



# 2024—2025

## High School Career and Technical Education (CTE)

*Updated April 2024*



## High School CTE



NIT believes in the importance in offering Career and Technical Education (CTE) opportunities to youth and young adults.

We continuously strive to provide the best hands-on learning available for students, and we are passionate about promoting the trades both as valuable skillsets in their own right and as viable career choices. We're excited to capture the dynamic work NIT does every day in our Palmer Shop and share it with Alaska's future learners.

All courses require a minimum attendance and GPA and may need to be scheduled off of a waitlist.

Please visit [www.nitalaska.com](http://www.nitalaska.com) for more information on upcoming courses.



## Training Center Facilities



### **Northern Industrial Training**

1740 N. Terrilou Ct.  
Palmer, AK 99645  
(907) 357-6400

NIT is headquartered in Palmer, Alaska. This building contains three classrooms equipped with computers and projectors, a student resource lab equipped with five computers, nine restrooms, one conference room, eight offices, and multiple storage areas. Each classroom is equipped with internet, large screen TV monitors, whiteboards, and instructor computer system, and student desks and ergonomic chairs. Additionally, each classroom includes coffee service, microwave ovens and mini-fridges for student use.

NIT's welding and maintenance shop is located next to the main facility. The shop contains sixteen welding booths, three restrooms, one classroom, two offices, two large maintenance bays, and a large fabrication bay. The classroom contains internet, a large TV monitor, computer systems, and student desks and ergonomic chairs.

NIT's training range consists of 80 plus acres of open area and is equipped with three office trailers for use by NIT staff and students, and three portable restroom facilities that are rented and maintained by a third party. Each office trailer contains drinking water, a microwave, and coffee service for student use.

### **Northern Industrial Training — Anchorage Extension**

3201 C Street Ste. 308  
Anchorage, AK 99503

NIT's Anchorage extension is located in a shared office building in downtown Anchorage, Alaska. The building leased by NIT is 2230 square feet and contains one classroom, four offices, one conference room, one kitchen, and one storage area. The classroom is equipped with internet, large TV monitors, projectors, computer systems, student desks and ergonomic chairs.

### **Northern Industrial Training — Fairbanks Extension**

3400 International St Suite A  
Fairbanks, AK  
(907)357-6400

NIT Fairbanks is located in an office building equipped with training classrooms, offices, and a lab area.



## *Our Staff*

**Instructor: Welding, Carpentry, Woodworking** Eric Galvan

**Instructor: Mechanics, Electrical, Carpentry, Woodworking** Padraic Munson

**Instructor: Drones, Career Readiness, Personal Finance** Aaron Edwards

**Instructor: AAA and Class D Testing** Joshua Brown

**Instructor: AAA and Class D Testing** Paul Lyrenmann

**Training Coordinator** Kaitlyn Dobson

**Homeschool Program Manager** Andrew Pace





## **Course Quick-Guide**

<b>Alaska Small Engines Level One</b>	<a href="#"><u>PG 6</u></a>
<b>Alaska Small Engines Level Two</b>	<a href="#"><u>PG 7</u></a>
<b>Automotive Maintenance Level One</b>	<a href="#"><u>PG 8</u></a>
<b>Automotive Maintenance Level Two</b>	<a href="#"><u>PG 9</u></a>
<b>SMAW Level One</b>	<a href="#"><u>PG 10</u></a>
<b>SMAW Level Two</b>	<a href="#"><u>PG 11</u></a>
<b>GMAW Level Three</b>	<a href="#"><u>PG 12</u></a>
<b>FCAW Level Four</b>	<a href="#"><u>PG 13</u></a>
<b>Carpentry Level One</b>	<a href="#"><u>PG 14</u></a>
<b>Carpentry Level Two</b>	<a href="#"><u>PG 15</u></a>
<b>Woodworking Level One</b>	<a href="#"><u>PG 16</u></a>
<b>Woodworking Level Two</b>	<a href="#"><u>PG 17</u></a>
<b>Electrical Level One</b>	<a href="#"><u>PG 18</u></a>
<b>Electrical Level Two</b>	<a href="#"><u>PG 19</u></a>
<b>Career Readiness</b>	<a href="#"><u>PG 20</u></a>
<b>Digital Solutions</b>	<a href="#"><u>PG 21</u></a>
<b>Effective Communication &amp; Leadership</b>	<a href="#"><u>PG 22</u></a>
<b>Personal Finance</b>	<a href="#"><u>PG 23</u></a>
<b>Drone 1</b>	<a href="#"><u>PG 24</u></a>



