

2022

Catalog Guide

**Anglin Dr. Training Facility-S3686**

**Grants Ln Training Facility -S3993**



**Published on June 16, 2022**

***Occupational Skills Training Specializing in the Aerospace and Advanced Manufacturing Industries***

*CLC, Inc. training programs are approved and regulated by the Texas Workforce Commission, Career Schools and Colleges, Austin, Texas.*

|  |  |  |
| --- | --- | --- |
| 1.) | Training Locations and Hours of Operation | 4 |
|  |  |  |
| 2.) | History and Mission | 5 |
|  | * CLC, Inc. Board of Directors | 5 |
|  |  |  |
|  | CLC, Inc. Identifying Data | 6-7 |
|  | * Committee Members |  |
|  | * A New Training Center |  |
|  | * CLC, Inc. Industry Partners |  |
|  |  |  |
| 3.) | Description of CLC, Inc. space, facilities, and equipment | 8-9 |
|  | * Anglin Drive Training Location |  |
|  | * Grants Lane Training Location |  |
|  |  |  |
| 4.) | CLC, Inc. Key Facility and Staff | 10-13 |
|  |  |  |
| 5.) | Training Schedule, Program Fees, Tuition and Special Charges | 14-18 |
|  | * Aircraft Assembly * Advanced Material Repair * Bookkeeping and QuickBooks Training Program * Composite Bonding * CNC Machining * Welding * MSSC Certified Production Technician Training (CPT) * MSSC Certified Logistics Associate Training / Certified Logistics Technician Training (CLA/CLT) * MSSC Safety * Manufacturing & Aerospace Assembly Training (MAAT) * Manufacturing & Aerospace Assembly Training-Plus (MAAT-Plus) * HVAC Training Program * CompTIA A+ Training Program * CompTIA ITF+ Training Program * OSHA Compliant Forklift Training Program |  |
| 6.) | Fast Track Training Schedule, Program Fees, Tuition and Special Charges | 19 |
|  |  |  |
| 7.) | Training Program Scheduled Classes and Holidays to be Observed | 20 |
|  |  |  |
| 8.) | Training Program Eligibility Criteria | 21 |
|  |  |  |
| 9.) | Full Course Subject Description | 22-30 |
|  |  |  |
| 10.) | Fast Track Course and Subject Description | 31-33 |
|  |  |  |
| 11.) | MAAT Training Program | 34-40 |
|  |  |  |
| 12.) | MAAT Plus Training Program | 41-48 |
|  |  |  |
| 13.) | Aircraft Assembly Training Program | 49-50 |
|  |  |  |
| 14.) | Aircraft Fast Track Program Overview | 51-52 |
|  |  |  |
| 15.) | Composite Bonding Training Program Overview | 53-55 |
|  |  |  |
| 16.) | AMR Training Program | 56-58 |
|  |  |  |
| 17.) | HVAC Training Program | 59-66 |
|  |  |  |
| 18.) | CNC Machining Training Program Overview | 67-69 |
|  |  |  |
| 19.) | Machinist Fast Track | 70-71 |
|  |  |  |
| 20.) | Welding Training Program Overview | 72-75 |
|  |  |  |
| 21.) | Welding Fast Track | 76-77 |
|  |  |  |
| 22.) | MSSC Certified Production Technician Training (CPT) Training  Program Overview | 78-80 |
|  |  |  |
| 23.) | CompTIA A+ Training Program | 81 |
|  |  |  |
| 24.) | CompTIA ITF+ Training Program | 81 |
|  |  |  |
| 25.) | OSHA Compliant Forklift Training Program | 82-85 |
|  |  |  |
| 26.) | MSSC Certified Logistics Associate Training/ Certified Logistics Technician Training (CLA/CLT) Program Overview | 86-87 |
|  |  |  |
| 27.) | MSSC Safety Training Program Overview | 88-89 |
|  |  |  |
| 28.) | Bookkeeping and QuickBooks Training Program Overview | 90-92 |
|  |  |  |
| 29.) | CLC, Inc. Credit for Previous Education, Attendance, Placement Assistance, Grading and Marking System, Requirements for Graduation and Progress Standards | 93-97 |
|  |  |  |
| 30.) | CLC, Inc. Training Program Standards of Conduct | 98-99 |
|  |  |  |
| 31.) | CLC, Inc. Training Program Applicant Waiver | 100 |
|  |  |  |
| 32.) | CLC, Inc. Rights of the Student | 101-103 |
|  | * CLC, Inc. Grievance Procedure |  |
|  | * Texas Workforce Commission Approved and Regulated Statement |  |
|  |  |  |
| 33.) | Directors’ Statement | 104 |

***Training Locations and Hours of Operation***

***Anglin Training Location:***

*6220 Anglin Drive*

*Forest Hill, Texas 76119*

*Office: (817) 887-9720*

*Fax: (817) 887-9143*

*Hours of Operation: Monday through Friday from 7:00am till 3:45pm*

*Specialized Training In:*

*Welding, CNC Machining, CompTIA A+, ITF+, Bookkeeping and QuickBooks Training Programs, & OSHA Compliant Forklift Training Program*

***Pat Lane Training Location:***

*555 North Grants Lane*

*Fort Worth, TX 76108*

*Office: (817) 569-9008*

*Fax: (817) 569-9016*

*Hours of Operation: Monday through Friday from 7:00am till 4:30pm*

*Specialized Training In:*

*Composite Bonding*

*MSSC Certified Logistics Technician Training (CLA/CLT)*

*MSSC Certified Production Technician Training (CPT)*

*Aerospace Manufacturing Training Program (AMTP)*

*Manufacturing & Aerospace Assembly Training (MAAT)*

*Manufacturing & Aerospace Assembly Training+ (MAAT+)*

*HVAC Training Program*

*Bookkeeping and QuickBooks Training Program*

*CompTIA A+, IT Fundamentals+*

***CLC, Inc. Administrative Office Location:***

*555 North Grants Lane*

*Fort Worth, TX 76108*

*Office: (817) 569-9008*

*Fax: (817) 569-9008*

*Hours of Operation: Monday through Friday from 8:00am till 4:30pm*

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| . | |
| **History and Mission**  CLC, Inc. provides job seekers with model education, training and employment services that lead to career progressive jobs. CLC, Inc. provides employers with qualified workers to meet their workforce needs.  CLC, Inc. operates through partnerships with industry, business, government, community organizations and schools. It provides model educational training and employment services that lead to better jobs and careers for Texans who need and want them most.  Since 2000, CLC, Inc. has trained more than 5,000 workers for high skill, high wage jobs in aircraft assembly, composite bonding, machining, welding, logistics and production technician training. CLC, Inc., graduates work for such companies as Lockheed Martin, Bell Helicopter and Vought Aircraft Industries.    **Capital Campaign Committee Members**   * **Rod Tanner,** Tanner & Associates, P.C. (Chairman) * **Becky Turner,** Office & Professional Employees International Union (Vice-Chair) * **Paul Black,** International Association of Machinists and Aerospace Workers * **Pat Lane,** CLC, Inc. * **Tim Smith,** International Associations of Machinists and Aerospace Workers * **Angela Traiforos,** CLC, Inc. * **Steve Williams,** Retired, Gulf Coast Trade Center * **Troy Vaughn,** Tarrant County College | **CLC, Inc. Board of Directors**   * **Pat Lane,** Chairman, CLC, Inc. * **Angela Traiforos,** Secretary Treasurer, CLC, Inc. * **Gary Livingston,** United Automobile Workers * **Becky Turner,** Office & Professional Employees International Union * **Troy Vaughn,** Associate Vice Chancellor, TCC * **Steve Williams,** Retired, Gulf Coast Trade Center * **B.R Day**, Retired Lockheed Martin * **William McKee**, Professor/Arbitrator/Mediator, University of North Texas * **Gordon England**, Former Deputy Secretary of Defense * **Charles Galupi,** Retired,Local Community Based Organizations * **Keith Stum,** Owner, Olsen’s Sporting Goods and Olsen’s Pro Am Fishing Shop   *CLC, Inc. training programs are approved and regulated by the Texas Workforce Commission, Career Schools and Colleges, Austin, Texas.*    **Pat Lane Center**   The International Association of Machinists contributed a building valued at $500,000 to CLC, Inc.  CLC, Inc. renovated the building into an education and training center.  The new building is strategically located across from the main gate of Lockheed Martin Aeronautics Company in Fort Worth, Texas.  This new training center, CLC, Inc. increases its outreach exponentially and prepares far more job seekers for growing industries in North Central Texas. |
| |  |  |  | | --- | --- | --- | | **We are very proud of our CLC, Inc. partners as follows:** | | | |  | International Association of Machinists and Aerospace Workers District Lodge 776 Lockheed Martin UAW Local #218 Bell Helicopter TEXTRON UAW Local #848 Vought Aircraft Industries Texas Manufacturing Assistance Center University of Texas, Arlington Manufacturing Skills Standards Council Workforce Solutions for Tarrant County Workforce Solutions for North Central Texas  *CLC, Inc. training programs are approved and regulated by the Texas Workforce Commission, Career Schools and Colleges, Austin, Texas.*  Workforce Solutions for Dallas County National Institute Metal Working Skills  Tarrant County College |  | | |

**Description of Available Space**

**Anglin Drive Training Location**

The CLC, Inc.’s Anglin Drive facility is an 8750 Square Foot facility located at 6220 Anglin Drive in Forest Hill, Texas 76119. The Anglin Drive facility has a total of 1,104 Square Foot of office space & restrooms. In the back corner of the facility, there is a 288 Square Foot MSSC Classroom. This leaves a total space of 7,358 Square Foot of Shop Floor dedicated to “hands on” skills based training. The facility itself has an overhead monorail to lift heavy materials and equipment, as well as an air compressor to operate all of the pneumatic tools in the facility.

The Machine Shop floor has two Engine Lathes, five Vertical Mills, a Metal Cutting Saw, a Drill Press, and a bench grinder. The Weld Shop floor has seven AC/DC stick welders, one TIG welder, 12 MIG welders, cutting/welding oxy-acetylene, Aluminum Spool Welder, Plasma torch, one Drill press, a vertical band saw, a Hydraulic bender, one bench grinder, six hand grinders, one large hand grinder, one hand electric drill, two chop saws and one large anvil, as well as various equipment for painting.

The MSSC Classroom has 18 PCs to complete online MSSC modules and assessments as well as Bookkeeping and QuickBooks training.

**Grants Lane – Pat Lane Center**

The Grants Lane, Pat Lane Training Center is at 555 North Grants Lane, directly across from the Lockheed Martin main entrance in Fort Worth, TX. We are currently offering Bookkeeping and QuickBooks, Manufacturing and Aerospace Assembly (MAAT), HVAC, Composite Bonding, Aircraft Assembly, AMTP and Advanced Material Repair (AMR) as well as MSSC-Logistics training inclusive of CLA, CLT and CPT at the center.

The MAAT training program is operated in a simulated environment that resembles a composite bonding department at an aircraft or helicopter factory and teaches creation, repair and assembly. Our composite bonding molds are made and maintained by our machine shop, utilizing lathes, mills, and surface grinders. This machining process keeps our composite tooling maintained to specifications. Various tooling techniques are utilized using flat panels, honey comb exercise, right angles and a recently added I Beam that required extensive machining. Materials and supplies used include Water Works cleaning and release agents, bagging film, separator film, TFE, tacky tape, Teflon tape, Tyler tape, razor knifes, Thermo couplings, vacuum funnels, vacuum gauges, gloves, non-metallic putty knives for mold release, unidirectional carbon fiber pre-preg, woven carbon fiber pre-preg and fiberglass pre-preg material. The oven for composite curing is a 460 volt, 3 phase machine rated at 82 amps of service. This particular oven was built to replicate an autoclave with a cool air damper in the back to the hot air exhaust that is vented through the ceiling. The vacuum pump for the oven was donated by Bell Helicopter TEXTRON. The oven runs on a Honeywell controller and was programmed by a Composite Bonding Engineer donated by Lockheed Martin.

The Aircraft Assembly training program, which will be located adjacent to the Composite Bonding area, will be equipped with Shadow Boxes that hold pneumatic drill motors and rivet guns, micro-stops, punches, drill blocks, vacuum, pliers, hammer, machinist rule, rivet sets. The area is surrounded by real aircraft parts donated by Lockheed Martin. These actual air plane parts are used for both teacher instruction and “hands on” practice. This provides a “virtual factory” setting for participants. The building is complete with Air compressors and vacuum pumps. This provides compressed air to the shop floor for Aircraft Assembly and vacuum to the Composite Lab for the composite bagging process.

The Manufacturing & Aerospace Assembly Training program (MAAT) utilizes the Aircraft Assembly facility and tools as well as the Composite Bonding facility and tools. The tool crib is where the bulk of the tools are stored. This includes rivets, drills, safety glasses, ear plugs, metal for drilling and shop floor exercises, volt meters, safety wire pliers, safety and curriculum videos showing hands on aircraft assembly processes and procedures, hand towels, files, hammers, scotch brite, sand paper, engineering drawings, oven manuals, oils, bees wax, clecos, extra vices, rivet sets and countersinks. The tool crib has many tools bought by CLC, Inc. and tools donated from both Lockheed Martin and Bell Helicopter TEXTRON.

The MSSC Classroom, located on the lower lever of the building, has an area which will accommodate 15 laptops to complete online MSSC modules and assessments as well as Bookkeeping and QuickBooks training.

**Key Staff**

**Pat Lane, CLC, Inc. Chairman**

President of CLC, Inc., Pat Lane, the former president of IAM DL 776, initiated the active involvement of Management and Labor in developing and implementing vocational rehabilitation and workforce development services since 1984 in the North Central Texas Regions. Pursuant to professional standards established by Mr. Lane and under his guidance, these workforce development programs have served over 10,000 workers with barriers to employment.

In addition to his active involvement in the Department of Education Project With Industry Training and Employment Programs for youth and adults with disabilities, Mr. Lane has been involved in the development and implementation of several other workforce development projects, including:

* A successful three-year US Department of Labor Older Disabled Workers Program.
* A Department of Labor Title III Dislocated Worker Demonstration Project.
* A two-year Department of Labor Contextual Learning Demonstration Project, known as the “Career Opportunities for Experienced Workers”.
* A two-year Department of Labor “Skills Shortage for Dislocated and Incumbent Workers” Program, known as Aerospace Industry Training Partnership (AITP) Program.
* A three year State of Texas Governor’s Office Wagner Peyser 7b Composite Bonding.
* A three year State of Texas Governor’s Office Wagner Peyser 7b Manufacturing and Aerospace Assembly Training (MAAT).
* A three year State of Texas Governor’s Office Wagner Peyser 7b Advanced Material Repair.
* A Three year Department of Labor Youth Offenders Welding and Machining skills training programs

Mr. Lane has been actively engaged in marketing these programs to employers and

Unions, including workers with barriers to employment and special needs. In the AITP, Composite Bonding/Repairs and MAAT programs, Mr. Lane has been a major liaison with the principal employers, Lockheed Martin Aeronautics Company and Bell Helicopter TEXTRON in Fort Worth, Texas.

Mr. Lane presently serves as a the Chair of the Board of Directors of CLC, Inc (a private non-profit charitable Organization, and the CLC, Inc Aerospace Industry Training Partnership (AITP) Project, Steering Committee. Mr. Lane has served as a member of the Working Partnership Group of the CLC, Inc Career Opportunities for Experienced Workers (COEW Project), the Texas Council on Workforce and Economic Competitiveness and the United Way of Tarrant County Board of Directors.

**Angela Traiforos, Executive Director, Pat Lane Center, Grants Lane Training Location**

When CLC, Inc. formalized its concern for workers with special needs and barriers to employment through specific programs, it sought the guidance of Angela Traiforos, a respected professional in the field of workforce development, to ensure that the Organization’s efforts was operated in accordance with the highest standards of her field. Ms. Traiforos has been involved in the organization, staff training, and direction of this workforce development program since its inception in 2000.

A U.S. Department of Education Mary Switzer Scholar, Ms. Traiforos has served on the board of International Association of Business, Industry and Rehabilitation, as the vice chair of the People-to-People Committee and the treasurer of the U.S. Council for International Rehabilitation. A member of the Labor Committee of the President’s Committee on Employment of People with Disabilities, she has also served on peer review panels for the U.S. Department of Education. Her efforts on behalf of people with special needs have brought her a number of honors, including the U.S Department of Education – Rehabilitation Services Administration Commissioner’s Award. Ms. Traiforos has been an active advocate for improving training and employment services at the international level and has been a facilitator for the 1997 International Leadership Forum for Women with Disabilities, a member of the U.S. Delegation to the Rehabilitation International Governing Assembly in Seoul, Korea, and the 4th European Conference for the Advancement of Assistive Technology.

Ms. Traiforos is certified as both as vocational counselor and a licensed disability management specialist.

Ms. Traiforos began her career as a vocational rehabilitation counselor at the Jewish Vocational Service of Chicago. From there, she went on to the Kennedy Institute in Washington, DC where she served as a workforce development coordinator, assisting youth and young adults with special needs. In 1980, she became involved with the development and implementation of IAM CARES. Under her leadership, IAM CARES expanded from a single location in Seattle, Washington into an international network serving 21 labor market areas in the United States and Canada. Pursuant to the professional standards developed by Ms. Traiforos, the programs of IAM CARES placed over 26,000 individuals with special needs, in competitive employment during this period. Her final assignment prior to joining CLC, Inc. was with Senior Service America, Inc. (formerly NSCERC) where she developed and operated a prototype work place literacy training program in Tarrant County that used contextual, experiential learning approaches and involved dislocated workers with employers at each stage of retraining.

Her educational background includes a M.Ed. from the University of Maryland,

a B.A. in psychology from Purdue University, and a degree in French Literature from the

French Academy in Athens, Greece.

**Troy Bottem, CLC, Inc. School Director for the Pat Lane Center Grants Lane Training Location**

Mr. Bottem has been an employee of CLC, Inc. since October 2017 and is currently the Grants Lane training facility Career School Director managing the Aerospace Training Program in Manufacturing and Aerospace Assembly Training, Manufacturing and Aerospace Assembly Training – Plus programs as well as the Bookkeeping/QuickBooks training program. His other responsibilities include classroom instruction, resume building, employer relations, planning, and recruitment for CLC, Inc. programs. Mr. Bottom also serves as a MSSC certified instructor for Certified Production Technician training program and the MSSC Safety training program. Mr. Bottem heads the facilities job development activities including work readiness training, placement services, retention and follow up services.

**Cory Lane, School Director for the Anglin Drive Training Location**

Mr. Lane has been employed by CLC, Inc. since June 2007, and is currently the Anglin Training Facility Career School Director, with responsibility for day-to-day management of the facility’s Skills Training Programs and the Instructors for Conventional Machining, CNC Machining, and Welding as well as, supervising and overseeing the delivery of training support, job development, placement, retention and follow-up services to Training Participants.  Mr. Lane also serves as an MSSC Certified Instructor for Green Production and Logistics, and works with other CLC, Inc. personnel in recruitment activities and the planning and conducting of the CLC, Inc. Skills Training Program orientation-and-intake sessions.  Finally, Mr. Lane heads the facility’s job development activities and, as needed, is directly involved in the delivery of work readiness training and job development, placement, retention, and follow-up services.

**Troy Bottem**

MSSC Certified Production Technician Training (CPT) Instructor

Manufacturing & Aerospace Assembly Training (MAAT) Instructor

Manufacturing & Aerospace Assembly Training Plus (MAAT-Plus) Instructor

**Larry Fox**

CNC Machinist Instructor

**Cory Lane**

MSSC Certified Production Technician Training Instructor

MSSC Certified Logistics Associate Training / Certified Logistics Technician Training Instructor

CompTIA A+ Training Program

CompTIA ITF+ Training Program

**Paul Mitchell**

OSHA Compliant Forklift Training Program

**William Gray**

Arc Welding

Blueprints

MIG Welding

TIG Welding

Welding & Cutting

**Donna McCauley**

Bookkeeping and QuickBooks Training Program

**Sean Smith**

CompTIA A+ Training Program

CompTIA ITF+ Training Program

**Douglas Molden**

HVAC Training Program

***Tuition, Fees, Training Schedules***

|  |  |  |  |
| --- | --- | --- | --- |
| **Aircraft Assembly Training Program –North Grants Lane**  200 Clock Hours / 5 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of Aircraft Assembly Program Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $1,520.00 | |
| Training Materials | | $850.00 | |
| Training Tools | | $480.00 | |
| Total | | $3,000.00 | |
| **Aerospace Manufacturing Training Program (AMTP) – North Grants Lane Location**  240 Clock Hours / 6 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of Aerospace Manufacturing Training Program (AMTP) Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $1,520.00 | |
| Training Materials | | $850.00 | |
| Training Tools | | $480.00 | |
| Total | | $3,000.00 | |
| **Composite Bonding Training Program – North Grants Lane Locations**  200 Clock Hours / 5 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of Aircraft Assembly Program Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $1,520.00 | |
| Training Materials | | $850.00 | |
| Training Tools | | $480.00 | |
| Total | | $3,000.00 | |
| **CNC Machining Training Program – Anglin Drive Location**  320 Clock Hours / 8 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of Machinist Program Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $1,720.00 | |
| Training Materials | | $1,050.00 | |
| Training Tools | | $580.00 | |
| Total | | $3,500.00 | |
| **Welding Training Program – Anglin Drive Location**  320 Clock Hours / 8 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of Welding Program Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $1,720.00 | |
| Training Materials | | $1,050.00 | |
| Training Tools | | $580.00 | |
| Total | | $3,500.00 | |
| **MSSC Certified Production Technician (CPT) Training Program – Anglin Drive &**  **Grants Lane Locations**  160 Clock Hours / 4 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of MSSC Certified Production Technician Program Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $1,620.00 | |
| MSSC Modules and Assessments | | $1,200.00 | |
| Supplies | | $30.00 | |
| Total | | $3,000.00 | |
| **MSSC Certified Logistics Associate/ Technician (CLA/CLT) Training Program –**  **Anglin Drive & Grants Lane Locations**  80 Clock Hours / 2 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of MSSC Certified Logistics Associate/Technician (CLA/CLT) Program Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $720.00 | |
| MSSC Modules and Assessments | | $600.00 | |
| Supplies | | $30.00 | |
| Total | | $1500.00 | |
| **MSSC Safety –Anglin Drive & Grants Lane Locations**  40 Clock hours / 1 week Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of MSSC Safety Course Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $270.00 | |
| MSSC Modules and Assessments | | $300.00 | |
| Supplies | | $30.00 | |
| Total | | $750.00 | |
| **Advanced Material Repair Training Program – North Grants Lane Locations**  200 Clock Hours / 5 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of Aircraft Assembly Program Cost: | | | |
| Registration | | $150.00 \* | |
| Tuition | | $1,520.00 | |
| Training Materials | | $850.00 | |
| Training Tools | | $480.00 | |
| Total | | $3,000.00 | |
| **Manufacturing & Aerospace Assembly Training – North Grants Lane Locations**  240 Clock Hours / 6 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of Aircraft Assembly Program Cost: | | | |
| Registration | | $150.00 | |
| Tuition | | $1,520.00 | |
| Training Materials | | $850.00 \*\* | |
| Training Tools | | $480.00 \*\*\* | |
| Total | | $3,000.00 | |
|  | | |
| **Manufacturing & Aerospace Assembly Training - Plus – North Grants Lane Locations**  280 Clock Hours / 7 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | | | |
| 1st Break | | 9:00am till 9:10am | |
| Lunch | | 11:00am till 11:45am | |
| 2nd Break | | 1:50pm till 2:00pm | |
| Breakdown of Aircraft Assembly Program Cost: | | | |
| Registration | | $150.00 | |
| Tuition | | $2020.00 | |
| Training Materials | | $850.00 \*\* | |
| Training Tools | | $480.00 \*\*\* | |
| Total | | $3,500.00 | |
|  | | |
| **HVAC – North Grants Lane Locations**  480 Clock Hours / 12 Weeks Instruction  Monday – Friday from 8:00am till 4:45pm | | | |
| 1st Break | | 10:00am till 10:10am | |
| Lunch | | 12:00am till 12:45am | |
| 2nd Break | | 2:00 till 2:10pm | |
| Breakdown of HVAC Program Cost: | | | |
| Registration | | $150.00 | |
| Tuition | | $4600.00 | |
| Training Materials | | $750.00 | |
| Training Tools | | $500.00 | |
| Total | | $6000.00 | |
|  | | |
| **CompTIA A+ Training Program - Anglin Drive and Grants Lane**  **80 Clock Hours / 2 Week Instruction**  **Monday – Friday from 8:00am till 4:30pm** | | |
| 1st Break | 9:00am till 9:10am | |
| Lunch | 11:00am till 11:45am | |
| 2nd Break | 1:50pm till 2:00pm | |
| Breakdown of CompTIA A+ Cost: | | |
| Registration | $150.00 \* | |
| Tuition | $600.00 | |
| A+ Certmaster Learn (2x @ $110) | $220.00 | |
| A+ Student Guide (1x) | $60.00 | |
| A+ Voucher (2x @ $100) | $200.00 | |
| Training Equipment | $200.00 | |
| Training Supplies | $320.00 | |
| Total | $1,750.00 | |
|  | | |
| **CompTIA ITF+ Training Program – Anglin Drive and Grants Lane**  40 Clock Hours / 1 Week Instruction  Monday – Friday from 8:00am – 4:30pm (TBD-subject to change) | | |
| **Breakdown of CompTIA ITF+ Training Program Cost:** | | |
| Registration | $150.00 \* | |
| Tuition | $300.00 | |
| ITF+ Certmaster Learn | | |
| ITF+ Student Guide | $16.00 | |
| ITF+ Voucher | $75.00 | |
| Training Equipment | $75.00 | |
| Training Supplies | $75.00 | |
| Total | $750.00 | |

|  |  |
| --- | --- |
| **Bookkeeping and QuickBooks Training Program – Anglin Drive and Grants Lane**  70 Clock Hours / 4 Week Instruction  Monday – Friday from 1:00pm till 4:30pm | |
|  |  |
|  |  |
| Breakdown of Bookkeeping and QuickBooks Training Program Cost: | |
| Registration | $150.00 \* |
| Tuition | $1,050.00 |
| QuickBooks | $150.00 |
| Training Supplies | $150.00 |
|  |  |
| Total | $1,500.00 |

