Wisconsin Youth Apprenticeship

TRANSPORTATION, DISTRIBUTION AND LOGISTICS

PROGRAM GUIDE

Investing in Wisconsin's Future

Department of Workforce Development

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TRANSPORTATION, DISTRIBUTION AND LOGISTICS YOUTH APPRENTICESHIP PROGRAM GUIDE

Description

Transportation, Distribution and Logistics (TDL) is a critical sector of the U.S. economy. This industry sector represents over 11 percent of the gross domestic product and is among the fastest growing of all sectors. There will be a growing number of career opportunities in a variety of professional and technical occupations as well as high-paid entry level occupations that provide career advancement opportunities.

This diverse career cluster encompasses careers and business involved in the planning, management, and movement of people, materials, and products by road, air, rail, and water, including related support services such as infrastructure planning and management, logistics services, and maintenance of mobile equipment and facilities. This Youth Apprenticeship occupational area focuses on three of the entry level pathways within the TDL industry: Facility & Mobile Equipment Maintenance, Logistics Planning & Management Services, and Warehouse & Distribution Center Operations.

Mobile Equipment Maintenance responsibilities include maintenance, repair, and servicing vehicles. Transportation relies on functioning equipment. Employees keep mobile machinery running while looking for more efficient safe and cost-effective ways to do so. Motor vehicles aren't a trend or a fad. The world needs cars and trucks to function. Demand will likely increase in the next few years as the number of vehicles in operation increases, reflecting continued growth in the driving age population and in the number of multi-car families, as well as maintaining current vehicles over the purchase of newer ones in a slow economy. Furthermore, as more freight is shipped across the country, additional diesel-powered trucks will be needed. Employment of service technicians and mechanics is expected to increase 15 percent between 2006 and 2020, compared to 10 percent for all occupations.[1] Job opportunities in this occupation are expected to be very good for those who complete high school or postsecondary technician training programs and earn ASE certification.

Careers in Logistics and Warehousing involve the planning, management and control of the physical distribution of materials and products. Often more than one mode of transportation is used as distribution efforts can be a complex national and global effort. This industry is responsible to ensure cargo arrives in the right location, at the right time, in the safest and most economical manner. Growth Opportunities in this area are found with large manufacturers, wholesale and retail trade companies and in government,

[1] Bureau of Labor Statistics Occupational Outlook Handbook, www.bls.gov, April 2013.

especially the armed forces. Growth in the industry does reflect ups and downs in the national economy. As the national economy grows and the production and sales of goods increases, there is an increase in the demand for transportation services to move goods from their producers to consumers. During economic downturns, the truck transportation and warehousing industry is one of the first to slow down as orders for goods and shipments decline. Nevertheless, Logistics, Trucking and Warehousing are expected to grow faster than the rest of the industry. Employment growth will result from manufacturers' willingness to concentrate more on their core competencies—producing goods—while outsourcing their distribution functions to trucking and warehousing companies which can perform these tasks with greater efficiency. As firms in other industries increasingly employ the industry's logistical services, such as inventory management and just-in-time shipping, many new jobs will be created. Also, as more consumers and businesses make purchases over the Internet, the expansion of electronic commerce will continue to increase demand for the transportation, logistical, and value-added services offered by the truck transportation and warehousing industry.[2]

The Youth Apprenticeship Program was approved by the Wisconsin State legislature in 1991 to provide a direct link between business, schools, and youth to meet the demands of technology, teamwork, communication, and leadership.

Wisconsin Youth Apprenticeship (YA) is a rigorous program that combines academic and related technical classroom instruction with mentored on the job learning for high school students. By training youth apprentices, employers play an active role in shaping the quality of their future workforce, improving the skill level of potential workers, and enhancing their competitive positioning in the marketplace. Employers, school districts, local consortiums, parents, and potential YA students are referred to the *Youth Apprenticeship Program Operations Manual* for general YA Program requirements.

Objective

The Wisconsin Transportation, Distribution and Logistics (TDL) YA Program is designed to provide students with a working understanding of occupational and technical skills within two entry level pathways within the TDL industry. This program provides the framework for educators and industry to work together to produce work-ready, entry-level employees that will compete favorably in a global market, as well as, provide for post-secondary educational advancement while integrating work-based learning in the school and worksite.

The following features distinguish a YA Program from other similar youth school to work programs.

[2] Bureau of Labor Statistics Occupational Outlook Handbook, www.bls.gov, 2009.

