> </ol> Autodesk Certified User- Inventor Autodesk Certified User- Revit

**Cluster: Manufacturing**

**Pathway: Manufacturing Production**

Program of Study	Level One	Level Two	Level Three
Electronics	Electronics I 494800	Electronics II 494820	<ol style="list-style-type: none"> <li>1. Electronics Lab 490080</li> <li>2. Youth Apprenticeship – T&amp;I: Manufacturing 490450</li> <li>3. Career Practicum: T&amp;I MIRP (490780)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 Lock Out/Tag Out: Energy Isolation	NOCTI-Certificate <ol style="list-style-type: none"> <li>1. Maintenance Awareness</li> <li>2. Manufacturing Processes and Production</li> <li>3. Quality Practices and Measurement Safety</li> </ol> Autodesk Certified User- Inventor Autodesk Certified User- Revit +

**Cluster: Manufacturing**

**Pathway: Manufacturing Production**

Program of Study	Level One	Level Two	Level Three
Advanced Manufacturing	Introduction to Manufacturing 494940	Design for Manufacturing 494950	<ol style="list-style-type: none"> <li>1. Manufacturing Production Processes 494960</li> <li>2. Machine Power and Equipment Systems 494970</li> <li>3. Youth Apprenticeship – T&amp;I: Manufacturing 490450</li> <li>4. Career Practicum: T&amp;I MFT (490780)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation  NOCTI-Certificate <ol style="list-style-type: none"> <li>1. Additive Manufacturing Fundamentals</li> </ol>	NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. CAD-Cam</li> <li>2. Manufacturing Technology</li> <li>3. Precision Machining</li> <li>4. Welding</li> </ol> NOCTI-Certificate <ol style="list-style-type: none"> <li>5. Maintenance Awareness</li> <li>6. Manufacturing Processes and Production</li> <li>7. Quality Practices and Measurement Safety</li> </ol> Autodesk Certified User- Inventor Autodesk Certified User- Revit Immerse2learn <ol style="list-style-type: none"> <li>1. 3-Axis CNC Milling Machine Programming</li> <li>2. 3-Axis CNC Milling Machine Setup (Classic Control)</li> <li>3. 3-Axis CNC Milling Machine Setup (GUI Control)</li> <li>4. Blueprint Reading</li> <li>5. CNC Lathe Programming</li> <li>6. CNC Lathe Setup (Classic Control)</li> <li>7. Safety for Machining</li> </ol>

**Cluster: Manufacturing**

**Pathway: Manufacturing Production**

Program of Study	Level One	Level Two	Level Three
Precision Machine Manufacturing	Machine Tool I 495200	Machine Tool II 495220	<ol style="list-style-type: none"> <li>1. Machine Tool Lab 495210</li> <li>2. Youth Apprenticeship – T&amp;I: Manufacturing 490450</li> <li>3. Career Practicum: T&amp;I MFT (490780)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation NOCTI-Certificate <ol style="list-style-type: none"> <li>1. Additive Manufacturing Fundamentals</li> </ol>	NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. CAD-Cam</li> <li>2. Manufacturing Technology</li> <li>3. Precision Machining Welding</li> </ol> NOCTI-Certificate <ol style="list-style-type: none"> <li>1. Maintenance Awareness</li> <li>2. Manufacturing Processes and Production</li> <li>3. Quality Practices and Measurement Safety</li> </ol> Autodesk Certified User- Inventor Autodesk Certified User- Revit Immerse2learn <ol style="list-style-type: none"> <li>1. 3-Axis CNC Milling Machine Programming</li> <li>2. 3-Axis CNC Milling Machine Setup (Classic Control)</li> <li>3. 3-Axis CNC Milling Machine Setup (GUI Control)</li> <li>4. Blueprint Reading</li> <li>5. CNC Lathe Programming</li> <li>6. CNC Lathe Setup (Classic Control)</li> <li>7. Safety for Machining</li> </ol>

**Cluster: Manufacturing Pathway:**

**Manufacturing Production**

Program of Study	Level One	Level Two	Level Three
Welding	Metal Fabrication 495570	Shielded Metal Arc Welding 495580	<ol style="list-style-type: none"> <li>1. Gas Metal Arc Welding 495550</li> <li>2. Gas Tungsten Arc Welding 495560</li> <li>3. Advanced Shielded Metal Arc Welding 495540</li> <li>4. Welding Lab 490190</li> <li>5. Youth Apprenticeship – T&amp;I: Manufacturing 490450</li> <li>6. Career Practicum: T&amp;I - MFT (490780)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation	NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. CAD-Cam</li> <li>2. Manufacturing Technology</li> <li>3. Precision Machining</li> <li>4. Welding</li> </ol> NOCTI-Certificate <ol style="list-style-type: none"> <li>5. Maintenance Awareness</li> <li>6. Manufacturing Processes and Production</li> <li>7. Quality Practices and Measurement Safety</li> </ol> Autodesk Certified User- Inventor Autodesk Certified User- Revit AWS: American Welding Society NCCER Welding Mechanical Fabrication Immerse2learn <ol style="list-style-type: none"> <li>1. 3-Axis CNC Milling Machine Programming</li> <li>2. 3-Axis CNC Milling Machine Setup (Classic Control)</li> <li>3. 3-Axis CNC Milling Machine Setup (GUI Control)</li> <li>4. Blueprint Reading</li> <li>5. CNC Lathe Programming</li> <li>6. CNC Lathe Setup (Classic Control)</li> <li>7. Safety for Machining</li> </ol>



