

## COURSE SYLLABUS

Division: **Workforce Services**

Curricula in Which Course is Taught:

Course Number & Title: **IND 195 Introduction to Factory Automation and Robotics**

Credit Hours: **2**      Hours/Wk Lecture: **10**      Hours/Wk Lab: **10**      Lec/Lab Comb: **20**

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### I. Catalog Description

An introductory course for students with little or no prior experience in the subject matter. Course will be delivered through approximately 50% lecture and reading and 50% hands-on experimentation. The course will utilize training equipment at RCATT, including Amatrol and Festo trainers in electricity, motors, controls, communication, PLCs, and mechatronics. In addition, robotics will be taught using Mitsubishi and Intelitek robots.

### II. Relationship of the course to curricula objectives in which it is taught.

This course is designed to build confidence in the student and to stimulate a desire to learn about and possibly consider a career path in industrial automation and robotics.

### III. Required background

This course is intended for anyone with an interest in and desire to learn the subject matter. No prior knowledge of the subject matter is required.

### IV. Course Content

- Electricity and Electrical Equipment
- Relays and Sensors
- Pneumatics,
- Basic Circuits
- PLC Logic
- Intro to Robotics

### V. Learner Outcomes

Upon completion of the class, students will have an understanding of:

### VI. Evaluation

- Homework/class work
- Quizzes
- Tests

Factory Automation and Robotics including the following: Metric System Measurement Electricity and Electrical Equipment Mechanical Power and Applications Automation Logic Introduction to Robotics	<ul style="list-style-type: none"> <li>• Midterm exam</li> <li>• Final exam</li> <li>• Class Participation</li> </ul>
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**The course supports the following objectives:**

DCC Educational Objectives

1. Communication
2. Critical Thinking
3. Computational and Computer Skills
4. Understanding Culture and Society

DCC Title IX (Sexual Harassment and Misconduct): Your Rights and How to Make a Report Consistent with its mission, Danville Community College is committed to providing a learning and working environment that emphasizes the dignity and worth of every member of its community. Sexual misconduct, which encompasses a range of behavior used to obtain sexual gratification against another's will or at the expense of another in any form will not be tolerated. Sexual misconduct includes sexual harassment, sexual assault, sexual exploitation, and sexual violence. Sexual harassment is unwelcome conduct of a sexual nature, which can include unwelcome sexual advances, requests for sexual favors, or other verbal, nonverbal, or physical conduct of a sexual nature. Thus, sexual harassment prohibited by Title IX can include conduct such as touching of a sexual nature; making sexual comments, jokes, or gestures; writing graffiti or displaying or distributing sexually explicit drawings, pictures, or written materials; calling students sexually charged names; spreading sexual rumors; rating students on sexual activity or performance; gender-based stalking or bullying; conditioning a benefit on submitting to sexual advances; or circulating, showing, or creating e-mails or websites of a sexual nature. Under Title IX, this constitutes sexual misconduct and includes rape or sexual assault.

If you have been the victim of sexual harassment or other sexual misconduct, you have certain rights under Title IX. For additional information regarding your rights, please consult the DCC Title IX website at [http://www.dcc.vccs.edu/News/Title\\_IX/Title\\_IX\\_and\\_Sexual\\_Misconduct.htm](http://www.dcc.vccs.edu/News/Title_IX/Title_IX_and_Sexual_Misconduct.htm).

In accordance with College policy and federal law, all faculty and staff members are required to report incidents of sexual harassment including sexual violence to one of the individuals below whose responsibility it is to investigate all complaints. In addition, you can contact these individuals for a complaint against a Danville Community College faculty or staff member for sexual harassment, sexual assault, sex discrimination, or other forms of sexual misconduct:

Title IX Coordinator: Ms. Andrea Burney  
Wyatt Building, Room 212  
434.797.8458  
[titleix@dcc.vccs.edu](mailto:titleix@dcc.vccs.edu) or  
[aburney@dcc.vccs.edu](mailto:aburney@dcc.vccs.edu)

Deputy Title IX Coordinator Mr. Howard Graves  
Wyatt Building, Room 108

434.797.8443  
[titleix@dcc.vccs.edu](mailto:titleix@dcc.vccs.edu) or  
[hgraves@dcc.vccs.edu](mailto:hgraves@dcc.vccs.edu)

### Plagiarism and Academic Dishonesty:

Students will be expected to maintain complete honesty and integrity in their academic work in this class. Acts of academic dishonesty, such as cheating, plagiarism, or inappropriately using the work of others to satisfy course requirements, will be not tolerated. Students who maintain their enrollment in this class agree that such acts will be managed at the discretion of the instructor according to the severity or the infraction. (Faculty may here specify the sorts of actions you will take in the event of a violation of academic dishonesty)