**\*Registration fee consists of administrative processing fee.**

**\*\* Course books will be purchased by CLC, Inc. Student may purchase books on their own.**

**\*\*\*Mandatory tool kit to be purchased by CLC, Inc.**

|  |  |
| --- | --- |
| **OSHA Compliant Forklift Training Program**  40 Clock Hours / 1 Week Instruction  Monday – Friday from 7:00am till 3:45pm | |
| 1st Break | 9:00am till 9:10am |
| Lunch | 11:00am till 11:45am |
| 2nd Break | 1:50pm till 2:00pm |
| Breakdown of OSHA Compliant Forklift Training Program Cost: | |
| Registration | $50.00 |
| Instruction | $575.00 |
| Training Materials | $75.00 |
| Supplies | $50.00 |
| Total | $750.00 |

***Fast Track Tuition, Fees, Training Schedules***

|  |  |
| --- | --- |
| **Fast-Track Aircraft Assembly Training Program –Grants Lane Location**  160 Clock Hours / 4 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | |
| 1st Break | 9:00am till 9:10am |
| Lunch | 11:00am till 11:45am |
| 2nd Break | 1:50pm till 2:00pm |
| Breakdown of Fast-Track Aircraft Assembly Program Cost: | |
| Registration | $385.00 \* |
| Tuition | $450.00 |
| Training Materials | $425.00 |
| Training Tools | $240.00 |
| Total | $1,500.00 |
| **Fast-Track Machinist Training Program – Anglin Training Location**  160 Clock Hours / 4 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | |
| 1st Break | 9:00am till 9:10am |
| Lunch | 11:00am till 11:45am |
| 2nd Break | 1:50pm till 2:00pm |
| Breakdown of Fast-Track Machinist Program Cost: | |
| Registration | $150.00 \* |
| Tuition | $685.00 |
| Training Materials | $425.00 |
| Training Tools | $240.00 |
| Total | $1,500.00 |
| **Fast-Track Welding Training Program – Anglin Training Location**  160 Clock Hours / 4 Weeks Instruction  Monday – Friday from 7:00am till 3:45pm | |
| 1st Break | 9:00am till 9:10am |
| Lunch | 11:00am till 11:45am |
| 2nd Break | 1:50pm till 2:00pm |
| Breakdown of Fast-Track Welding Program Cost: | |
| Registration | $150.00 \* |
| Tuition | $685.00 |
| Training Materials | $425.00 |
| Training Tools | $240.00 |
| Total | $1,500.00 |

**CLC, Inc. Training Program Scheduled Classes and Holidays to be Observed**

|  |  |  |  |
| --- | --- | --- | --- |
| Class | Begin Date | End Date | Location / Cycle # |
| Welding | January 03, 2022\* | February 28, 2022\* | Anglin/2 |
| Welding | March 07, 2022 | April 29, 2022 | Anglin/3 |
| Welding | May 09, 2022\* | June 01, 2022\* | Anglin/4 |
| CNC Machining | January 03, 2022\* | February 28, 2022\* | Anglin / 5 |
| CNC Machining | March 07, 2022 | April 29, 2022 | Anglin / 6 |
| CNC Machining | May 09, 2022\* | June 01, 2022\* | Anglin / 1 |
|  |  |  |  |
| **Please Note**: All classes will be offered provided that we have the minimum number of students enrolled to attend class. Machining class size: 6-9, Welding class size: 12-18. **Class dates are subject to change.** Please contact CLC, Inc. at 817-569-9008 ext. 16 to verify class start dates.  \* Holidays accounted for with extra class days | | | |

**Holidays to Be Observed - Offices Closed**

|  |  |
| --- | --- |
| YEAR 2022 | |
| Holiday | Date |
| Memorial Day | May 30, 2022 |
| Independence Day | July 04, 2022 |
| Labor Day | September 05, 2022 |
| Thanksgiving Day | November 24, 2022 |
| Thanksgiving Day | November 25, 2022 |
| Christmas Holiday | December 26-31, 2022 |

**CLC, Inc. Training Program Eligibility Criteria**

**Eligibility Criteria for Bookkeeping and QuickBooks, Aircraft Assembly, Composite Bonding, Aerospace (AMTP), Manufacturing and Aerospace Assembly Training (MAAT), Manufacturing and Aerospace Assembly Training-Plus (MAAT-Plus), HVAC Training Program, CNC Machining, OSHA Compliant Forklift Training Program, and Welding Training Programs, MSSC Certified Logistics Associate Training – Certified Logistics Technician Training (CLA/CLT), and Certified Production Technician (CPT) Training Programs, CompTIA A+ Training Program**

* Be a United States Citizen or Naturalized Citizen
* Be at least 18 years of age
* No felony convictions
* If a male born after 1960, have registered with Selective Service
* Have demonstrated a proficiency in Mathematics and Reading Comprehension (currently measured through the McGraw Hill TABE assessment)

TABE Score must be 8.0 or higher in Mathematics and 8.0 or higher in Reading

* Be able to pass a background check
* Have a high school diploma or GED certification

**COURSE AND SUBJECT DESCRIPTIONS**

**Aircraft Assembly Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| AA-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Aircraft Assembly training program, will review basic shop safety, math, computers, precision measurement and engineer drawings  (No pre-requisite required) |
| AA-101 | Basic Structural Aircraft Assembly Knowledge and Skills | 40 | 40 | 80 | Students will learn the basics of lay-out, drilling, reaming, countersinking, riveting, blind fasteners, torque, safety wiring and flying object debris (FOD)  (Pre-requisite AA-100) |
| AA-102 | Structural Aircraft Assembly Practical’s and Virtual Factory | 40 | 40 | 80 | Students will complete shop floor exercises gaining hands on experience in Aircraft Assembly  (Pre-requisite AA-101) |
| Total Hours | | | | | 200 |

**Advanced Material Repair Training Program**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** | | AMR-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Advanced Material Repair training program, will review basic shop safety, math, computers, precision measurement and engineer drawings | | AMR-101 | Advanced Material Repair Basic Knowledge, Skills and Practical’s | 64 | 96 | 160 | Students will learn the fundamentals of Advanced Material Repair, Engineering Drawing, safety, tool cleaning and releasing agents, planning, terminology, bag & cure, drilling, and inspections, different materials of fabrics, resins and repair methods. | | Total Hours without prerequisite…………………………………… | | | | | 200 | |

**Composite Bonding Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| CB-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Composite Bonding training program, will review basic shop safety, math, computers, precision measurement and engineer drawings  (No pre-requisite required) |
| CB-101 | Composite Bonding Basic Knowledge, Skills and Practical’s | 71 | 88 | 160 | Students will learn the fundamentals of composites, BHTI Engineering Drawing, composite safety, tool cleaning and releasing agents, planning, terminology, debulking and bagging a part, curing, laying up a part and cutting, drilling, and routing composites  (Pre-requisite CB-101) |
| Total Hours ……………………..…………………………………… | | | | | 200 |

**CNC Machining Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE**  **HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| M-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Machinist training program, will review basic shop safety, math, computers, precision measurement and engineer drawings  (No pre-requisite required) |
| M-101 | Machinist Skills | 132 | 148 | 280 | Students will learn basic machinist skills, shop floor safety, measurement, materials and complete shop floor training using the metal cutting saw, drill press, mill, lathe and grinder  (Pre-requisite M-100) |
| Total Hours ……………………………………………………… | | | | | 320 |

**Welding Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| W-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Welding training program, will review basic shop safety, math, computers, precision measurement and engineer drawings  (No pre-requisite required) |
| W-101 | Blueprint Reading and Layout of Parts | 20 | 20 | 40 | Students will be introduced to terminology, complete basic blueprint reading, and actual layout of parts from blueprint specifications  (Pre-requisite W-100) |
| W-102 | Shielded Metal Arc (MMA) Welding | 20 | 20 | 40 | Students will learn MMA theory, tips and practice guided by shop floor instruction  (Pre-requisite W-101) |
| W-103 | Plasma Theory and Cutting | 20 | 20 | 40 | Students will learn Plasma Cutting Theory, tips and practice guided by shop floor instruction  (Pre-requisite W-102) |
| W-104 | Gas Metal Arc (MIG) Welding & Flux Core Arc Welding | 20 | 60 | 80 | Students will learn MIG and Flux Core welding, tips and practice guided by shop floor instruction  (Pre-requisite W-103) |
| W-105 | Gas Tungsten Arc (TIG) Welding | 20 | 20 | 40 | Students will learn TIG welding, tips and practice guided by shop floor instruction  (Pre-requisite W-104) |
| W-106 | Production Simulation | 20 | 20 | 40 | Students will simulate a product using MMA, MIG and TIG demonstrating the skills they have learned over the weeks of training.  (Pre-requisite W-105) |
| Total Hours | | | | | 320 |

**MSSC Certified Production Technician Training (CPT)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| CPT-101 | Safety | 18 | 22 | 40 | Through an online simulation, students will learn the basics of work safety, perform safety and environmental inspections, identify unsafe conditions, monitor safe equipment and operator performance, and utilize effective, safety-enhancing workplace practices  (No pre-requisite required) |
| CPT-102 | Quality Practices and Continuous Improvement | 16 | 24 | 40 | Through an online simulation, students will learn internal quality audit activities, check calibration of gages and other data collection equipment, inspect materials, address quality problems, corrective actions, and use common measurement systems and precision measurement tools  (No pre-requisite required) |
| CPT-103 | Manufacturing Processes and Production | 18 | 22 | 40 | Through an online simulation, students will learn customer needs, production processes, set goals, coordinate work flow, perform and monitor processes, and prepare final product for shipping and distribution  (No pre-requisite required) |
| CPT-104 | Maintenance Awareness | 15 | 25 | 40 | Through an online simulation, students will learn preventive maintenance, routine repair, ensure correct operations, maintain production schedules, recognize potential maintenance issues, and the importance of communication  (No pre-requisite required) |
| Total Hours………………………………………………………… | | | | | 160 |

**MSSC Certified Logistics Associate Training/Certified Logistics Technician Training Program (CLA/CLT)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| CLA-101 | Certified Logistics Associate | 18 | 22 | 40 | Students learn the basics to the logistics environment, global supply chain, material handling equipment, safety, quality, communication, teamwork and computers  (No pre-requisite required) |
| CLT-102 | Certified Logistics Technician | 16 | 24 | 40 | Students engage in mid-level technical knowledge covering product receiving, product storage, order processing, inventory control, safe handling, transportation modes, dispatch and tracking options  (Pre-requisite CLA-101) |
| Total Hours………………………………………………………… | | | | | 80 |

**MSSC Safety Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE**  **HOURS** | **LAB**  **HOURS** | **TOTAL**  **HOURS** | **BRIEF DESCRIPTION** |
| CPT-101 | Safety | 18 | 22 | 40 | Through an online simulation, students will learn the basics of work safety, perform safety and environmental inspections, identify unsafe conditions, monitor safe equipment and operator performance, and utilize effective, safety-enhancing workplace practices  (No pre-requisite required) |
| Total Hours…………………………………………………………….. | | | | | 40 |

**Manufacturing & Aerospace Assembly Training**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| MAAT-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Manufacturing & Aerospace Assembly Training program, will review basic shop safety, shop math, precision measurement and engineer drawings |
| MAAT-101 | Manufacturing & Aerospace Assembly Training Basic Knowledge, Skills and Practical’s | 53 | 147 | 200 | Students will learn the fundamentals of Basic Composite & Material Bonding,, Engineering Drawing, safety, tool cleaning and releasing agents, planning, terminology, bag & cure, assembly processes, drilling, reaming, countersink, surface preparations, fastener & rivet installation, sealants. Torque, safety wiring, repairs, and inspections, various materials of metals & composites. |
| Total Hours without prerequisite…………………………………… | | | | | 240 |

**Manufacturing & Aerospace Assembly Training - Plus**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| MAAT -100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Manufacturing & Aerospace Assembly Training program, will review basic shop safety, shop math, precision measurement and engineer drawings |
| MAAT-101 | Manufacturing & Aerospace Assembly Training Basic Knowledge, Skills and Practical’s | 53 | 147 | 200 | Students will learn the fundamentals of Basic Composite & Material Bonding,, Engineering Drawing, safety, tool cleaning and releasing agents, planning, terminology, bag & cure, assembly processes, drilling, reaming, countersink, surface preparations, fastener & rivet installation, sealants. Torque, safety wiring, repairs, and inspections, various materials of metals & composites. |
| CPT-101 | Safety | 18 | 22 | 40 | Through an online simulation, students will learn the basics of work safety, perform safety and environmental inspections, identify unsafe conditions, monitor safe equipment and operator performance, and utilize effective, safety-enhancing workplace practices  (No pre-requisite required) |
| Total Hours without prerequisite…………………………………… | | | | | 280 |

**Program Syllabus**

**HVAC Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Course Description: Students will acquire the skills required for entry-level HVAC Service Technician positions upon their successful graduation from the training program. It is comprised of 480 hours of instruction conducted weekdays from 8:00am-4:45pm, over a 12-week period in classroom and lab | | | | | |
| **COURSE#** | **SUBJECT** | **LECTURE**  **HOURS** | **LAB**  **HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| HVAC-101 | Fundamentals | 14 | 7.5 | 21.5 | Learn about the basic skills and tools used in the HVAC industry |
| HVAC-102 | HVAC Science | 7 | 1 | 8 | Discover the theories and technologies that make air conditioning possible |
| HVAC-103 | Refrigeration Systems and Components | 20 | 10 | 30 | Develop an understanding of how the large components of HVAC systems work |
| HVAC-104 | Refrigeration Practices | 24 | 34.5 | 58.5 | Learn how technicians handle and use refrigerants safely without harming the environment |
| HVAC-105 | HVAC Electrical Systems and Components | 34 | 54 | 88 | Learn the principles of electricity and how components and tools are used regularly by HVAC technicians |
| HVAC-106 | Air-Conditioning Systems | 19 | 18 | 37 | Combine previous units’ knowledge to see how they work together to accomplish air conditioning |
| HVAC-107 | Heating Systems | 13 | 14 | 27 | Learn about the theories and components that apply to heating systems |
| HVAC-108 | Heat Pump Systems | 19 | 23 | 42 | Learn about the way heat pumps operate more efficiently and how they are supplemented with electric heat |
| HVAC-109 | System Design, Sizing, and Layout | 19 | 15 | 34 | Learn how to appropriately size equipment and ductwork for residential applications |
| EPA-608 | Environmental Protection Agency 608 Universal Certification | 8 | 8 | 16 | Students obtain their EPA 608 Universal Certification |
| HVAC-110 | Installation, Maintenance, Service, and Troubleshooting | 60 | 58 | 118 | Begin to master the art of troubleshooting by encountering real life situations simulated in the lab |

|  |  |
| --- | --- |
| Total Hours…………………………………… | 480 |

**CompTIA A+ Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| 220-1001 | Hardware | 32 | 8 | 40 | CompTIA A+ 220-1001 covers mobile devices, networking technology, hardware, virtualization and cloud computing and network troubleshooting. |
| 220-1002 | Software | 40 | 0 | 40 | CompTIA A+ 220-1002 covers installing and configuring operating systems, expanded security, software troubleshooting and operational procedures. |
| Total Hours………………………………………………………… | | | | | 80 |

**CompTIA IT Fundamentals+ Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| FC0-U61 | IT Fundamentals | 32.75 | 7.25 | 40 | CompTIA ITF+ FC0-U61 covers using features of common OS, establishing network connectivity, common software applications, and security/web browsing practices. |
| Total Hours………………………………………………………… | | | | | 40 |
| Full syllabus attached separately: CompTIA ITF+ Syllabus.xlsx | | | | | |

**OSHA COMPLIANT FORKLIFT CERTIFICATION PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: Program provides trainee with knowledge and skills required for entry-level OSHA compliant forklift operation and certification, and is comprised of 40 hours of instruction conducted in classroom and simulated factory settings on weekdays, 7:00 AM to 3:45 PM, over a 1-week period in classroom and shop settings. | | | | | |
| **F-100 ORIENTATION, BASIC KNOWLEDGE AND SKILLS** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 1 | 2 |  | 8 | Introduction and Orientation | CLC, Inc. paperwork |
| 2 | 2 | 1 | Industrial Trucks, The Basics | FLC, Topic 1, 4, 5 - Pages 3-22 |
| 3 | 2 | 1 | Lift Trucks, The Basics | FLC, Topic 2, 3, 5 - Pages 3-20 |
| **F-101 SAFE OPERATION AND LOAD HANDLING I (Pre-requisite: F-100)** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 4 | 4 | 4 | 8 | Safe Operation and Load Handling i | FLC, Topic 1,4,5 - Pages 26-44 |
| **F-102 SAFE OPERATION AND LOAD HANDLING ii( Pre-requisite: F-101)** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 5 | 4 | 4 | 8 | Safe Operation and Load Handling ii | FLC, Topic 2, 3 - Pages 36-45 |
| **F-103 MAINTENANCE AND INSPECTION (Pre-requisite: F-102)** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 6 | 1 | 1 | 8 | Inspection and Maintenance i | FLC, Topic 1,4,5 Pages 12-22 |
| 7 | 1 | 1 | Inspection and Maintenance ii | FLC, Topic 2,3 Pages 9-20 |
| 8 | 1 | 1 | Fueling and Batteries i | FLC, Topic 1,4,5 Pages 47-57 |
| 9 | 1 | 1 | Fueling and Batteries ii | FLC, Topic 2,3 Pages 47-51 |
| **F-104 OBSERVATION AND TESTING (Pre-requisite: F-103)** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 10 |  | 5 | 8 | Observation and Testing |  |
| 11 | 3 |  | Job Search and Interviewing Techniques |  |
| Total | 21 | 19 | 40 |  |  |

FLC = from FLC Forklift Certification.com Operator Training Program, Certifyme, LLC

**Bookkeeping and QuickBooks Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| BKE-101 | Bookkeeping | 17.5 | 7 | 24.5 | Students learn the basics of bookkeeping, terminology, cash and accrual accounting method, accounts receivable and accounts payable, examine four financial reports, examine payroll terms and recording of entries, record and report payroll and sales tax.  (No pre-requisite required) |
| QB-101 | QuickBooks | 13 | 32.5 | 45.5 | Students learn how to set up and customize a company; entering and removing transactions; setup Customer, Vendor and Item lists; navigate Home Page and Menu bar; Back-up and Restore a data file; add Customer, Vendors, Item; Understand the Customer and Vendor Center and all aspects within; Enter customer and Vendor transactions; Enter, process and report Payroll; Run various reports along with functions of reports |
| Total Hours………………………………………………………… | | | | | 70 |

Fast-Track Course and Program Description

Syllabus for Fast-Track Aircraft Assembly Training Program

The Fast-Track Aircraft Assembly Training Program includes classroom and shop floor training in a real shop floor setting with Safety and Foreign Object Debris (FOD) related instruction. During the course of the training program, students will learn the basics of Manufacturing Mathematics, Engineering Drawings, Precision Measurements, Drilling/Countersinking, Fastener Installations.

Students will acquire and master the skills required for entry-level Aircraft Assembler positions in the aerospace industries, upon their successful graduation from the training program. Aircraft Assembly Training Program is comprised of eight hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a four week period in classroom and shop floor settings located at North Grants Lane in Fort Worth, Texas.

Successful completion of the Aircraft Assembly Training Program requires passing the skills-based end-of-course practical assessment given at the end of the program.

**Fast-Track Aircraft Assembly Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| FT-AA-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Aircraft Assembly training program, will review basic shop safety, math, precision measurement and engineer drawings.  (No pre-requisite required) |
| FT-AA-101 | Basic Structural Aircraft Assembly Knowledge and Skills | 40 | 40 | 80 | Students will learn the basics of lay-out, drilling, countersinking, riveting, blind fasteners, torque, safety wiring and flying object debris (FOD)  (Pre-requisite AA-100) |
| FT-AA-102 | Structural Aircraft Assembly Practical’s and Virtual Factory | 40 | 40 | 120 | Students will complete shop floor exercises gaining hands on experience in Aircraft Assembly  (Pre-requisite AA-101) |
| FT-AA-103 | Structural Aircraft Assembly Practical’s and Virtual Factory | 40 | 40 | 160 | Students will complete shop floor exercises gaining hands on experience in Aircraft Assembly  (Pre-requisite AA-101) |
| Total Hours ……………………..…………………………………… | | | | | 160 |

Fast-Track Course and Program Description

Syllabus for Fast-Track Machinist Training Program

Machinist Fast-Track Training Program – The Machinist Fast-Track Training Project will provide, operate, evaluate and improve upon an industry-designed and approved Machinist Training Program. The program is designed to provide the trainee with the NIMS Machining Level I knowledge and skills required for entry-level work as a Machinist and is comprised of 25 lessons, conducted weekdays between 7:00 AM and 3:45 PM over a four-week period in classroom and machine shop settings located at the Anglin Dr. facility in Fort Worth, Texas. As indicated in the curriculum outline in Table 1, the initial first week of training consists of classroom training in Safety, Shop Floor Math, Precision Measurement and Engineering Drawings training, with the remainder of the program consisting principally of “hands-on” training on the machine shop floor. Successful completion of the Machinist Fast-Track Training Program requires passing a combination of classroom training and the NIMS practical assessments given during the “Hands-on” training portion of the program.

**Fast-Track Machinist Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE**  **HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| FT-M-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Machinist training program, will review basic shop safety, math, precision measurement and engineer drawings  (No pre-requisite required) |
| FT-M-101 | Machinist Skills | 40 | 80 | 160 | Students will learn basic machinist skills, shop floor safety, measurement, materials and complete shop floor training using the metal cutting saw, drill press, mill, lathe and grinder  (Pre-requisite M-100) |
| Total Hours ……………………..…………………………………… | | | | | 160 |

Fast-Track Course and Program Description

**Syllabus for Fast-Track Welding Training Program**

In the Fast-Track Welding Training Program, students will acquire and master the skills required for entry-level Welder positions in the manufacturing and construction industries, upon their successful graduation from the training program. The Welding Training program is comprised of eight-hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a four week period in classroom and shop set­tings located at the CLC, Inc., Anglin Dr. facility in Fort Worth, Texas.

All students learn the basics in:

Layout Fitting

Shop tool use Project fabrication

Plasma torch cutting MIG welding

Stick welding

The projected growth rate for Welders in North Central Texas is 16.4%, with an average of 475 openings projected each year for the region due to growth and replacement. Mean hourly wages in the three Workforce Development Boards for entry-level positions in this occupational area currently range from $9.73 to $10.72 an hour.

Successful completion of the Welding Training Program requires that the trainees pass the skills-based production simulation evaluation conducted at the end of the training program.

**Fast-Track Welding Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| FT-W-100 | Orientation, Basic Engineer Knowledge and Skills | 16 | 24 | 40 | Students will be introduced to the Welding training program, will review basic shop safety, Introduction to Welding, engineer drawings and Welding Practice  (No pre-requisite required) |
| FT-W-101 | Gas Metal Arc & MIG Welding Theory & hands-on welding practice | 20 | 20 | 40 | Students will be introduced to terminology, complete basic shop floor instruction with basic assessments at the end of the week  (Pre-requisite W-100) |
| FT-W-102 | Plasma Theory and Cutting & MIG Welding Practice | 2 | 38 | 40 | Students will learn Plasma Cutting Theory, tips and welding practice guided by shop floor instruction  (Pre-requisite W-102) |
| FT-W-103 | Gas Metal Arc (MIG) Welding | 4 | 36 | 40 | Students will learn MIG welding, tips and practice guided by shop floor instruction  (Pre-requisite W-103) |
| Total Hours ……………………..…………………………………… | | | | | 160 |



# CLC, Inc.

# Producing Skilled Workers for 21st Century Jobs

CLC, Inc. offers entry level training to qualified applicants in:

**MANUFACTURING & AEROSPACE ASSEMBLY TRAINING**

**During the course of the training program, students will learn the basics of:**

* Safety, Manufacturing Mathematics, Engineering Drawings
* Drilling, reaming & Countersinking on various materials and surfaces
* Precision Measurements using Calipers, Micrometers & Machinist Scale
* Bonding of various composites & metals, resins, vacuum bagging, Honeycomb

core and lay-up methods

* Install and removal of various fasteners, torque, sanding, masking and adhesives

**Why Train With Us:**

* Assistance in professional development of Resume along with Interview skills.
* Successful graduates of the program will have their portfolios delivered to area employers such as Lockheed Martin, Bell Helicopter/TEXTRON, Triumph/Vought Aircraft Division, Sikorsky-(Composite Technology Inc.), Aero-Components for consideration upon successful completion of the skills based practical, excellent attendance, and demonstration of acceptable interpersonal skills
* Currently, only day classes are offered. 7:00am – 3:45pm M-F
* Course consists of both (40 hours) of classroom Academics and a total of (200 Hours) of Hands-On Composite Lay-Up & Assembly Training in a work simulated Lab Environment.
* Job Placement assistance after successful completion of the (6-Week) 240 Hour Program.

**Every program applicant must:**

* Be at least 18 years-old and have a high school diploma or GED
* Must be determined WIA Dislocated Worker eligible
* Demonstrate successful performance on an aptitude test
* Be a U. S. Citizen or Permanent Resident Alien
* Have **NO** felony convictions
* Be able to pass a criminal background and drug screen test for employment.

**For more information about CLC Manufacturing & Aerospace Assembly Training program, call Sam Deckich at mobile# (817-475-9478). Or visit our website at**

**CLC, INC., MANUFACTURING & AEROSPACE ASSEMBLY TRAINING (MAAT) PROGRAM CURRICULUM OUTLINE**

**Subject Description:** Students acquire and master the skills required for entry-level Manufacturing Assembly/Composite Technician positions in aerospace, automotive, sporting goods and other manufacturing industries, upon their successful graduation from the training program.

The (MAAT) Program is **240** hours, comprised of eight hour lessons conducted weekdays M-F from 7:00 AM to 3:45 PM over a **six** week period in classroom and shop floor settings.