Level Two Youth Apprenticeship is a two-year program for high school juniors and seniors with an interest in a particular field; e.g., automotive repair. One-year Youth Apprenticeship Programs are also available to pursue.

Youth apprentices, parents, employers, YA program coordinators, and school districts enter into a written agreement approved by the Department of Workforce Development.

Statewide skills are established by the industry, making the youth apprentice skill set more relevant to the state's employers.

Youth apprentices are trained at the worksite by skilled mentors and are paid minimum wage or better for their work. Students average 10-15 hours/week.

Youth apprentices receive a high school diploma and a Certificate of Occupational Proficiency from the Wisconsin Department of Workforce Development (DWD) at graduation.

Youth apprentices may receive advanced standing credit and/or transcripted credit for the YA Program at a Wisconsin Technical College and/or at some four year colleges. See **Appendix F** for current details.

Statewide skill standards focus on skills and knowledge needed by employers for entry level employment in the TDL industry.

Students apply and are interviewed by TDL employers for positions in the Transportation, Distribution and Logistics YA Program. The state approved skill standards and program guide for the Transportation, Distribution and Logistics YA Program are used in both the classroom instruction and worksite learning. If the local school district is unable to provide the related technical classroom instruction courses, they may contract with their local technical college or employer practitioners to do so.

The skill standards are competency based. Competencies are performance-based outcome statements of occupational related skills defined by representatives of TDL worksites throughout Wisconsin and aligned with national skill standards. The competencies in the program include many of those required for the certified tests in Collision Repair and Refinishing, Automobile/Light Truck Repair, and Heavy/Medium Truck Repair administered by the National Institute for Automotive Service Excellence (ASE) (http://www.ase.com/), and the standards and knowledge outlined in the National Association of State Directors of Career Technical Education Consortium (NASDCTEc) Career Cluster Skill Standards (http://www.careerclusters.org/) for the Logistics Planning & Management Services, Warehousing & Distribution Center Operations, and Facility & Mobile Equipment Maintenance pathways in the TDL Career Cluster

The competencies will be taught at the worksite in combination with supportive, related technical classroom instruction. While the skill competencies are established statewide, program implementation and oversight occurs through local consortium committees to assure local needs are met.

Target Population

This Youth Apprenticeship occupational area focuses on three of the entry level pathways within the TDL industry: Facility & Mobile Equipment Maintenance, Logistics Planning & Management Services, and Warehouse & Distribution Center Operations.

The **Auto Collision, Auto Tech, or Diesel Tech** units are appropriate for students who have expressed an interest in this occupational area and like hands-on work and problem solving while performing repairs and installations. The **Logistics/Supply Chain Management (SCM)** units provide students with multiple business opportunities to plan and manage movement of materials. These students should be detail-oriented and efficient in order to work in a fast-paced, time-driven environment.

All students successfully meeting current high school graduation requirements and with a good attendance record for that year are encouraged to apply for the Transportation, Distribution and Logistics Youth Apprenticeship (YA) Program. The student must apply to the program in the year previous to program entry and be on track toward fulfilling high school graduation requirements in their school district. SEE **Appendix G** for students entering or continuing the Transportation, Distribution and Logistics YA Program in 2013.

All Youth Apprentices must complete the industry-wide foundational skill competencies consisting of competencies in core employability skills and safety. The Required Skill competencies may be completed concurrently with the specific technical skills.

Potential TDL youth apprentices will be required to complete a minimum of 450 work hours with 180 hours (2 semesters) of related technical classroom instruction for a Level One (1-year) Transportation, Distribution and Logistics (TDL) YA Program or a minimum of 900 work hours with 360 hours (4 semesters) of related technical classroom instruction for a Level Two (2-year) TDL YA program.

TDL YA students are required to perform all of the Core and Safety skills. **Level One (one year)** YA students are to choose additional competencies as indicated below in a specific TDL Pathway. **Level Two (two year)** YA students are to complete competencies in the specific TDL Pathway as indicated below.

Worksites can be chosen from any number of TDL settings including auto repair shops, auto collision shops, fleet management facilities, manufacturing facilities, distribution centers, and so on PROVIDED THAT the competencies related to the TASKS and EQUIPMENT USED are allowable by DWD Child Labor Laws. See **Appendix A** for more detail or contact the Department of Workforce Development's Equal Rights Division/Labor Standards Bureau at 608-266-6860 for questions regarding child labor laws.

