Automation and Robotics Orientation

IAMT 0010

Classroom Hours:
M – F 8am – 3pm
Lunch 11am – 12pm
M – Th 3pm – 9pm

Advisement Hours:
M – F 8am – 8pm

IAMT Program Faculty:
https://www.davistech.edu/programs/automation-and-robotics#faculty

Faculty

Introduction

Welcome to the Automation and Robotics program at the Davis Technical College (Davis Tech)! This program orientation aims to familiarize you with information specific to the program and its unique policies and procedures. You must read this document thoroughly and discuss any unclear sections with your instructor or a Career and Academic Advisor. You may also review college policies on the Davis Tech website (www.davistech.edu) or in Student Services.

Program Description

Students enrolled in the Automation and Robotics program utilize industry-standard tools, manufacturing equipment, and procedures for entry-level technicians. Students design, build, test, and troubleshoot automated technology directly tied to industrial processes. The program offers students the opportunity to apply hands-on learning to prepare them to meet industry needs in their respective fields. Students of Automation and Robotics explore safety measures, industrial controls, mechanical, fluid power systems, robotics, electronics, instrumentation-process control, communications, programmable logic controllers, building automation, plumbing, solar panels, and other forms of alternative energy.

Program Objectives

This program teaches through hands-on practice, instructional videos, information sheets, and competency tests. Students will practice safety principles, basic electronics, automation principles, mechanics, electrical motor controls, fluid power systems, programmable logic controllers, and workplace relations. Upon completing this program or a given certificate, students will also receive specialized training to become Industrial Technician. Depending on individual needs, students will have the opportunity to demonstrate and apply the following:

Automation and Robotics Core Objectives:

- Use and identify the following automation principles:
  - Safety
  - Service and Repair
  - Electronics and Programmable Logic Controllers

- Electrical, Refrigeration, Boiler, Mechanical, and HVAC Systems
- Fluid Power Systems of Automation Technology
- Workplace Relations

Elective Objectives:

- Demonstrate component identification, safety practices, soldering, de-soldering, anti-static grounding, and surface mount/through-hole techniques
- Demonstrate peripheral software and hardware interfacing
- Demonstrate industry robotic equipment installation and troubleshooting
- Identify and demonstrate automated conveyor control system design, construction, and troubleshooting
- Demonstrate analog and digital communication circuit construction and troubleshooting
- Demonstrate using instrumentation devices to measure temperature, pressure, level, and flow in a process control environment
- Demonstrate energy audits, building automation devices installation, and energy conservation
- Learn the mechanics of installing sensors and actuators in machines
- Construct and integrate automated equipment

General Information

You can access this orientation on the Davis Tech program website, as well as current information on the following items:

- Admission Requirements
- Classroom Availability
- Training Location
- Graduation Requirements
- Course Descriptions
- Program Requirements
- Gainful Employment Disclosures
- Estimated Cost (*tuition, fees, program, and course materials*)
- Financial Aid
- Credentials
- Job Outlook
- Transfer Options
- Academic Agreements
- Industry Licensing and Certification

Program and Course Materials

Tooling U is an online training program used nationwide by many large manufacturing facilities to train their personnel. Tooling U is used at Davis Tech to help students learn fundamental skills. The Machine Tool program also uses hands-on training and videos to cover all the courses in this program. You must purchase Tooling U subscriptions from the Davis Tech bookstore. They are

available in varying lengths, from 90-120 days to 365-day subscriptions. Tooling U is first used in IAMT 1100 Industrial Safety, and you will need to have your subscription purchased by the time you are ready to begin Module 1: Safety and Accident Prevention. **If you buy a Tooling U subscription directly from the Tooling U website and not from the Davis Tech bookstore, your instructor will not be able to assign you to the correct courses, and you will pay a higher price for the subscription.**

Student Advisement

Teacher advisement is essential for your success at Davis Tech. Students who receive regular advisement are more likely to achieve their goals and complete their training program on schedule. Your instructor can meet with you during the advisement hours listed at the beginning of this orientation. These meetings are used for you and the instructor to accomplish the following tasks:

- Update contact information in Northstar, the Student Information System
- Review performance and attendance
- Define and clarify training and career goals
- Select appropriate courses according to interest and aptitude
- Select courses that achieve program completion requirements
- Discuss professional work ethic in performance, attendance, attitude, dress, behavior, and communication
- Discuss challenges with referral to appropriate institutional support systems that can help improve your success

Competency-based Training

Davis Tech courses are competency-based, requiring you to demonstrate your knowledge and skill according to industry-based objectives and performance standards. Course lengths are based on actual clock hours and are calculated on the average length students are expected to complete designated coursework. At the beginning of each course, you purchase or receive course curriculum, which provides guided learning modules to follow. This includes the amount of time that should be spent on each learning activity. This will help you meet industry time standards and complete coursework in an appropriate amount of time.