Performance Objectives Students will Learn:

* Manufacturing Safety
* Shop Math
* Precision Measurement
* Engineering Drawings
* Basic Computer Operations
* Advanced Manufacturing Assembly & Composite Bonding
* Assembly layout, drilling, reaming, countersink, fastener install & removal
* Layup, vacuum bagging, bleeder & breather concepts and curing

**Subject Descriptions**

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| --- | --- | --- | --- | --- |
| **Day** | **Lesson** | **Hours** | **Topic** | **Activities/Reference Materials\*** |
| **WEEK 1: BASIC ENGINEERING KNOWLEDGE AND SKILLS** (**all classroom training**) | | | | |
| Mon |  | 1.00 | Welcome & Introduction | Orientation |
|  | 1.00 | Job Skills, Diversity, Career School Applications | Lecture, handouts Q & A |
| 1 | 6.00 | Virtual Factory Floor Safety & PPE | Factory Floor Safety & Assessment |
| Tue | 2 | 8.00 | Manufacturing Math – Decimals & Fractions | Manufacturing Math Assessment |
| Wed | 3 | 8.00 | Precision Measurement – Micrometers, Calipers, Machinist Scales | Precision Measurement Assessment |
| Thu- | 4 | 8.00 | Basic Engineering Drawing, Specifications, Planning, Engineering Work Instructions | Basic Engineering Drawings.  Various Manufacturing & Aerospace |
| Fri | 4 | 8.00 | Basic Engineering Drawing, Specifications, Planning, Engineering Work Instructions | Basic Engineering Drawings  Various Manufacturing & Aerospace  Assessment |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  | **WEEK 2: Advanced Materials Bonding, Basic Knowledge, Skills and Practical’s** | | | | |  | |  |  | | | |  |  |  |  | | | **Day** | **Lecture Hours** | | | | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References\*** | | | Mon |  | | | | 1 | 4  Lecture  36  Lab | Entry Composite Exam |  | | | Mon | 1 | | | | 1 | Intro to Lab, PPE & Solvents |  | | | Mon |  | | | | 4 | Clean Tools, Release & Prep Bagging Prep bagging Supplies | Water Works -Video  Instructor Demo’s | | | Mon | 1 | | | |  | Composite Terminology | \*Appendix G-1 | | | Tues | 1 | | | |  | Review & Assessment | Water Works | | | Tue |  | | | | 7 | Cutting & Prep. Material for all Kits | Practical #1 thru #6 | | | Tue |  | | | | 1 | Seal in Kits, Log into Freezer |  | | | Wed |  | | | | 7 | Cutting & Prep. Material for all Kits | Practical #1 thru #6 | | | Wed |  | | | | 1 | Seal in Kits, Log into Freezer |  | | | Thu |  | | | | 5 | Cutting & Prep. Material for all Kits | Practical #1 thru #6 | | | Thu |  | | | | 1 | Seal in Kits, Log into Freezer |  | | | Thu |  | | | | 2 | Planning & Procedures & Grading |  | | | Fri | 1 | | | | 1 | Prepare Debulk Bag& Tool | Instructor Demo for Practical #1 | | | Fri |  | | | | 6 | Prepare Debulk Bag& Tool | Practical #1 | | | | | | |

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|  |  |  |  | **WEEK 3: Advanced Materials Bonding, Basic Knowledge, Skills and Practical’s** | | | | |  |
|  |  | | | |  |  |  |  | |
| **Day** | **Lecture Hours** | | | | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References\*** | |
| Mon |  | | | | 6 | 4  Lecture  36  Lab | Start Layup– 8” x 8” Flat Panel | Practical #1 | |
| Mon |  | | | | 2 | Complete Final Bag & Leak Check | Practical #1 | |
| Tue |  | | | | 1 | Start Cure of Practical # 1 | Practical #1 | |
| Tue | 1 | | | | 1 | Review Planning,  Start Bagging of Practical #2 | Practical #2 | |
| Tue |  | | | | 4 | Start Layup- 3” x 12” Outside Angle | Practical #2 | |
| Tue |  | | | | 1 | Complete Final Bag & Leak Check | Practical #2 | |
| Wed |  | | | | 1 | Post Bond Practical #1 | Practical #1 | |
| Wed |  | | | | 1 | Start Cure of Practical #2 | Practical #2 | |
| Wed | 1 | | | | 1 | Review Planning,  Start Bagging of Practical #3 | Practical #3 | |
| Wed |  | | | | 3 | Start Layup of 12” x 12” flat panel with Honeycomb Core | Practical #3 | |
| Wed |  | | | | 1 | Complete Final Bag & Leak Check | Practical #3 | |
| Thu |  | | | | 1 | Post Bond Practical #2 | Practical #2 | |
| Thu |  | | | | 1 | Start Cure of Practical #3 | Practical #3 | |
| Thu | 1 | | | | 1 | Review Planning,  Start Bagging of Practical #4 | Practical #4 | |
| Thu |  | | | | 3 | Start Layup of 3” x 12” Inside Angle | Practical #4 | |
| Thu |  | | | | 1 | Complete Final Bag & Leak Check | Practical #4 | |
| Fri |  | | | | 1 | Post Bond Practical #3 | Practical #3 | |
| Fri |  | | | | 1 | Start Cure of Practical #4 | Practical #4 | |
| Fri | 1 | | | | 1 |  | Review Planning,  Start Bagging of Practical #4 | Practical #5 | |
| Fri |  | | | | 3 |  | Start Layup of 12” x 12” Flat Panel Various stackup, (3) materials used | Practical #5 | |
| Fri |  | | | | 1 |  | Complete Final Bag & Leak Check | Practical #5 | |

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|  |  |  |  | **WEEK 4: Advanced Materials Bonding & Manufacturing & Aerospace Assembly Basic**  **Knowledge, Skills, Practical’s & Exercises** | | | | |  |
|  |  | | | |  |  |  |  | |
| **Day** | **Lecture Hours** | | | | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References\*** | |
| Mon |  | | | | 1 | 11  Lecture  29  Lab | Post Bond Practical #4 | Practical #4 | |
| Mon |  | | | | 1 | Start Cure of Practical #5 | Practical #5 | |
| Mon | 1 | | | | 1 | Review Planning,  Start Bagging of Practical #6 | Practical #6 | |
| Mon |  | | | | 3 | Start Layup of 3” x 12” Outside Angle with Over-Press | Practical #6 | |
| Mon |  | | | | 1 | Complete Final Bag & Leak Check | Practical #6 | |
| Tue |  | | | | 1 | Post Bond Practical #5 | Practical #5 | |
| Tue |  | | | | 1 | Start Cure of Practical #6 | Practical #6 | |
| Tue | 1 | | | | 1 | Review Planning,  Start Bagging of Practical #7 | Practical #7 | |
| Tue |  | | | | 3 | Start Layup of 12” x 12” Flat Panel, with Nest | Practical #7 | |
| Tue |  | | | | 1 | Complete Final Bag & Leak Check | Practical #7 | |
| Wed |  | | | | 1 | Post Bond Practical #6 | Practical #6 | |
| Wed |  | | | | 1 | Start Cure of Practical #7 | Practical #7 | |
| Wed |  | | | | 1 | Review &Final Composite Written Assessment | Assessment | |
| Wed | 2 | | | |  | Resume Writing, Job Searches, Interviews, Partner Employers & Research & Expectations | Lecture | |
| Wed |  | | | | 3 | Post Bond Practical #7, Secondary Bond Practical #4, Final Re Bag & Cure. | Final Practical #7 | |
| Thu | 1 | | | |  | **DRILL, REAM, COUNTERSINK**-  Intro / Objectives / Defects / Clean-as-you-go, FOD |  | |
| Thu | 1 | | | |  | Manufacturing & Self verification |  | |
| Thu | 2 | | | | 4 | **ASSEMBLY LAYOUT**- Tools, Edge Distance, Spacing & Securing part (Clamping), Fixture Location (Clamping), Part Numbers, Tool Numbers, Labels |  | |
| Fri | 3 | | | | 5 |  | **DRILL & REAM**- Motors, RPM’s, Drill Bits, Reamers, Guide Blocks, Bushings, Lubricants & Coolants |  | |

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|  |  |  |  | **WEEK 5: Manufacturing & Aerospace Assembly, Basic Knowledge, Skills and Exercises** | | | | |  |
| **Day** | **Lecture Hours** | | | | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References\*** | |
| Mon | 1 | | | |  | 18  Lecture  22  Lab | **SECONDARY HOLE PREP**- Intro & Objectives |  | |
| Mon |  | | | | 4 | Countersink, Counterseal, Spotface, Counterbore, Deburr, Fillet Relief, Guages, Self Verification, Clean-As-You-Go, FOD |  | |
| Mon | 1 | | | |  | **CHEMFILM CONVERSION**-Intro & Objectives |  | |
| Mon |  | | | | 1 | Conversion Coating Application, MIL Spec, Safety, FOD, Manufacturing & Self Verification |  | |
| Mon |  | | | | 1 | Materials Involved-Cleaner, Water, Primer, Application Touchup Process, Aluminum Surfaces | MIL-DTL-81706 | |
| Tue | 1 | | | |  | **SOLID & LIQUID SHIMMING-** Intro & Objectives, Manufacturing & Self Verification, Safety & FOD |  | |
| Tue |  | | | | 1 | Shim Types, Adhesives, Primers |  | |
| Tue | 1 | | | |  | **TOOLS, PPREPARATION FOR SHIMMING** |  | |
| Tue |  | | | | 2 | Decision Process Flow, Unbonded Surfaces, Fit, Measuring Gaps, Mismatches, Shaping Shims, Moldable Plastic Shim, Surface Prep |  | |
| Tue | 1 | | | |  | **INSTALLING SHIMS** |  | |
| Tue |  | | | | 2 | Secure Structure, Cure Cycle, Cleanup, Reprocessing, Final Assembly |  | |
| Wed | 1 | | | |  | **FAYING SURFACES SEALING**- Intro & Objectives, Manufacturing & Self Verification, Safety & FOD  Work Instructions, DWG, Planning |  | |
| Wed | 1 | | | |  | **SEALANT TYPES & JOB PREPARATION** |  | |
| Wed |  | | | | 2 |  | Cleaning, Set-Up Bolts, Clecos, Promotors, Tools |  | |
| Wed | 1 | | | | 2 |  | **SEALANT APPLICATION**-  Applying to Surface, Assembly, Cleanup |  | |
| Wed | 1 | | | | 1 |  | **VOID SEALING**-  Exposed Voids, Closed Voids, Clean-as-you-go, FOD |  | |
| Thu | 1 | | | |  |  | **FILLET & GAP SEALING**- Intro & Objectives, Manufacturing & Self Verification, Safety & FOD  Work Instructions, DWG, Planning |  | |
| Thu | 1 | | | | 1 |  | **SEALANT**-Common Sealants & Cleaning |  | |
| Thu | 1 | | | | 1 |  | **JOB PREPARATION**- Surface Prep, Promotors, Tools |  | |
| Thu | 1 | | | |  |  | **SEALANT APPLICATION (FILLET / CAP)** |  | |
| Thu |  | | | | 2 |  | Fuel Areas (Fillet), Non-Fuel Areas (Cap), Vents, Drains, Clean-as-you-go, FOD |  | |
| Fri | 1 | | | |  |  | **SOLID & BLIND RIVETS**-Intro |  | |
| Fri | 1 | | | | 1 |  | **SOLID RIVETS**-Definitions, Tools, machines & Equipment, Holes, Countersinking & Planning |  | |
| Fri | 1 | | | | 1 |  | **RIVET DIMENSIONING** – Flat or Tapered Upset Tail,Countersink Upset Tail, Cutting the Rivet to Length |  | |
| Fri | 1 | | | | 1 |  | **DESCRIPTION OF THE RIVET OPERATION**- Squeezing Slow, Rivet Gun |  | |
| Fri | 1 | | | |  |  | **WET INSTALLATION, FLUSHNESS, INSPECTION & REPAIRS** |  | |

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|  |  |  |  | | **WEEK 6: Manufacturing & Aerospace Assembly, Basic Knowledge, Skills and Exercises** | | | |  |
| **Day** | **Lecture Hours** | | | **Lab Hours** | | **Total Hours** | **Unit Titles** | **Curriculum References\*** | |
| Mon | .5 | | | 3 | | 16  Lecture  24  Lab | **BLIND RIVETS**- Definitions, Tools, machines & Equipment, Holes, Countersinking & Planning, Rivet Length, Description of the Rivet Installation, Wet Installation, Use of Washers  Inspection & Repair |  | |
| Mon | .5 | | | 1 | | **BLIND BOLTS**- Intro & Objectives, Manufacturing & Self Verification, Safety & FOD Work Instructions, DWG, Planning |  | |
| Mon | .5 | | | 2.5 | | **TOOLS**- Grip Gauges, Installation Tools **SEALANT APPLICATION (WET INSTALLATION) INSPECTION**-Flushness **REMOVAL** |  | |
| Tue | 1 | | |  | | **BONDED NUTPLATE INSTALLATION-** Intro & Objectives, Manufacturing & Self Verification, Safety & FOD, Work Instructions, DWG, Planning |  | |
| Tue | .5 | | | 2 | | **IDENTIFYING NUTPLATES SURFACE PREPARATION-** Nutplate Surface, Aircraft Surface- Metallic & Composites  INSTALL OF INSERTS-Composites with Core |  | |
| Tue | .5 | | | 1 | | **BONDING-** Adhesive Application-Work Life Squeeze Out Inspection, Post Cure Inspection, Push Off Test |  | |
| Tue | .5 | | | 2.5 | | **FINISH TOUCH UP, PROCESSING**- Knock Off Methods- Room Temperature, Heat, Cold **SLEEVES-** Surface Preparation, Installation & Inspection, Clean-as-you-go, FOD |  | |
| Wed | 1 | | |  | | **TORQUE FASTENER INSTALLATION**- Intro & Objectives, Manufacturing & Self Verification, Safety & FOD, Work Instructions, DWG, Planning |  | |
| Wed | .5 | | | 2 | | **TORQUE TOOLS**- Torque Wrench types: Jobe Wrenches, Breakaway Wrenches, Pneumatic Guns, Calibration, Care & Use, Extensions |  | |
| Wed | .5 | | | 4 | | **TORQUE FASTENER INSTALLATION-** Panel Fasteners, Thread-In-Bearing, Shank Out, Minimum Thread Protrusion, Washers, Clean-as-you-go, FOD, **SAFETY WIRING** |  | |
| Thu | .5 | | |  | |  | **EDDIE BOLT /LOCKBOLT INSTALLATION**- Intro & Objectives, Manufacturing & Self Verification, Safety & FOD, Work Instructions, DWG, Planning |  | |
| Thu | .5 | | | 1.5 | |  | **EDDIE BOLT INSTALLATION, EDDIE BOLT PRE-INSTALLATION**-Grip Gauges, Dry Fit, Protrusion Gauges, Drive Gauges, Washers, Installation Tooling: Power & Hand | Alcoa Fastening Systems | |
| Thu | .5 | | | 1.5 | |  | **EDDIE BOLT INSTALLATION-** Fastener Preparation, Installation, Post Installation Inspection: Swage Paddle & Protrusion Gauges, Flushness, Reprocessing, Removal, Oversize / Gauges | Alcoa Fastening Systems | |
| Thu | .5 | | | 1 | |  | **LOCKBOLT INDENTIFICATION / COLLARS**  **LOCKBOLT PRE-INSTALLATION**- Grip Gauges, Dry Fit, Protrusion Gauges, Drive Gauges, Washers, Installation Tooling |  | |
| Thu | .5 | | | 1.5 | |  | **LOCKBOLT INSTALLATION-** Fastener Preparation, Installation, Post Installation Inspection: Swage Gauges, Flushness, Reprocessing, Removal, Oversize / Gauges |  | |
| Fri | 2 | | | 1.5 | |  | **FINAL ASSESSMENTS & GRADUATION**-Course Overview, Final Written Assessment, Virtual Factory Floor Cleanup & FOD Walk, |  | |
| Fri | .5 | | |  | |  | TWC Grant Course Student Surveys, |  | |
| Fri | 4 | | |  | |  | Graduation Lunch Food Spread for participants & Invited Guests  Graduation Ceremony. Q & A, Resumes, Applications, Interviews Etc. |  | |

**Reference Materials**: Curriculum is in the process of being developed from a number of different sources, including texts listed below and repair standards and procedures materials from LM Aero, Bell Helicopter, American Airlines, and Boeing:

* Advanced Composites, by Cindy Foreman, Englewood, CO: Jepperson Sanderson (2002) [in particular "Chapter 11: Assessment and Repair" and "Chapter 12: Types of Repair"].
* Fundamentals of Composite Manufacturing: Materials, Methods, and Applications, by A. Brent Strong, Dearborn, MI: Society of Manufacturing Engineers (2008) [in particular "Chapter 20: Damage, Prevention and Repair"].
* Essentials of Advanced Composite Fabrication and Repairs, by Louis C. Dorworth, Ginger L. Gardner, and Greg M. Gellema, Newcastle, WA: Aviation Supplies and Academies (2009).

Maximum student to instructor ratio is 20 to 2 in both lecture and shop floor settings.

In order for the participant to successfully complete the training course, students must fulfill the following criteria:

* regularly attend both in-classroom and shop floor training;
* maintain an excellent attendance and punctuality record;
* maintain industry acceptable conduct;
* pass the final skills based practical tests administered by the course instructor and scored by an industry representative;
* upon successful completion of the (MAAT) Training Course, the participant receives a certificate of successful completion from CLC, Inc.;

Each participant must acquire sufficient knowledge and understanding of the following subjects: Manufacturing Safety, Basic Engineering Drawing, Composite Bonding, Manufacturing Assembly & Basic Repairs.

**GRADING AND MARKING SYSTEM**

Students are assessed prior to entering the CLC, Inc. training program in reading and mathematics by the utilization of The Test of Adult Basic Education (TABE). Students must score an 8th grade level or higher in both Reading & Math to qualify for CLC, Inc. skills training programs.

Students will complete skills based assessments throughout the program for progress tracking and retention of training.

Students will be given a final skills based practical assessment, administered and scored by the course instructor, at the end of the training program. Students must score 80% or higher to successfully graduate the skills training program.

**MANUFACTURING & AEROSPACE ASSEMBLY TRAINING – PLUS**

**During the course of the training program, students will learn the basics of:**

* Safety, Manufacturing Mathematics, Engineering Drawings
* Drilling, Reaming & Countersinking on various materials and surfaces
* Precision Measurements using Calipers, Micrometers & Machinist Scale
* Bonding of various composites & metals, resins, vacuum bagging, Honeycomb

core and lay-up methods

* Install and removal of various fasteners, torque, sanding, masking and adhesives

**Why Train With Us:**

* Assistance in professional development of Resume along with Interview skills.
* Successful graduates of the program will have their portfolios delivered to area employers such as Lockheed Martin, Bell/TEXTRON, Triumph/Vought Aircraft Division, Sikorsky-(Composite Technology Inc.), Aero-Components for consideration upon successful completion of the skills based practical, excellent attendance, and demonstration of acceptable interpersonal skills
* Currently, only day classes are offered. 7:00am – 3:45pm M-F
* Course consists of both (40 hours) of classroom Academics and a total of (240 Hours) of Hands-On Composite Lay-Up & Assembly Training in a work simulated Lab Environment.
* Job Placement assistance after successful completion of the (7-Week) 280 Hour Program.

**Every program applicant must:**

* Be at least 18 years-old and have a high school diploma or GED
* Must be determined WIA Dislocated Worker eligible
* Demonstrate successful performance on an aptitude test
* Be a U. S. Citizen or Permanent Resident Alien
* Have **NO** felony convictions
* Be able to pass a criminal background and drug screen test for employment.

**For more information about CLC Manufacturing & Aerospace Assembly Training Plus program, call Troy Bottem at mobile# (817-475-0760). Or visit our website at** [**www.clcinc.org**](http://www.clcinc.org)

**CLC, INC., MANUFACTURING & AEROSPACE ASSEMBLY TRAINING Plus (MAAT-Plus) PROGRAM CURRICULUM OUTLINE**

**Subject Description:** Students acquire and master the skills required for entry-level Manufacturing Assembly/Composite Technician positions in aerospace, automotive, sporting goods and other manufacturing industries, upon their successful graduation from the training program.

The (MAAT) Program is **280** hours, comprised of eight-hour lessons conducted weekdays M-F from 7:00 AM to 3:45 PM over a **seven**-week period in classroom and shop floor settings.

Performance Objectives Students will Learn:

* Manufacturing Safety
* Shop Math
* Precision Measurement
* Engineering Drawings
* Basic Computer Operations
* Advanced Manufacturing Assembly & Composite Bonding
* Assembly layout, drilling, reaming, countersink, fastener install & removal
* Layup, vacuum bagging, bleeder & breather concepts and curing
* Safety

**Subject Descriptions**

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| --- | --- | --- | --- | --- | --- |
| **Week 1: Manufacturing and Aerospace Assembly Training – Plus Program Academics** | | | | | |
| **Day** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Topic** | **Activities/Reference Materials** |
| Mon | 1 |  | 30 Lecture 10 Lab | Welcome and Introduction | Orientation |
| Mon | 1 |  | Job Skills, Expectations, Career School Applications | Lecture, Handouts, Q&A |
| Mon | 6 |  | Virtual Factory Floor Safety and PPE | Factory Floor Safety & Assessment |
| Tue | 6 | 2 | Manufacturing Math- Hand Calculations, Decimals, and Fractions | Manufacturing Math Assessment |
| Wed | 6 | 2 | Precision Measurement- Micrometers, Calipers, Various Gauges, & Machinist Scales | Precision Measurement Assessment |
| Thu | 6 | 2 | Basic Engineering Drawing, Specifications, Planning, Engineering Work Instructions | Engineering Drawing Interpretation Exercises |
| Fri | 4 | 4 | Basic Engineering Drawing, Specifications, Planning, Engineering Work Instructions | Engineering Drawing Assessment |

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| **Week 2: Advanced Materials Bonding, Basic Knowledge, Skills, and Practicals** | | | | | |
| **Day** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References** |
| Mon |  | 1 | 6 Lecture 34 Lab | Composite Entry Exam |  |
| Mon | 1 | 1 | Introduction to Lab, PPE, and Solvents |  |
| Mon |  | 4 | Clean and Release Molds/Tools Using Various Solvents and Chemical Release Agents | Waterworks Mold Release video |
| Mon | 1 |  | Composite Terminology | Appendix G-1 |
| Tue | 1 |  | Review and Assessment | Waterworks |
| Tue |  | 6 | Cut Composite Material for all Kits | Practicals #1-8 |
| Tue |  | 1 | Seal Kits and Log into Freezer |  |
| Wed |  | 7 | Cut Composite Material for all Kits | Practicals #1-8 |
| Wed |  | 1 | Seal Kits and Log into Freezer |  |
| Thu |  | 4 | Finish Material Cutting/Kitting | Practicals #1-8 |
| Thu | 2 |  | Introduction to Planning/Traveler and Grading |  |
| Thu |  | 2 | Cut Bagging Materials for First Practical-Release/Separator Film, Airweave, Edge Breather, Vacuum Bag | Practical #1 |
| Fri | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #1 |
| Fri |  | 5 | Start Layup of Practical #1 8x8 Flat Panel | Practical #1 |
| Fri |  | 1 | Complete Final Bag and Leak Check | Practical #1 |

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| **Week 3: Advanced Materials Bonding, Basic Knowledge, Skills, and Practicals** | | | | | |
| **Day** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References** |
| Mon |  | 1 | 5 Lecture 35 Lab | Start Cure of Practical #1 | Practical #1 |
| Mon | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #2 |
| Mon |  | 4 | Start Layup of Practical #2 Outside Radius Stiffener | Practical #2 |
| Mon |  | 1 | Complete Final Bag and Leak Check | Practical #2 |
| Tue |  | 1 | Post Bond Practical # 1- Deburring, Cleaning, Identifying | Practical #1 |
| Tue |  | 1 | Start Cure of Practical #2 | Practical #2 |
| Tue | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #3 |
| Tue |  | 3 | Start Layup of Practical #3 Honeycomb Sandwich Panel 12x12 | Practical #3 |
| Tue |  | 1 | Complete Final Bag and Leak Check | Practical #3 |
| Wed |  | 1 | Post Bond Practical #2- Deburring, Cleaning, Identifying | Practical #2 |
| Wed |  | 1 | Start Cure of Practical #3 | Practical #3 |
| Wed | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #4 |
| Wed |  | 3 | Start Layup of Practical #4 Inside Radius Stiffener With Peel Ply | Practical #4 |
| Wed |  | 1 | Complete Final Bag and Leak Check | Practical #4 |
| Thu |  | 1 | Post Bond Practical #3- Deburring, Cleaning, Identifying | Practical #3 |
| Thu |  | 1 | Start Cure of Practical #4 | Practical #4 |
| Thu | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #5 |
| Thu |  | 3 | Start Layup of Practical #5 Picture Frame- Noncontinuous Plies, Rubber Overpress | Practical #5 |
| Thu |  | 1 | Complete Final Bag and Leak Check | Practical #5 |
| Fri |  | 1 | Post Bond Practical #4- Deburring, Cleaning, Identifying | Practical #4 |
| Fri |  | 1 | Start Cure of Practical #5 | Practical #5 |
| Fri | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #6 |
| Fri |  | 3 | Start Layup of Practical #6 Secondary Bonding Base- 12x12 With Nest | Practical #6 |
| Fri |  | 1 | Complete Final Bag and Leak Check | Practical #6 |

