Curriculum aligned with Military Service Credentials

Technical Retraining to Achieve Credentials (TRAC-7) created a process and guide to align signature programs with Military Occupational Specialties (MOSs) and Air Force Specialty Codes (AFSCs). TRAC-7 used the American Council on Education (ACE) Guide for the Evaluation of Educational Experiences in the Armed Services as part of its process. TRAC-7 awards credit for appropriate learning acquired in military service at levels consistent with ACE Guide recommendations and/or those transcripted by the Community College of the Air Force (CCAF) where applicable to a Service Member’s program. Curriculum alignment with military service credentials was developed for the Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant Program Round 1 Grant, Technical Retraining to Achieve Credentials (TRAC-7): TC-22513-11-60-A-20.

[Creative Commons License](http://creativecommons.org/licenses/by/3.0/) The Curriculum aligned with Military Service Credentials by [Technical Retraining to Achieve Credentials (TRAC-7)](http://www.trac7.org/) is licensed under a [Creative Commons Attribution 3.0 Unported License](http://creativecommons.org/licenses/by/3.0/).

This workforce product was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

MILITARY OCCUPATIONAL SPECIALTY (MOS) TRANSFER CREDIT GUIDE

(FHTC Example of the process)

1. Access the following American Council on Education (ACE) website:

<http://www2.acenet.edu/militaryguide/OccupationSearch.cfm>

***NOTE***: *Military Occupational Specialty (MOS) training programs change over time. Please note the time period when the MOS was awarded. A Soldier’s Joint Service Transcript (JST) should be reviewed to determine training accomplished prior to awarding transfer credits.*

*Acceptable forms of documentation include:*

*AARTS Transcript (Army ACE Registry Transcript)*

*Form DD-214 (Report of Separation)*

*Form DD-295 (Application for the Evaluation of Learning Experience During Military*

*Service)*

2. Choose Occupation from drop down menu. Choose “Army Enlisted”. Type MOS in the Occupation Designator (11B). Choose the ACE ID and applicable start and end date. Hit search button. The information should include exhibit dates, career management field, description, and skill level recommendations.

3. Access the following Flint Hills Technical College Website:

<https://www.fhtc.edu/web/pub/catalog>

4. Locate the appropriate FHTC program information including course code, title, credit information and a thorough course description.

**NOTE:** For more information about PPT courses see FHTC course competency profile and objectives.

5. Compare course information against the MOS/ACE recommendations to determine school transfer credit recommendations. Review Soldier’s Joint Services Transcript (JST) for more information.

6. Award Technical transfer credit for each MOS skill level (10, 20, 30, 40, 50).

7. Keep school policy for awarding credit in mind. FHTC does not award technical credit for courses taken outside of a five-year window. Awarding general education credits policy is more liberal. Additionally, the maximum number of transfer credit policy should be considered. Provide your recommendations to the appropriate school instructor / employee to review and approve recommendations.

**The following flowchart is a quick reference guide for use when transferring credit for a student.**

MILITARY OCCUPATIONAL SPECIALTY (MOS) TRANSFER CREDIT GUIDE

A step-by-step process for transferring credit for technical training

Step 2: Type student’s MOS in the Occupation Designator field and hit search. Review student’s MOS start and end dates and click on the corresponding Title. Review the contents of the Occupation Exhibit page.

Step 4: Compare the MOS Occupation Exhibit recommendations from the ACE website with program of study course descriptions, paying special attention to any vocational certificate recommendations.

Step 3: Access student’s selected program of study course catalog or other appropriate institutional document that includes course descriptions.

Step 7: Obtain transfer credit approval from school staff. Prepare degree plan and inform student.

Step 5: Review student’s Joint Services Transcript

Step 1: Go to the American Council on Education (ACE) Guide to the Evaluation of Educational Experiences in the Armed Services website: <http://www2.acenet.edu/militaryguide/OccupationSearch.cfm>

Step 6: Determine transfer credits to award based on ACE recommendations and course descriptions.

