

Status	Approved	Division	Business and Applied Technologies
Credits	4	Department	Agriculture
Terms Offered	Fall	Term	Fall 2017
Global Awareness	No	Modalities	Traditional
Locations Offered	Springfield - Leffel Lane	General Education	none

Instructor	Everett, Lawrence, Professor		
Office	106A Shull Hall	Office Hours	TTh 10:30 - 1:00 or by appointment
Phone	937.328.3860	Email	everettl@clarkstate.edu

Prerequisite(s)	AGR 1750
Pre/Corequisite(s)	none
Corequisite(s)	none

Permission Required No

Fees Lab and other \$100.00

Description Analyze and troubleshoot various hardware precision agriculture components. Communicate effectively with customers and suppliers. Download apps, update software, and train others to operate precision equipment. Install replacement sensors, components, or new precision equipment.

Contact Hours (per week)	Lecture	3 hours
	Lab 2:1	2 hours
	Total	5 hours

Meeting Times	Format	Days	Time	Room
	Lecture	TTH	8:00 - 10:40	S105

- Course Goals**
- Demonstrate an understanding of the precision equipment required for a given agricultural production goal.
 - Identify sources for precision hardware
 - Develop a list of precision components for a given situation
 - Describe the steps involved in procuring the required equipment
 - Develop an accurate customer bid based on the desired outcome
 - Troubleshoot, evaluate equipment to determine faulty components.
 - Demonstrate proficiency using a Multi-meter on precision components
 - Determine optimal readings from manufactures specifications
 - Evaluate and determine the correct course of action based on preliminary troubleshooting findings
 - Develop user instruction sheets for precision equipment, such as light bars, GPS units, monitors, and variable rate controllers.
 - Identify desired user outcomes
 - Create suitable instruction sheets or checklists
 - Analyze each component in relation to the total precision system
 - Determine suitability of a given component for different agricultural applications

4. Determine the optimum mix of precision systems based on the stakeholder's total agricultural operation.
 - Determine if equipment can be easily switched from one piece of equipment to another
 - Identify costs for different precision systems
 - Recognize the associated costs with precision equipment failure
 - Present recommendations to stakeholders
5. Present recommendations for the addition or retrofitting of precision equipment to older equipment and install new or replacement components.
 - Develop a list of required hardware
 - Develop a list of required software
 - Develop a cost sheet with equipment, software, and estimated hours of labor
 - Install components in an approved manner
 - Present recommendations to stakeholders

Outcomes CORE

- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Write clearly and accurately in a variety of contexts and formats.

Program

- Analyze data from precision agriculture platforms and prepare recommendations. (Agricultural/Horticulture)
- Demonstrate basic agriculture business concepts, skills, and tools. (Agricultural/Horticulture)
- Locate and use current information in solving technical and critical thinking problems. (Agricultural/Horticulture)
- Demonstrate effective employability skills. (Agricultural/Horticulture)
- Demonstrate basic troubleshooting and maintenance skills. (Agricultural/Horticulture)

Books No information has been provided. Please check with your instructor.

Course Policies

Grading Policy

Tentative Schedule

College Information

College Mission - To engage and empower diverse learners by providing high-quality educational programs and services that emphasize student and community success.

Basic Needs - The Clark State community acknowledges that challenges such as securing food, housing, clothing, or other basic needs may affect course performance. Any student facing these challenges is encouraged to contact the Office of Student Support to access campus and community resources. The office is located in Rhodes Hall, Room 217. You can email the office at studentsupport@clakstate.edu or call the office at 937-328-6101.

Academic Environment - In the course of a college education, students will encounter content and people that challenge their preconceived ideas and beliefs. This clash of competing ideas is an important catalyst, not only for the expansion of knowledge, but also in students' development of critical thinking. Faculty will help students evaluate evidence in order to form their own grounded judgments.

Assessment of Student Academic Achievement - Student learning is central to all that we do at the College. Faculty assess student learning in a variety of ways, including in-course assessments, portfolios, certification examinations, employer surveys, success of transfer

students, and many others. The results of our assessment of student learning efforts are used to improve student learning.

Students with Disabilities - In accordance with the American with Disabilities Act, it is the policy of Clark State Community College to provide support services to persons with disabilities. The Office of Accessibility Services 937.328.6019 (Springfield) or 937.431.7155 (Beavercreek) is the official contact for students with disabilities who request reasonable accommodations, auxiliary aides, and/or services to provide equal opportunity for academic success. Students must self-disclose their disability to and register with the Office of Accessibility Services in order to receive accommodations. If you have already presented your documentation and/or arranged accommodations through the Office of Accessibility Services, you are required to provide the instructor with your accommodation letter. Accommodations will only be provided after the letter is submitted to your instructor. Any request must be made so that the instructor has sufficient time to meet your needs. It is the student's responsibility to schedule tests with the instructor and the Office of Accessibility Services. If any students with disabilities need help evacuating the class in an emergency, they should speak with their instructor and the Office of Accessibility Services about an evacuation plan.

College Bookstore - Information about textbooks required for each section, including estimated prices, can be found on the virtual bookstore website by logging into your myClarkState account and clicking on the Virtual Bookstore link in the Quick Links section of the page.