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| **Week 4: Advanced Materials Bonding, Basic Knowledge, Skills, and Practicals** | | | | | |
| **Day** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References** |
| Mon |  | 1 | 6 Lecture 34 Lab | Post Bond Practical #5- Deburring, Cleaning, Identifying | Practical #5 |
| Mon |  | 1 | Start Cure of Practical #6 | Practical #6 |
| Mon | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #7 Base |
| Mon |  | 3 | Start Layup of Practical #7 IBeam Base- 12x12 Flat Panel With Pedestal Plies and Peel Ply | Practical #7 Base |
| Mon |  | 1 | Complete Final Bag and Leak Check | Practical #7 Base |
| Tue |  | 1 | Post Bond Practical #6- Deburring, Cleaning, Identifying | Practical #6 |
| Tue |  | 1 | Start Cure of Practical #7 Base | Practical #7 Base |
| Tue | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #7 Tubes |
| Tue |  | 3 | Start Layup of Practical #7 IBeam Tubes- Outside Radius Tube Layup to Form I-Beam | Practical #7 Tubes |
| Tue |  | 1 | Complete Final Bag and Leak Check | Practical #7 Tubes |
| Wed |  | 1 | Post Bond Practical #7 Base- Deburring, Cleaning, Identifying | Practical #7 Base |
| Wed |  | 2 | Secondary Bond #7 Base and Tubes | Practical #7 Tubes |
| Wed |  | 1 | Complete Final Bag and Leak Check, Begin Cure | Practical #7 Tubes |
| Wed |  | 2 | Secondary Bonding Practicals #4/#6 Using Supported Film Adhesive | Practicals #4/#6 |
| Wed |  | 1 | Complete Final Bag and Leak Check | Practicals #4/#6 |
| Wed |  | 1 | Final Composite Exam Review |  |
| Thu |  | 1 | Post Bond Practical #7 IBeam- Deburring, Cleaning, Identifying | Practical #7 Tubes |
| Thu |  | 1 | Start Cure of Practical #4/#6 Secondary Bonding | Practicals #4/#6 |
| Thu | 1 | 1 | Review Planning and Prepare Vacuum Bag | Practical #8 |
| Thu |  | 3 | Start Layup of Practical #8- Final Composite Panel 8x8 | Practical #8 |
| Thu |  | 1 | Complete Final Bag and Leak Check | Practical #8 |
| Fri |  | 1 | Start Cure of Practical #8 | Practical #8 |
| Fri | 3 |  | Introduction to Aerospace Coatings and Coating Tools |  |
| Fri |  | 3 | HVLP Spray Gun Demonstration- Setup, Usage (0 VOC Coating), and Cleaning |  |
| Fri |  | 1 | Post Bond Practical #8 and #4/#6- Deburring, Cleaning, Identifying | Practical #8 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Week 5: Manufacturing & Aerospace Assembly, Basic Knowledge, Skills, and Practicals** | | | | | |
| **Day** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References** |
| Mon |  | 1 |  | Composite Bonding Final Exam |  |
| Mon | 2 |  | 15 Lecture 25 Lab | Drill, Ream, Countersink Presentation- Intro, Objectives, Defects, Clean as You Go, Company Expectations, Accountability & FOD |  |
| Mon | 2 | 1 | Hand Tools- Pneumatic Drills, Fastener Installation/Removal, Drill Bits, Various Aerospace Assembly Tools, Safety |  |
| Mon | 2 |  | Torque and Safety Wiring- Torque Wrench Usage, Adjustment, and Maintenance |  |
| Tue | 2 |  | Fastener Selection- Eddie Bolts, Solid Rivets, Blind Rivets, Squeeze Rivets, Torque Fasteners, Self-Locking Nuts, Washers, Collars |  |
| Tue | 2 | 1 | Assembly Layout Presentation and Introduction to Assembly Practicals, Self-Verification |  |
| Tue |  | 3 | Assembly Layout Practice and Begin Assembly Practical #1- Precision Layout, Machinist Scales, Drill Starts, Drill Blocks, Drill Guides, Pilot Holes, Tolerance, and Deburring | Assembly Practical #1 |
| Wed | 1 | 3 | Assembly Practical #2- 63 Hole Exercise- Precision Layout, Machinist Scales, Drill Starts, Pilot Holes, Drill Blocks, Drill Guides, Tolerance, and Deburring | Assembly Practical #2 |
| Wed | 1 | 3 | Assembly Practical #3- Pilot Holes, Hole Correction, Upsizing, Step-Drilling, Chamfer, Fillet Relief, Countersinking, Microstop | Assembly Practical #3 |
| Thu | 1 | 3 | Assembly Practical #4- Multiple Plate Drilling, Aluminum Skins, Deburring and Assembly. Cleco Usage and Placement, Countersink, Microstop Adjustment, Step-Drilling, Fastener Installation, and Torque | Assembly Practical #4 |
| Thu |  | 4 | Introduction to Sealants, Sealant Application Tools, and Solid & Liquid Shimming- Squeeze Out, Surface Preparation, Filling and Fairing |  |
| Fri | 1 | 3 | Assembly Practical #5- Cleco Usage, Countersink, Microstop Adjustment, Step-Drilling, Fastener Installation, and Torque. Nutplate Installation, Removal, Alligator Squeeze Gun, Rivets, and Spotfacing | Assembly Practical #5 |
| Fri | 1 | 2 | Surface Preparation- Scuffing, Solvent Cleaning, Promotors, Masking |  |
| Fri |  | 1 | Sealant Application (Fillet/Cap) |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Week 6: Manufacturing & Aerospace Assembly, Basic Knowledge, Skills, and Practicals** | | | | | |
| **Day** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References** |
| Mon | 1 | 3 | 16 Lecture 24 Lab | Assembly Practical #6- Clecos, Nutplates, Click Bond Nutplate Installation and Preparation, Adhesive Squeeze-Out, Countersink, Self-Verification, Torque, Tolerance | Click Bond Fastening Systems Assembly Practical # 6 |
| Mon | 2 | 2 | Solid and Blind Rivet Installation and Tools- Planning, Holes, Countersink, Grip Gauge, Wet Installation, Flushness Inspection |  |
| Tue | 1 | 3 | Assembly Practical #7- Clecos, Nutplates, Jigs, Countersink, Self-Verification, Torque, Tolerance | Assembly Practical #7 |
| Tue | 1 | 1 | Fastener Correction/Repair, Drilling Out, Bushing, Verification, Gauges |  |
| Tue | 2 |  | Introduction to Composite Panel/Skin Drilling and Surface Preparation |  |
| Wed | 1 | 3 | Assembly Practical #8- Clecos, Nutplates, Jigs, Countersink, Self-Verification, Torque, tolerance | Assembly Practical #8 |
| Wed |  | 2 | Composite Panel Drilling, Reaming, and Countersinking. Self-Verification, Tolerances, Gauges |  |
| Wed | 1 | 1 | Resume Writing Skills, Job Searches, Employer Research and Presentations, Employer Expectations |  |
| Thu |  | 2 | Tool Maintenance, Calibration, and Lubrication. |  |
| Thu |  | 6 | Final Assembly Practical #9 | Assembly Practical #9 |
| Fri | 2 | 1 | Final Assessments and Graduation- Course Overview, Final Written Assessment, Virtual Factory Floor Cleanup and FOD Walk |  |
| Fri | 1 |  | School Survey and Student Questions/Answers |  |
| Fri | 4 |  | Graduation Ceremony- Questions/Answers, Resumes, Applications, Mock Interviews |  |

The Manufacturing Skill Standards Council (MSSC) Certified Production Technician Training (CPT) Program is designed to provide the trainee with the basic knowl­edge, understanding, and skills required for production work in high-performance manufacturing operations. Successful completion of the Certified Production Technician (CPT) Training Program will be as indicated by documentation that the participant passed the MSSC Safety Online Assessment

**Program Title: MSSC-CERTIFIED PRODUCTION TECHNICIAN (CPT) TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: The CPT Training Program is comprised of four on-line, teacher-facilitated courses conducted over four 40-hour weeks and making use of a Manufacturing Skill Standard Council (MSSC) Certificate Program curriculum taught by an MSSC-certified CLC, Inc., Instructor in an MSSC-certified training facility operated by CLC, Inc. It is designed to provide the trainee with the basic knowledge, understanding, and skills required for production work in high-performance manufacturing operations. Each course delivered through the program corresponds to a major competency area, and the trainee must pass assessments in all four competency areas in order to earn the “MSSC Production Technician Certification” Certificate. | | | | | |
| **INSTRUCTIONAL MATERIALS**: Program textbook is MSSC’s High Performance Manufacturing: Portable Production Skills, McGraw-Hill (2006), with corresponding on-line materials and assessment instruments. [\*Curriculum References: OS = On-line Safety Course; OQ = On-Line Quality Course; OP = On-Line Production Course; OM = On-Line Maintenance Course] | | | | | |
| **CPT-101 SAFETY COURSE** | | | | | |
| **Unit** | **Lecture**  **Hours** | **Lab**  **Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference\*** |
| 1 | 1 | 1 | 40 | Learning Techniques | Teacher Led |
| 2 | 1 | 1 | Working in Manufacturing | Teacher Led |
| 3 | 1 | 1 | Impact of Manufacturing | Teacher Led |
| 4 | 1 | 1 | Responding to Customer Expectations | Teacher Led |
| 5 | 1 | 1 | Best Practice  s Companies | Teacher Led |
| 6 | 1 | 1 | Communications Skills | Teacher Led |
| 7 | 1 | 1 | Production Group Communications | Teacher Led |
| 8 | 1 | 1 | Communication Strategies | Teacher Led |
| 9 | 1 | 1 | Production Teams | MSSC-OS1 |
| 10 | 1 | 1 | Training and Leadership | MSSC-OS2 |
| 11 | 1 | 1 | Meeting Customer Needs | Teacher Led |
| 12 | 1 | 1 | Introduction to Safety | MSSC-OS3 |
| 13 | 1 | 1 | Personal Protective Equipment | MSSC-OS4 |
| 14 | 1 | 1 | Fire and Electrical Safety | MSSC-OS5 |
| 15 | 1 | 1 | Work Area Safety | MSSC-OS6 |
| 16 | 1 | 1 | Hazardous Material Safety | MSSC-OS7 |
| 17 | 1 | 1 | Tool and Machine Safety | MSSC-OS8 |
| 18 | 1 | 1 | Material Handling Safety | MSSC-OS9 |
| Test |  | 4 | MSSC-M1 Safety Course Assessment | MSSC Assessment |

**Reference Materials**: Curriculum is in the process of being developed from a number of different sources, including texts listed below and repair standards and procedures materials from LM Aero, Bell/Textron, American Airlines, and Boeing:

* Advanced Composites, by Cindy Foreman, Englewood, CO: Jepperson Sanderson (2002) [in particular "Chapter 11: Assessment and Repair" and "Chapter 12: Types of Repair"].
* Fundamentals of Composite Manufacturing: Materials, Methods, and Applications, by A. Brent Strong, Dearborn, MI: Society of Manufacturing Engineers (2008) [in particular "Chapter 20: Damage, Prevention and Repair"].
* Essentials of Advanced Composite Fabrication and Repairs, by Louis C. Dorworth, Ginger L. Gardner, and Greg M. Gellema, Newcastle, WA: Aviation Supplies and Academies (2009).

Maximum student to instructor ratio is 20 to 2 in both lecture and shop floor settings.

In order for the participant to successfully complete the training course, students must fulfill the following criteria:

* regularly attend both in-classroom and shop floor training;
* maintain an excellent attendance and punctuality record;
* maintain industry acceptable conduct;
* pass the final skills based practical tests administered by the course instructor and scored by an industry representative;
* upon successful completion of the (MAAT-Plus) Training Course, the participant receives a certificate of successful completion from CLC, Inc.

Each participant must acquire sufficient knowledge and understanding of the following subjects: Manufacturing Safety, Basic Engineering Drawing, Composite Bonding, Manufacturing Assembly & Basic Repairs.

**GRADING AND MARKING SYSTEM**

Students are assessed prior to entering the CLC, Inc. training program in reading and mathematics by the utilization of The Test of Adult Basic Education (TABE). Students must score an 8th grade level or higher in both Reading & Math to qualify for CLC, Inc. skills training programs.

Students will complete skills-based assessments throughout the program for progress tracking and retention of training.

Students will be given a final skill based practical assessment, administered, and scored by the course instructor, at the end of the training program. Students must score 80% or higher to successfully graduate the skills training program.

**Aircraft Assembly Training Program**

The Aircraft Assembly Training Program includes classroom and shop floor training in a state-of-the-art training area with Safety and Foreign Object Debris (FOD) related instruction. During the course of the training program, students will learn the basics of Manufacturing Mathematics, Engineering Drawings, Precision Measurements, Drilling/Reaming/Countersinking, Fastener Installations, and Basic Computer Operations.

Students will acquire and master the skills required for entry-level Aircraft Assembler positions in the aerospace, automotive, construction and other related manufacturing positions, upon their successful graduation from the training program. Aircraft Assembly Training Program is comprised of eight hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a five week period in classroom and shop floor settings located at the Pat Lane Center, Grants Lane in Fort Worth, Texas.

The projected growth rate for Assemblers and Fabricators in the Dallas – Fort Worth Metroplex is 15.2% with an average of 220 openings projected each year for the region due to growth and replacement. Mean hourly wages in the three Workforce Development Boards for positions in this occupational area currently range from $12.00 to $16.00 per hour.

Successful completion of the Aircraft Assembly Training Program requires passing the skills-based end-of-course practical assessment given at the end of the program.



**CLC, INC.,**

**Program Title: AIRCRAFT ASSEMBLY TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: The program provides trainees with the knowledge and skills required for entry-level structural aircraft assembly and other related positions. The curriculum is comprised of 200 hours of instruction conducted in classroom and virtual factory settings on weekdays, from 7:00 AM to 3:45 PM, over a five-week period. The curriculum was originally developed by a curriculum development committee led by Lockheed Martin Aeronautics Company-Fort Worth, with participation by Bell Helicopter Textron, Inc., and later modifications were made by Vought Aircraft Industries. | | | | | | |
| **AA-100 ORIENTATION, BASIC ENGINEER KNOWLEDGE AND SKILLS** | | | | | | |
| Unit | Lecture Hours | Lab Hours | Total Hours | Unit Titles | | Curriculum Reference\* |
| 1 | 8 |  | 40 | Introduction and Orientation | | CLC, Inc., Paperwork |
| 2 | 8 |  | Manufacturing Safety and Assessment | | Manufacturing Safety Assessment |
| 3 | 8 |  | Manufacturing Math and Assessment | | Manufacturing Math Assessment |
| 4 | 8 |  | Precision Measurement and Assessment | | Precision Measurement Assessment |
| 5 | 8 |  | Basic Engineering Drawing and Assessment | | Engineering Drawing Assessment |
| **AA-101 BASIC STRUCTURAL AIRCRAFT ASSEMBLY KNOWLEDGE AND SKILLS** | | | | | | |
| Unit | Lecture Hours | Lab Hours | Total Hours | Unit Titles | | Curriculum Reference\* |
| 6 | 4 | 4 | 40 | Virtual Factory Floor Tour/Tool and Shadow Box Review, Lay-Out Practical and Assessment, | | Course Manual and Aircraft Assembly Projects |
| 7 | 4 | 4 | Drilling Classroom | | Course Manual and Aircraft Assembly Projects |
| 8 | 4 | 4 | Ream Classroom, Countersink Classroom, FOD Walk | | Course Manual and Aircraft Assembly Projects |
| 9 | 4 | 4 | Riveting Classroom | | Course Manual and Aircraft Assembly Projects |
| 10 | 4 | 4 | Blind Fastener Classroom, Torque Classroom, Safety Wiring Classroom | | Course Manual and Aircraft Assembly Projects |
| 11 | 4 | 4 | 40 | Virtual Factory Floor Tour/Tool and Shadow Box Review, Lay-Out Practical and Assessment, | | Course Manual and Aircraft Assembly Projects |
| 12 | 4 | 4 | Drilling Classroom | | Course Manual and Aircraft Assembly Projects |
| 13 | 4 | 4 | Ream Classroom, Countersink Classroom, FOD Walk | | Course Manual and Aircraft Assembly Projects |
| 14 | 4 | 4 | Riveting Classroom | | Course Manual and Aircraft Assembly Projects |
| 15 | 4 | 4 | Blind Fastener Classroom, Torque Classroom, Safety Wiring Classroom | | Course Manual and Aircraft Assembly Projects |
| **AA-102 STRUCTURAL AIRCRAFT ASSEMBLY PRACTICAL’S AND VIRTUAL FACTORY** | | | | | | |
| Unit | Lecture Hours | Lab Hours | Total Hours | Unit Titles | Curriculum Reference\* | |
| 18 | 20 | 20 | 40 | Shop Exercise, Virtual Factory Clean-Up and FOD Walk | Course Manual and Aircraft Assembly Projects and Assessment | |
| 19 | 20 | 20 | 40 | Shop Exercise, Virtual Factory Clean-Up and FOD Walk | Course Manual and Aircraft Assembly Projects and Assessment | |
| Graduation | | |  | Graduation Luncheon | CLC, Inc., TCC, and Industry Representatives | |

Reference Materials:

**Primary Aircraft Assembly Text**: Ronald Westen (Lockheed Martin), Aerospace Industry Training Partnership, 2001

**Fast-Track Aircraft Assembly Training Program**

The Fast-Track Aircraft Assembly Training Program includes classroom and shop floor training in a real shop floor setting with Safety and Foreign Object Debris (FOD) related instruction. During the course of the training program, students will learn the basics of Manufacturing Mathematics, Engineering Drawings, Precision Measurements, Drilling/Countersinking, and Fastener Installations.

Students will acquire and master the skills required for entry-level Aircraft Assembler positions in the aerospace industries, upon their successful graduation from the training program. Aircraft Assembly Training Program is comprised of eight hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a four week period in classroom and shop floor settings located at Grants Lane facility in Fort Worth, Texas.

Successful completion of the Aircraft Assembly Training Program requires passing the skills-based end-of-course practical assessment given at the end of the program.



**CLC, Inc.**

**Program Title: FAST-TRACK AIRCRAFT ASSEMBLY TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: The program provides trainees with the knowledge and skills required for entry-level structural aircraft assembly work. The curriculum is comprised of 160 hours of instruction conducted in classroom and virtual factory settings on weekdays, from 7:00 AM to 3:45 PM, over a five-week period. The curriculum was originally developed by a curriculum development committee led by Lockheed Martin Aeronautics Company-Fort Worth, with participation by Bell Helicopter Textron, Inc., and later modifications were made by Vought Aircraft Industries. | | | | | | | |
| **AA-100 ORIENTATION, BASIC ENGINEER KNOWLEDGE AND SKILLS** | | | | | | | |
| Unit | | Lecture Hours | Lab Hours | Total Hours | Unit Titles | | Curriculum Reference\* |
| 1 | | 20 Min |  | 40 | Introduction and Orientation | | CLC, Inc., Paperwork |
| 2 | | 1 hr 40min |  | Manufacturing Math and Assessment | | Manufacturing Safety Assessment |
| 3 | | 4 |  | Precision Measurement and Assessment | | Precision Measurement Assessment |
| 4 | | 2 |  | Basic Engineering Drawing | | Engineering Drawing |
| 4 | | 8 |  | Basic Engineering Drawing | | Engineering Drawing |
| 4 | | 8 |  | Basic Engineering Drawing | | Engineering Drawing |
| 4 | | 4 |  | Basic Engineering Drawing and Assessment | | Engineering Drawing & Assessment |
| 5 | | 4 |  | Layout & Assessment | | Layout & Assessment |
| 6 | | 2 |  | Safety & Assessment | | Safety & Assessment |
| 7 | | 1 |  | Tour VF Floor = Tool and Shadow Box Review | | Shadow Box Review |
| 8 | | 5 | 5 | Drill VF Floor | | Aircraft Assembly Projects |
| **AA-101 BASIC STRUCTURAL AIRCRAFT ASSEMBLY KNOWLEDGE AND SKILLS** | | | | | | | |
| Unit | Lecture Hours | | Lab Hours | Total Hours | Unit Titles | | Curriculum Reference\* |
| 9 |  | | 8 | 40 | Drill & Countersink VF Floor | | Assembly Projects |
| 10 |  | | 8 | Drill, Countersink & Rivet VF Floor | | Aircraft Assembly Projects |
| 11 |  | | 2 | Blind Fastener Show & Tell | | Mentor Demonstration |
| 12 |  | | 6 | Shop Exercise / VF Floor | | Aircraft Assembly Projects |
| 13 |  | | 8 | Shop Exercise / VF Floor | | Aircraft Assembly Projects |
| 14 |  | | 8 | Shop Exercise / VF Floor | | Aircraft Assembly Projects |
| **AA-102 STRUCTURAL AIRCRAFT ASSEMBLY PRACTICAL’S AND VIRTUAL FACTORY** | | | | | | | |
| 15 |  | | 8 | 40 | Shop Exercise / VF Floor | | Aircraft Assembly Projects |
| 16 |  | | 8 | Shop Exercise / VF Floor | | Aircraft Assembly Projects |
| 17 |  | | 8 | Shop Exercise / VF Floor | | Aircraft Assembly Projects |
| 18 |  | | 8 | Shop Exercise / VF Floor | | Aircraft Assembly Projects |
| 19 |  | | 8 | Shop Exercise / VF Floor | | Aircraft Assembly Projects |
| **AA-103 STRUCTURAL AIRCRAFT ASSEMBLY PRACTICAL’S AND VIRTUAL FACTORY** | | | | | | | |
| 20 | |  | 8 |  | Shop Exercise / VF Floor | Aircraft Assembly Projects | |
| 21 | |  | 8 |  | Shop Exercise / VF Floor | Aircraft Assembly Projects | |
| 22 | |  | 8 |  | Skills Based Practical Assessment VF Floor | Mentor | |
| 23 | |  | 3 |  | Short Shop Exercise / VF Floor | Aircraft Assembly Projects | |
| 24 | |  | 5 |  | Skills Based Practical Assessment Re-Takes VF Floor | Mentor | |
| 25 | |  | 8 |  | Mentor’s Choice Shop Exercise / VF Floor | Aircraft Assembly Projects | |
| Graduation | | | |  | Graduation Luncheon | TSTC Representatives | |

Reference Materials:

**Primary Aircraft Assembly Text**: Ronald Westen (Lockheed Martin), Aerospace Industry Training Partnership, 2001

**Composite Bonding Training Program**

The Composite Bonding Training Program is the wave of the future in the aerospace, automotive, sporting goods, construction and other manufacturing industries. During the course of the training program, students will learn the basics of Manufacturing Mathematics, Engineering Drawings, Precision Measurements, Fastener Installations, Drilling/Reaming/Countersinking, Basic Computer Operations and Carbon Graphite Composite Lay-Up. This training course consists of both classroom and hands-on training in a, state-of-the-art training room. Students will acquire and master the skills required for entry-level Composite Bonder positions in the aerospace, automotive, sporting goods, construction and other manufacturing industries, upon their successful graduation from the training program. The Composite Bonding Training Program is comprised of eight hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a five week period in classroom and shop floor settings located at the Pat Lane Training Center in Fort Worth, Texas.

Composite Bonding, in the advanced manufacturing, has been identified as a priority industry cluster for economic and workforce development purposes by the Fort Worth, Dallas, and Arlington Chambers of Commerce and the North Central Texas Workforce Development Boards. Advanced manufacturing companies consti­tute some of the largest, highest paying, and most significant employers in North Central Texas. With an average of 425 openings projected each year for the region due to growth and replacement. Mean hourly wages in the three Workforce Development Boards for positions in this occupational area currently range from $12.00 to $16.00 per hour.

Successful completion of the Composite Bonding Training Program requires passing the skills-based end-of-course practical assessment given at the end of the program.



**CLC, INC.**

**Program Title: COMPOSITE BONDING TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: The program provides trainees with the knowledge and skills required for entry-level composite bonding work in aerospace and other advanced manufacturing settings. The curriculum is comprised of another 200 hours of instruction conducted in classroom and virtual factory settings on weekdays, from 7:00 AM to 3:45 PM, over a five-week period. | | | | | |
| **CB-100 Orientation, Basic Engineer Knowledge and Skills** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References\*** |
| 1 | 2 |  | 40 | Introduction and Pre-Assessment | Pre-Assessment |
| 2 | 6 |  | Shop Floor Safety | Shop Floor Safety Assessment |
| 3 | 8 |  | Manufacturing Math | Manufacturing Math Assessment |
| 4 | 8 |  | Resume Writing | CLC, Inc., Materials |
| 5 | 8 |  | Precision Measurement | Precision Measurement Assessment |
| 6 | 8 |  | Basic Engineering Drawing  (taught by TCC Instructor) | Engineering Drawings (various)  Basic Engineering Drawing Assessment |
| **CB-101 Composite Bonding Basic Knowledge, Skills and Practical’s** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum References\*** |
| 7 | 2 | 2 | 40 | Fundamentals of Composites | Milt Siems, HRD, BHTI |
| 8 | 2 | 2 | Introduction to Composites | \*Chap 1: Introduction |
| 9 | 1 | 2 | Composite Reinforcing Fibers | \*Chap 2: Reinforcing Fibers |
| 10 | 1 | 2 | BHTI Engineering Drawings – Overview | BHTI Engineering Drawings |
| 11 |  | 2 | BHTI Engineering Drawings – Composite and Metal Parts | BHTI Engineering Drawings |
| 12 | 2 | 2 | Composite Safety | BHTI Environmental Health and Safety  \*Chapter 6: Composite Safety |
| 13 | 2 | 2 | Tool Cleaning and Releasing Agents | WaterWorks |
|  | 1 | Cleaning and Releasing Tools – Flat Panels | Practical |
|  | 1 | Cleaning and Releasing Tools – Angles | Practical |
|  | 1 | Cleaning and Releasing Tools – Core Tools | Practical |
| 14 | 1 | 2 | Composite Matrix Materials | \*Chapter 3: Matrix Materials |
| 15 | 2 | 1 | Planning | BHTI, LM Aero, and Vought Aircraft Planning Materials |
| 16 | 2 | 1 | Composite Terminology | \*Appendix G-1 |
| 17 |  | 1 | Laying Up a Part – Flat Panel | Practical |
| 18 |  | 1 | Debulking and Bagging a Part | \*Chapter 7: Applying Pressure |
| 19 |  | 1 | Laying Up a Part – Angle Part | Practical |
| 20 |  | 1 | Debagging and Detooling | Video |
| 21 | 2 | 3 | 40 | Methods of Curing Composites | \*Chapter 8: Methods of Curing |
| 22 | 2 | 2 | Laying Up a Part – Angle Part | Practical |
| Test | 1 | 1 | Review for Test | Test Review Materials |
| 23 | 1 | 1 | Core Materials | \*Chapter 4: Core Materials |
| 24 | 2 | 1 | Laying Up a Part | Practical |
| Test | 1 | 3 | Review for Test | Test Review Materials |
| 25 | 2 | 1 | Debagging and De-tooling Parts | Video |
| 26 | 2 | 1 | Eddy Current Testing of Parts | Handouts |
| 27 | 1 | 1 | Laying Up a Part | Practical |
| 28 | 2 | 2 | Post Cure Processes | \*Chapter 5: Manufacturing |
| 29 | 2 | 2 | Laying Up a Part | Practical |
| 30 | 1 | 1 | Laying Up a Part | Practical |
| Test | 1 | 1 | Review for Test | Test Review Materials |

**CLC, INC., COMPOSITE BONDING TRAINING PROGRAM CURRICULUM OUTLINE**

(continued)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Topic** | **Reference Materials/Activities** |
| 31 | 4 | 4 | 40 | Laying Up a Part | Practical’s |
| 32 | 8 | 8 | Cutting, Drilling, and Routing Composites | \*Chapter 9: Machining Composites |
| 33 | 4 | 4 | Practice Drilling Composite Panels | Practical |
| Tour | 4 | 4 | Tour of BHTI Bonding Facilities and Operations | BHTI Personnel |
| 34 | 4 | 4 | 40 | Laying Up a Part | Practical |
| 35 | 4 |  | Composite Repair | \*Chapter 11: Assessment and Repair |
| 36 |  | 4 | Laying Up a Part | Practical |
| 37 | 4 |  | Composite Repair | \*Chapter 12: Types of Repair |
| 38 |  | 4 | Laying Up a Part | Practical |
| 39 | 4 |  | Laying Up a Part | Practical |
| Test |  | 4 | Review for Examination | Textbook and Handouts |
| Test |  | 4 | Composite Bonding Final Examination | Composite Bonding Final Examination |
| Test |  | 4 | Review Final Exam and Clean-Up Work Area | Composite Bonding Final Examination |
| Graduation | | | | Graduation Ceremony | CLC, TCC, and Aerospace Industry Representatives |

**Primary Composite Bonding Text:** Cindy Foreman, Advanced Composites, Englewood, CO: Jeppesen Sanderson, Inc. (2002)\*

**Abbreviations**

BHTI = Bell Helicopter Textron, Inc.