Scheduling Courses in this program have an Open-start/Defined-end schedule. Courses in this program may be started at any time. Following course enrollment, you will receive a schedule that shows the date by which the course must be completed. If you fail to complete a course by the end date, you must re-enroll and repay for the course. This scheduling type is also called course-based because courses are paid for one at a time.

Campus Technology

You will log in and out of the Northstar Classroom Login Station each time you attend class using your 10-digit student number. You were given this number when you completed the Davis Tech enrollment process. You will use your student number to access the Student Portal as well. Your instructor will provide you with information on Canvas access.

You can access Canvas from any internet-connected computer at the following URL: https://davistech.instructure.com/login . If you have problems logging in to Canvas, please see your instructor or email online.support@davistech.edu . If you encounter technical issues in Canvas, use the Help button and the "Report a Problem" link. A general orientation to Canvas can be found in the New Student Orientation, but faculty will also offer an orientation specific to technology in your program on your first day of class.

Learning Resources

Student Resource Center

The classroom includes a Student Resource Center with industry publications, periodicals, manuals, and media materials. In addition, you will be given opportunities to use equipment and materials, such as computers with Internet access and software applications currently being used in the industry.

Electronic Student Resources

Your Canvas orientation course contains electronic learning resources that can be used throughout the program. Each canvas course links to these resources and will be updated regularly. If you find a frequently used resource (website, video, tutorial, etc.) that you think would be helpful for other students in your program, consider sharing the link with your instructor.

Students with Disabilities

If you have a disability that may require some accommodation by the instructor, contact an advisor in Student Services to document the disability.

Instructor Response Time

Your instructor will respond to any question regarding the program, assignments, or assessments within 24 hours of the Davis Tech operational schedule.

Student Policies and Procedures

You may find information on institutional student policies and procedures here: http://www.davistech.edu/policies-and-procedures .

Performance Standards

Students are expected to complete course work according to a timeline in the course curriculum. The timeline shows the maximum number of hours a student should take to complete each section of the course. Students who cannot maintain this progress should meet with the instructor or a college counselor.

Progress

Progress is calculated by the number of scheduled hours versus the completed coursework. Program progress must be maintained at 67 percent or better to qualify for financial aid. It is recommended that progress be maintained at 85 percent or better. This will ensure that you can complete the program on time. Please meet with your instructor if you have difficulty meeting 85 percent progress. If you do not complete a course by the end date, you will have to pay for the course again (adult students only), and a faculty member will help create a Student Success Plan to

ensure your success on a second attempt.

Grading

Davis Tech courses are competency-based, requiring you to demonstrate your knowledge and skill in various methods according to industry-based objectives and performance standards. To demonstrate competency and receive a letter grade for each course, you must achieve 80 percent or higher on all graded activities. If you don't pass an activity, you must rework it. Specific details for revising an activity can be found in the Course Navigation section of your course syllabus.

The assignments and activities used to calculate your grade will vary according to the course. The grade calculation for each course can be found in the course syllabus under Grading Practices.

Final grades for all courses are based on the following scale:

100% - 94%	A	86% - 84%	B	76% - 74%	C
93% - 90%	A-	83% - 80%	B-	73% - 70%	C-
89% - 87%	B+	79% - 77%	C+		

Academic Performance

Your success in this program is vital to us. We will work with you to help you succeed, but if you are not meeting the minimum standards described in this orientation, we are committed to taking appropriate actions to help you improve. The following steps may be taken if you fail to meet the minimum performance, progress, and attendance standards or violate Machine Tool Technology policies and procedures:

Academic Probation

Students on academic probation may lose Federal Financial Aid, scholarship eligibility, or sponsorship and benefits, as determined per college Financial Aid requirements and Department of Education regulations.

If you cannot complete a course by the course end date or meet program performance standards, you will be put on probation, and you will work with a faculty member to create a Student Success Plan. The plan will include details of the unsatisfactory performance, outline a plan and timeframe for performance improvement, and describe the process that will be used to monitor and evaluate future performance. This plan will be submitted to Student Services to become part of your student record. You and the instructor will sign the Student Success Plan.

If you are unable to correct the unsatisfactory performance or complete the repeated course by the repeated course end date, you will remain on probation and will need to meet with your instructor and a college counselor to modify and further define the Student Improvement Plan. The instructor and counselor may also evaluate barriers preventing your success in the program and whether or not other training options should be considered.

If you fail to meet the performance standards outlined in the Student Improvement Plan, you must participate in a Committee Review to continue as a student at Davis Tech. The committee will

comprise you, the instructor, the program director, an impartial program director, and a college counselor. The committee will evaluate the corrective actions you and the college took to determine a mutually beneficial course of action. Possible options may include but are not limited to continued academic probation, additional assessment, recommended change to another educational program, suspension, or termination from the program.

