

Automated Packaging Systems Technician

32-454-1 Technical Diploma

Financial Aid Eligible

Program Overview

The Automated Packaging Systems Technician program will give you the skills you need to enter a career in the packaging industry. You will be trained to service and repair a wide variety of packaging equipment and automated systems. Our program emphasizes the maintenance and troubleshooting of electrical, mechanical, and fluid power components on packaging equipment including industrial computer controls and programmable logic controllers. Classroom and hands-on lab instruction on packaging machines plus visits to packaging industries are all parts of the program. You will also participate in the Institute of Packaging Professionals meetings each month.

Offered at:

New Richmond



Special Features

This program is unique in the state. Global career opportunities are available. The packaging industry, both locally and nationally, provides unique support to the program by providing scholarships, equipment, and supplies.

Each student has the opportunity to apply for a tool scholarship in the form of a tool kit provided by the Packaging Machinery Manufacturing Institute (PMMI). The kit is the property of the student, at the completion of the program, to use in industry.

Student Profile

As an Automated Packaging Systems Technician student, you should be able to:

- Learn and apply mechanical principles and repair techniques
- Use good judgment
- Follow procedures carefully
- Handle and manipulate tools and testing equipment
- Assume responsibility for quality work
- Work under pressure
- Stand for long periods of time
- Work from prints and drawings

Preparation for Admission

The following experiences will help you prepare for this program:

- Basic Math/Algebra/Geometry
- Computer Skills
- General Science
- English
- Print Reading
- Drafting
- Welding/Metals/Machine Shop

Program Outcomes

Employers will expect you, as an Automated Packaging Systems Technician graduate, to be able to:

- Use engineering and machine layout drawings to assemble, install, and troubleshoot machines and machine assemblies.
- Apply the basics of mechanical and electrical concepts to operate and service automated packaging machines.
- Perform basic machining and welding operations.
- Apply basic communication skills to interface with people in business and industry.
- Accept responsibility, manage time and resources, and demonstrate a professional attitude when working alone or as a member of a team.
- Explain the basic properties of packaging materials and their applications in the packaging industry.

Career Outlook

After graduating from the Automated Packaging Systems Technician program, you will be ready to start your career as a:

- Packaging Systems Assembler
- Packaging Maintenance Technician
- Field Service Technician
- Line Mechanic/Adjuster
- Packaging Systems Operator

Curriculum

Number	Course Title	Credits
Occupational Specific Courses		
32414358	(A) AC/DC Circuits	3
32414359	(B) AC/DC Circuits ▲	3
32414380	Basic PLCs ▲	3
32420314	Basic Machine Shop	3
32449305	General Safety	1
32454340	Packaging Machine Maintenance (WBL) ▲	3
32454341	Fluid Power Systems ▲	3
32454342	Packaging Machine Operations ▲	3
32454343	Packaging Machine Rebuilding ▲	5
32454344	Schematics, Prints, and Layouts ▲	2
32454345	Packaging Systems Equipment Control ▲	3
32454347	Electromechanical Componentry ▲	4
32454348	Troubleshooting ▲	2
32454349	Installation of Packaging Machines ▲	5
32454357	Power Transmission Componentry ▲	2
32454359	Packaging Materials/Processes ▲	2
32454362	Processes of Manufacturing - Packaging ▲	2
32454364	Motion Controls ▲	2
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Occupational Supportive/General Studies Courses

32442307	Welding for Mechanics	2
10801195	Written Communication ♦	3
10801196	Oral/Interpersonal Communication	3
10801197	Technical Reporting ▲	3
32804355	Math 355	3
32804364	Math 364 ▲	2
32809371	Applied Human Relations	2
10890108	Information Resources	1
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PROGRAM REQUIREMENTS **70**

▲ This course requires a prerequisite and/or corequisite, and must be completed with a grade of "C-" or better.

♦ Appropriate placement score or Introduction to College Writing course required.

Course Descriptions

32414358

(A) AC/DC Circuits - Credits: 3

This course is an introduction to electricity. The focus will be on direct current as it is used in industry. It is a blend of the practical and theoretical. You will develop skills in reading schematics, circuit analysis, and electrical measurement techniques.

32414359

(B) AC/DC Circuits - Credits: 3

This course is an introduction to alternating current electricity as used in industry. It is a blend of the practical and theoretical. You will study series and parallel alternating current circuits, transformers, and three-phase alternators and motors. PREREQUISITE: 32414358 (A) AC/DC Circuits.

32414380

Basic PLCs - Credits: 3

This course will provide a foundation for working with microprocessor controls. Students will learn the theory and application of electrical principles as they are applied to control systems found in industry. The learner will use trainers and machine components to provide recognition and understanding of modern microprocessor-based control systems. PREREQUISITE: 32454345 Packaging Systems Equipment Control.

32420314

Basic Machine Shop - Credits: 3

This course gives students an introduction to machine tool operations. Emphasis will be placed on exposing students to a variety of machine tools and related operations.