CLC, Inc. = Community Learning Center, Inc.

PPT = PowerPoint Presentation

TCC = Tarrant County College (provider of some classroom training)

**Advanced Material Repair Training Program**

The Advanced Materials Repair (AMR) Training Program curriculum is designed to meet the needs of a wide range of personnel, from the very beginner to the seasoned professional. The five-week, 200-hour curriculum is highly recommended to anybody seeking a better understanding of advanced materials repair methods, materials, tools, and equipment. The curriculum is comprised of both theoretical and practical presentations. The latter are inclusive of extensive hands-on projects in a virtual factory environment, in which Trainees work with various fabrics and resins in exercises designed to teach them fundamental vacuum bagging, bleeder, and breather concepts and methods. The curriculum is being developed under the leadership of human resource development personnel from Lockheed Martin Aeronautics (LM Aero) Company-Fort Worth, Bell Helicopter Textron, Inc., and American Airlines based upon instructional methods and materials utilized in the training of new employees for positions requiring AMR knowledge and skills within their various operations in North Central Texas.

The (AMR) Training Program is comprised of eight hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a five week period in classroom and shop floor settings located at the Pat Lane Training Center in Fort Worth, Texas.

Successful completion of the (AMR) Training Program requires passing the skills-based end-of-course practical assessment given at the end of the program.



**CLC, INC., ADVANCED MATERIALS REPAIR (AMR) TRAINING PROGRAM CURRICULUM OUTLINE**

**Subject Description:** Students acquire and master the skills required for entry-level Material/Repair Technician positions in aerospace, automotive, sporting goods and other manufacturing industries, upon their successful graduation from the training program. The (AMR) Training Program is 200 hours, comprised of eight hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a five week period in classroom and shop floor settings.

Performance Objectives Students will Learn:

* Manufacturing Safety
* Engineering Drawings
* Basic Computer Operations
* Fabrics & Resins
* Vacuum Bagging, bleeder & breather concepts and methods.

**Subject Descriptions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Day** | **Lesson** | **Hours** | **Topic** | **Activities/Reference Materials\*** |
| **WEEK 1: BASIC ENGINEERING KNOWLEDGE AND SKILLS** (all classroom training) | | | | |
| Mon | 1 | 1.00 | Introduction and Pre-Assessment | Pre-Assessment |
| 2 | 3.00 | Virtual Factory Floor Safety | Factory Floor Safety Assessment |
| 3 | 4.00 | Manufacturing Math-with a focus on Ratio’s | Manufacturing Math Assessment |
| Tue | 4 | 2.00 | Resume Writing, Job Skills Training, etc. | CLC, Inc., Materials |
| 5 | 6.00 | Precision Measurement | Precision Measurement Assessment |
| Wed-Fri | 6 | 23.00 | Basic Engineering Drawing | Engineering Drawings and Basic Engineering Drawing Assessment |
| Fri | Test | 1.00 | Advanced Materials Repair Pre-Test | AMR Pre-Test |
| **WEEK 3: ADVANCED MATERIALS INTRODUCTION, DAMAGE TYPES, HOLE REPAIR, AND EDGE REPAIR** | | | | |
| Mon | 7 | 2.0 | Introduction to Advanced Materials | Classroom\* |
| 8 | 6.0 | Advanced Materials Manufacturing and Repair Drawings | Classroom |
| Tue | 9 | 1.0 | Damage Types: How Does Damage Occur? | Classroom |
| 10 | 3.0 | Damage Types: What Types of Damage Occur? | Classroom |
| 11 | 3.0 | Damage Types: Non-Conformance Damage Identification | Classroom |
| 12 | 1.0 | Damage Types: Dry Versus Wet Fabric Repair | Classroom |
| Wed | 13 | 2.0 | Damage Types: Repair Methods | Classroom |
| 14 | 1.0 | Damage Types: Hot Bonders/Blankets | Classroom |
| 15 | 3.0 | Hole Repair: Flat Panel Kit and Assembly | Practical |
| 16 | 2.0 | Hole Repair: Bag and Cure | Practical |
| Thu | 17 | 2.0 | Hole Repair: Flat Panel Inspect/Hole Drilled | Practical |
| 18 | 2.0 | Hole Repair: Review Repair Process Detail | Practical |
| 20 | 2.0 | Hole Repair: With Caul Plate & Chopped Fiber/Resin | Practical |
| 21 | 2.0 | Hole Repair: Bag and Cure | Practical |
| Fri | 22 | 1.0 | Edge Repair: Damage Edge of Part/Inspection | Classroom |
| 23 | 2.0 | Edge Repair: Edge Damage Repair Process | Classroom |
| 24 | 3.0 | Edge Repair: Repair Edge Damage with Injection Process | Practical |
| 25 | 2.0 | Edge Repair: Bag and Cure | Practical |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Day** | | **Lesson** | **Hours** | | **Topic** | | **Activities/Reference Materials\*** |
| **WEEK 4: ADVANCED MATERIALS SURFACE AND SCARF REPAIRS** | | | | | | | |
| Mon | | 26 | 2.0 | | Surface Repair: Surface Anomalies | | Classroom |
| 27 | 1.0 | | Surface Repair: Sanding of Advanced Materials | | Practical |
| 28 | 2.0 | | Surface Repair: Surface Repair with Chopped Fiber/Resin | | Practical |
| 29 | 1.0 | | Surface Repair: Surface Repair with Resin Only | | Practical |
| 30 | 2.0 | | Surface Repair: Preparation for Cure | | Practical |
| Tue | | 31 | 2.0 | | Scarf Repair (Non-Core): Method and Approach | | Classroom |
| 32 | 2.0 | | Scarf Repair (Non-Core): Create Damage/Inspect/Discuss | | Practical |
| 33 | 4.0 | | Scarf Repair (Non-Core): Scarf Damaged Area | | Practical |
| Wed | | 34 | 4.0 | | Scarf Repair (Non-Core): Kit Preparation for Scarf Repair | | Practical |
| 35 | 2.0 | | Scarf Repair (Non0Core): Lay-Up Repair | | Practical |
| 36 | 2.0 | | Scarf Repair (Non-Core): Bag and Cure | | Practical |
| Thu | | 37 | 1.0 | | Scarf Repair (Non-Core): Inspect/Discuss Repair | | Classroom |
| 38 | 1.0 | | Scarf Repair (Core): Scarf Repair Method for Core Part | | Classroom |
| 39 | 2.0 | | Scarf Repair (Core): Create Damage/Clean/Inspect/Discuss | | Practical |
| 40 | 4.0 | | Scarf Repair (Core): Scarf Damaged Area | | Practical |
| Fri | | 41 | 2.0 | | Scarf Repair (Core): Clean Part & Oven Dry Exposed Core | | Practical |
| 42 | 6.0 | | Scarf Repair (Core): Cut, Pot in Core, and Oven Cure | | Practical |
| **WEEK 5: ADVANCED MATERIALS SCARF, COMPOSITE, AND FIBERCLASS REPAIR AND FINAL EXAMINATION** | | | | | | | |
| Mon | 43 | | | 2.0 | | Scarf Repair (Core): Hot Bonder/Blanket Cure Procedure | Classroom |
| 44 | | | 2.0 | | Scarf Repair (Core): Programming Hot Bonder for Cure Cycles | Classroom |
| 45 | | | 4.0 | | Scarf Repair (Core): Kit Preparation for Scarf Repair | Practical |
| Tue | 46 | | | 3.0 | | Scarf Repair (Core): Lay-Up Repair | Practical |
| 47 | | | 1.0 | | Scarf Repair (Core): Blanket & Bag Scarf Repair Cure | Practical |
| 48 | | | 4.0 | | Scarf Repair (Core): Run Cure Cycle with Hot Bonder | Practical |
| Wed | 49 | | | 2.0 | | Composite Doubler Repair: Methodology and Usage | Classroom |
| 50 | | | 2.0 | | Composite Doubler Repair: Adhesive Bonding & Part Prep | Classroom |
| 51 | | | 2.0 | | Composite Doubler Repair: Kit Preparation for Doubler | Practical |
| 54 | | | 2.0 | | Composite Doubler Repair: Lay Up and Cure Doubler | Practical |
| Thu | 55 | | | 2.0 | | Composite Doubler Repair: Inspect/Discuss Doubler Repair | Classroom |
| 56 | | | 2.0 | | Fiberglass Repair: Glass Types and Repair Methods | Classroom |
| 57 | | | 1.0 | | Fiberglass Repair: Damage Fiberglass Part | Practical |
| 58 | | | 1.0 | | Fiberglass Repair: Prepare Surfaces | Practical |
| 59 | | | 2.0 | | Fiberglass Repair: Apply Patch | Practical |
| Fri | 60 | | | 1.0 | | Fiberglass Repair: Inspect Fiberglass Repair | Classroom |
| Review | | | 3.0 | | Review for Final Examination | Classroom |
| Exam | | | 4.0 | | Advanced Materials Repair Final Examination | AMR Final Examination |

**Reference Materials**: Curriculum is in the process of being developed from a number of different sources, including texts listed below and repair standards and procedures materials from LM Aero, Bell Helicopter, American Airlines, and Boeing:

* Advanced Composites, by Cindy Foreman, Englewood, CO: Jepperson Sanderson (2002) [in particular "Chapter 11: Assessment and Repair" and "Chapter 12: Types of Repair"].
* Fundamentals of Composite Manufacturing: Materials, Methods, and Applications, by A. Brent Strong, Dearborn, MI: Society of Manufacturing Engineers (2008) [in particular "Chapter 20: Damage, Prevention and Repair"].
* Essentials of Advanced Composite Fabrication and Repairs, by Louis C. Dorworth, Ginger L. Gardner, and Greg M. Gellema, Newcastle, WA: Aviation Supplies and Academies (2009).

**Program Syllabus**

HVAC Training Program

**Subject Description:**

1. Students will learn HVAC fundamentals, the science behind it, safety practices, electrical components, and how to troubleshoot, diagnose, and repair systems. Job search and interviewing techniques will also be taught.
2. These skills are applicable to HVAC Technicians in the industry. This course covers everything needed to become an entry-level HVAC Technician.
3. The Environmental Protection Agency 608 Universal Certification is included.

**Subject Hours:** 480 contact hours (237 hours classroom, 243 hours lab)

* **Performance Objectives:**
  + Identify and describe the components of HVAC systems.
  + Identify safety and environmental hazards of electrical, gas, and refrigerant components of HVAC systems.
  + Diagnose and repair broken HVAC systems.

**Prerequisites:** **HVAC** None

**Required Textbooks:** Fundamentals of HVACR, Stanfield & Skaves, Pearson, 2017

**Instructional Methods:** 1. Lecture

1. Textbook
2. PowerPoints and videos
3. Hands-on diagnosis and repair

**Maximum Student: Instructor Ratio:** 18:1

**Materials and Media References:** Fundamentals of HVACR, Stanfield & Skaves, Pearson, 2017

**Basis of Grades:** Tests/Quizzes 0%

Final Exam 50%

Demonstration of proficiency 50%

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Program Syllabus** | | | | | | |
| **HVAC Training Program** | | | | | | |
| **Course Description: Students will acquire the skills required for entry-level HVAC Service Technician positions upon their successful graduation from the training program. It is comprised of 480 hours of instruction conducted weekdays from 8:00 AM to 4:45 PM, over a 12-week period in classroom and lab settings.** | | | | | | |
|
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** | |
| **HVAC-101** | **Fundamentals** | **14** | **7.5** | **21.5** | **Learn about the basic skills and tools used in the HVAC industry** | |
|
| **HVAC-102** | **HVAC Science** | **7** | **1** | **8** | **Discover the theories and technologies that make air conditioning possible** | |
| **HVAC-103** | **Refrigeration Systems and Components** | **20** | **10** | **30** | **Develop an understanding of how the large components of HVAC system work** | |
| **HVAC-104** | **Refrigeration Practices** | **24** | **34.5** | **58.5** | **Learn how technicians handle and use refrigerants safely without harming the environment** | |
| **HVAC-105** | **HVAC Electrical Systems and Components** | **34** | **54** | **88** | **Learn the principles of electricity and how components and tools are used regularly by HVAC technicians** | |
| **HVAC-106** | **Air-Conditioning Systems** | **19** | **18** | **37** | **Combine previous units’ knowledge to see how they work together to accomplish air conditioning** | |
| **HVAC-107** | **Heating Systems** | **13** | **14** | **27** | **Learn about the theories and components that apply to heating systems** | |
| **HVAC-108** | **Heat Pump Systems** | **19** | **23** | **42** | **Learn about the way heat pumps operate more efficiently and how they are supplemented with electric heat** | |
| **HVAC-109** | **System Design, Sizing, and Layout** | **19** | **15** | **34** | **Learn how to appropriately size equipment and ductwork for residential applications** | |
| **EPA-608** | **Environmental Protection Agency 608 Universal Certification** | **8** | **8** | **16** | **Students obtain their EPA 608 Universal Certification** | |
| **HVAC-110** | **Installation, Maitnenance, Service, and Troubleshooting** | **60** | **58** | **118** | **Begin to master the art of troubleshooting by encountering real life situation simulated in the lab** | |
| **Total Hours ………………………………………………………….** | | | | | **480** | |
| **HVAC TRAINING PR**  **PROGRAM CURRICULUM OUTLINE** | | | | | | |
|  |  |  |  |  |  |  |
| **OVERVIEW: Program provides trainee with knowledge and skills required for entry-level HVAC technician work and is comprised of 480 hours of instruction conducted in classroom and lab settings on weekdays, 8:00 AM to 4:45 PM, over a 12-week period in classroom and lab settings.** | | | | | | |
| **HVAC-101 - Fundamentals** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **1** | **2** | **0** | **21.5** | **Introduction to Heating, Ventilation, Air Conditioning, and Refrigeration** | | **AHRI Fundamentals of HVAC Textbook** |
| **2** | **2** | **0** | **Being a Professional HVAC Technician** | | **AHRI Fundamentals of HVAC Textbook** |
| **3** | **4** | **1** | **Safety** | | **AHRI Fundamentals of HVAC Textbook** |
| **4** | **3** | **5** | **Hand and Power Tools** | | **AHRI Fundamentals of HVAC Textbook** |
| **5** | **2** | **0.5** | **Fasteners** | | **AHRI Fundamentals of HVAC Textbook** |
| **6** | **1** | **1** | **Measurements** | | **AHRI Fundamentals of HVAC Textbook** |
| **HVAC-102 - HVAC Science** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **7** | **2** | **0** | **8** | **Properties of Matter** | | **AHRI Fundamentals of HVAC Textbook** |
| **8** | **2** | **0** | **Types of Energy and Their Properties** | | **AHRI Fundamentals of HVAC Textbook** |
| **9** | **1** | **0** | **Temperature and Thermodynamics** | | **AHRI Fundamentals of HVAC Textbook** |
| **10** | **2** | **1** | **Pressure and Vacuum** | | **AHRI Fundamentals of HVAC Textbook** |
| **HVAC-103 - Refrigeration Systems and Components** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **11** | **3** | **1** | **30** | **Type of Refrigeration Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **12** | **3** | **2** | **The Refrigeration Cycle** | | **AHRI Fundamentals of HVAC Textbook** |
| **13** | **2** | **1** | **Compressors** | | **AHRI Fundamentals of HVAC Textbook** |
| **14** | **2** | **1** | **Condensers** | | **AHRI Fundamentals of HVAC Textbook** |
| **15** | **2** | **1** | **Metering Devices** | | **AHRI Fundamentals of HVAC Textbook** |
| **16** | **2** | **1** | **Evaporators** | | **AHRI Fundamentals of HVAC Textbook** |
| **17** | **3** | **0** | **Refrigerants and Their Properties** | | **AHRI Fundamentals of HVAC Textbook** |
| **18** | **3** | **3** | **Special Refrigeration Components** | | **AHRI Fundamentals of HVAC Textbook** |
| **HVAC-104 - Refrigeration Practices** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **20** | **1** | **1** | **58.5** | **Refrigerant Safety** | | **AHRI Fundamentals of HVAC Textbook** |
| **21** | **2** | **2** | **Refrigerant System Servicing and Testing Equipment** | | **AHRI Fundamentals of HVAC Textbook** |
| **22** | **3** | **4** | **Piping and tubing** | | **AHRI Fundamentals of HVAC Textbook** |
| **23** | **2** | **8** | **Soldering and Brazing** | | **AHRI Fundamentals of HVAC Textbook** |
| **24** | **1.75** | **1.25** | **Refrigerant System Piping** | | **AHRI Fundamentals of HVAC Textbook** |
| **25** | **0.25** | **0.25** | **Accessing Sealed Refrigeration Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **26** | **6** | **2** | **Refrigerant Management and the EPA** | | **AHRI Fundamentals of HVAC Textbook** |
| **27** | **2** | **4** | **Refrigerant Leak Testing** | | **AHRI Fundamentals of HVAC Textbook** |
| **28** | **2** | **4** | **Refrigerant System Evacuation** | | **AHRI Fundamentals of HVAC Textbook** |
| **29** | **4** | **8** | **Refrigerant System Charging** | | **AHRI Fundamentals of HVAC Textbook** |
| **HVAC-105 - HVAC Electrical Systems and Components** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **30** | **3** | **2** | **88** | **Electrical Safety** | | **AHRI Fundamentals of HVAC Textbook** |
| **31** | **4** | **2** | **Basic Electricity** | | **AHRI Fundamentals of HVAC Textbook** |
| **32** | **2** | **0** | **Alternating Current Fundamentals** | | **AHRI Fundamentals of HVAC Textbook** |
| **33** | **2** | **6** | **Electrical Measuring and Test Instruments** | | **AHRI Fundamentals of HVAC Textbook** |
| **34** | **3** | **4** | **Electrical Components** | | **AHRI Fundamentals of HVAC Textbook** |
| **35** | **2** | **4** | **Electric Motors** | | **AHRI Fundamentals of HVAC Textbook** |
| **36** | **2** | **4** | **Motor Controls** | | **AHRI Fundamentals of HVAC Textbook** |
| **37** | **3** | **4** | **Motor Application and Troubleshooting** | | **AHRI Fundamentals of HVAC Textbook** |
| **38** | **6** | **8** | **Electrical Diagrams** | | **AHRI Fundamentals of HVAC Textbook** |
| **39** | **3** | **4** | **Control Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **40** | **2** | **0** | **Communicating Control Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **41** | **2** | **16** | **Electrical Troubleshooting** | | **AHRI Fundamentals of HVAC Textbook** |
| **HVAC-106 - Air-Conditioning Systems** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **43** | **2** | **1** | **37** | **Air Filters** | | **AHRI Fundamentals of HVAC Textbook** |
| **44** | **2** | **1** | **Ventilation and Dehumidification** | | **AHRI Fundamentals of HVAC Textbook** |
| **45** | **2** | **1** | **Residential Air Conditioning** | | **AHRI Fundamentals of HVAC Textbook** |
| **47** | **3** | **4** | **Residential Split-System Air-Conditioning Installations** | | **AHRI Fundamentals of HVAC Textbook** |
| **48** | **2** | **3** | **Duct Installation** | | **AHRI Fundamentals of HVAC Textbook** |
| **49** | **8** | **8** | **Troubleshooting Air-Conditioning Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **HVAC-107 - Heating Systems** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **50** | **2** | **0** | **27** | **Principals of Combustion and Safety** | | **AHRI Fundamentals of HVAC Textbook** |
| **51** | **2** | **5** | **Gas Furnaces** | | **AHRI Fundamentals of HVAC Textbook** |
| **52** | **3** | **3** | **Gas Furnace Controls** | | **AHRI Fundamentals of HVAC Textbook** |
| **53** | **2** | **2** | **Gas Furnace Installation** | | **AHRI Fundamentals of HVAC Textbook** |
| **54** | **2** | **4** | **Troubleshooting Gas Furnaces** | | **AHRI Fundamentals of HVAC Textbook** |
| **59** | **1** | **0** | **Space Heaters** | | **AHRI Fundamentals of HVAC Textbook** |
| **60** | **1** | **0** | **Humidifiers** | | **AHRI Fundamentals of HVAC Textbook** |
| **HVAC-108 - Heat Pump Systems** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **61** | **2** | **4** | **42** | **Electric Heat** | | **AHRI Fundamentals of HVAC Textbook** |
| **62** | **2** | **2** | **Electric Heat Installation** | | **AHRI Fundamentals of HVAC Textbook** |
| **63** | **4** | **6** | **Troubleshooting Electric Heat** | | **AHRI Fundamentals of HVAC Textbook** |
| **64** | **3** | **3** | **Heat Pump System Fundamentals** | | **AHRI Fundamentals of HVAC Textbook** |
| **65** | **2** | **1** | **Air-source Heat Pump Applications** | | **AHRI Fundamentals of HVAC Textbook** |
| **67** | **2** | **1** | **Heat Pump Installation** | | **AHRI Fundamentals of HVAC Textbook** |
| **68** | **4** | **6** | **Troubleshooting Heat Pump Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **HVAC-109 - System Design, Sizing, and Layout** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **69** | **2** | **0** | **34** | **Basic Building Construction** | | **AHRI Fundamentals of HVAC Textbook** |
| **70** | **5** | **4** | **Green Building and Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **71** | **3** | **2** | **Indoor Air Quality** | | **AHRI Fundamentals of HVAC Textbook** |
| **72** | **3** | **3** | **Residential Load Calculations** | | **AHRI Fundamentals of HVAC Textbook** |
| **73** | **2** | **2** | **Duct Design** | | **AHRI Fundamentals of HVAC Textbook** |
| **74** | **2** | **2** | **Zone Control Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **75** | **2** | **2** | **Testing and Balancing Air Systems** | | **AHRI Fundamentals of HVAC Textbook** |
| **Environmental Protection Agency 608 Universal Certification** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **Core** | **2** | **2** | **16** | **Core** | | **Skillcat eLearning** |
| **Type 1** | **2** | **2** | **Type 1 (Small Appliances)** | | **Skillcat eLearning** |
| **Type 2** | **2** | **2** | **Type 2 (High-Pressure)** | | **Skillcat eLearning** |
| **Type 3** | **2** | **2** | **Type 3 (Low-pressure)** | | **Skillcat eLearning** |
| **HVAC-110 - Installation, Maintenance, Service, and Troubleshooting** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| **76** | **3** | **1** | **118** | **Installation Techniques** | | **AHRI Fundamentals of HVAC Textbook** |
| **77** | **8** | **8** | **Planned Maintenance** | | **AHRI Fundamentals of HVAC Textbook** |
| **78** | **4** | **4** | **Refrigeration System Cleanup** | | **AHRI Fundamentals of HVAC Textbook** |
| **79** | **45** | **45** | **Troubleshooting** | | **AHRI Fundamentals of HVAC Textbook** |
| **Curriculum References** | | | | | | |
| **AHRI Fundamentals of HVAC by Carter Stanfield and David Skies** | | | | | | |
| **Skillcat eLearning: https://www.skillcatapp.com/epa-certification-universal-online** | | | | | | |

**Program Syllabus**

CNC Machining Training Program

**Subject Description:** Students acquire and master the skills required for entry-level Machinist positions in the manufacturing and construction industries, upon their successful graduation from the training program. The Machinist Training Program is a total of 320 hours, designed to provide the trainee with the NIMS Machining Level I knowledge and skills required for positions as a Machinist and is comprised of eight hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a 8-week period in classroom and machine shop settings.