***MOS-11B-006 INFANTRYMAN***

*The below information was copied from the American Council on Education (ACE) Website on 6 November 2013* [*http://www2.acenet.edu/militaryguide/OccupationSearch.cfm*](http://www2.acenet.edu/militaryguide/OccupationSearch.cfm)

*Document Revised: 13 December 2013*

***NOTE****: Military Occupational Specialty (MOS) training programs change over time. Access the above website, determine the Soldier’s program start and stop date and then review training offered during that period to make recommendations on transfer credits.*

**11B10**

**11B20**

**11B30**

**11B40**

**Exhibit Dates: 9/04–Present.**

**Career Management Field: 11 (Infantry).**

**Description**

**Summary**: Leads, supervises, and serves as a member of an infantry unit of 10-20 persons, employing individual weapons, machine guns, and anti-armor weapons in offensive and defensive ground combat.

**Skill Level 10**: Uses individual infantry weapons; lays field wire; performs basic communications functions and operates communication equipment; utilizes camouflage to conceal weapons and personnel; constructs minor fortifications; performs land navigation; performs preventive maintenance on weapons, equipment, and some vehicles; makes verbal reports; administers first aid; operates wheeled vehicles to transport personnel, supplies, and equipment.

**ACE Recommendation - Skill Level 10:**

Credit may be granted on the basis of an individualized assessment of the student (9/04)(9/04).

**FHTC Recommenation – Skill Level 10**:

* Concur with ACE Recommendation
* PDV 101 Professional Development (Requires TAP Course Completion within 5 years)
* HHS 261 First Aid/CPR (w/current CPR card)

**Skill Level 20**: Able to perform the duties required for Skill Level 10; serves as a team leader, directing deployment and employment of personnel; supervises maintenance and construction activities; reads, interprets, and collects intelligence information; distributes administrative and training documents; trains subordinate personnel; evaluates terrain and supervises the emplacement of sighting and firing all assigned weapons; uses maps and map overlays, performs intersection and resection, and determines elevation and grid azimuths.

**ACE Recommendation - Skill Level 20:**

Credit may be granted on the basis of an individualized assessment of the student (9/04)(9/04).

**FHTC Recommendation – Skill Level 20**:

* Concur with ACE Recommendation
* PDV 101 Professional Development I
* PDV 204 Leadership and Teamwork
* HHS 261 First Aid/CPR (w/current CPR card)

**Skill Level 30**: Able to perform the duties required for Skill Level 20; as a first-line supervisor, directs the utilization of personnel and equipment; coordinates unit actions with adjacent and supporting elements; insures proper collection and reporting of intelligence data.

**ACE Recommendation - Skill Level 30**:

In the vocational certificate category, 3 semester hours in mechanical maintenance. In the lower-division baccalaureate/associate degree category, 1 semester hour in map reading, 1 in first aid, 2 in record keeping, 3 in personnel supervision, 3 in human relations, and credit in surveying on the basis of institutional evaluation (9/04)(9/04).

**FHTC Recommendation – Skill Level 30**:

* Concur with ACE Recommendation
* PDV 101 Professional Development I
* PDV 203 Management Principles in Technology
* PDV 204 Leadership and Teamwork
* HHS 261 First Aid/CPR (w/current CPR card)
* PPT 123 Basic Mechanical
* PPT 133 Basic Computers

**Skill Level 40**: Able to perform the duties required for Skill Level 30; supervises and trains personnel in infantry operations and intelligence activities; assists in planning, organizing, directing, supervising, training, coordinating, and reporting activities of subordinate units; supervises receipt, storage, and distribution of supplies, equipment, and food to subordinate units; provides oral and written reports; assists in production and administration of staff journals, files, records, and reports.

**ACE Recommendation - Skill Level 40**:

In the vocational certificate category: 3 semester hours in mechanical maintenance

In the lower-division baccalaureate/associate degree category:

2 semester hours in map reading

1 in first aid

3 in record keeping

3 in personnel supervision

3 in human relations

3 in principles of instruction

credit in surveying on the basis of institutional evaluation.

In the upper-division baccalaureate degree category - 3 semester hours for field experience in management (9/04)(9/04).

