DAVISTECH

DAVIS TECHNICAL COLLEGE

IAMT 0000 Automation and Robotics Orientation

Faculty:	Stacy Hatch	stacy.hatch@davistech.edu	801-593-2433
	Ryan McDaniel	ryan.mcDaniel@davistech.edu	801-593-2034
Associate Faculty:	Stewart Girres	stewart.girres@davistech.edu	
	Anthony White	Anthony.white@davistech.edu	
	Dale Rappleye	dale.rappleye@davistech.edu	
	Gary Smith	gary.smith@davistech.edu	
	Ron Barnes	ron.barnes@davistech.edu	
Advisement Hours:	Monday – Friday 8 a.m. – 8 p.m.		

Introduction

Welcome to the Automation Technology program at the Davis Technical College (Davis Tech)! The purpose of this program orientation is to familiarize you with information specific to the program and its unique policies and procedures. You are required to 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 Technology program will utilize industry standard tools, manufacturing equipment, and procedures for entry-level technicians. Students will design, build, test, and troubleshoot automated technology, which is 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 the Automation Technology program have the opportunity to practice safety measures, industrial controls, mechanical, fluid power systems, robotics, refrigeration, electronics, instrumentation-process control, communications, programmable logic controllers, building automation, plumbing, solar panels, solar thermal water systems, and other forms of alternative energy.

Program Objectives

Through hands-on practice, instructional videos, information sheets, and competency tests, students will practice safety principles, basic electronics, automation principles, mechanics, and electrical motor controls, fliud power systems, progammable logic controllers, and workplace relation. Upon completion of this program or a given certificate, students will also have received specialized training to become an 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 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 basic electrical, plumbing, and heating ventilation and air conditioning
- Obtain EPA 608 certification and handling of refrigerants
- 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 install and troubleshooting
- Identify and demonstrate automated conveyor control system design, construction, and troubleshooting.
- Demonstrate analog and digital communication circuit construction and troubleshooting.
- Demonstrate the use of instrumentation devices in measuring temperature, pressure, level, and flow in a process control environment.
- Demonstrate energy audits, building automation devices install, and energy conservation.
- Learn mechanics of installing sensors and actuators in machines.
- Build and Integrate automated equipment.

General Information

You can access this orientation on the Davis Tech program web site, 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 that is used across the country 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 day subscription to 365 day subscription. 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 purchase 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 important 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 is available to 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 course work. At the beginning of each course, you purchase or receive course curriculum which provides guided learning modules for you to follow. This includes the amount of time that should be spent on each learning activity. This will helps you to meet industry time standards and to complete course work 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 will be required to re-enroll and repay for the course. This type of scheduling is also referred to as course based because courses are paid for one at a time.

Campus Technology

Each time that you attend class, you will log in to and out of the Northstar Classroom Login Station 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 problems while in Canvas, use the Help button in Canvas 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.

Classroom Resources

Each time that you attend class, you will log in to and out of the Northstar Classroom Login Station 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 problems while in Canvas, use the Help button in Canvas 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 where you will find industry publications, periodicals, manuals, media materials. In addition, you will be given opportunities to use equipment and materials, such as computers with Internet access and software applications that are currently being used in industry.

Electronic Student Resources

Your Canvas orientation course contains electronic learning resources that can be used throughout your time in the program. Each canvas course links to these resources, and they 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.

First Aid Supplies

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

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 in 24 hours within the Davis Tech operational schedule.

Student Policies and Procedures

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

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 it should take a student to complete each section of the course. Students who are not able to maintain this progress should meet with the instructor or a College counselor.

Progress

Progress is calculated by the number of scheduled hours versus the amount of coursework completed. Progress must be maintained at 100% or better. If you have difficulty meeting the progress requirement, you are encouraged to talk to your instructor. Failure to maintain the required progress standard, or failure to complete a course by the end date will result in academic corrective action being taken.

Grading

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

The assignments and activities that will be 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:

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

Academic Performance

Your success in this program is important to us. We will work with you to help you succeed, but if we feel that you are not meeting the minimum standards as 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 who are on academic probation may lose Federal Financial Aid, scholarship eligibility, or sponsorship and benefits, as determined in accordance with college Financial Aid requirements and Department of Education regulations.

If you are unable to complete a course by the course end date or meet program performance standards, you will be put on probation and a Student Improvement Plan will be developed. 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. The Plan will be signed by you and the instructor.

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 that might prevent 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 will be required to participate in a Committee Review in order to continue as a student at Davis Tech. The committee will be composed of you, the instructor, the program director, an impartial program director, and a college counselor. The committee will evaluate the corrective actions taken by the college and you 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 leave 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

Although high school students in this program are required to have a defined schedule, adult students have flexible scheduling options with a minimum attendance standard. Although you are in a classroom environment, the College's purpose is to help you prepare to work in the business world. Good work habits include punctuality and attendance. Employers pay close attention to attendance and tardiness. The attendance policy for the Automation and Robotics program is a minimum of 85%; however, you should have a personal goal of 100% attendance.

You can only be excused for job related interviews, Davis Tech sponsored activities, and high school assemblies or activities (with prior approval). However, if your progress is not satisfactory, you will NOT be excused. Absences cannot be made up. You may enroll for additional hours in the day or night class to catch up on late work.

You are responsible to sign in to Northstar at the beginning of your first class period before the computer marks you tardy, and sign out at the completion of your last class period. Problems with signing in must be reported to an instructor as soon as possible. Four tardies equal one absence.

If you are absent for ten (10) consecutive scheduled days, you will be withdrawn from Davis Tech. Failure to meet the required attendance standard will result in academic corrective action being taken.

The guidelines for attendance are based upon that of a working environment. If you were at your place of employment and you were continually late or leaving early, you probably wouldn't have your job for long. We are willing to work with you if you have special circumstances, but you must learn to communicate these to your instructor. (This doesn't mean we can excuse an absence.)

Student Follow-up

Your success in finding employment is an indication of the quality of our instruction. To evaluate the effectiveness of our programs, we ask that you notify your instructor if you are already employed, you become employed, or 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 Safety

You will learn about industrial safety in IAMT 1100 Industrial Safety and are expected to follow the following safety standards:

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

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 simply to verify the evaluation is completed only once per student. Feedback is used for program improvement and professional

development.

Work-based Activities

Students have the choice to enroll in an Automation Technology externship where they will work with local companies to apply skills learned through their course work 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 if you have any questions.

Student Code of Conduct

Professionalism

You are training to be a professional in a trade. Take it seriously.

Problem Solving

Some labs and workbook questions are not as easy as they seem. Many require you to use problem solving skills, which will greatly benefit you in industry. The technician that can troubleshoot problems independently is a great asset to an employer.

Responsibility

You are responsible for your training. Learn all that you can. The more you take with you 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 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

Cell phone calls must be taken outside of the classroom and should be brief and kept to a minimum. The classroom is like a work environment, and employers will not allow you to miss work or leave work for your colleagues to deal with.