Piedmont Technical College Course Syllabus

COURSE INFORMATION

Course Prefix/Number: AMT 105

Title: Robotics and Automated Control I

Responsible Division: Technical Education

Last Day to Withdraw from this Course: For the last date to withdraw from this course, consult the current *Student Calendar*.

Course Description:

For course, credit hour, pre-requisite(s) and co-requisite(s) information, visit the Detailed Course Information page: <u>www.ptc.edu/courses/AMT105</u>.

Textbook and Other Materials:

For textbook information and additional required and/or supplemental materials, visit the <u>college bookstore</u> (www.ptc.edu/bookstore).

Proctored Examinations:

Proctored examinations for distance learning courses taken at non-PTC campuses may require a proctoring fee for each exam taken.

COURSE POLICIES

Course policies are available online through the *Academic Catalog* and *Student Handbook*. Visit the <u>Course Policies page</u> (www.ptc.edu/syllabus/policies)for a detailed list of important policies and more information.

GRADE POLICY

Detailedgrading policy information can be found on the <u>Grading Policy</u> <u>webpage(http://www.ptc.edu/grading-policy).Final grade appeal information</u> is available in the <u>Academic Catalog</u> (http://www.ptc.edu/catalog/).

ACCOMMODATIONS

Accommodations for ADA:

Information is available on the <u>Student Disability Services webpage</u> (http://www.ptc.edu/ada).

RATIONALE

Why do I need this course?

This is an introductory course to the field of industrial robotics and programming. Items covered in this course are the building blocks for process automation. Without an understanding of these fundamentals, the potential technician would not be able to effectively troubleshoot and repair automated controls and systems.

PROGRAM INFORMATION

Revision Date: 10/16/2015

For program information including required courses, program learning outcomes, gainful employment information and advisement information, refer to the Academic Program webpage. Go to <u>Academics</u> (http://www.ptc.edu/academics), select your program, and then select Credentials Offered.

COURSE STUDENT LEARNING OUTCOMES

Upon successful completion of this course and/or clinical, each student will be able to:

- Practice safety as it pertains to a robot system.
- Identify and use the Flexpendant.
- Operate the ABB IRB 120 in manual mode.
- Operate the ABB IRB 120 in automatic mode.
- Load, create, save, delete and edit basic programs.

GENERAL EDUCATION COMPETENCIES

Piedmont Technical CollegeGeneral Education Competencies for All Graduates:

This course may address one or more of the following General Education Competencies (assessment will be stated when applicable):

Communicate effectively.

Assessment:

N/A

Apply mathematical skills appropriate to an occupation.

Assessment:

N/A

Employ effective processes for resolving problems and making decisions.

Assessment:

Coding robot programs to accomplish a certain task.

Demonstrate the basic computer skills necessary to function in a technological world.

Assessment:

Using the ABB Flexpendant to program the ABB IRB 120 robot.

To validate proficiency in the general education competencies, students in some programs will be tested using Work Keys.