TDL Units

1. Mobile Equipment Maintenance Pathway

Auto Collision- Unit competencies aligned with NATEF 2005 Collision Repair and Refinish skills. *2 Units per year.*

- Collision Repair Basics Unit- REQUIRED FIRST
- Non-Structural Analysis and Repair Unit
- Painting and Refinishing Unit
- Damage Analysis and Electrical Repair Unit

Auto Technician- Unit competencies aligned with NATEF 2012 Maintenance and Light Repair Automotive Standards skills. *1 Unit per year.*

- General Auto Service Unit- REQUIRED FIRST
- Auto/Light Truck Systems Unit

Diesel Technician- Unit competencies aligned with NATEF 2007 Medium/Heavy Truck Standards skills. *1 or 2 year program as indicated on Skill Standards Checklist.*

- Diesel Technician Unit

2. Logistics/Supply Chain Management Pathway- *2 Units per year*.

Planning and Purchasing Unit
Inventory Management and Production Unit
Storage and Warehousing Unit
Distribution and Transportation Operations Unit

Transportation, Distribution and Logistics Program Responsibilities

The following responsibilities are outlined for individuals involved in the Transportation, Distribution and Logistics (TDL) YA Program.

Students –

1. Maintain academic skills and attendance at the high school to remain on track for high school graduation.
2. Participate in progress reviews as scheduled.
3. Exhibit maturity and responsibility to meet requirements of employment as designated by the employer.

Parents or Guardians-

4. Ensure that adequate transportation is available to and from the worksite.
5. Participate in student progress reviews as scheduled.

School District-

6. Recruit students and coordinate student enrollment in the program with the consortiums and/or employers.
7. Integrate the YA Program related technical classroom instruction and worksite training into the student's overall education program with high school graduation credit issued for each semester successfully completed.
8. Participate in student progress reviews as scheduled.

YA Program Coordinators-

9. Apply and maintain approval from the DWD to operate a YA Program.
10. Ensure a minimum of 450 hours of worksite instruction/experience plus a minimum of 180 hours of related technical classroom instruction for each one year YA program.
11. Establish and meet regularly with an advisory committee that will identify when and where tasks will be taught during the Transportation, Distribution and Logistics YA Program.
12. Develop and maintain a yearly commitment with participating high schools, technical colleges, and local businesses to accommodate the number of students involved in the Transportation, Distribution and Logistics YA Program.
13. Establish and maintain a YA student grievance procedure.
14. Provide employer mentor training.

Related Technical Classroom Instruction Faculty-

15. Qualify in the specialty areas being taught in the YA Program.

Employers and Worksite Mentors-

16. SEE **Appendix B –** Transportation, Distribution and Logistics YA Implementation Guide for Employers.
17. Participate in a mentor training session and provide on the job training of the Youth Apprentices.

Department of Workforce Development-

18. Monitor national and state regulatory agencies, such as OSHA, for changes and impact on the Transportation, Distribution and Logistics Youth Apprenticeship Program.

Program Guide Organization

The competencies in the program include many of those required for the certified tests in Collision Repair and Refinishing, Automobile/Light Truck Repair, and Medium/Heavy Truck administered by the National Institute for Automotive Service Excellence (ASE) (http://www.ase.com/), and the standards and knowledge outlined in the National Association of State Directors of Career Technical Education Consortium (NASDCTEc) Career Cluster Skill Standards (http://www.careerclusters.org/) for the Logistics Planning & Management Services, Warehousing & Distribution Center Operations, and Facility & Mobile Equipment Maintenance pathways in the TDL Career Cluster

The Transportation, Distribution and Logistics YA Program also requires that Related Technical Classroom Instruction is provided to support attainment of the knowledge necessary to master the competencies. While recommendations for specific Related Technical Classroom Instruction are detailed separately in **Appendix C**, instructional requirements will vary depending on local consortium and advisory group decisions. It is strongly advised that local consortiums work with their advisory groups to determine appropriate Related Technical Classroom Instruction based on their local needs and resources.

The Youth Apprenticeship Program curriculum is written and organized according to the Worldwide Instructional Design System (WIDS) format and includes the Transportation, Distribution and Logistics YA Skill Standards Checklist, Program Appendices and Unit Appendices for the program. Overall progress is documented on the Skill Standards Checklist which lists skill level achievement for each competency achieved. The Unit Appendices outline each skill competency with corresponding performance standards and learning objectives. The Performance Standards describe the tasks and behaviors, as applicable, that employers should look for in order to evaluate the competency. The Learning Objectives outline the recommended content to be covered in the related technical classroom instruction. SEE **Appendix D** - Wisconsin Instructional Design System (WIDS) Format and Youth Apprenticeship Program Guide Terms and **Appendix E** - Use and Distribution of the Curriculum for further details.