Performance Objectives Students will Learn:

* Precisions Measurements
* Manufacturing Mathematics
* Engineering Drawing
* Basic Computer Operations
* Conventional Machining Techniques
* Set up and Programming Operations
* Introduction to CNC Machining

**Subject Descriptions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE**  **HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| **Optional Prerequisite**  CPT-101 | Safety | 18 | 22 | 40 | Through an online simulation, students will learn the basics of work safety, perform safety and environmental inspections, identify unsafe conditions, monitor safe equipment and operator performance, and utilize effective, safety-enhancing workplace practices |
| M-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Machinist training program, will review basic shop safety, math, computers, precision measurement and engineer drawings |
| M-101 | Machinist Skills | 112 | 128 | 240 | Students will learn basic machinist skills, shop floor safety, measurement, materials and complete shop floor training using the metal cutting saw, drill press, mill, lathe and grinder |
| Total Hours with Prerequisite………………………………………. | | | | | 360 |
| Total Hours without Prerequisite…………………………………… | | | | | 320 |

**MACHINIST TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: Program provides trainee with NIMS Machining Level I knowledge and skills required for entry-level Machinist work and is comprised of 8-hour lessons, conducted weekdays, 7:00 AM to 3:45 PM, over a 7-week period in classroom and machine shop settings. | | | | | |
| **M-100 ORIENTATION, BASIC ENGINEER KNOWLEDGE AND SKILLS** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 1 | 8 |  | 40 | Machinist Training Program Overview | CLC Internal Documents |
| 2 | 8 |  | Manufacturing Mathematics & Assessment | CLC SG Manufacturing Math |
| 3 | 8 |  | Precision Measurement & Assessment | CLC SG Precision Measurement |
| 4 | 8 |  | Basic Engineering Drawing & Assessment | CLC SG Basic Engineering Drawing |
| 5 | 8 |  | Job Planning, Benchwork, & Lay-Out  Resume Development | NIMS Job Planning, Benchwork & Lay-Out  CLC Materials, Resources, & TEC |
| **M-101 MACHINIST SKILLS** | | | | | |
| **Unit** | **Lecture**  **Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 6 | 4 | 4 | 32 | Measurement, Materials, & Shop Floor Safety | NIMS Measurement, Materials, & Safety |
| 7 | 4 | 4 | Measurement, Materials, & Shop Floor Safety | NIMS Measurement, Materials, & Safety |
| 8 | 4 | 4 | Metal Cutting Saw Operation/Shop Floor | Shop Floor Instruction |
| 9 | 4 | 4 | Metal Cutting Saw Operation/Shop Floor | Shop Floor Instruction |
| 10 | 4 | 4 | 32 | Metal Cutting Saw/Shop Floor | Shop Floor Instruction |
| 11 | 4 | 4 | Drill Press/Shop Floor | NIMS Level I Drill Press |
| 12 | 4 | 4 | Mill/Shop Floor | NIMS Level I Milling |
| 13 | 4 | 4 | Lathe/Shop Floor | NIMS Level I Turning |
| 14 | 4 | 4 | 32 | Metal Cutting Saw/Shop Floor | Shop Floor Instruction |
| 15 | 4 | 4 | Drill Press/Shop Floor | NIMS Level I Drill Press |
| 16 | 4 | 4 | Mill/Shop Floor | NIMS Level I Milling |
| 17 | 4 | 4 | Lathe/Shop Floor | NIMS Level I Turning |
| 18 | 4 | 4 | 32 | Metal Cutting Saw/Shop Floor | Shop Floor Instruction |
| 19 | 4 | 4 | Drill Press/Shop Floor | NIMS Level I Drill Press |
| 20 | 4 | 4 | Mill/Shop Floor | NIMS Level I Milling |
| 21 | 4 | 4 | Lathe/Shop Floor | NIMS Level I Turning |
| 22 | 4 | 4 | 32 | Metal Cutting Saw/Shop Floor | Shop Floor Instruction |
| 23 | 4 | 4 | Mill/Shop Floor | NIMS Level I Milling |
| 24 | 4 | 4 | Lathe/Shop Floor | NIMS Level I Turning |
| 25 | 4 | 4 | Resume Development, Interviewing Skills Training, & Job Search and Development Planning | CLC Materials, Resources, & Training and Employment Counselor (TEC) |
| 26 | 4 | 4 | 40 | Metal Cutting Saw/Shop Floor | Shop Floor Instruction |
| 27 | 2 | 6 | Drill Press/Shop Floor – EOCP Assessment | NIMS Level I Drill Press |
| 28 | 2 | 6 | Mill/Shop Floor – EOCP Assessment | NIMS Level I Drill Press |
| 29 | 2 | 6 | Lathe/Shop Floor – EOCP Assessment | NIMS Level I Drill Press |
| 30 | 2 | 6 | Grinder/Shop Floor – EOCP Assessment | NIMS Level I Drill Press |
| 31 | 40 | 40 | 80 | Introduction to CNC Machining | Shop Floor and Classroom Instruction |

**Textbooks utilized for classroom and hands on training include:**

National Institute of Metalworking Skills Machining Level I Performance Guide and accompanying prints in each skills area

Maximum student to instructor ratio is 8 to 1 in both lecture and shop floor settings.

Students will be monitored and assessed throughout the 8 week training course for overall objectives learned.

In order for the participant to successfully complete the training course, students must fulfill the following criteria:

* regularly attend both in-classroom and shop floor training;
* maintain an excellent attendance and punctuality record;
* maintain industry acceptable conduct;
* pass the final skills based practical tests administered by the course instructor and scored by a certified industry representative;
* upon successful completion of the Machinist Training Course, the participant receives a certificate of achievement from CLC, Inc.;
* each participant must acquire sufficient knowledge and understanding of the following subjects: Manufacturing Machine Shop Math, Precision Measurement, Basic Engineering Drawings, Layout, Shop Safety, Machine Set-up using Basic Conventional Machining Principles, and Machine Set-up using CNC Machine Principles including using offsets and editing CNC programs.

**GRADING AND MARKING SYSTEM**

Students are assessed prior to entering the CLC, Inc. training program in reading and mathematics by the utilization of The Test of Adult Basic Education (TABE). Students must score an 8th grade level or higher to qualify for CLC, Inc. skills training programs.

Students will complete skills based assessments throughout the program for progress tracking and retention of training.

Students will be given a final skills based practical assessment, administered and scored by the course instructor, at the end of the training program. Students must score 75% or higher to successfully graduate the skills training program.

Students will have the opportunity to re-test on the final skills based practical assessment if they fail the first exam. The re-test must take place within 72 hours of the first exam.

**Fast-Track Machinist Training Program**

In the Fast-Track Machinist Training Program students will acquire and master the skills required for entry-level Machinist positions in the manufacturing and construction industries, upon their successful graduation from the training program. The Fast-Track Machinist Training Program is designed to provide the trainee with the NIMS Machining Level I knowledge and skills required for positions as a Machinist and is comprised of eight hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a four week period in classroom and machine shop settings located at the CLC, Inc., Anglin Training facility in Fort Worth, Texas.

All students learn the basics in:

* Precisions Measurements
* Manufacturing Mathematics
* Engineering Drawing
* Conventional Machining Techniques
* Set up and Operation of Machines

Successful completion of the Fast-Track Machinist Training Program requires passing the skills-based end-of-course practical assessment given at the end of the program.



**CLC, INC.**

**Program Title: FAST-TRACK MACHINIST TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: Program provides trainee with NIMS Machining Level I knowledge and skills required for entry-level Machinist work and is comprised of 8-hour lessons, conducted weekdays, 7:00 AM to 3:45 PM, over a 4-week period in classroom and machine shop settings. | | | | | |
| **Week 1: M-101 ORIENTATION, BASIC ENGINEER KNOWLEDGE AND SKILLS** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 1 | 1 |  | 40 | Introduction & CLC First Day Paperwork | CLC Internal Documents |
| 2 | 2 |  | Safety Organization and Personal Protective Equipment | CLC AMTP Safety Curriculum |
| 3 | 4 |  | Shop Floor Mathematics | CLC AMTP Shop Math Curriculum |
| 4 | 1 |  | Precision Measurement | CLC AMTP Precision Measurement Cur. |
| 4 | 3 |  | Precision Measurement | CLC AMTP Precision Measurement Cur. |
| 5 | 5 |  | Engineering Drawings | CLC AMTP Engineering Drawings Cur. |
| 5 | 6 |  | Engineering Drawings | CLC AMTP Engineering Drawings Cur. |
| 6 | 1 | 1 | Basic Machine Safety & Basic Machine Operation | CLC Mentors |
| 6 | 1 | 1 | Basic Machine Safety & Basic Machine Operation | CLC Mentors |
| 7 | 3 | 3 | Metal Cutting Saw/Shop Floor | CLC Shop Floor Instruction |
| 8 | 1 | 1 | Drill Press/Shop Floor | NIMS Level 1 Drill Press |
| 9 | 3 | 3 | Mill/Shop Floor | NIMS Level I Milling |
| **WEEK 2: M-102 SKILLS BASED HANDS-ON** | | | | | |
| **Unit** | **Lecture**  **Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 10 | 4 | 4 | 40 | Metal Cutting Saw/Shop Floor | Shop Floor Instruction |
| 11 | 4 | 4 | Drill Press/Shop Floor | NIMS Level I Drill Press |
| 12 | 4 | 4 | Mill/Shop Floor | NIMS Level I Milling |
| 13 | 4 | 4 | Lathe/Shop Floor | NIMS Level I Turning |
| 14 | 4 | 4 | Grinder/Shop Floor | NIMS Level I Grinding |
|  |  |  |  | **WEEK 3: M-103 SKILLS BASED HANDS-ON** |  |
| 15 | 4 | 4 | 40 | Metal Cutting Saw/Shop Floor | Shop Floor Instruction |
| 16 | 4 | 4 | Drill Press/Shop Floor | NIMS Level I Drill Press |
| 17 | 4 | 4 | Mill/Shop Floor | NIMS Level I Milling |
| 18 | 4 | 4 | Lathe/Shop Floor | NIMS Level I Turning |
| 19 | 4 | 4 | Grinder/Shop Floor | NIMS Level I Grinding |
|  |  |  |  | **WEEK 4: M-104 SKILLS BASED HANDS-ON** |  |
| 20 | 4 | 4 | 40 | Metal Cutting Saw/Shop Floor | Shop Floor Instruction |
| 21 | 4 | 4 | Drill Press/Shop Floor | NIMS Level I Drill Press |
| 22 | 4 | 4 | Mill/Shop Floor | NIMS Level I Milling |
| 23 | 4 | 4 | Lathe/Shop Floor | NIMS Level I Turning |
| 24 | 4 | 4 | Grinder/Shop Floor | NIMS Level I Grinding |

Reference Materials

**CLC SG** = from Community Learning Center, Inc., AITP Student Guide [developed and revised by industry-led curriculum teams over four-year period as a part of two CLC Aerospace Industry Training Partnership (AITP) projects funded by the US Department of Labor.]

**NIMS** = from National Institute of Metalworking Skills Machining Level I Performance Guide and accompanying prints in each skills area.

**Program Syllabus**

Welding Training Program

**Subject Description:** Students acquire and master the skills required for entry-level Welder positions in the manufacturing and construction industries, upon their successful graduation from the training program. It is comprised of 320 hours of instruction conducted weekdays from 7:00 AM to 3:45 PM, over an 8-week period in classroom and shop floor settings.

Performance Objectives Students will Learn:

* Layout, Fitting
* Shop tool use
* Project fabrication
* Oxy-fuel cutting and welding
* Plasma torch cutting
* TIG/MIG welding
* Stick welding

**Subject Descriptions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| **Optional Prerequisite**  CPT-101 | Safety | 18 | 22 | 40 | Through an online simulation, students will learn the basics of work safety, perform safety and environmental inspections, identify unsafe conditions, monitor safe equipment and operator performance, and utilize effective, safety-enhancing workplace practices |
| W-100 | Orientation, Basic Engineer Knowledge and Skills | 40 | 0 | 40 | Students will be introduced to the Welding training program, will review basic shop safety, math, computers, precision measurement and engineer drawings |
| W-101 | Blueprint Reading and Layout of Parts | 20 | 20 | 40 | Students will be introduced to terminology, complete basic blueprint reading, and actual layout of parts from blueprint specifications |
| W-102 | Plasma Theory and Cutting & Carbon Arc Gouging | 20 | 20 | 40 | Students will learn Plasma Cutting Theory, tips and practice guided by shop floor instruction and how to cut and repair welds by carbon arc gouging |
| W-103 | Shielded Metal Arc Welding  (SMAW) | 20 | 20 | 40 | Students will learn SMAW theory, tips and practice guided by shop floor instruction |
| W-104 | Gas Metal Arc (MIG) Welding & Flux Core Arc Welding (FCAW) | 20 | 60 | 80 | Students will learn MIG and Flux Core welding, tips and practice guided by shop floor instruction |
| W-105 | Gas Tungsten Arc (TIG) Welding | 20 | 20 | 40 | Students will learn TIG welding, tips and practice guided by shop floor instruction |
| W-106 | Production Simulation | 20 | 20 | 40 | Students will simulate a product using MMA, MIG and TIG demonstrating the skills they have learned over the weeks of training. |
| Total Hours with Prerequisite………………………………………. | | | | | 360 |
| Total Hours without prerequisite…………………………………… | | | | | 320 |

**WELDING TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: Program provides trainee with knowledge and skills required for entry-level welding work and is comprised of 280 hours of instruction conducted in classroom and virtual factory settings on weekdays, 7:00 AM to 3:45 PM, over a 7-week period in classroom and shop settings. | | | | | | |
| **W-100 ORIENTATION, BASIC ENGINEER KNOWLEDGE AND SKILLS** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| 1 | 8 |  | 40 | Introduction and Orientation | | CLC, Inc. paperwork |
| 2 | 8 |  | Manufacturing Safety and Assessment | | Manufacturing Safety Assessment |
| 3 | 8 |  | Manufacturing Math and Assessment | | Manufacturing Math Assessment |
| 4 | 8 |  | Precision Measurement and Assessment | | Precision Measurement Assessment |
| 5 | 8 |  | Basic Engineering Drawing and Assessment | | Engineering Drawing Assessment |
| **W-101 BLUEPRINT READING AND LAYOUT OF PARTS** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| 6 | 4 | 4 | 40 | Introduction to Welding and Welding Vocabulary | | Lincoln, pages 176-186 |
| 7 | 4 | 4 | Basic Blueprint Reading, Part I | | Lincoln, pages 1-20 |
| 8 | 4 | 4 | Basic Blueprint Reading, Part II | | Lincoln, pages 21-40 |
| 9 | 4 | 4 | Actual Layout of Parts from Blueprint Specifications | | Shop Floor Instruction |
| 10 | 4 | 4 | Blueprint Reading and Lay-Out Test | | CLC Assessment Materials |
| **W-102 PLASMA THEORY AND CUTTING** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** | |
| 11 | 4 | 4 | 40 | Plasma Cutting & Carbon Arc Gouging Theory | Ruth, pages 64-66/Shop Floor | |
| 12 | 4 | 4 | Plasma Cutting & Carbon Arc Gouging Tips and Practice | Ruth, page 67/Shop Floor Instruction | |
| 13 | 4 | 4 | Plasma Cutting & Carbon Arc Gouging Practice | Shop Floor Instruction | |
| 14 | 4 | 4 | Plasma Cutting & Carbon Arc Gouging Test | Shop Floor Skills-Base Assessment | |
| 15 | 4 | 4 | Plasma Cutting & Carbon Arc Gouging Practice/Re-Test (if needed) | Shop Floor Instruction/Assessment | |
| **W-103 SHIELDED METAL ARC (SMAW) WELDING** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | | **Curriculum Reference** |
| 16 | 4 | 4 | 40 | Shielded Metal Arc (SMAW) Welding Theory | | Ruth, pages 40-42 |
| 17 | 4 | 4 | SMAW Welding Tips and Practice | | Ruth, page 43/Shop Floor Instruction |
| 18 | 4 | 4 | SMAW Welding Practice | | Shop Floor Instruction |
| 19 | 4 | 4 | Shielded Metal Arc (SMAW) Welding Test | | Shop Floor Skills-Base Assessment |
| 20 | 4 | 4 | SMAW Welding Practice/Re-Test (if needed) | | Shop Floor Instruction/Assessment |
|  | | | | | | |
| **W-104 GAS METAL ARC (MIG) WELDING** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** | |
| 21 | 2 | 14 | 80 | Gas Metal Arc (MIG) & Flux Core (FCAW) Welding Theory | Ruth, pages 44-47 | |
| 22 | 2 | 14 | MIG Welding Tips and Practice | Ruth, page 48-53/Shop Floor Instruction | |
| 23 | 2 | 14 | MIG & Flux Core (FCAW) Welding Practice | Shop Floor Instruction | |
| 24 | 2 | 14 | Gas Metal Arc (MIG) & Flux Core (FCAW) Welding Test | Shop Floor Skills-Base Assessment | |
| 25 | 2 | 14 | MIG & Flux Core (FCAW) Welding Practice/Re-Test (if needed) | Shop Floor Instruction/Assessment | |
| **W-105 Tungsten Inert Gas (TIG) WELDING** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** | |
| 26 | 4 | 4 | 40 | Tungsten Inert Gas (TIG) Welding Theory | Ruth, pages 54-59 | |
| 27 | 4 | 4 | TIG Welding Tips and Practice | Ruth, page 60-63/Shop Floor Instruction | |
| 28 | 4 | 4 | TIG Welding Practice | Shop Floor Instruction | |
| 29 | 4 | 4 | Tungsten Inert Gas (TIG) Welding Test | Shop Floor Skills-Base Assessment | |
| 30 | 4 | 4 | TIG Welding Practice/Re-Test (if needed) | Shop Floor Instruction/Assessment | |
| **W-106 PRODUCTION SIMULATION** | | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** | |
| 31 | 4 | 4 | 40 | Shielded Metal Arc (MMA) Welding Production Simulation | Shop Floor Instruction | |
| 32 | 4 | 4 | Gas Metal Arc (MIG) Welding Production Simulation | Shop Floor Instruction | |
| 33 | 4 | 4 | Gas Tungsten Arc (TIG) Welding Production Simulation | Shop Floor Instruction | |
| 34 | 4 | 4 | Production Simulation Performance Evaluation & Test | Shop Floor Skills- Based Assessment | |
| 35 | 4 | 4 | Resume Development, Interviewing Skills Training, and Job Search and Development Planning | CLC Materials, Resources, and Training and Employment Counselor (TEC) | |

**Textbooks utilized for classroom and hands on training include:**

James F. Lincoln, How to Read Shop Drawings, with a Special Reference to Welding and Welding Symbols, 2001 Karen Ruth, Welding Basics: An Introduction to Practical and Ornamental Welding, 2004

Maximum student to instructor ratio is 8 to 1 in both lecture and shop floor settings.

Students will be monitored and assessed throughout the 8 week training course for overall objectives learned.

In order for the participant to successfully complete the Welding Training course, students must fulfill the following criteria:

* regularly attend both in-classroom and shop floor training;
* maintain an excellent attendance and punctuality record;
* maintain industry acceptable conduct;
* pass the final skills based practical tests administered and scored by the course instructor;
* upon successful completion of the Welding Training Course, the participant receives a certificate of achievement from CLC, Inc.;
* each participant must acquire sufficient knowledge and understanding of the following subjects: Safety, Oxyacetylene Welding, Shielded Metal Arc Welding, Gas Metal Arc Welding, Gas Tungsten Arc Welding, Plasma Cutting, Oxyacetylene Cutting, Layout, and Basic Shop Drawings

**GRADING AND MARKING SYSTEM**

Students are assessed prior to entering the CLC, Inc. training program in reading and mathematics by the utilization of The Test of Adult Basic Education (TABE). Students must score an 8th grade level or higher to qualify for CLC, Inc. skills training programs.

Students will complete skills based assessments throughout the program for progress tracking and retention of training.

Students will be given a final skills based practical assessment, administered and scored by the course instructor, at the end of the training program. Students must score 75% or higher to successfully graduate the skills training program.

Students will have the opportunity to re-test on the final skills based practical assessment if they fail the first exam. The re-test must take place within 72 hours of the first exam.

**Fast-Track Welding Training Program**

In the Fast-Track Welding Training Program, students will acquire and master the skills required for entry-level Welder positions in the manufacturing and construction industries, upon their successful graduation from the training program. The Fast-Track Welding Training program is comprised of eight-hour lessons conducted weekdays from 7:00 AM to 3:45 PM over a four week period in classroom and shop set­tings located at the CLC, Inc., Anglin Training facility in Fort Worth, Texas.

All students learn the basics in:

* Layout
* Fitting
* Shop tool use
* Project fabrication
* Plasma torch cutting
* MIG welding
* Stick welding

The projected growth rate for Welders in North Central Texas is 16.4%, with an average of 475 openings projected each year for the region due to growth and replacement. Mean hourly wages in the three Workforce Development Boards for entry-level positions in this occupational area currently range from $13.00 to $16.00 an hour.

Successful completion of the Welding Training Program requires that the trainees pass the skills-based production simulation evaluation conducted at the end of the training program.



**CLC, INC.**

**Program Title: FAST-TRACK WELDING TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: Program provides trainee with knowledge and skills required for entry-level welding work and is comprised of 160 hours of instruction conducted in classroom and virtual factory settings, Monday-Friday, 7:00 AM to 3:45 PM, over a 4-week period in classroom and shop settings. | | | | | |
| **Week 1 INTRODUCTION TO WELDING**  **SAFETY, BLUEPRINTS AND SHIELDED METAL ARC (MMA) WELDING** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 1 | 2 |  | 40 | Introduction and Orientation | CLC, Inc. paperwork |
| 2 | 2 |  | Manufacturing Safety and Assessment | CLC, Inc. |
| 3 | 2 |  | Introduction to Welding | Ruth, pages 176-186 |
| 4 | 2 |  | Basic Blue Print Reading | Lincoln P. 1-20 |
| 5 | 2 | 6 | Shielded Metal Arc (MMA) Tips & Practice | Ruth, P. 43/Shop Floor Instruction |
| 6 |  | 8 | (MMA) Welding Practice | Shop Floor instruction |
| 7 |  | 8 | (MMA) Welding Practice | Shop Floor Instruction |
| 8 |  | 8 | (MMA) Welding Practice - TEST | Shop Skills Assessment |
| **Week 2 GAS METAL ARC (MIG) WELDING** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 9 | 4 | 4 | 40 | Gas Metal Arc (MIG) Welding Theory | Ruth, pages 44-47 |
| 10 |  | 8 | MIG Welding Tips and Practice | Ruth, pages 48-53/Shop Floor Instruction |
| 11 |  | 8 | MIG Welding Practice | Shop Floor Instruction |
| 12 |  | 8 | MIG Welding Practice | Shop Floor Skills-Base Assessment |
| 13 |  | 8 | MIG Welding Practice - TEST | Shop Floor Instruction/Assessment |
| **Week 3 PLASMA THEORY AND CUTTING AND GAS METAL ARC (MIG) WELDING** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 14 | 1 | 1 | 40 | Plasma Cutting Theory | Ruth, pages 64-66 |
| 15 | 1 | 1 | Plasma Cutting Tips and Practice | Ruth, page 67/Shop Floor Instruction |
| 16 |  | 1 | Plasma Cutting Practice | Shop Floor Instruction |
| 17 |  | 1 | Plasma Cutting Practice | Shop Floor Skills-Base Assessment |
| 18 |  | 2 | Plasma Cutting Test | Shop Floor Skills-Base Assessment |
| 19 |  | 8 | MIG Welding Practice | Shop Floor Instruction |
| 20 |  | 8 | MIG Welding Practice | Shop Floor Instruction |
| 21 |  | 8 | MIG Welding Practice | Shop Floor Instruction |
| 22 |  | 8 | MMA Welding Test | Shop Floor Instruction |
| **Week 4 GAS METAL ARC (MIG) PRODUCTION SIMULATION AND FINAL CERTIFICATION TEST** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 23 |  | 8 | 40 | Shielded Metal ARC (MMA) Welding Production Simulation | Shop Floor Instruction |
| 24 |  | 8 | Gas Metal ARC (MIG) Welding Production Simulation | Shop Floor Instruction |
| 25 |  | 8 | Gas Metal ARC (MIG) test preparation | Shop Floor Instruction |
| 26 |  | 8 | American Welding Society Test for Certification | American Welding Society TEST for Certification |
| 27 | 4 | 4 | Resume Development, Interviewing Skills Training and Job Search and Development Planning | CLC, Inc. Materials, Resources and Training and Employment Counselor (TEC) |

Lincoln = from How to Read Shop Drawings, with a Special Reference to Welding and Welding Symbols, Cleveland, OH: James F. Lincoln Arc Welding Foundation (2001)

Ruth = from Karen Ruth, Welding Basics: An Introduction to Practical and Ornamental Welding, Minneapolis, MN: Creative Publishing International (2004).Abbreviations: MMA = manual metal arc MIG = metal inert gas

**MSSC Certified Production Technician Training Program**

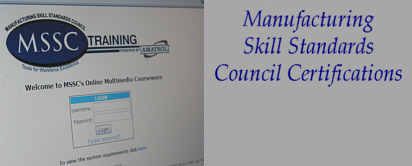
The Manufacturing Skill Standards Council (MSSC) Certified Production Technician Training (CPT) Program is designed to provide the trainee with the basic knowl­edge, understanding, and skills required for production work in high-performance manufacturing operations. Successful graduations might expect to find employment as quality inspectors, material-handlers, front-line production workers, and various jobs in maintenance. Each course delivered through the program corresponds to a major competency area. The MSSC CPT Training Program consists of four on-line MSSC courses conducted over four 40-hour weeks, with facilitation by an MSSC-Certified Instructor within an MSSC-certified training facility op­erated by CLC, Inc., located at the Pat Lane Center in Fort Worth, TX.

All students complete the 4 on-line modules in:

* Safety
* Quality Prac­tices & Continuous Improvement
* Manufacturing Processes & Production
* Basic Computer Operations
* Production, and Maintenance

The projected growth rate for Production Technicians in the manufacturing industries is 14.2%, with an average of 1,700 openings projected each year in the region due to growth and replacement. Based upon CLC, Inc.’s manufacturing placements in the past three years, CLC, Inc. staff reports that hourly wage rates for entry-level positions in this occupational area range from about $12.00 to $16.00 an hour.

Successful completion of the Certified Production Technician (CPT) Training Program will be as indicated by documentation that the participant passed the MSSC Safety Online Assessment, the MSSC Quality Practices and Continuous Improvement Online Assessment, the MSSC Manufacturing Processes and Production Online Assessment and the MSSC Maintenance Awareness Online Assessment.