Tutoring Services - Tutoring is available by subject area, for most courses, free of charge to all Clark State students. A schedule of available tutoring hours will be posted at the beginning of every term. For more information about tutoring services contact the Student Academic Support Center, Rhodes Hall, Room 105, 937.328.6049 or the Greene Center, Room 226, 937.429.8921.

Course Withdrawal - If for any reason you cannot complete this or any other course, you must officially withdraw from the class by the published last day to withdraw. If you officially enrolled in a course, you may receive a grade for the course unless you complete and submit a drop form in accordance with College policy.

For regular term courses: If the course is dropped prior to the 15th day of the term, the work attempted will not be counted and no notation of the enrollment will appear on the transcript. If the course is dropped after the 15th day of the term through the published withdrawal date, indicating completion of 70 percent of the term, the grade of W will appear on the transcript. After the published last day to withdraw, students will receive the grade earned as defined in the syllabus; including zeros for any work not completed. After the withdrawal date, students who have an unexpected and serious issue arise and who had been progressing satisfactorily up to that point will need to petition the appropriate academic dean to obtain an approval for a grade of W.

For flexibly scheduled courses: Flexibly scheduled classes (sections coded with an X) also use the 70 percent rule for grade and withdrawal purposes. Contact the Records and Registration Office for the exact last day to withdraw from a flexibly scheduled class.

Students who do not attend by the 15th day of a regular term will be administratively dropped for non-attendance. The course will not be counted and no notation of the enrollment will appear on the transcript.

Students who stop attending class prior to completion of 70 percent of the term, but fail to officially withdraw from the course, will receive a grade of UW (unofficial withdrawal). A UW grade is counted in the grade point average and has the same impact as an F.

Drop/Add forms are available from academic division offices, advising offices, Records and Registration, and the Greene Center and Bellefontaine offices. You can also drop courses online through Student Planning unless there is an academic hold (i.e. College Credit Plus or probation students) on your record. Students with an academic hold can email the Records and Registration Office at records@clarkstate.edu to request the withdrawal.

Students who decide to withdraw from a class and have any kind of financial aid should consult

with the financial aid office prior to the withdrawal to determine what affect it will have on their financial aid status. Students who receive Veteran's benefits and drop a class or withdraw from all classes are responsible for notifying the Veteran's Certifying Official (937.328.7937). Courses dropped anytime during the term could result in an over-payment dating back to the first day of the term.

Incomplete Grade - If you have been progressing satisfactorily in a course, but for reasons beyond your control (death in family, personal illness, etc.) you cannot complete all of the requirements for the course, you can request an incomplete grade (I) from the instructor. Guidelines for progressing satisfactorily are completion of 70% of the coursework with a passing grade. You must notify your instructor by the last day of any term. If the instructor agrees, you will work out a mutually agreeable completion schedule. The date of completion can be no later than Friday of the eighth week of the following semester. A student receiving an incomplete grade at the end of spring or summer terms must complete all conditions by no later than the eighth week of fall semester. The instructor will complete a grade change form once the course work is completed. If the student fails to complete the course work within the agreed schedule, the incomplete (I) grade will automatically change to an F.

Academic Integrity - Students are expected to behave as responsible members of the college community and to be honest and ethical in their academic work. Activities of academic dishonesty corrupt the process of acquiring the knowledge and developing the skills necessary for success in any profession; such activities are considered a violation of the student code of conduct and are therefore prohibited. Students are responsible for understanding and abiding by the college's Academic Integrity policy and definition of academic dishonesty (College Policy section of Student Handbook) as well as course and faculty specific standards and expectations.

Cases involving academic dishonesty are handled within the academic division responsible for that course. Faculty have the authority to issue a sanction up to a grade of zero for any assignment in which academic misconduct has occurred. In serious or repetitive incidences, the case will be referred to the Academic Incident Hearing Panel (AIHP) for further action. Such action may include issuing a failing grade for the course, probation, suspension, or expulsion.

Children in Classes - Children are not allowed in classes without the prior approval of the instructor. No children are allowed in lab classrooms or lab sessions. If permission is granted to bring a child into a class, it is the parent's responsibility to see that the child in no way disturbs other students or the class in general. Even after permission is granted, the instructor always has the right to ask a parent and child to leave a class if any kind of disruption takes place. Individuals who bring children to the college for any reason are expected to supervise them at all times.

Student Change of Information - Students are expected to keep their name, address, phone number and program major current to allow College faculty and staff to communicate with and appropriately advise them. You may update this information with one of the following offices: Records and Registration, Sara T. Landess Technology and Learning Center, Room 114, 937.328.6015; Greene Center, Student Services, Room 202, 937.429.8819; or at the Bellefontaine campus, Admissions Office, 937.328.6484.

Student Username/Login ID and Password - Students are provided a username/login ID and password to access the College's network, Student Portal (myClarkState), Student Planning (used to register for classes or check grades) and classes in Blackboard. The username/login ID consists of the first five letters of your last name followed by your first initial followed by four assigned digits. (If your last name is less than five characters, use your entire last name, first initial, four assigned digits.) Do not include any spaces, special characters, or capital letters. You can find your username at www.clarkstate.edu/username.