## Alaskan Small Engines Level One

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**
- 1/2 Mathematics Credit **OR**
- 1/2 Elective Mathematics Credit

**Enrollment Requirements:**

- Parental Consent
- Computer and internet access
- Appropriate clothing for hands-on work in shop.

**Tuition Breakdown**

- *Modern Motorcycle Technology*—Edward Abdo
- NIT Blackboard and Collaborate Student Access
- PPE
- Practical (Lab) Materials and Supplies

**Total Cost: \$500**

**Program Description:**

In this course, students will learn and develop the fundamental skills of maintenance and repair on the small engines unique to Alaska, including motorcycle, ATV, snow machines, outboard motors and more. Students will expand their familiarity with a mechanic shop environment, applying their focus to: small engines, cooling systems, fuel and engine management systems, drives, clutches, 2-and 4-stroke engines, and maintenance and troubleshooting.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live, real-time lectures via Blackboard Collaborate: 8 total (one hour each)
- ⇒ Practical Lab at NIT’s Shop: 4 sessions (four hours each)

**MODULES TRAINED**

Small Engines	Drive Train	Fuel System	Cooling Systems
Clutches	Safety	2-and 4-Stroke Engines	Maintenance & Troubleshooting

## Alaskan Small Engines Level Two

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**
- 1/2 Mathematics Credit **OR**
- 1/2 Elective Mathematics Credit

**Enrollment Requirements:**

- Completed Level One
- Parental Consent
- Computer and internet access
- Appropriate clothing for hands-on work in shop.

**Tuition Breakdown**

- *Modern Motorcycle Technology*—Edward Abdo
- NIT Blackboard and Collaborate Student Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

In this course, students will continue to take a comprehensive look at how basic power sports systems work. They will, upon completion of the course, demonstrate proficiency in power sports knowledge. Students will learn skills necessary to ensure operability of their vehicles in situations they will likely encounter in the field. Students will expand familiarity with a mechanic shop environment, applying their focus to small engines, frames, suspension, brakes, wheels & tires, and maintenance and troubleshooting.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live, real-time lectures via Blackboard Collaborate: 8 total (one hour each)
- ⇒ Practical Lab at NIT’s Shop: 4 sessions (four hours each)

**MODULES TRAINED**

Small Engines	Frames	Suspension	Brakes
Wheels & Tires	Safety	2-and 4-Stroke Engines	Maintenance & Troubleshooting

## Automotive Maintenance Level One

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**
- 1/2 Mathematics Credit **OR**
- 1/2 Elective Mathematics Credit

**Enrollment Requirements:**

- Parental Consent
- Computer and internet access
- Appropriate clothing for hands-on work in shop.

**Tuition Breakdown**

- *Automotive Maintenance & Light Repair, 3rd ED.* — Rob Thompson
- NIT Blackboard and Collaborate Student Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

In this course, students will learn how basic automotive systems work, from a beginner’s perspective. Their studies will give them insight & proficiency in basic automotive knowledge by reinforcing Blackboard learning through purposeful repetition and application in practical sessions. Students will become familiar with a mechanic shop environment, working together to broaden their understanding of basic service, wheels and tires, suspension systems, steering systems and brakes.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live, real-time lectures via Blackboard Collaborate: 8 total (one hour each)
- ⇒ Practical Lab at NIT’s Shop: 4 sessions (four hours each)

**MODULES TRAINED**

Basic Service	Wheels, Tires	Suspension Systems	Steering Systems
Drum Brakes	Safety	Disk Brakes	Maintenance & Troubleshooting

## Automotive Maintenance Level Two

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**
- 1/2 Mathematics Credit **OR**
- 1/2 Elective Mathematics Credit

**Enrollment Requirements:**

- Completed Level One
- Parental Consent
- Computer and internet access
- Appropriate clothing for hands-on work in shop.