**Program Title: MSSC-CERTIFIED PRODUCTION TECHNICIAN (CPT) TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: The CPT Training Program is comprised of four on-line, teacher-facilitated courses conducted over four 40-hour weeks and making use of a Manufacturing Skill Standard Council (MSSC) Certificate Program curriculum taught by an MSSC-certified CLC, Inc., Instructor in an MSSC-certified training facility operated by CLC, Inc. It is designed to provide the trainee with the basic knowledge, understanding, and skills required for production work in high-performance manufacturing operations. Each course delivered through the program corresponds to a major competency area, and the trainee must pass assessments in all four competency areas in order to earn the “MSSC Production Technician Certification” Certificate. | | | | | |
| **INSTRUCTIONAL MATERIALS**: Program textbook is MSSC’s High Performance Manufacturing: Portable Production Skills, McGraw-Hill (2006), with corresponding on-line materials and assessment instruments. [\*Curriculum References: OS = On-line Safety Course; OQ = On-Line Quality Course; OP = On-Line Production Course; OM = On-Line Maintenance Course] | | | | | |
| **CPT-101 SAFETY COURSE** | | | | | |
| **Unit** | **Lecture**  **Hours** | **Lab**  **Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference\*** |
| 1 | 1 | 1 | 40 | Learning Techniques | Teacher Led |
| 2 | 1 | 1 | Working in Manufacturing | Teacher Led |
| 3 | 1 | 1 | Impact of Manufacturing | Teacher Led |
| 4 | 1 | 1 | Responding to Customer Expectations | Teacher Led |
| 5 | 1 | 1 | Best Practices Companies | Teacher Led |
| 6 | 1 | 1 | Communications Skills | Teacher Led |
| 7 | 1 | 1 | Production Group Communications | Teacher Led |
| 8 | 1 | 1 | Communication Strategies | Teacher Led |
| 9 | 1 | 1 | Production Teams | MSSC-OS1 |
| 10 | 1 | 1 | Training and Leadership | MSSC-OS2 |
| 11 | 1 | 1 | Meeting Customer Needs | Teacher Led |
| 12 | 1 | 1 | Introduction to Safety | MSSC-OS3 |
| 13 | 1 | 1 | Personal Protective Equipment | MSSC-OS4 |
| 14 | 1 | 1 | Fire and Electrical Safety | MSSC-OS5 |
| 15 | 1 | 1 | Work Area Safety | MSSC-OS6 |
| 16 | 1 | 1 | Hazardous Material Safety | MSSC-OS7 |
| 17 | 1 | 1 | Tool and Machine Safety | MSSC-OS8 |
| 18 | 1 | 1 | Material Handling Safety | MSSC-OS9 |
| Test |  | 4 | MSSC-M1 Safety Course Assessment | MSSC Assessment |
|  | |  | **CPT-102 QUALITY PRACTICES AND CONTINUOUS IMPROVEMENT COURSE** | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference\*** |
| 19 | 1 | 2 | 40 | Blueprint Reading 1 – Multiview Drawings | MSSC-OQ1 |
| 20 | 1 | 2 | Blueprint Reading 2 – Sectional Drawings and Fasteners | MSSC-OQ2 |
| 21 | 1 | 1 | Blueprint Reading 2 – Geometric Dimensioning and Tolerancing | MSSC-OQ3 |
| 22 | 1 | 1 | Basic Measurement | MSSC-OQ4 |
| 23 | 1 | 1 | Precision Measurement Instruments | MSSC-OQ5 |
| 24 | 1 | 1 | Dimensional Gaging | MSSC-OQ6 |
| 25 | 1 | 1 | Quality Systems | MSSC-OQ7 |
| 26 | 1 | 1 | Quality Improvement | Teacher Led |
| 27 | 1 | 1 | Introduction to Statistical Concepts | MSSC-OQ8 |
| 28 | 1 | 1 | Control Charts | MSSC-OQ9 |
| 29 | 1 | 1 | Continuous Improvement 1 | MSSC-OQ10 |
| 30 | 1 | 2 | Continuous Improvement 1 | Teacher Led |
| 31 | 1 | 2 | Quality Inspections | Teacher Led |
| 32 | 1 | 1 | Quality Audits | Teacher Led |
| 33 | 1 | 1 | Preventive and Corrective Actions | Teacher Led |
| 34 | 1 | 1 | Verification and Documentation | Teacher Led |
| Test |  | 4 | MSSC-M2 Quality Practices and Continuous Improvement Course Assessment | MSSC Assessment |

**CERTIFIED PRODUCTION TECHNICIAN (CPT) TRAINING PROGRAM CURRICULUM OUTLINE**

(continued)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CPT- 103 MANUFACTURING PROCESSES AND PRODUCTION COURSE** | | | | | |
| **Unit** | **Lecture Hours** | **Lab**  **Hours** | **Total**  **Hours** | **Unit Titles** | **Curriculum Reference\*** |
| 35 | .5 | .5 | 40 | Customer Contact | Teacher Led |
| 36 | .5 | .5 | Creating Products | Teacher Led |
| 37 | .5 | .5 | Types of Production | Teacher Led |
| 38 | .5 | .5 | Mechanical Principles | Teacher Led |
| 39 | 1 | 1 | Mechanical Linkages | MSSC-OP2 |
| 40 | 1 | 1 | Gear Drives | MSSC-OP3 |
| 41 | 1 | 1 | Production Materials | Teacher Led |
| 42 | 1 | 1 | Testing, Selecting, and Developing Materials | Teacher Led |
| 43 | 1 | 1 | Production Processes | Teacher Led |
| 44 | 1 | 1 | Machining Processes | MSSC-OP4 |
| 45 | 1 | 1 | Machine Tooling | MSSC-OP5 |
| 46 | 1 | 1 | Machine Operations | MSSC-OP6 |
| 47 | 1 | 1 | Tools and Equipment Use | Teacher Led |
| 48 | 1 | 1 | Equipment Procedures | MSSC-OP7 |
| 49 | 1 | 1 | Production Planning and Workflow | MSSC-OP8 |
| 50 | 1 | 1 | Production Components | Teacher Led |
| 51 | 1 | 1 | Production Control | MSSC-OP9 |
| 52 | 1 | 1 | Documenting the Process | Teacher Led |
| 53 | 1 | 1 | Product Packaging | Teacher Led |
| 54 | 1 | 1 | Product Distribution | Teacher Led |
| Test |  | 4 | MSSC-M3 Manufacturing Processes and Production Course Assessment | MSSC Assessment |
| **CPT-104 MAINTENANCE AWARENESS COURSE** | | | | | |
| **Unit** | **Lecture**  **Hours** | **Lab**  **Hours** | **Total**  **Hours** | **Unit Titles** | **Curriculum Reference\*** |
| 55 | 1 | 2 | 40 | Welding | MSSC-OM1 |
| 56 | 1 | 2 | Basic Electric Circuits | MSSC-OM2 |
| 57 | 1 | 1 | Electrical Measurements | MSSC-OM3 |
| 58 | 1 | 1 | Electrical Power | MSSC-OM4 |
| 59 | 1 | 1 | Pneumatic Power Systems | MSSC-OM5 |
| 60 | 1 | 1 | Basic Pneumatic Circuits | MSSC-OM6 |
| 61 | 1 | 2 | Principles of Pneumatic Pressure and Flow | MSSC-OM7 |
| 62 | 1 | 2 | Lubrication and Coolants | MSSC-OM8 |
| 63 | 1 | 1 | Bearings and Couplings | MSSC-OM9 |
| 64 | 1 | 1 | Belt Drives | MSSC-OM10 |
| 65 | 1 | 1 | Chain Drives | MSSC-OM11 |
| 66 | 1 | 1 | Machine Control Concepts | MSSC-OM12 |
| 67 | 1 | 2 | Machine Automation | MSSC-OM13 |
| 68 | 1 | 1 | Machine Operation Modes | MSSC-OM14 |
| 69 | 1 | 2 | Electric Motor Control | MSSC-OM15 |
| Test |  | 4 | MSSC-M4 Maintenance Awareness Course Assessment | MSSC Assessment |

\*Curriculum References: OP = On-Line Production Course; OM = On-Line Maintenance Course

**CompTIA A+ Training Program**

To view the full CompTIA A+ Syllabus, please click the link below:

[**A+ Syllabus**](http://www.clcinc.org/docs/CompTIAA+.xlsx)(too large to include)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| 220-1001 | Hardware | 32 | 8 | 40 | CompTIA A+ 220-1001 covers mobile devices, networking technology, hardware, virtualization and cloud computing and network troubleshooting. |
| 220-1002 | Software | 40 | 0 | 40 | CompTIA A+ 220-1002 covers installing and configuring operating systems, expanded security, software troubleshooting and operational procedures. |
| Total Hours………………………………………………………… | | | | | 80 |

**CompTIA IT Fundamentals+ Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| FC0-U61 | IT Fundamentals | 32.75 | 7.25 | 40 | CompTIA ITF+ FC0-U61 covers using features of common OS, establishing network connectivity, common software applications, and security/web browsing practices. |
| Total Hours………………………………………………………… | | | | | 40 |
| Full syllabus attached separately: CompTIA ITF+ Syllabus.xlsx | | | | | |

**OSHA Compliant Forklift Training Program**

Program Description:

* Students will learn entry level skills applicable to Shipping, Receiving, and Traffic Clerk, Industrial Truck and Tractor Operators (Forklift Operators).
* Students will learn maintenance checks prior to forklift opration, how to safely move loads, and how to safely operate a forklift in a variety of environments.
* These skills are applicable to Shipping, Receiving, and Traffic Clerks, and Industrial Truck and Tractor Operators (Forklift Operators) for work settings in manufacturing, transportation, retail and industrial enviroments.

Admissions requirements:

1. Be United States Citizens or Naturalized citizens
2. Be at least 18 years old
3. If a male born after 1960, have registered with Selective Service as required by **50 U.S.C. 3801 et seq.**
4. Have demonstrated a proficiency in Mathematics and Reading Comprehension (currently measured through the McGraw Hill TABE assessment) TABE Score must be 8.0 or higher in Mathematics and 8.0 or higher in Reading
5. Be able to pass a background check
6. Have a high school diploma or GED certification

Program Outline

**F-100 Orientation, Basic Knowledge and Skills, 6 hours Classroom, 2 hours Lab, 8 hours total**

Understand the Industrial Truck (Forklift), 6 hours Classroom, 2 hours Lab

Students will learn the nature of the Forklift, the various kinds of Forklifts, their use and safety concerns.

**F-101 Safe Operation and Load Handling I, 4 hours Classroom, 4 hours Lab, 8 hours total**

Students will be trained to identify hazards in the place to avoid potential accidents and injuries.

Students will learn to maintain load stability, have awareness of the conditions at the workplace and identify potential hazards and possible solutions for the following aspects of the workplace:

Physical Conditions

Surface or ground conditions:

* Surfaces must be strong enough to support the forklift, its load and its operator;
* They must also be free of holes, grease, oil or obstructions that could cause the lift truck to skid or bounce, and possibly tip over.

Pedestrian Traffic

Students will learn to always be aware of conditions in their workplace, including pedestrian traffic, and that Forklift traffic should be separated from other workers and pedestrians where possible.

Ramps and Grades

Forklift operators will learn the general rules of the road when traveling on ramps and other inclines:

* Traveling on Ramps and Grades
* Traveling with a Load (Forks Upgrade)
* Traveling Empty (Forks Downgrade)

**F- 102 Safe Operation and Load Handling II, 4 hours Classroom, 4 hours Lab, 8 hours total**

Students will be trained to identify hazards associated with forklift operation in specific areas to avoid potential accidents and injuries.

Loading Docks

Students will learn the dangers of operation a forklift on or near loading docks including:

* Practicing awareness of their proximity to the loading dock and the importance of maintaining a safe distance;
* Conditions that are unsafe for Forklift operation such as wet or icy ground conditions;
* The importance of keeping working surfaces clear and clean;
* Marking unsafe areas; and
* Unexpected incidents such as tail swing.

Narrow Aisles

Students will learn safe operation of the Forklift in narrow aisle storage systems.

Elevators

Students will learn to check elevator capacity ratings against the combined weight of the Forklift and the load to ensure the elevator can safely lift it. Also, students will learn to:

* Approach elevators slowly and enter squarely after the elevator car is properly leveled;
* Shut off the power, and set the brakes. [29 CFR 1910.178(n)(12)];
* Neutralize the controls and shut off the power once the Forklift is on the elevator;
* Ensure adequate overhead clearance for Forklift truck and space in elevator for the truck and operator.

Enclosed and Hazardous Areas

Students will learn the dangers of accumulated gasses from an internal combustion engine when used in an indoor environment, such as:

* With cold weather, windows and doors normally open may be closed and increase risk as to air quality;
* Operation of gasoline/propane/or diesel engine for long periods of time in a confined area, such as a truck trailer increase risk, so engines should be shut off when staying inside a small confined area for any amount of time;
* Operation of a combustion engine within a warehouse, plant or on board ship requires adequate ventilation;
* Small rooms or blocked off areas present the same dangers as other confined spaces;
* Engines should not be raced or idled for long periods of time to prevent gas accumulation; and,
* The benefits of using electric Forklifts in confined areas.

**F-103 Maintenance and Inspection – 4 hours Classroom, 4 hours Lab, 8 hours total**

Students will learn basic maintenance checks to perform prior to operating a Forklift and why they should not operate a Forklift requiring servicing. [29 CFR 1910.178(p)(1)]

**F-104 Observation and Testing – 3 hours Classroom, 5 hours Lab, 8 hours total**

Students will operate the forklift in a variety of settings and mock environments (i.e., will demonstrate forklift operation *as if* in a hazardous environment). Upon satisfactory completion of the exercise, students will be issued an OSHA Certified Forklift Operator card.

Students will be assisted in resume’ creation, and schooled in job search and interviewing techniques.

**CLC, INC.**

**Program Title: A. OSHA COMPLIANT FORKLIFT TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: Program provides trainee with knowledge and skills required for entry-level OSHA compliant forklift operation and certification, and is comprised of 40 hours of instruction conducted in classroom and simulated factory settings on weekdays, 7:00 AM to 3:45 PM, over a 1-week period in classroom and shop settings. | | | | | |
| **F-100 ORIENTATION, BASIC KNOWLEDGE AND SKILLS 6 Lecture 2 Lab** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 1 | 2 |  | 8 | Introduction and Orientation | CLC, Inc. paperwork |
| 2 | 2 | 1 | Industrial Trucks, The Basics | FLC, Topic 1, 4, 5 - Pages 3-22 |
| 3 | 2 | 1 | Lift Trucks, The Basics | FLC, Topic 2, 3, 5 - Pages 3-20 |
| **F-101 SAFE OPERATION AND LOAD HANDLING I (Pre-requisite: F-100) 4 Lecture 4 Lab** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 4 | 4 | 4 | 8 | Safe Operation and Load Handling i | FLC, Topic 1,4,5 - Pages 26-44 |
| **F-102 SAFE OPERATION AND LOAD HANDLING ii( Pre-requisite: F-101) 4 Lecture 4 Lab** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 5 | 4 | 4 | 8 | Safe Operation and Load Handling ii | FLC, Topic 2, 3 - Pages 36-45 |
| **F-103 MAINTENANCE AND INSPECTION (Pre-requisite: F-102) 4 Lecture 4 Lab** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 6 | 1 | 1 | 8 | Inspection and Maintenance i | FLC, Topic 1,4,5 Pages 12-22 |
| 7 | 1 | 1 | Inspection and Maintenance ii | FLC, Topic 2,3 Pages 9-20 |
| 8 | 1 | 1 | Fueling and Batteries i | FLC, Topic 1,4,5 Pages 47-57 |
| 9 | 1 | 1 | Fueling and Batteries ii | FLC, Topic 2,3 Pages 47-51 |
| **F-104 OBSERVATION AND TESTING (Pre-requisite: F-103) 3 Lecture 5 Lab** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference** |
| 10 |  | 5 | 8 | Observation and Testing |  |
| 11 | 3 |  | Job Search and Interviewing Techniques |  |
| Total Hours………………………………………………………………… 40 (21 Lecture and 19 Lab) | | | | | |

Total Program hours + 40 and can be completed in one week.

FLC = from FLC Forklift Certification.com Operator Training Program, Certifyme, LLC, 2016

**MSSC Certified Logistics Associate Training/Certified Logistics Technician**

**Training Program**

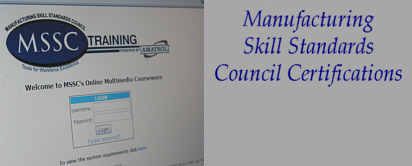
The Manufacturing Skill Standards Council (MSSC) Certified Logistics Associate-Certified Logistics Technician (CLA/CLT) covers core competency areas, as defined by MSSC’s industry-led, nationally validated skills standards for higher skilled, frontline material handling workers across all supply chain facilities. Successful graduates might expect to find employment in packaging, material handling, transportation, factories, warehouses, distribution centers and front-line workers. Individuals are assessed for two credentials: the *foundational-level Certified Logistics Associate (****CLA****)* certificateand *mid-level Certified Logistics Technician (****CLT****)* Certification. CLA is a prerequisite for CLT.

MSSC training and assessment addresses the need for employability and academic skills as well as technical skills. MSSC strongly recommends that individuals be at the 8th grade level of math and 10th grade level of English before attempting MSSC courses and assessments.

Each course delivered through the program corresponds to a major competency area. The MSSC CLA/CLT Training Program consists of two on-line MSSC courses conducted over two 40-hour weeks, with facilitation by an MSSC-Certified Instructor within an MSSC-certified training facility op­erated by CLC, Inc. located at the Pat Lane facility, Fort Worth, TX.

Based upon CLC, Inc.’s manufacturing placements in the past, staff report that hourly wage rates for entry-level positions in this occupational area range from $12.00 to $16.00 an hour.

Successful completion of the CLA/CLT Training Program will be as indicated by documentation that the participant passed the MSSC Certified Logistics Associate Online Assessment and the MSSC Certified Logistics Technician Online Assessment.



**COMMUNITY LEARNING CENTER, INC., MANUFACTURING SKILL STANDARDS COUNCIL (MSSC)**

**Program Title: CERTIFIED LOGISTISTICS ASSOCIATE Training (CLA) AND CERTIFIED LOGISTICS TECHNICIAN TRAINING (CLT) PROGRAM CURRICULUM OUTLINE**

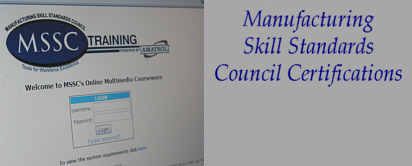
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CLA-101 CERTIFIED LOGISTICS ASSOCIATE (CLA) TRAINING PROGRAM** | | | | | |
| **Overview**: The foundational-level CLA Training Program is an on-line, teacher-facilitated course typically conducted over a one-week, 40-hour period making use of an MSSC Certificate Program curriculum taught by an MSSC-certified CLC, Inc., Instructor in an MSSC-certified training facility operated by CLC, Inc. The program is designed to provide the trainee with foundational knowledge of the core competencies required for the critical work activities that underpin supply chain operations and is a pre-requisite for the Certified Logistics Technician (CLT) Training Program. | | | | | |
| **Instructional Materials**: Program textbook is Supply Chain Logistics: Foundational Knowledge – A Primer for Front Line Workers, edited by Leo Reddy and Rebekah Hutton, MSSC, and published by MSSC in Alexandria, VA (2009), with corresponding on-line materials and assessment instruments. [NOTE: \*Curriculum references are to pages in the Foundational Knowledge textbook. Trainees access instructional materials on-line at mssc.opusworks.com.] | | | | | |
| **Unit** | **Lecture Hours** | **Lab**  **Hours** | **Total**  **Hours** | **Unit Titles** | **Curriculum Reference** |
| 1 | 2 | 2 | 40 | Global Supply Chain Logistics | Pages 14-22 |
| 2 | 2 | 2 | The Logistics Environment | Pages 23-31 |
| 3 | 2 | 2 | Material Handling Equipment | Pages 32-38 |
| 4 | 2 | 2 | Safety Principles | Pages 39-49 |
| 5 | 2 | 2 | Safe Material Handling and Equipment Operation | Pages 50-58 |
| 6 | 2 | 2 | Quality Control Principles | Pages 59-66 |
| 7 | 2 | 2 | Work Communication | Pages 67-71 |
| 8 | 2 | 2 | Teamwork and Good Workplace Conduct to Solve Problems | Pages 72-81 |
| 9 | 2 | 2 | Using Computers | Pages 82-85 |
| Test |  | 4 | Certified Logistics Associate Certification Assessment | MSSC Assessment |
| **CLT-102 CERTIFIED LOGISTICS TECHNICIAN (CLT) TRAINING PROGRAM** | | | | | |
| **Prerequisite**: Certified Logistics Associate Training Program | | | | | |
| **Overview**: The mid-level CLT Training Program is an on-line, teacher-facilitated course typically conducted over a one-week, 40-hour period making use of an MSSC Certificate Program curriculum taught by an MSSC-certified CLC, Inc., Instructor in an MSSC-certified training facility operated by CLC, Inc. The program is designed to provide the trainee with mid-level knowledge of the core competencies required for higher skilled, front-line material handling workers across supply chain operations. | | | | | |
| **Instructional Materials**: Program textbook is Supply Chain Logistics: Mid-Level Technical Knowledge – A Primer for Front Line Workers, edited by Leo Reddy and Rebekah Hutton, MSSC, and published by MSSC in Alexandria, VA (2009), with corresponding on-line materials and assessment instruments. [NOTE: \*Curriculum references are to pages in the Technical Knowledge textbook. Trainees access instructional materials on-line at mssc.opusworks.com.] | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** | **Total Hours** | **Unit Titles** | **\*Curriculum Reference** |
| 1 | 2 | 3 | 40 | Product Receiving | Pages 8-14 |
| 2 | 2 | 2 | Product Storage | Pages 15-26 |
| 3 | 2 | 3 | Order Processing | Pages 27-34 |
| 4 | 2 | 3 | Packing and Shipment | Pages 35-42 |
| 5 | 2 | 3 | Inventory Control | Pages 43-49 |
| 6 | 2 | 2 | Safe Handling of Hazardous Materials | Pages 50-56 |
| 7 | 2 | 2 | Evaluation of Transportation Modes (Truck, Air, Rail, Water) | Pages 57-69 |
| 8 | 2 | 2 | Dispatch and Tracking Operations | Pages 70-78 |
| Test |  | 4 | Certified Logistics Technician Certification Assessment | MSSC Assessment |

MSSC Safety Training Program

The Manufacturing Skill Standards Council (MSSC) Safety Training Program is designed to provide the trainee with the basic knowl­edge, understanding, and skills required for safety practices in production work and manufacturing operations. Graduates might expect to find employment as quality inspectors, material-handlers, front-line production workers, and various jobs in maintenance. The Safety course is designed to enhance knowledge and skills in general safety practices. The MSSC Safety Training Program is a one week course consisting of 40 hours of online training with facilitation by an MSSC-Certified Instructor within an MSSC-certified training facility op­erated by CLC, Inc., located at the Grants Lane facility, in Fort Worth, TX.

Students will learn basic skills pertaining to working in a safe and productive manufacturing workplace, performing environmental inspections, emergency drills, identifying unsafe conditions and taking proper corrective action, and utilize effective, safety-enhancing workplace practices.

Successful completion of the MSSC Safety Training Program will be as indicated by documentation that the participant passed the MSSC Safety Online Assessment at the end of the course.



**CLC, INC.,**

**Program Title: MSSC-SAFETY TRAINING PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: The Safety Training Program is comprised of one on-line, teacher-facilitated course conducted over one, 40-hour week and making use of a Manufacturing Skill Standard Council (MSSC) Certificate Program curriculum taught by an MSSC-certified CLC, Inc., Instructor in an MSSC-certified training facility operated by CLC, Inc. It is designed to provide the trainee with the basic knowledge, understanding, and skills in Safety which is required for production work in high-performance manufacturing operations. The course corresponds to a major competency area, safety and the trainee must pass the assessment in order to earn the “MSSC Safety” Certificate. | | | | | |
| **INSTRUCTIONAL MATERIALS**: Program textbook is MSSC’s High Performance Manufacturing: Portable Production Skills, McGraw-Hill (2006), with corresponding on-line materials and assessment instruments. [\*Curriculum References: OS = On-line Safety Course) | | | | | |
| **CPT-101 SAFETY COURSE** | | | | | |
| **Unit** | **Lecture**  **Hours** | **Lab**  **Hours** | **Total Hours** | **Unit Titles** | **Curriculum Reference\*** |
| 1 | 1 | 1 | 40 | Learning Techniques | Teacher Led |
| 2 | 1 | 1 | Working in Manufacturing | Teacher Led |
| 3 | 1 | 1 | Impact of Manufacturing | Teacher Led |
| 4 | 1 | 1 | Responding to Customer Expectations | Teacher Led |
| 5 | 1 | 1 | Best Practices Companies | Teacher Led |
| 6 | 1 | 1 | Communications Skills | Teacher Led |
| 7 | 1 | 1 | Production Group Communications | Teacher Led |
| 8 | 1 | 1 | Communication Strategies | Teacher Led |
| 9 | 1 | 1 | Production Teams | MSSC-OS1 |
| 10 | 1 | 1 | Training and Leadership | MSSC-OS2 |
| 11 | 1 | 1 | Meeting Customer Needs | Teacher Led |
| 12 | 1 | 1 | Introduction to Safety | MSSC-OS3 |
| 13 | 1 | 1 | Personal Protective Equipment | MSSC-OS4 |
| 14 | 1 | 1 | Fire and Electrical Safety | MSSC-OS5 |
| 15 | 1 | 1 | Work Area Safety | MSSC-OS6 |
| 16 | 1 | 1 | Hazardous Material Safety | MSSC-OS7 |
| 17 | 1 | 1 | Tool and Machine Safety | MSSC-OS8 |
| 18 | 1 | 1 | Material Handling Safety | MSSC-OS9 |
| Test |  | 4 | MSSC-M1 Safety Course Assessment | MSSC Assessment |

**Introduction to Bookkeeping Training Program**

**Subject Description:**

* Students will learn basic bookkeeping skills including terminology, accounting methods, tracking the business operations, reporting on the business, payroll, taxes and Quickbooks certification. Job search and interviewing techniques will also be taught.
* These skills are applicable to bookkeeping jobs for work performed on a day to day basis.