Evaluation

The student must successfully complete the related technical classroom instruction and demonstrate the minimum skill level required on the Transportation, Distribution and Logistics YA Skill Standards Checklist for each competency according to the applicable curriculum. Worksite mentors and/or instructors use this checklist to evaluate the learner on each of the required skills. It is the responsibility of the mentor(s) to rate the students skill level on all tasks performed at the worksite.

Transportation, Distribution and Logistics YA Program Completion

Upon successful completion of high school and the Level Two (2 year) TDL YA Program requirements, the youth apprentice will receive a high school diploma and a Certificate of Occupational Proficiency from the Department of Workforce Development indicating "Transportation, Distribution and Logistics Youth Apprenticeship." Youth Apprentices who successfully complete a Level One (1 year) TDL YA Program and who are on track for graduation will be eligible for a Level One Certificate from the Department of Workforce Development. Furthermore, the YA students may;

1. Continue to work in the TDL industry.
2. Apply to a registered apprenticeship.
3. Pursue a degree or diploma from a Wisconsin Technical College with advanced standing and/or transcripted credit.
4. Apply for admission to a four-year University of Wisconsin school with high school academic elective credit for admission.
5. Go into military service.

SEE **Appendix F** for current agreements for post-secondary credit at Wisconsin Technical Colleges and University of Wisconsin colleges.

Appendices

Appendix A - Work Contracts, Child Labor Laws, Liability & Insurance

Appendix B - Transportation, Distribution and Logistics YA Implementation Guide for Employers

Benefits to the Employer
Role of the Employer
Role of the Mentor
Checklist for Program Participation
Checklist for Program Operation
Frequently Asked Questions
Work Contracts, Child Labor Laws, Liability & Insurance (insert Appendix A)

Appendix C - Recommended Related Technical Classroom Instruction

Appendix D - Wisconsin Instructional Design System (WIDS) Format and Youth Apprenticeship Program Guide Terms

Appendix E - Use and Distribution of the Curriculum

Appendix F - Post Secondary Advanced Standing Credits

Appendix G - Grandfather Clause – Program Transition Guidelines

Appendix H - Transportation, Distribution and Logistics Skill Standards Checklist

Appendix I - Transportation, Distribution and Logistics YA Course Outcome Summary: Overview and Table of Contents (COS)

Appendix J- Transportation, Distribution and Logistics Required Skills Curriculum (Units 1-2)

Appendix K- Auto Collision: Collision Repair Basics Curriculum (Unit 3)

Appendix L- Auto Collision: Non-Structural Analysis & Repair Curriculum (Unit 4)

Appendix M- Auto Collision: Painting & Refinishing Curriculum (Unit 5)

Appendix N- Auto Collision: Damage Analysis & Electrical Repair Curriculum (Unit 6)

Appendix O- ***Invalid beginning Fall 2015;*** Auto Technician: Vehicle Basics & General Service Curriculum (Unit 7)

Appendix P- ***Invalid beginning Fall 2015;*** Auto Technician: Brake Systems Curriculum (Unit 8)

Appendix Q- ***Invalid beginning Fall 2015;*** Auto Technician: Electrical/Electronics Curriculum (Unit 9)

Appendix R- ***Invalid beginning Fall 2015;*** Auto Technician: Suspension & Steering Curriculum (Unit 10)

Appendix S- ***Invalid beginning Fall 2015;*** Auto Technician: Engine Performance & Repair Curriculum (Unit 11)

Appendix T- Logistics/Supply Chain Management: Planning & Purchasing Curriculum (Unit 12)

Appendix U- Logistics/Supply Chain Management: Inventory Management & Production Curriculum (Unit 13)

Appendix V- Logistics/Supply Chain Management: Storage & Warehousing Curriculum (Unit 14)

Appendix W- Logistics/Supply Chain Management: Distribution & Transportation Curriculum (Unit 15)

Appendix X- Diesel Technician (unit 16)

Appendix Y- Auto Technician- General Auto Service (Unit 17)

Appendix Z- Auto Technician- Auto/Light Truck Systems (Unit 18)