**FHTC Recommendation – Skill Level 40**:

* Concur with ACE Recommendation
* PDV 101 Professional Development I
* PDV 203 Management Principles in Technology
* PDV 204 Leadership and Teamwork
* HHS 261 First Aid/CPR (w/current CPR card)
* PPT 123 Basic Mechanical
* PPT 133 Basic Computers

**POWER PLANT TECHNOLOGY PROGRAM COURSES**

Extracted from the following FHTC Website in October 2013: <https://www.fhtc.edu/web/pub/catalog>

**Code** **Title** **Min Credits** **Max Credits**

HHS 261 First Aid/CPR 1 1

PDV 101 Professional Development I 1 1

PDV 202 Current Issues in Technology 3 3

PDV 203 Management Principles in Technology 3 3

PDV 204 Leadership and Teamwork 1 1

PPT 102 PP Equipment Fundamentals I 4 4

PPT 107 Properties of Materials 1 1

PPT 108 Power Plant Equipment Fund. II 2 2

PPT 121 Basic Math & Physics 3 3

PPT 122 Power Plant Safety & Work Performance 3 3

PPT 123 Basic Mechanical 1 1

PPT 124 Introduction to Scaffolding 1 1

PPT 125 Fuel/Water Chemistry and Control 3 3

PPT 126 Basic Electricity 4 4

PPT 128 Basic Print Reading 2 2

PPT 131 Introduction to Power Plant Systems 2 2

PPT 132 Electrical Equipment 2 2

PPT 133 Basic Computers 1 1

PPT 230 Heat Transfer & Fluid Flow 2 2

PPT 251 Rigging Lift Equipment 1 1

PPT Electives

PPT 226 Internship 4 4

PPT 240 Introduction to Atomic & Nuclear 2 2

TCH 243 Introduction to Wind Energy 2 2

**Total PPT Electives Credits Required 8 8**

**Total Program Education Course Credits Required: 54 54**

**NOTE:** The following course information can be modified and changed on an annual basis so it will need to be checked regularly when awarding credit.

**Course Descriptions**:

\*See course description proficiencies and objectives for more information.

**PDV 101 Professional Development**: This course delivers the basic background in professional behaviors, understanding of self, coworkers and supervisory positions. Students will participate and interact in specific elements of the class including role-plays, language development, conflict resolutions and basic employment issues.

*Competencies*:

1. Demonstrates a commitment to self-management and improvement
2. Displays the skills to work with people
3. Describes career development tools needed to gain employment

**PDV 202 Current Issues in Technology**: The student will discuss specific pieces of legislation, regulatory initiative, public concern issues, funding and actual provisions of technology by various entities. The student will research and discuss current issues in technology and the impact of those issues on society. The student will complete projects that expand on specific areas of interest.

**PDV 203 Management Principles in Technology**: The student will describe the overall perspective of business and industry and the associated managerial role. The student will be able to utilize practical building blocks for managerial growth. The student will be able to discuss the involvement of future roles for business and industry and outside forces that impact management of an industrial component.

**PDV 204 Leadership and Teamwork**: This course delivers the basic background in leadership and teamwork. Students will participate and interact in specific elements of the class including role-plays, conflict resolutions, basic employment issues, and providing leadership and teamwork skills.

**PPT 102 PP Equipment Fundamentals I**: Students describe the fundamentals of common types of pumps and valves.

**PPT 107 Properties of Materials**: Students identify the properties of metals. Students define and apply the concepts of alloyed metals to power plant equipment. They relate the strength of materials and brittle facture to power plant material problems. Students describe thermal shock/stress, erosion and corrosion and their control.

**PPT 108 Power Plant Equipment Fund II**: The students explain the fundamentals of refrigeration, heating, ventilation, and air-conditioning. They also describe the operation of common components found in mechanical systems including valve actuators, air compressors, heat exchangers, diesel engines, strainers and filters. Bearings and the lubrication principles that maintain them in good working condition are described by the student. Students describe the basic principles of process measurement and control actions that are crucial to plant operation and the operation of power plant water treatment systems and equipment.

**PPT 121 Basic Math & Physics**: Students identify the standards of measure necessary to compare and evaluate system pressures, temperatures, levels, flow rates and other important power plant operating characteristics. They identify classical mechanical principles that ensure maintenance technicians or operators are able to understand the dynamic changes occurring in power plant mechanical and electrical systems. They contrast fluids and define the relationships between hydraulics, pressure, buoyancy and flow.