As a new student your initial password for all systems is your birth month (01-12) followed by your birth year (all four numbers) followed by the last 4 of your Social Security Number. It will look like MMYYYSSSS. You will be required to change this on first login, then again on a regular basis.

Technology Support - Students in need of technology, Blackboard or login support can contact

the IT Help Center at <https://help.clarkstate.edu/>. Live support is available 24/7/365 via telephone and online live chat. If you do not have access to a computer, you can call support toll-free at 1.866.223.0387. Assistance for personally owned equipment is limited.

Responsible Use of Technology - Engaging in any activity that violates or is strictly prohibited by Clark State's Use Policy, can result in the immediate loss of access privileges. If such activities also violate the College policy or local, state or federal laws, violators may be referred to the appropriate College authority or law enforcement agency for resolution. Such cases may result in suspension from the College as well as prosecution by law enforcement agencies.

With the evolving nature of resources, Clark State's Use Policy may be amended from time to time. These changes will be made available via the College's website as well as in the Information Technology department. It is the responsibility of each individual who uses the technology resources of the College to be familiar with and abide by all current operational policies.

The use of any technology resource of the College implies acceptance of all current operational policies.

Emergency Closing - In the unusual event, the College closes or delays for inclement weather or any other emergency, all available information will be communicated through Eagle Alerts and posted on Clark State's website, Facebook, Twitter, radio and television stations listed on the Emergency Closings area of myClarkState portal. The announcement will be made as early as possible, generally beginning at 6 a.m. for day classes and 1 p.m. for evening classes.

When the College closes, the Greene Center campus, Bellefontaine campus (at Ohio Hi-Point Career Center), Springfield Center of Innovation: The Dome, as well as classes held at any other location (Urbana University, Greene County Career Center, Miami Valley CTC and Springfield-Clark CTC) will be cancelled. If Urbana University or any of the Career Centers close (and Clark State remains open), classes at those locations will be cancelled. Classes held at Ohio Hi-Point Career Center in Bellefontaine will follow the delay/closing schedule for Ohio Hi-Point.

In the event of a delay, class starting times will not be altered. Classes scheduled during the delay period will not meet. Classes scheduled after the College has reopened will be held at their usual times. There will be no abbreviated class sessions. Buildings will open one hour prior to the start of classes.

Students are expected to attend all class sessions. When the College remains open during inclement weather and you cannot attend class, please notify your instructor. Students will still be responsible for any missed class activities or assignments. It is up to the individual instructor as to any accommodations made with students when classes are missed. (See also Children in Classes Policy).

Campus Safety - The safety and security of faculty, staff, and students is a top priority at Clark State Community College. A safe environment is a necessary precursor to active learning. If there is ANY threat of immediate harm, call 911.

- If you believe you are the victim of (or a witness to) sexual discrimination, including but not limited to sexual harassment, sexual assault, or sexual violence, you are encouraged to contact one of the Title IX Coordinators below or any Clark State faculty or staff member.
 - Title IX Coordinator:
 - Laura Whetstone, Director, Human Resources
Rhodes Hall 210C, 937.328.7958, whetstonel@clarkstate.edu
 - Title IX Deputy Coordinators:
 - Yolanda Hall, Senior Human Resources Generalist
Rhodes Hall 210D, 937.328.6125, hally@clarkstate.edu
 - Nina Wiley, Dean, Student Engagement & Support Services
TLC 115, 937.328.7936, wileyn@clarkstate.edu
 - Ron Gordon, Dean, Enrollment Services
Rhodes Hall 129, 937.328.6095, gordonr@clarkstate.edu

- Natalie Johnson, Associate Dean, Greene County Campuses
Greene Center 109, 937.429.8926, johnsonn@clarkstate.edu
- If you witness any threatening behavior that makes you uncomfortable, notify the Behavior Intervention Team (937.328.6056).
- If you are depressed or have thoughts of suicide, please know that you are not alone. The Counseling Center (937.328.7961) is always ready to help.
- If you identify fire conditions:
 - RACE: Rescue, Alarm, Contain, Extinguish
 - Know where the nearest fire extinguisher is located (find one, today).
 - Fire Extinguisher use: PASS: Pull, Aim, Squeeze, Sweep
 - Take time to look at the suggested evacuation routes posted in each room.
- If you find someone apparently unresponsive, retrieve and apply an Automated External Defibrillator (AED). Find the nearest AED, today.
- If you identify someone in need of medical aid, consider calling 911.
- Know where Clark State First Aid kits are located (see the Crisis Response Manual on the Clark State Portal).
- Visit the Leffel Lane Health Clinic, ASC 210.
- If you work in a lab with chemicals:
 - Know how to access appropriate Personal Protective Equipment (PPE).
 - Know where the Safety Data Sheets are posted.
- In case of tornado, know the designated safe areas in the building you are in.
- In case of evacuation, determine if any special needs occupants need assistance.
- In case of a shooter on campus, follow these simple rules:
 - RUN, HIDE, FIGHT
 - <https://youtu.be/5VcSwejU2D0>