**Cluster: Transportation, Distribution and Logistics**

**Pathway: Facility and Mobile Equipment Maintenance**

Program of Study	Level One	Level Two	Level Three
Aviation Technology	Aviation I 494250	Aviation II 494260	<ol style="list-style-type: none"> <li>1. Aviation Lab 490020</li> <li>2. Youth Apprenticeship – T&amp;I: Transportation, Distribution and Logistics 490560</li> <li>3. Career Practicum: T&amp;I TDL (490790)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation	

**Cluster: Transportation, Distribution and Logistics**

**Pathway: Facility and Mobile Equipment Maintenance**

Program of Study	Level One	Level Two	Level Three
Medium/Heavy Truck Technology	Medium/Heavy Brake/Drive Train 494650	Medium/Heavy Electrical Systems/HVAC 494660	<ol style="list-style-type: none"> <li>1. Medium/Heavy Steering &amp; Suspension/Hydraulics 494230</li> <li>2. Medium/Heavy Diesel Engines/CAB 494240</li> <li>3. Medium/Heavy Truck Lab 490090</li> <li>4. Youth Apprenticeship – T&amp;I: Transportation, Distribution and Logistics 490560</li> <li>5. Career Practicum: T&amp;I TDL (490790)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills	NOCTI- Job Ready <ol style="list-style-type: none"> <li>1. Diesel Technology</li> <li>2. Heavy Equipment Maintenance &amp; Repair</li> </ol>

**Cluster: Transportation, Distribution and Logistics**

**Pathway: Facility and Mobile Equipment Maintenance**

Program of Study	Level One	Level Two	Level Three
Power Equipment Technology	Power Equipment Technology I 495400	Power Equipment Technology II 495420	<ol style="list-style-type: none"> <li>Power Equipment Technology Lab 490100</li> <li>Youth Apprenticeship – T&amp;I: Transportation, Distribution and Logistics 490560</li> <li>Career Practicum: T&amp;I TDL (490790)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>21<sup>st</sup> Century Skills for Workforce Success</li> <li>Employability Skills</li> <li>Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation	NOCTI-Job Ready <ol style="list-style-type: none"> <li>Small Engine Technology</li> </ol> iCEV: EETC Principles of Small Engine Technology

**Cluster: Transportation, Distribution and Logistics**

**Pathway: Facility and Mobile Equipment Maintenance**

Program of Study	Level One	Level Two	Level Three
Automotive Collision Repair Technology	Non-Structural Analysis/Repair 494300	Painting & Refinishing 494310	<ol style="list-style-type: none"> <li>Damage Analysis, Estimating and Customer Service 494220</li> <li>Structural Analysis/Repair 494320</li> <li>Automotive Collision Lab 490000</li> <li>Youth Apprenticeship – T&amp;I: Transportation, Distribution and Logistics 490560</li> <li>Career Practicum: T&amp;I TDL (490790)</li> </ol>
	NOCTI-Employability Skills <ol style="list-style-type: none"> <li>21<sup>st</sup> Century Skills for Workforce Success</li> <li>Employability Skills</li> <li>Workplace Readiness</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation	NOCTI- Job Ready <ol style="list-style-type: none"> <li>Collision Repair</li> <li>Collision Repair &amp; Refinishing Technology</li> </ol> Automotive Service Excellence: <ol style="list-style-type: none"> <li>Collision Repair and Refinish Non-Structural &amp; Damage Repair</li> <li>Collision Repair and Refinish Painting and Refinishing</li> </ol>

**Cluster: Transportation, Distribution and Logistics**

**Pathway: Facility and Mobile Equipment Maintenance**

Program of Study	Level One	Level Two	Level Three
Automotive Service Technology	Brakes/Manual Drive Train 494180	Automotive Electrical Systems/HVAC 494190	<ol style="list-style-type: none"> <li>1. Engine Performance /Engine Repair 494200</li> <li>2. Suspension &amp; Steering/Automatic Transmission 494210</li> <li>3. Automotive Service Lab 490010</li> <li>4. Youth Apprenticeship: T&amp;I: TDL (490560)</li> <li>5. Career Practicum: T&amp;I - TDL (490790)</li> </ol>
NOCTI-Employability Skills <ol style="list-style-type: none"> <li>1. 21<sup>st</sup> Century Skills for Workforce Success</li> <li>2. Employability Skills</li> <li>3. Workplace Readiness</li> </ol> Automotive Service Excellence: <ol style="list-style-type: none"> <li>1. Automobile Brakes</li> <li>2. Automobile Manual Drive Train &amp; Axels</li> </ol>	OSHA 10 or OSHA 30 OSHA Employability Skills Lock Out/Tag Out: Energy Isolation  Automotive Service Excellence: <ol style="list-style-type: none"> <li>1. Automobile Electrical / Electronic Systems</li> <li>2. Automobile Heating &amp; Air Conditioning</li> </ol> NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. Automotive Technician-Core</li> </ol>	NOCTI-Job Ready <ol style="list-style-type: none"> <li>1. Automotive Technician - Advanced</li> </ol> Automotive Service Excellence <ol style="list-style-type: none"> <li>1. Automobile Automatic Transmission</li> <li>2. Automobile Engine Performance</li> <li>3. Automobile Engine Repair</li> <li>4. Automobile G-1</li> <li>5. Automobile Maintenance &amp; Light Repair</li> <li>6. Automobile Suspension and Steering</li> </ol>	

**The following certifications are acceptable across all Trade and Industry Program Areas:**

1. All Career Readiness Certificates
2. All Microsoft Office (MOS) Certification Specialist and Expert
3. iCEV Financial Responsibility: Personal Financial Literacy
4. Digital Literacy
5. Customer Service National Professional Certification