**Tuition Breakdown**

- *Automotive Maintenance & Light Repair, 3rd ED.* — Rob Thompson
- NIT Blackboard and Collaborate Student Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

In this course, students will continue to learn how basic automotive systems work. They will expand their proficiency in automotive knowledge, reinforcing Blackboard learning through purposeful repetition and application in practical sessions. Students will extend their familiarity with a mechanic shop environment, working together to broaden their understanding of electrical systems, batteries, starting and charging systems, lighting systems, accessories, engine performance principles, and vehicle maintenance.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live, real-time lectures via Blackboard Collaborate: 8 total (one hour each)
- ⇒ Practical Lab at NIT’s Shop: 4 sessions (four hours each)

**MODULES TRAINED**

Electrical Systems	Batteries	Starting & Charging Systems	Lighting Systems
Accessories	Safety	Engine Performance Principles	Maintenance

## Shielded Metal Arc Welding (SMAW) Level One

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access
- Leather work boots
- Cotton pants/shirt (**no synthetic materials**)

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Physical Science Credit **OR**
- 1/2 Elective Science Credit

**Tuition Breakdown**

- *Shielded Metal Arch Welding Basic* - Hobart Institute
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

Theory meets hands-on practice in this comprehensive introductory course. This course will introduce shielded metal arc welding (SMAW), stressing safety, study and practice as the key components to learning. Students will learn and understand safety precautions for arc welding and the importance of safety in welding, basic SMAW process and equipment, including weld quality, striking and controlling the arc, visual inspections and quality control, welding distortion and control, electrode selection and much more.

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT's Shop: 4 sessions (4 hours each)
- ⇒ Simulator Practice at NIT's Shop: included in practical, hands-on sessions

**MODULES TRAINED**

SMAW Process & Equipment	Shop & Welding Safety	Striking & Controlling Arc	Visual Inspection
Electrode Selection	Welding Distortion	Video Demos	Simulator Practice

## Shielded Metal Arc Welding (SMAW) Level Two

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Complete Level One
- Parental Consent
- Computer with internet access
- Leather work boots
- Cotton pants/shirt (**no synthetic materials**)

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Physical Science Credit **OR**
- 1/2 Elective Science Credit

**Tuition Breakdown**

- *Shielded Metal Arch Welding Structural-*  
Hobart Institute
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

The objective of this course is to provide students with advanced skills in shielded metal arc welding. Students will learn and be proficient in SMAW safety, electrode selection, polarity & amperage, arc length, travel speed & electrode angles, quality control, weld size & profile, carbon arc cutting & gouging, & hard surfacing. Students will practice skill-building exercises involving multi-pass single v-groove weld on 3/8" & 1" mild steel in all positions and standard horizontal (2G) and vertical (3G) qualification tests on 3/8" up to 1" mild steel.

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT's Shop: 4 sessions (4 hours each)
- ⇒ Simulator Practice at NIT's Shop: included in practical, hands-on sessions

**MODULES TRAINED**

SMAW Process & Equipment	Shop & Welding Safety	Striking & Controlling Arc	Visual Inspection
Electrode Selection	Welding Distortion	Video Demos	Simulator Practice

# High School CTE Programs

## Gas Metal Arc Welding (GMAW) Level Three

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Complete Levels One and Two
- Parental Consent
- Computer with internet access
- Leather work boots
- Cotton pants/shirt (**no synthetic materials**)

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Physical Science Credit **OR**
- 1/2 Elective Science Credit

**Tuition Breakdown**

- *Gas Metal Arc Welding Basic* - Hobart Institute
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:** Building upon the foundation laid in previous SMAW coursework, participants will learn processes, equipment, & key variables associated with GMAW. The role of the welder in visual inspection & quality control will be thoroughly examined, emphasizing the importance of meticulous attention to detail in achieving superior weld quality. Weld size & profile will inform each project, guiding students towards precision & excellence in their work. Skill-building exercises encompassing all welding positions on mild steel ranging from 3/8" to 1" thicknesses will solidify students' understanding & proficiency in GMAW techniques.