32449305

General Safety - Credits: 1

The student will learn the United States labor law and safe work practices with employee training requirements. The proper use of safety equipment and personal application of safe working habits will be emphasized. Students who work with chemical hazards and use power tools are exposed to a variety of safety concerns that require the use of guidelines and regulations. Medical attention and response to emergencies is also an important procedure to preserve human life and prevent disease.

32454340

Packaging Machine Maintenance (WBL) - Credits: 3

The study of the care and maintenance of automated packaging systems. You will learn to select and apply basic tools used for maintenance and repair of equipment. You will develop skill in selecting, ordering, and receiving machine components and supplies. COREQUISITE: 32449305 General Safety.

32454341

Fluid Power Systems - Credits: 3

This course develops the skills required for the implementation of vacuum, air, and oil used to transmit force for performing useful functions on machines. Students will apply symbols to components and connect components to understand the assembly, operation, and maintenance of fluid power systems. The transmission of force is used in a variety of applications and can be hazardous to individuals who do not understand the related laws of physics. COREQUISITE: 32449305 General Safety.

32454342

Packaging Machine Operations - Credits: 3

In this course you will develop skills necessary to operate and adjust machinery in a safe and efficient manner. You will gain experience in product handling and performing assigned tasks on packaging machines. A step-by-step approach to understanding complex tasks from observation and written documents is a basic skill that can be used in a variety of occupations. COREQUISITE: 32449305 General Safety.

32454343

Packaging Machine Rebuilding - Credits: 5

The student will learn to plan, organize, and perform various tasks for the assembly or repair of packaging machines. Project work will be assigned for individuals and groups to assemble and disassemble packaging equipment simulating the work environment. Rebuilding machines gives students the opportunity to see applications and problem areas found on custom machinery. PREREQUISITE: 32449305 General Safety.

32454344

Schematics, Prints, and Layouts - Credits: 2

This course covers an introduction and use of the many types of engineering drawings used to represent machines. Students will draw sketches and develop interpretation skills required for the correct translation of machine drawings. The ability to understand visualization techniques and symbol usage is a valuable and universal skill as used in everyday life. PREREQUISITE: 32449305 General Safety.

32454345

Packaging Systems Equipment Control - Credits: 3

This course gives the students the opportunity to perform the selection, design, installation, and operation of control systems found on automated packaging machines. The student will work with many types of components to gain recognition and skill development in the correct installation of electrical control systems. The modern control system requires specialized skills that are useful for understanding high technology applications such as robotics and climate control. PREREQUISITE: 32449305 General Safety.

32454347

Electromechanical Componentry - Credits: 4

This course will develop an understanding of the skills necessary for the selection and application of electromechanical components as used in modern control systems. You will have the opportunity to simulate a control system. You will develop techniques used for identifying failures and malfunctions that occur in control systems. PREREQUISITES: 32414359 (B) AC/DC Circuits and 32449305 General Safety.

32454348

Troubleshooting - Credits: 2

The learner will develop the skills necessary for troubleshooting by analyzing the process of problem solving. You will perform troubleshooting procedures on components, machines, and systems. You will learn to think critically as an individual and as a member of a team. Prior knowledge of machine controls is required. PREREQUISITE: 32449305 General Safety.

32454349

Installation of Packaging Machines - Credits: 5

The learner will develop skills necessary to plan, install, and perform system checkouts. You will develop a schedule to simulate a machine installation, provide operator training, and develop a team approach to the installation. A variety of packaging machines will be used for the installation projects. A successful installation requires proper planning, teamwork, and the ability to analyze the machine's performance. PREREQUISITE: 32449305 General Safety.

32454357

Power Transmission Componentry - Credits: 2

The learner will develop skills necessary to install, maintain, and replace mechanical drive system components. The learner will use machine components to gain an understanding of their use, operation, and maintenance requirements. The correct installation and maintenance is necessary for trouble-free operation. PREREQUISITE: 32449305 General Safety.

32454359

Packaging Materials/Processes - Credits: 2

You will learn how to identify equipment types, material properties, and research application history and trends. You will develop skill in identifying materials that are used in various packaging processes. Student presentations and industry tours will be utilized to study current industry issues and trends. PREREQUISITE: 32449305 General Safety.

32454362

Processes of Manufacturing - Packaging - Credits: 2

You will learn how to select materials, fabricate parts, and perform quality assurance used in a manufacturing environment. Students will perform a variety of tasks to develop skills necessary for the manufacturing of components. Manufacturing is a fast-paced, highly technical, and globally competitive industry that requires a basic understanding of manufacturing principles. COREQUISITE: 32449305 General Safety.

32454364

Motion Controls - Credits: 2

The student will learn the application of motion controllers used in industry that accurately control position or speed. The student will select the correct motion controller from application requirements as used in industry. Performance will include the installation, connection, configuring, and troubleshooting of basic motion controllers. PREREQUISITE: 32454347 Electromechanical Componentry.

Graduate Employment Information

(WITC Graduate Survey Responses 2005-2006)

Number of graduates	8	Number employed	7	% employed in WITC district	29%
Number of responses	7	Percent employed	100%	Range of yearly salary	\$30,000-\$75,000
Number available for employment	7	Employed in related field	7	Average yearly salary	\$41,655

career vision