**PPT 122 Power Plant Safety & Work Performance**: Students will learn methods of error prevention, workplace ethics and communication skills. They will learn and practice the proper and safe use of hand and power tools. The use of personal protective equipment is also part of their safety training. The student learns the methods of identifying and controlling electrical and mechanical hazards. Fire safety items and MSDS criteria are covered.

**PPT 123 Basic Mechanical**: Students will learn the correct and safe methods for using hand and power tools. They will also learn how to properly use torque wrenches. This course includes laboratory exercise. Precision measurement tools are used by the student to determine accurate dimensional readings.

**PPT 124 Introduction to Scaffolding**: Introduction to the various types of scaffolding commonly used in power plants. Overview of Industry and Federal standards for scaffolding criteria and use.

**PPT 125 Fuel/Water Chemistry and Control**: Students explain the fundamentals of chemistry to include atomic structure and the periodic table, chemical bonding, molecular structure, mixtures, solutions and compounds, and properties and uses of gases. They explain the theory of corrosion chemistry, pH and ion exchangers that are key to power plant water systems. They describe the methods and systems used for water chemistry control. For reactor water chemistry, they analyze the types, sources, effects and control/removal of impurities. Students describe the factors involved with radiochemistry, radiolysis and recombination and hydrogen gas that are essential to reactor water chemistry.

**PPT 126 Basic Electricity**: Students apply electrical principles to the identification of electrical insulators versus conductors. They describe the factors that create static electricity. They recognize and use units of electrical measurement. Students use electrical laws to promote a better understanding of DC and AC electrical circuit operating characteristics. They analyze AC circuit fundamentals. They use basic electrical test equipment to measure circuit operating parameters. The course also covers basic electronic components such as diodes, transistors and SCR’s. This includes laboratory time.

**PPT 128 Basic Print Reading**: Students identify common symbols used to represent electrical and mechanical components on power plant drawings. They describe the features of piping and instrumentation, electrical, logic and building layout drawings. This course includes practical exercises to reinforce power plant print reading.

**PPT 131 Introduction to Power Plant Systems**: Students use selected power plant systems to integrate individual equipment theory and apply fundamental scientific concepts. They analyze system configuration and operation to comprehend the tasks performed by maintenance and operations personnel.

**PPT 132 Electrical Equipment**: Introduction to the function, construction and operation of power plant electrical systems and equipment including generators, motors, switchgear and inverters.

**PPT 133 Basic Computers**: The student will demonstrate proficiency in basic computer skills related to the power plant technology field. This will include proficiencies in setting up and using spreadsheets with Excel; preparing professional presentations with Power Point; proficiency in using and editing with WORD; understanding basic computer nomenclature and ability to navigate through files; and ability to navigate the Internet for industry related sites and information.

**PPT 230 Heat Transfer & Fluid Flow**: Students describe the principles of basic thermodynamics to include temperature, sensible heat, properties of water and steam, and other important concepts in this subject area. They explain the principles of fluid flow. The students describe laminar and turbulent flow, pump theory, cavitation, fluid flow in a closed system, water hammer, heating and draining a closed system, and filling and venting systems.

**PPT 251 Rigging Lift Equipment**: Students will learn the safe and correct materials to rig and lift loads. They will learn rigging requirements, and types of connectors in order to perform safe lifts. In addition, students will be exposed to the operational requirements and limits of lift equipment such as a fork lifts, boom trucks, and various types of cranes.

*Competencies*:

1. Calculate loads to be rigged and lifted
2. Identify types and uses of rigging and other lifting apparatus
3. Describe construction and operation of hoists and cranes
4. State safety precautions for lift equipment
5. Describe safe operation of fork lift and boom truck
6. Describe components of hydraulic power systems.

**PPT 226 Internship**: Students will get on-the-job experience by working with qualified personnel in a power plant. Work hours and objectives will be agreed upon by the instructor/advisor, the power plant supervisor/ coordinator, and the student. Student progress will be gauged by meeting objectives and by a written report from the power plant supervisor/coordinator. This course will be graded on a satisfactory/ unsatisfactory basis.