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT's Shop: 4 sessions (4 hours each)
- ⇒ Simulator Practice at NIT's Shop: included in practical, hands-on sessions

**MODULES TRAINED**

GMAW Process & Equipment	Shop & Welding Safety	Weld Quality	Visual Inspection
Weld Size & Profile	Video Demos	Simulator Practice	

# High School CTE Programs

## Flux Core Arc Welding (FCAW) Level Four

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Complete Levels One, Two and Three
- Parental Consent
- Computer with internet access
- Leather work boots
- Cotton pants/shirt (**no synthetic materials**)

**Program Description:**

This course provides a comprehensive exploration of Flux Cored Arc Welding (FCAW). Beginning with a rigorous focus on safety protocols specific to FCAW, students will establish a solid foundation before gaining a thorough understanding of the flux-cored arc process, equipment, & setup procedures, as well as the distinctions between FCAW & Gas Metal Arc Welding (GMAW). Key variables affecting weld quality will be examined in detail, including the relationship between amperage & voltage, electrode selection, angles, travel speed, electrode extension, & joint design. Students will have access to video demonstrations & hands-on skill-building exercises. These exercises will involve performing fillet welds & groove welds on carbon steel plate in all positions using both gas-shielded & self-shielded tubular electrodes. Additionally, students will gain practical experience in welding 6-inch schedule 80 pipe in the 2G & 5G positions.

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT’s Shop ( including simulator practice): 4 sessions

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Physical Science Credit **OR**
- 1/2 Elective Science Credit

**Tuition Breakdown**

- *Flux Cored Arc Welding* - Hobart Institute
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**MODULES TRAINED**

FCAW Process & Equipment	Shop & Welding Safety	Weld Quality	FCAW vs. GMAW
Video Demos	Simulator Practice		

# High School CTE Programs

## Carpentry Level One

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access
- Appropriate job-related clothing

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Mathematics Credit **OR**
- 1/2 Elective Mathematics Credit

**Tuition Breakdown**

- *Residential Construction Academy: Carpentry* - Floyd Vogt; Gary Brackett
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

Students will complete this course with a firsthand knowledge of what it takes to design, plan & get started on the construction of a functional structure. Students will learn the basics of the construction trade, with an emphasis on carpentry. Students will drive each step of the building process, from the planning stages to the halfway point in completing a viable structure. They will be introduced to the basics of tool use, safety, planning & materials before diving into and implementing the stages of construction. Students will work together to construct a building of their own, during their hands-on practical sessions.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT's Shop: 4 sessions (4 hours each)

**MODULES TRAINED**

Safety	General Tool Use	Building Planning & Prep	Floor Systems
Wall Framing	Roof Framing	Material Handling & Estimating	

# High School CTE Programs

## Carpentry Level Two

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Complete Levels One
- Parental Consent
- Computer with internet access
- Appropriate job-related clothing

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Mathematics Credit **OR**
- 1/2 Elective Mathematics Credit

**Tuition Breakdown**

- Residential Construction Academy: Carpentry - Floyd Vogt; Gary Brackett
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

This course is a continuation of Carpentry Level One. Students will continue working towards completion of a viable building, focusing on roofing applications, windows & doors, siding & decks, insulation & ventilation, walls & interior finishes, stairs, cabinets, and finishes. By the end of this course, students will have constructed a building to be placed with a partnering non-profit for use in the community.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT's Shop: 4 sessions (4 hours each)

**MODULES TRAINED**

Safety	General Tool Use	Building Planning & Prep	Floor Systems
Wall Framing	Roof Framing	Material Handling & Estimating	

# High School CTE Programs

## Woodworking Level One

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access
- Appropriate job-related clothing

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Mathematics Credit **OR**
- 1/2 Elective Mathematics Credit

**Tuition Breakdown**

- *Woodworking, 2nd Ed.* - Nancy Macdonald
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

This course offers an introduction to the basics of woodworking tools and materials. Students will begin with basic safety and awareness. Key topics include hand tools, power tools, stationary shop tools, clamps and fasteners, adhesives, and building materials. Students will gain proficiency in the foundational elements of woodworking through a series of practical projects.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT's Shop: 4 sessions (4 hours each)