If you fail to appear for the Committee Review, you may be considered for disciplinary termination. If you have received a Student Improvement Plan or have been placed on academic probation and subsequently left the institution, you may be considered for disciplinary termination. If you are terminated for academic performance, you must meet with a Career and Academic Advisor to discuss a plan for correction before being permitted to re-enroll at Davis Tech.

Problem Resolution

If you are not satisfied for any reason with classroom management, grading, or academic disciplinary actions taken, discuss your concerns with faculty in your program. If this does not resolve your concerns, please contact Student Services.

Attendance

Attendance must be 67 percent or better to be eligible for financial aid. The Automation and Robotics program prefers 85 percent minimum attendance to ensure students can stay on track for the timely completion of each course. Attendance is calculated using the number of scheduled hours versus the number of hours you are present in the classroom. To meet this requirement, you must be in class on the days and times that you are scheduled. Your attendance requirement may be higher depending on any sponsorship or financial aid stipulations that apply to you. You must log in and out of Northstar each time you attend class so your attendance is documented.

Talk to your instructor when an absence is necessary. Excused absences will be given for job interviews, Davis Tech-sponsored activities, major illness, significant life events, off-site training, or high school activities. If you require an extended absence from the program, consult with your instructor before the absence. If necessary, a counselor in Student Services may assist you in this process.

Students are expected to attend class for the hours they are scheduled. If you are absent for 10 consecutive scheduled days, you will be withdrawn from Davis Tech. Per the College Student Records Policy, student attendance information may be released to potential employers.

High School Students

High school students must meet minimum standards in grading, progress, and attendance before transitioning into a place in the program as an adult student. The program establishes these standards and may differ across the college. In the Automation and Robotics program, a high school student should meet the following minimum standards:

Attendance: 85 percent Progress: 85 percent Grade: 80 percent

You will be subject to academic discipline if you do not meet Davis Tech or Automation and Robotics performance standards. Reasons for academic discipline include but are not limited to

violations of Davis Tech or program policies and procedures, violations of academic integrity, failure to maintain minimum attendance standards, failure to maintain progress standards, and repeating a course.

Student Follow-up

Your success in finding employment indicates the quality of our instruction. To evaluate the effectiveness of our programs, we ask that you notify your instructor if you are already employed, have become employed, or if your employment status changes. You may also report current military service, the pursuit of additional education, or reasons that may prevent you from completing your program or finding employment. If we do not receive a response from you, a Davis Tech employee will contact you to request your employment status.

Program Health, Safety, and Fire Prevention

You will learn about industrial safety in IAMT 1100 Industrial Safety and Workplace Relations and must follow the following safety standards:

- Wear proper personal protective equipment in required areas
- Adhere to classroom dress code and student conduct

First Aid Supplies

The classroom also includes a first aid kit and other supplies needed in an emergency. Evacuation maps can be found in strategic locations throughout the college.

Fire Prevention

Fire prevention and safety are paramount in our classrooms. We are committed to ensuring a safe learning environment for all students and staff. Please familiarize yourself with the location of fire exits, fire extinguishers, and emergency procedures posted in each classroom. In case of a fire alarm, calmly evacuate the building using the nearest exit and assemble at the designated meeting point.

Course Evaluations

At the end of each course, your curriculum will guide you to an online evaluation with questions about instructional content and your primary instructor. We appreciate and value your feedback. Although you will be asked to enter your student number, this is to verify the evaluation is completed only once per student. Feedback is used for program improvement and professional development.

Work-based Activities

Students can enroll in an Automation and Robotics externship where they will work with local companies to apply skills learned through their coursework in a real-world setting. The instructor will work with business partners to arrange and manage the details of the externship. The student will complete 30 hours of work. Consult with your instructor if you are interested in work-based learning or have any questions.

Student Code of Conduct

Professionalism

The focus of Davis Tech's educational programs are to prepare students for employment. It means that we encourage good employability practices, promote a strong work ethic, and instruct students on particular job skills. Prospective employers are far more interested in your attendance, punctuality, initiative, attitude, and experience than your academic achievement scores.

Problem-Solving

Some labs and workbook questions are not as easy as they seem. Many require you to use problem-solving skills, significantly benefiting you in the industry. A technician who can troubleshoot problems independently is an excellent asset to an employer.

Responsibility

You are responsible for your training. Learn all that you can. The more you take to an employer, the better you will be. You are also responsible for your own safety. Be aware of your surroundings and follow all safety guidelines included in the instruction.

Food and Drink Policy

Food and drink are allowed in the classroom and lab area, but if abused, this privilege could be revoked at any time.

Clean-up

When you leave, please clean up your area and reset any trainers for the next student. This will help everyone work better together. Show respect for your neighbor.

Children/Visitors in the Classroom

If you have a visitor, you may briefly leave the classroom to resolve any issues. Children are not allowed in Davis Tech labs or classrooms.

Cell Phone Use

Take any cell phone calls outside of the classroom; keep them brief and to a minimum. The classroom is like a work environment, and employers will not allow you to miss or leave work for your colleagues to deal with your responsibilities.