**Subject Hours:** 70 contact hours

**Performance Objectives:** Identify and describe bookkeeping terminology

Identify the difference between cash and accrual accounting methods

Explain how accounts receivable and accounts payable are used to track business operations

Identify four types of financial reports

Identify and describe key payroll terms and recording payroll entries

Demonstrate how to record and report payroll tax and sales tax

Intuit QuickBooks Certification

**Prerequisites:** Admission to the Program

**Required Textbooks:** CLC Inc’s Basic Bookkeeping participant workbook

**Instructional Methods:** 1. Lecture

1. E-learning
2. Bookkeeping exercises
3. Intuit QuickBooks training program Level 1

**Maximum Student: Instructor Ratio:** 8:1

**Materials and Media References:** CLC Inc’s Basic Bookkeeping participant workbook

**Daily Content Outline:** 7 hours Introduction to Bookkeeping terminology

3.5 hoursCash and Accrual accounting methods

3.5 hours Accounts Receivable and Accounts Payable

3.5 hours Examine four financial reports

3.5 hours Examine payroll terms and recording of entries

3.5 hours Record and report payroll and sales tax

45.5 hours Intuit QuickBooks training program Level1

**Basis of Grades:** Bookkeeping Final 50%

QuickBooks certification 50%

**Bookkeeping and QuickBooks Training Program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE #** | **SUBJECT** | **LECTURE HOURS** | **LAB HOURS** | **TOTAL HOURS** | **BRIEF DESCRIPTION** |
| BKE-101 | Bookkeeping | 17.5 | 7 | 24.5 | Students learn the basics of bookkeeping, terminology, cash and accrual accounting method, accounts receivable and accounts payable, examine four financial reports, examine payroll terms and recording of entries, record and report payroll and sales tax.  (No pre-requisite required) |
| QB-101 | QuickBooks | 13 | 32.5 | 45.5 | Students learn how to set up and customize a company; entering and removing transactions; setup Customer, Vendor and Item lists; navigate Home Page and Menu bar; Back-up and Restore a data file; add Customer, Vendors, Item; Understand the Customer and Vendor Center and all aspects within; Enter customer and Vendor transactions; Enter, process and report Payroll; Run various reports along with functions of reports |
| Total Hours………………………………………………………… | | | | | 70 |

**BOOKKEEPING and QUICKBOOKS CERTIFICATION PROGRAM CURRICULUM OUTLINE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **OVERVIEW**: Program provides trainee with knowledge and skills required for entry-level bookkeeping and certification, and is comprised of 80 hours of instruction conducted in classroom on weekdays, over a 4-week period in classroom. | | | | | |
| **BKE-101 WEEK-1 ORIENTATION, BASIC BOOKKEEPING KNOWLEDGE AND SKILLS** | | | | | |
| **Unit** | **Lecture**  **Hours** | **Lab Hours** |  | **Unit Titles** | **Curriculum References** |
| 1 | 2.5 | 1 |  | Orientation-Introduction to Bookkeeping Terminology | Orientation, |
| 2 | 2.5 | 1 | Introduction to Bookkeeping Terminology | Basic Terminology. Module 1 |
| 3 | 2.5 | 1 | Cash and Accrual Accounting | Accounting Methods. Module 2 |
| 4 | 2.5 | 1 |  | Accounts Receivable and Accounts Payable | How to Track the Business. Module 3 |
| 5 | 2.5 | 1 |  | Examine Four Financial Reports | Reporting on the Business. Module 4 |
| **BKE-101 Week-2 BASIC BOOKKEEPING KNOWLEDGE AND SKILLS** | | | | | |
| 6 | 2.5 | 1 |  | Examine Payroll terms and recording of entries | Payroll /Bookkeeping Terminology. Module 5 |
| 7 | 2.5 | 1 |  | Record and report Payroll and sales tax | Payroll and Sales Taxes. Module 6 |
|  |  |  |  |  |
| Total | 17.5 | 7 |  |  |
| **QB-101 INTRODUCTION TO QUICKBOOKS** | | | | | |
| **Unit** | **Lecture Hours** | **Lab Hours** |  |  |  |
| 8 | .5 | 1.5 |  | Sec. A - Course Opening | LK, Introduction/How to Study for This Exam |
| 8 | .5 | 1 | Sec. B – QuickBook Setup | LK, Before Setting Up a Company/Create a Company and EasyStep Interview/Remove Old Transactions/Customize the Home Page/Set Up Customer and Vendor List/Set up Item Lists |
| 9 | .5 | 1.5 |  | Sec. C – Navigation and Data Files | LK, Navigate the Home Page/Navigate Menus and the Icon Bar/Navigate the Icon Bar/Back Up a Data File/Restore a Data File |
| 9 | .5 | 1 |  | Sec. D – Program Information And Preferences | LK, Determine the Release Number/Update QuickBooks/QuickBooks Modes/QuickBooks Versions/Password Protection/Preferences/Domain 1 and 2 Test Tips. |
| 10 | .5 | 1.5 |  | Sec. A – List Management | LK, Add Customers/Add Vendors/Add Items/General List Management/Edit List Entries/Merge List Entries |
| 10 | .5 | 1 |  | Sec. B – Items | LK, Items for Accounting Entries/Item Types/Products for a Specific Price/Services for a Specific Price/Unique Pricing Enries/Single Service or Products |
| 11 | .5 | 1.5 |  | Sec. C – Recap | LK, Domain 3 and 4 Test Tips |
| 11 | .5 | 1 |  | Sec. A – Sales | LK, Customer Center Lists/Navigate the Customer Center/Sales Workflow/Invoicing/Sales Receipts/Undeposited Funds/View Accounts Receivable and Checking/Customer Credits/Sales Statements/Handle Bounced Checks |
| 12 | .5 | 3 |  | Sec. B – Purchases | LK, Vendor Center Lists/Navigate the Vendor Center/Enter and Pay Bills/Write Checks/Use Debit Cards/Purchase Workflow Transactions/Vendor Credits. |
| 13 | .5 | 3 |  | Sec. C – Inventory, Taxes, and Reconciliation | LK, Inventory Workflows/Set Up and Collect Sales Taxes/Pay Sales Taxes/Bank Reconciliation |
| 14 | .5 | 3 |  | Sec. A – Payroll | LK, Available Payroll Services/Starting the payroll Setup Wizard/Employee Earnings/Employee Sick and Vacation Time/Finish the Payroll Setup Wizard/Set Up Payroll Schedules/Run Payroll/Pay Payroll Forms/Prepare Payroll  Forms/Track Time and Invoice Customers |
| 15 | .5 | 3 |  | Sec. B – Reports | LK, Report Center/Customize Reports/Expand and Collapse Report Data/Report Descriptions/Process Multiple Reports/Send Reports to Excel/Memorize Reports |
| 16 | .5 | 3 |  | Sec. A – Basic Accounting | LK, Financial Statements/Cash vs. Accrual Reports/Set a Closing Date/Enter a Journal Entry |
| 17 | .5 | 2.5 |  | Sec. B – Customization and Shortcuts | LK, Memorize Transactions/Set Up Multiple Users and Access/Create Custom Fields/Apply Custom Fields/Customize an Invoice |
| 17 | .5 |  |  | Sec. C – Session 5 and Course Recap | LK, Domain 9 and 10 Test Tips/Final Test Tips/Conclusion |
| 18 | 1 | 2.5 |  | Review | Review all Modules and practice QuickBook Test, Resume Building, Mock Interviews, Do’s and Don’t’s |
| 19 | 1 | 2.5 |  | Test | Review and Final QuickBook Test, Resume Building, Mock Interviews, Do’s and Don’t’s |
| 20 | 3.5 |  |  |  | TWC Student Course Survey, Application, Resume Building, Graduation |
| Total | 13 | 32.5 |  | Total hours - 70 |  |

LK = from LearnKey through Certiport

“CLC, Inc. Training Program Credit for Previous Education, Attendance, Placement Assistance, Grading and Marking System, Requirements for Graduation and Progress Standards”

**CREDIT FOR PREVIOUS EDUCATION**

Due to the intensity of the CLC, Inc. training programs it is mandatory that our students have a high school diploma or GED. CLC, Inc. will not provide credit for previous education, training or experience. Returning students who have been terminated or have dropped out of class will not receive previous credit for the CLC, Inc. training program.

**ATTENDANCE**

Attendance in school and participation in class are an integral part of academic achievement and the instructor-learning process. Regular attendance develops patterns of behavior essential to professional and personal success in life. Regular attendance by every student is mandatory and documented by daily attendance logs kept by the instructor.

Regular attendance by every student is **Mandatory**

* 1st absence will be a verbal warning
* 2nd absence will be a written disciplinary record. The third absence will result in termination from the training cycle. Your complete attendance record will become part of your permanent record and will be viewed by potential hiring companies.

(In the OSHA Compliant Forklift Training Program the 2nd absence will result in dismissal from course.)

* 3rd absence will result in termination from the training cycle. Your complete attendance record will become part of your permanent record and will be viewed by potential hiring companies and if applicable, will be reported to Department of Veteran Affairs.
* **Re-admission:** The student may not re-enter the training program until the start of the next training class cycle and will not receive any previous credit from the previous training program.
* **Maximum Length of Time to Complete a Training Program:** Students will have 12-months from the 1st scheduled day of class to complete the training program. After 12-months if the student has not completed the training program they will not be entitled to a refund.
* A student receiving a grade of incomplete can re-enroll in the training program during the 12-month period following the date the student withdraws without payment of additional tuition.

**PLACEMENT ASSISTANCE**

CLC, Inc. provides our students and successful graduates job readiness skills that will lead to career progressive jobs. Services that we offer to our students and successful graduates are as follows:

* Career Exploration
* Labor Market Information
* Resume Development
* Interviewing Techniques
* Mentoring
* Job Search and Job Development
* Follow-Up

**GRADING AND MARKING SYSTEM FOR AIRCRAFT ASSEMBLY, AEROSPACE MANUFACTURING, MACHINING, WELDING, BOOKEEPING and QUICKBOOKS, and HVAC TRAINING PROGRAMS**

Students are assessed prior to entering the CLC, Inc. training program in reading and mathematics by the utilization of The Test of Adult Basic Education (TABE). Students must score an 8th grade level or higher to qualify for CLC, Inc. skills training programs.

Students will complete skills-based assessments throughout the program for progress tracking and retention of training.

Students will be given a final skill based practical assessment, administered, and scored by the course instructor, at the end of the training program. Students must score 75% or higher to successfully graduate the skills training program.

0%-74% is considered failing the course

75%-100% is considered passing the course

Students will have the opportunity to re-test on the final skills based practical assessment if they fail the first exam. The re-test must take place within 72 hours of the first exam.

**COMPOSITE BONDING**

Students are assessed prior to entering the CLC, Inc. training program in reading and mathematics by the utilization of The Test of Adult Basic Education (TABE). Students must score an 8th grade level or higher to qualify for CLC, Inc. skills training programs.

Students will complete skills-based assessments throughout the program for progress tracking and retention of training.

Students will be given a final skill based practical assessment, administered, and scored by the course instructor, at the end of the training program. Students must score 80% or higher to successfully graduate the skills training program.

0%-79% is considered failing the course

80%-100% is considered passing the course

Students will not have the opportunity to re-test.

**BOOKKEEPING AND HVAC**

Students are assessed prior to entering the CLC, Inc. training program in reading and mathematics by the utilization of The Test of Adult Basic Education (TABE). Students must score an 8th grade level or higher to qualify for CLC, Inc. skills training programs.

Students will complete skills-based assessments throughout the program for progress tracking and retention of training.

Students will be given a final skill based practical assessment, administered, and scored by the course instructor, at the end of the training program. Students must score 80% or higher to successfully graduate the skills training program.

0%-69% is considered failing the course

70%-100% is considered passing the course

Students will not have the opportunity to re-test.

**GRADING AND MARKING SYSTEM FOR MSSC CERTIFIED PRODUCTION TECHNICIAN TRAININING PROGRAM AND CERTIFIED LOGISTICS ASSOCIATE/CERTIFIED LOGISTICS TECHINICAN TRAINING PROGRAMS**

Students are assessed prior to entering the CLC, Inc. training program in reading and mathematics by the utilization of The Test of Adult Basic Education (TABE). Students must score an 8.0 or higher in Mathematics and 10.0 or higher in Reading

Students will complete skills-based assessments throughout the program for progress tracking and retention of training.

Students will be given a final skill based practical assessment, administered and scored by the course instructor, at the end of the training program. Students must score 75% or higher to successfully graduate the skills training program.

0%-74% is considered failing the course

75%-100% is considered passing the course

Students will have the opportunity to re-test on the final skills based practical assessment if they fail the first exam. In order to re-test the student must wait 30 days after taking first exam.

**REQUIREMENTS FOR GRADUATION IN AIRCRAFT ASSEMBLY, AEROSPACE MANUFACTURING, MACHINING, WELDING, BOOKKEEPING, HVAC, MSSC CERTIFIED PRODUCTION TECHNICIAN TRAININING PROGRAM AND MSSC CERTIFIED LOGISTICS ASSOCIATE/CERTIFIED LOGISTICS TECHINICAN TRAINING PROGRAMS**

Students must score 75% or higher on their final exam to successfully graduate the skills training program. Students will have 12 months from the 1st scheduled day of class to complete the training program and successfully graduate.

**75% - 100% on final exam students successfully pass the course and graduate from the training program.**

**REQUIREMENTS FOR GRADUATION IN COMPOSTITE BONDING**

Students must score 80% or higher on their final exam to successfully graduate the skills training program. Students will have 12 months from the 1st scheduled day of class to complete the training program and successfully graduate.

**80% - 100% on final exam students successfully pass the course and graduate from the training program.**

**PROGRESS STANDARDS**

**SATISFACTORY PROGRESS IN AIRCRAFT ASSEMBLY, AEROSPACE MANUFACTURING, MACHINING, WELDING, MSSC CERTIFIED PRODUCTION TECHNICIAN TRAINING PROGRAM AND MSSC CERTIFIED LOGISTICS ASSOCIATE/CERTIFIED LOGISTICS TECHINICAN TRAINING PROGRAMS**

Students must attend class regularly and not exceed school guidelines regarding absences. Students must have an overall average of 75% cumulative on skills based practical assessments administered weekly in class and be able to pass their final skills based practical assessment, administered, and scored by the course instructor, at the end of the training program.

Students must score 75% or higher on their final skills based practical assessment to successfully graduate the skills training program.

Students will have the opportunity to re-test on the final skills based practical assessment if they fail the first exam. The re-test must take place within 72 hours of the first exam. Students must score 75% or higher on their re-take final skills based practical assessment to successfully graduate the skills training program.

**SATISFACTORY PROGRESS IN COMPOSITE BONDING**

Students must attend class regularly and not exceed school guidelines regarding absences. Students must have an overall average of 80% cumulative on skills based practical assessments administered weekly in class and be able to pass their final skills based practical assessment, administered, and scored by the course instructor, at the end of the training program.

Students must score 80% or higher on their final skills based practical assessment to successfully graduate the skills training program.

Students will not have the opportunity to take a re-test. Students must score 80% or higher on their final skills based practical assessment to successfully graduate the skills training program.

**PROBATION AND UNSATISFACTORY PROGRESS IN AIRCRAFT ASSEMBLY, AEROSPACE MANUFACTURING, MACHINING, WELDING, BOOKKEEPING, HVAC, MSSC CERTIFIED PRODUCTION TECHNICIAN TRAININING PROGRAM AND MSSC CERTIFIED LOGISTICS ASSOCIATE/CERTIFIED LOGISTICS TECHINICAN TRAINING PROGRAMS**

CLC, Inc. does not offer a probation term for students that are falling behind in their skills training program. If a student falls below the cumulative score of 75% and has abused the school guidelines on absences, then the student will be terminated from the training program and student may not reenter the training program until the start of the next training class cycle.

Students will be provided daily class attendance reports and weekly progress reports regarding skills based practical assessments administered in class by their instructor.

**PROBATION AND UNSATISFACTORY PROGRESS IN COMPOSITE BONDING**

CLC, Inc. does not offer a probation term for students that are falling behind in their skills training program. If a student falls below the cumulative score of 80% and has abused the school guidelines on absences, then the student will be terminated from the training program and student may not reenter the training program until the start of the next training class cycle.

Students will be provided daily class attendance reports and weekly progress reports regarding skills based practical assessments administered in class by their instructor.

**WITHDRAW “INCOMPLETE”**

Under Texas Education Code, Section 132.061 (f) a student who is obligated for the full tuition may request a grade of “incomplete” if the student withdraws for an appropriate reason unrelated to the student’s academic status.

A student receiving a grade of incomplete can re-enroll in the training program during the 12-month period following the date the student withdraws without payment of additional tuition.

TRAINING PROGRAM STANDARDS OF CONDUCT

All participants in the CLC, Inc. Training Program are expected to behave in a courteous, respectful and professional manner. Violation of standards can result in disciplinary action up to and including removal from the training program. The following are violations of Standards of Conduct:

1. Absence from class.
2. Reporting late to class.
3. Reporting late from lunch or break periods
4. Refusal or failure to comply with class instruction of CLC Instructors and Mentors.
5. Demonstrating obscene or inappropriate behavior toward any person or persons at training site.
6. Removing copyrighted or proprietary materials from class site without written permission of CLC staff.
7. Removing CLC materials, supplies or tools from class site without written permission of CLC staff. The removal of materials, tools, and supplies from a student’s station other than your own is also prohibited.

1. Fighting or displaying aggressive behavior toward any person involved in or related to the training program or location at any time.
2. Reporting to class under the influence of alcohol or any illegal substance.
3. Possession of alcohol or any illegal substance while on class premises.

I have read and understand the above. I realize that demonstrating unacceptable behavior while in the training program, including but not limited to the above violations, may result in my removal from the program. I agree to not hold any member of the CLC, Inc. staff, organization, instructors, and/or partner organization(s) liable in this event.

Applicant Name (printed)

Applicant Signature Date

Instructor Signature Date

**Pat Lane Center, Grants Lane**

**Training Program Rules, Regulations & Procedures**

1. **Be on Time** - Monday through Friday 7 a.m. to 3:45 p.m. Failure to be on time in any manner will result in written disciplinary action. Attendance is Mandatory. There will be no exceptions. First absence offense will be a verbal warning. The second offense will be a written disciplinary record. The third absence will result in termination from the training cycle. Your complete attendance record will become part of your permanent record and will be viewed by potential hiring companies.
2. **Badges** – The CLC, Inc. will issue your ID badge and time clock card. You must be wearing your badge when you enter and depart the Pat Lane Center (PLC) premises. You must wear it at all times while inside PLC or anywhere on the PLC property. You must display your badge at all times, with your name showing. Misplaced, lost or damaged timecards will result in disciplinary action with a $2.50 charge for replacement time cards.
3. **Parking** - You may park in the north parking lot on the Lockheed Martin side. You can also park at the back of the facility as well. Please leave the first 10 open spaces closest to the building by the front door for visitors.
4. **Dress Code** - For personal safety please avoid clothing that is too loose or bulky; do not dress in something that may be perceived as offensive. No open toed shoes or sandals. No shorts. No dresses. Excessive or dangling jewelry is not allowed.
5. **Telephones** - The phones are not for personal use. Tell your family to direct emergency calls to your instructor. Student cell phones must be turned off or on silent at all times during class times. Personal cell phone calls can be returned during lunch or scheduled breaks.
6. **Bathrooms** – The student’s bathrooms are on the north side of the building and due east of training room 202.
7. **Smoking** - No smoking in the building is allowed. The facility is a complete NON-SMOKING FACILITY. There is NO smoking permitted anywhere on the campus facility which includes the PLC parking lot.
8. **Safety** – All students will wear eye and ear protection at all times on the virtual factory floor when Pneumatic tools are being used or any other power equipment. Eye protection should also be used when filing, sanding or deburring parts. Furthermore, they will engage in safe practices at all times during their training. Absolutely no horseplay at any time. No weapons of any kind are allowed on PLC premises.
9. **Harassment** – CLC, Inc. will not tolerate harassment of or by its students at any time. CLC, Inc. policy is to maintain an environment free from harassment for all learners.
10. **Student Break Room-** is located across from the Composite Bonding classroom and has been designated as room number 203 at the top of the door. Break and lunch times will be designated by your instructor. It is your responsibility to clean up after yourself in the break area. Please note: the Break Room that is located on the lower floor is for the CLC, Inc. Staff only.

This form constitutes a contractual agreement between student and CLC, Inc. Failure to comply with any and all of the above stipulations may result in disciplinary action up to and including expulsion from the program.

Print Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Instructor Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Applicant Waiver**

CLC, Inc. and its staff must adhere to mandated guidelines and regulations through the Texas Workforce Commission. The staff of CLC, Inc. will make every reasonable effort to assist eligible students in the program with training and job placement support.

It is important that you, as an applicant to the program, understand and agree to the following conditions when applying for CLC, Inc. training programs. Therefore, please read each item carefully and initial on the line provided to the left of each item. When you have done so for each item, please print your name, sign your name, and print today’s date above the lines provided for that purpose.

Thank you for your interest in our training program.

|  |  |
| --- | --- |
| Initials | Terms and Conditions |
|  | I must meet all qualifications to be considered for training |
|  | If eligible, I will be considered for training. |
|  | I will NOT be paid to attend any CLC, Inc. training programs. |
|  | Attending a CLC, Inc. training program does NOT guarantee me a job with any organization or entity. |
|  | Failure to complete all application paperwork and provide copies of all requested documentation will result in NOT being considered for acceptance into the training program. |
|  | If accepted into training, my association can be terminated by Texas Workforce Commission rules and statutes. |

I agree to each of the six conditions listed above. In addition, I will not hold CLC, Inc.’s employees, instructors or partner organizations liable for any action or lack thereof.

Student Print Name

Student Signature Date

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CLC, Inc. Staff Signature Date

Headquarters Office: 555 North Grants Lane, Fort Worth, TX 76108

(817) 569-9008 / Fax (817) 569-9016

**Rights of the Student**

As a Student in CLC, Inc. training programs you have the following rights:

The Student has the right to considerate, respectful, and humane treatment and services.

The Student should not be denied access to scheduled services on the basis of race, color, national origin or physical or mental disability.

The Student has the right to expect that within its capacity CLC, Inc. staff will make a reasonable response to their requests for services.

The Student has the right to know by name all staff responsible for coordinating and providing his/her training services.

Each Student has the right to participate in the planning of his/her training services.

The Student has the right to meet regularly with CLC, Inc. staff to talk about his/her training services.

The Student has the right to refuse training services and the right to be informed of the consequences of his/her actions.

The Student has the right to every consideration of his/her privacy concerning his/her training services. Case discussion, consultation, and service provision are confidential and should be conducted discreetly.

The Student has the right to expect that all communications and records pertaining to his/her training services will be confidential.

The Student has the right to know what rules and regulations apply to his/her conduct.

The Student has the right to the following Grievance Procedure if he or she feels they have been treated unfairly, or have been discriminated against. CLC, Inc. staff assures that no Student is discriminated against for filing a grievance or making an appeal in accordance with this grievance procedure. In addition, the student has the right to direct any unresolved grievances to:

Texas Workforce Commission  
Career Schools and Colleges, Room 226T

101 East 15th Street

Austin, TX 78778-0001

512 936-3000

<http://csc.twc.state.tx.us>

I have reviewed and understand my rights as a CLC, Inc. Student and the CLC, Inc. Grievance Procedure:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Print Signature

Name of CLC, Inc. Staff: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**GRIEVANCE PROCEDURE**

The following describes CLC, Inc. Training Programs procedures for addressing Student grievances:

**STEP ONE**:

Within seven calendar days of the event or action giving rise to the grievance, the Student should bring the situation to the attention of his/her assigned CLC, Inc. training program staff, explaining the nature of the problem and a preferred solution. An answer must be given to the Student within seven calendar days after presentation of the grievance.

**STEP TWO**:

If the informal discussion with the CLC, Inc. training program Staff does not result in a mutually satisfactory resolution, the Student may prepare a written grievance and file it with the CLC, Inc. School Director, within five workdays from the date of meeting with CLC, Inc. training program staff. The School Director will confer with the Student within ten workdays to discuss the grievance. Seven days after this discussion, the School Director will issue a written decision to the Student.

**STEP THREE**:

If the Student is dissatisfied with the decision of the School Director of CLC, Inc. he or she may appeal the decision in writing to the Executive Director of CLC, Inc. within five workdays. Within ten workdays of the appeal, the Executive Director of CLC, Inc. training programs will render a final decision and notify the Student and the School Director accordingly in writing.

If the Student is not in agreement with the decision made by the Executive Director of CLC, Inc. training programs, or at any time during the grievance process, the Student has the right to contact:

**Texas Workforce Commission  
Career Schools and Colleges, Room 226T**

**101 East 15th Street**

**Austin, TX 78778-0001**

**512 936-3100**

[**http://csc.twc.state.tx.us**](http://csc.twc.state.tx.us)

Student Signature Date

**NOTICE**

**STUDENT COMPLAINT POLICY**

**Dear Students:**

**This school has a Certificate of Approval from the Texas Workforce**

**Commission (TWC).**

**The TWC-assigned school number is: S3686 – Anglin Drive**

**The TWC-assigned school number is: S3993 – Grants Lane**

**The school’s programs are approved by TWC, *as well as (name(s) of***

***other Texas state agencies, as applicable) and (names(s) of any relevant***

***accrediting bodies).***

**Students must address their concerns about this school or any of its**

**educational programs by following the grievance process outlined in**

**the schools’ catalog.** Schools are responsible for ensuring and

documenting that all students have received a copy of the school’s

grievance procedures and for describing these procedures in the school’s

published catalog. If, as a student, you were not provided with this information, please inform school management.

**Students dissatisfied with this school’s response to their complaint**

**or who are not able to file a complaint with the school, can file a**

**formal complaint with TWC, as well as with other relevant agencies**

**or accreditors, if applicable.**

**Information on filing a complaint with TWC can be found on TWC’s Career Schools and Colleges Website at http://csc.twc.state.tx.us/.**

“CLC, Inc. training programs are Approved and Regulated

by the Texas Workforce Commission, Career Schools and Colleges, Austin, Texas”

**DIRECTOR’S STATEMENT**

“The information contained in this catalog is true and correct to the best of my knowledge.”

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Signature: Pat Lane, CLC, Inc. Chairman of the Board Date

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Signature: Cory Lane, School Director #S3686 Anglin Drive Date

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Signature: Troy Bottem, School Director #S3993 Grants Lane Date