**MODULES TRAINED**

Hand and Power Tools	Safety	Stationary Shop Tools	Clamps & Fasteners
Adhesives	Personal Projects	Wood & Other Building Materials	
Personal Projects			

# High School CTE Programs

## Woodworking Level Two

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access
- Appropriate job-related clothing

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Mathematics Credit **OR**
- 1/2 Elective Mathematics Credit

**Tuition Breakdown**

- *Woodworking, 2nd Ed.* - Nancy Macdonald
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

This course is a continuation of Woodworking Level One. Students will expand upon their basic knowledge of tools and materials. Student learning will focus on joinery and assembly, cabinet and furniture anatomy, and finishing preparation and application.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT's Shop: 4 sessions (4 hours each)

**MODULES TRAINED**

Joinery & Assembly	Safety	Cabinet & Furniture Anatomy	Special Topics
Finishing Preparation & Application		Advanced Techniques	
Personal Projects			

## Electrical Level One

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access
- Appropriate job-related clothing

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Physical Science Credit **OR**
- 1/2 Elective Science Credit

**Tuition Breakdown**

- *Residential Construction Academy: House Wiring, 5th Ed.* - Gregory W. Fletcher
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

The objective of this course is to provide students with a foundational understanding of the electrical wiring principles and practices used in the installation of residential wiring systems. Students will learn general and electrical safety, focusing on the knowledge and skills required of a pre-apprentice electrician. Through hands-on exercises, students will engage in wiring techniques, installation of switches, outlets, and various electrical equipment.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT's Shop: 4 sessions (4 hours each)

**MODULES TRAINED**

Hand and Power Tools	Safety, PPE	Measurement Tools	Read & Understand Plans
Preparation and Planning of	Exercises in Wiring, Switches, Outlets, Equipment & Installations		

## Electrical Level Two

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Complete Level One
- Parental Consent
- Computer with internet access
- Appropriate job-related clothing

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit **OR**  
1/2 Physical Science Credit **OR**
- 1/2 Elective Science Credit

**Tuition Breakdown**

- *Residential Construction Academy: House Wiring, 5th Ed.* - Gregory W. Fletcher
- NIT Blackboard and Collaborate Access
- PPE
- Practical (Lab) materials and supplies

**Total Cost: \$500**

**Program Description:**

The objective of this course is a continuation of Electrical Level One. Students will continue to familiarize themselves with the details of residential wiring, with an emphasis on more complex theoretical knowledge and advanced wiring techniques and applications. This course will focus on requirements for electrical installations, installation techniques for boxes, lighting fixtures, devices and cable, awareness of how to trim-out service panels, maintenance and troubleshooting of residential electrical systems, and an introduction to green wiring techniques.

**What to Expect:**

- ⇒ All Personal Protective Equipment (PPE) will be provided by NIT.
- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard: 8 total (one hour each)
- ⇒ Lab at NIT’s Shop: 4 sessions (4 hours each)

**MODULES TRAINED**

Electrical Installations	Installation Techniques	Trim-out Service Panel Awareness
Green Wiring Techniques	Maintenance & Troubleshooting of Residential Electrical Systems	
Wire Mock Building	Complex Switches and Controls	

# High School CTE Programs

## Career Readiness

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit

**Tuition Breakdown**

- NIT Blackboard and Collaborate Access

**Total Cost: \$350**

**Program Description:**

Students will explore the intricacies of securing employment, delving into the vital steps that lead to successful hiring. From strategically matching skills with job opportunities to crafting a compelling resume with Word, we guide students through the often-daunting preparation process. Key focuses include mastering effective interviewing techniques, cultivating positive personal habits, creating impactful first impressions and refining communication styles. This course addresses aspects of adulthood that contribute to a successful and fulfilling professional journey. Join us in empowering the next generation with the skills and knowledge they need for career success .