**PPT 240 Introduction to Atomic & Nuclear**: Students analyze the elements of atomic structure in terms of atomic mass unit, protons, neutrons, and isotopes. They distinguish between nuclear interactions and reactions. They describe the theory of the fission process, how it is controlled and its products. Students explain the basic elements used for reactor operation. Students also examine several methods of radioactive decay.

**TCH 243 Introduction to Wind Energy**: Students learn of the various forms of energy and more specifically renewable energy sources. The basic concepts and vocabulary of electricity and concepts of transforming or converting mechanical energy to electrical energy are covered. The most common energy sources including the benefits and limitation of each are investigated. Progression of harnessing the wind and looks to the future of wind energy are discussed. A typical modern wind turbine is dissected to discover how electricity is created from the wind. Practical exercises in recording and analyzing information to determine wind power potential are practiced. This course includes practical exercises to reinforce energy, wind power and its future.

**Name/MOS: \_\_\_\_\_11B40\_\_\_\_\_\_\_\_\_**

**Flint Hills Technical College (PPT)**

**Technical Education Credits (25 credit hours)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course #** | **Course Title** | **Hours** | **Transfer Credits** |
|  | **Fall only** |  |  |
| PPT 102 | Power Plant Equipment Fundamentals I | 1 |  |
| PPT 108 | Power Plant Equipment Fundamentals II | 2 |  |
| PPT 122 | Power Plant Safety & Work Performance | 3 |  |
| PPT 123 | Basic Mechanics | 1 | **Transfer** |
| PPT 124 | Introduction to Scaffolding | 1 |  |
| PPT 134 | Basic Math | 2 |  |
| PPT 135 | Basic Physics | 2 |  |
| PPT 136 | Fuel/Water Chemistry Control | 2 |  |
| S |  |  |  |
|  | **Spring only** |  |  |
| PPT 126 | Basic Electricity | 4 |  |
| PPT 128 | Basic Print Reading | 2 |  |
| PPT 131 | Introduction to Power Plant Systems | 2 |  |
| PPT 132 | Electrical Equipment | 2 |  |
| PPT 133 | Basic Computers | 1 | **Transfer** |
|  | Total Hours | 25 |  |

## Power Plant Technology (PPT) – Associate Degree

|  |  |  |  |
| --- | --- | --- | --- |
| **Course #** | **Course Title** | **Hours** | **Transfer Credits** |
| PDV 101 | Professional Development I | 1 | **Transfer-TAP** |
| PDV 202 | Current Issues in Technology | 3 |  |
| PDV 203 | Management Principles in Technology | 3 | **Transfer** |
| PDV 204 | Leadership and Teamwork | 1 | **Transfer** |
| PPT 107 | Properties of Materials | 1 |  |
| PPT 109 | Energy Industrial Fundamentals (Elective) | 3 |  |
| PPT 230 | Heat Transfer & Fluid Flow | 2 |  |
| PPT 251 | Rigging and Lift Equipment | 1 |  |
| HHS 261 | First Aid/CPR | 1 | **Transfer** |
| PPT 226 | Internship (or 4 hours of approved technology course) | 4 |  |
| TCH243 | Introduction to Wind & Alternative Energy Sources | 2 |  |
| PPT 240 | Introduction to Atomic & Nuclear Physics | 2 |  |
|  | Total Associate Hours | 21 |  |
|  | Total Technical Hours | 46 |  |

|  |  |  |
| --- | --- | --- |
| **Course Title** | Hours | **Transfer Credits** |
| *English Composition I* | 3 |  |
| *Public Speaking or Interpersonal Communications* | 3 |  |
| *Biology or Physical Science* | 4/5 |  |
| *Technical Math or College Algebra* | 3 |  |
| *Psychology or Sociology* | 3 |  |

**General Education Credits (16-17 credit hours)**

**Total Program Credits 62-63**

Students must complete the following: a graduation application and submit official HS transcript. If a student is transferring credits to FHTC, you must send official college transcripts and complete a Transfer Request for Academic Credit form, this form is available in the Registrar’s office. You must have completed such coursework with a grade point average (GPA) of 2.0 or higher.

Student’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Advisor’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_