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard, twice a week: 16 total (1.5 hours each)

**MODULES TRAINED**

Professional Correspondence	Cover Letters	Resumes
Interpersonal Awareness	Interviewing	First Impressions      Active Listening
Positive Personal Habits		

## Digital Solutions

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit

**Tuition Breakdown**

- NIT Blackboard and Collaborate Access

**Total Cost: \$350**

**Program Description:**

Students will be introduced to key software applications such as Word, Excel, and PowerPoint, gaining essential insights into their functionalities and practical applications. Through hands-on learning experiences, participants will develop proficiency in utilizing these software tools to enhance efficiency both in personal endeavors and as emerging professionals poised to enter the workforce. By the end of the course, students will have acquired the skills necessary to navigate and leverage computer technology effectively, empowering them to excel in their respective fields & adapt to the evolving demands of the modern workplace.

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard, twice a week: 16 total (1.5 hours each)

**MODULES TRAINED**

MS Word	MS Excel	MS PowerPoint	
Computer Technology	Online Presence	Software Tools	Websites

## Effective Communication & Leadership

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit

**Tuition Breakdown**

- NIT Blackboard and Collaborate Access

**Total Cost: \$350**

**Program Description:**

Through engaging discussions and practical exercises, participants will investigate the challenges and opportunities inherent in adopting a rhetorical perspective towards communication. By the conclusion of the course, students will emerge equipped with the tools and strategies necessary to be comfortable in everyday interactions and navigate the complexities of communication in the professional world. Whether preparing for the workforce or seeking to enhance interpersonal relationships, this life skills class offers invaluable benefits for individuals from all walks of life.

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard, twice a week: 16 total (1.5 hours each)

**MODULES TRAINED**

Leadership	Everyday Communication	Professional Communication
Interpersonal Relationships	Preparing for the Workforce	

# High School CTE Programs

## Personal Finance

**Length of Program:** 8 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study

**Enrollment Requirements:**

- Parental Consent
- Computer with internet access

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- 1/2 Elective Credit

**Tuition Breakdown**

- NIT Blackboard and Collaborate Access

**Total Cost: \$350**

**Program Description:**

Participants will gain invaluable insights into the process of major financial decisions, such as purchasing a car, by learning to compare interest rates and understand the long-term implications of their financial choices. By the conclusion of the course, students emerge confident in managing their finances, equipped with the knowledge and skills necessary to navigate the financial landscape with competence and foresight. This class offers a lifelong benefit, empowering students to make informed financial decisions & build a secure future for themselves.

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard, twice a week: 16 total (1.5 hours each)

**MODULES TRAINED**

Financial Goal Setting	Personal Budgeting	Credit Management
Loans	Investments	MS Excel

# High School CTE Programs

## Drone 1

**Length of Program:** 5 Weeks

**Format of Program:**

- ⇒ Live Online Instruction
- ⇒ Self-Paced Online Independent Study
- ⇒ Practical Instruction (Lab)

**Enrollment Requirements:**

- Parental consent
- Computer with internet access
- Appropriate job-related clothing

**Certifications & Possible Credit Transfer**

- Certificate of Completion
- UAS FAA “TRUST” Certificate
- 1/2 Elective Credit **OR**
- 1/2 Elective Science Credit

**Tuition Breakdown**

- NIT Blackboard and Collaborate Access
- UAV “drone” for flight practice
- FAA Flight rules for recreational pilots

**Total Cost: \$500**

**Program Description:**

Drone 1 is a five-week, ½ credit class that introduces students to flying drones for education and recreation, while doing so safely and legally. There will be in-person classroom lectures and hands-on flight training. Radio control, by line of sight and virtual reality (VR) goggles, will be used for proper control and a first-person view (FPV) flying experience. It is ideal for those just starting out with drones, or those who want to make sure they are flying safely. Students will learn basic rules for drones in the US and Alaska and practice flying within those boundaries. Upon completion, students will earn the UAS FAA “TRUST” Certificate for recreational flying.

**What to Expect:**

- ⇒ Weekly assignments via independent study online
- ⇒ Live Lectures via Blackboard, twice a week: 16 total (1.5 hours each)
- ⇒ Lab at NIT’s Shop, once a week: 5 total (1.5 hours each)

**MODULES TRAINED**

Intro to UAS Aerodynamics	FAA Regulations	UAV Flight Training
Certification Test	Radio Control	Safety