AGED 240
Technical Tool Applications in Agricultural Education
Tuesdays and Thursdays 3:00 to 4:50pm
Co Bank Center for Ag Ed Lab

Descriptive Information
Instructor: Nathan Clark
Agricultural Education
Department of Agricultural and Resource Economics
Co Bank Center for Ag Ed
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Office Hours: By appointment (I am available before and after class at the Ag Ed Center)

Catalog Description:
Development of safe competencies and applications related to power and technical tools utilized in school based Agricultural Education programs.
2.000 Credit hours

Prerequisite:
None

Course overview:
The Power, Structure, and Technical Systems (PSTS) pathway is an essential component of our secondary agricultural education programs in Colorado. It is essential that agricultural education graduates are provided the knowledge and ability to safely teach and apply the tools required in this pathway. This course is designed to provide students with the essential information and skills needed to be successful and safe while teaching in the PSTS pathway.

Texts:
None required, selected readings will be provided.

Optional Texts:


Additional Class Material:
Students will need access to a mobile internet enables device for watching safety videos and taking safety tests. Students will need to provide approved safety glasses and other appropriate safety gear (i.e. closed toe shoes). All other materials will be provided.

Course Objectives:
1. The student will identify a safe work environment and demonstrate safe practices.
2. The student will be able to read, develop, and interpret technical manuals.
3. The student will develop products which reflect their competence in Agricultural Education tool applications.
4. The student will demonstrate the use of current technology and principles utilized in a secondary Agricultural Education program.
5. The student will interpret information on labels and signs in agricultural technical systems.
6. The student will identify and apply power and technical tools common in the agricultural education power, structure and technical labs.
7. The student will determine and apply the proper tools for application requirements found in agricultural education.
8. The student will identify, select, and apply fasteners and hardware in an agricultural education setting.
9. The student will utilize principles in tool selection and safety to complete an application project around agricultural education.
Instructional Methodology/Mode of Delivery:
The class will utilize weekly readings, homework, and online lectures, followed by safety tests and classroom discussions. Practical application of principals in the lecture/discussion will be performed in the laboratory setting.

Course Topics/Flow of Course:
1. Safety and expectations for workplace and school settings and distinguishing safe and unsafe work environments
2. Safety in personal equipment and attire by wearing safety glasses and protective clothing at all times
3. Interpret equipment manuals and determine proper operation, safety, maintenance, troubleshooting & repair
4. Identify power, structure, and technical, tools and their uses in Agricultural Education
5. Demonstrate proper and safe operation of tools
6. Maintain and store p.s.t tools appropriately
7. Identify specialty tools used in power, structure and technical laboratories
8. Demonstrate proper and safe operation of specialty p.s.t. tools
9. Maintain and store specialty tools appropriately
10. Determine the tools necessary to complete a project/job
11. Define and utilize appropriate terms used in p.s.t. applications
12. Determine what types of p.s.t. tools are needed for use in different applications
13. Select and utilize appropriate types of hardware fasteners needed in the p.s.t. applications
14. Utilize the tools and knowledge in a p.s.t. application project

Method of Evaluation:
Students will be evaluated on discussion/participation based on weekly assigned readings, unit safety examinations, weekly laboratory activities, unit quizzes and final examination.

Evaluation Criteria
Select Assignments: 10%
Tool safety examinations: 20%
Tool Skill Performance Assessments: 40%
Tool Application Assignments: 20%
Final Examination: 10%

PST Tool Units:
Circular Saw  Band Saw  Router
Jig Saw  Drill Press  Bench Grinder
Miter Saw  Corded Drill  Cordless Drill
Table Saw  Portable Sanders  Angle Grinder
Iron Worker Punch  Iron Worker Sheer  Metal Cutting Chop Saw
Pneumatic Nailer  Pneumatic Impact  Plasma CNC Table

Unit Assignments:
Performance Assessment Sheets: 400 pts.
Tool Application Project(s): 200 pts.
Attendance/Select Assignments: 100 pts.
Final Exam Reflection: 100 pts.
Total: 1000 pts.

GRADING SCALE:

A+  100 - 97  C+  79.9 - 77
A   96.9 - 93  C   76.9 - 73
A-  92.9 - 90  C-  72.9 - 70
B+  89.9 - 87  D+  69.9 - 67
B   86.9 - 83  D   66.9 - 63
B-  82.9 - 80  D-  62.9 - 60
F   Below 60

Note: This grading scale is consistent with EDCT 485, the student teaching experience. As we value preparing you for the next step in your teacher licensure development, grading scales in agricultural education classes will be consistent with you’re the scale used in your final capstone courses.
CLASS CULTURE:
There are two main “rules for success” in this class. They are:

- Be honest and kind
- Think before you act/react, and work hard.

As we work to build our culture and community, all things can be summed up through these two statements. All people (regardless of who they are) in our class should be treated kindly and honestly. For example, we honor all those who have chosen to join us in this class including the instructor. This includes kindly coming to class regularly and on time. If you have trouble getting to class (i.e. train, late leaving campus, etc.) kindly text or call us so we know where you are. Honesty is always the best policy, especially when it comes to your own work. Academic integrity is paramount, and all work you turn in will be of your own effort not anyone else.

We are going to work to build a “culture of safety” in our facility. This is a term industry uses and as we try to be relevant to the industry, we will do that as well. The absolute first way we can build a culture of safety is if we first and foremost think before we act or react in any situation. Think before you pick a tool, think before you say something you will regret, think while working on a project, etc. The other way we will build this culture is by being in the moment and working hard in the classroom and the lab.

OTHER IMPORTANT CONSIDERATIONS
If you are a student who will need accommodations in this class due to a disability or chronic health condition, please make an appointment with me to discuss your individual needs. Any accommodation must be discussed in a timely manner prior to implementation. A verifying accommodation letter from Resources for Disabled Students is required before any accommodation is provided. Student Disability Center https://disabilitycenter.colostate.edu/ located in TILT, room 121 or via phone 970-491-6385.

Need Help?
CSU is a community that cares for you. If you are struggling with drugs or alcohol and/or experiencing depression, anxiety, overwhelming stress or thoughts of hurting yourself or others please know there is help available. Counseling Services has trained professionals who can help. Contact 970.491.6053 or go to http://health.colostate.edu. If you are concerned about a friend or peer, tell someone at by calling 970.491.1350 to discuss your concerns with a professional who can discreetly connect the distressed individual with the proper resources (http://supportandsafety.colostate.edu/tellsomeone). Rams take care of Rams. Reach out and ask for help if you or someone you know is having a difficult time.

Sexual Assault and Violence Elimination
CSU’s Student Sexual Harassment and Violence policy, following national guidance from the Office of Civil Rights, requires that professors follow CSU policy as a “mandatory reporter” of any personal disclosure of sexual harassment, abuse, and/or violence related experiences or incidents shared with the professor in person, via email, and/or in classroom papers or homework exercises. These disclosures include but are not limited to reports of personal relational abuse, relational/domestic violence, and stalking. While professors are often able to help students locate appropriate channels of assistance on campus (e.g., see the CSU Health Network link below), disclosure by the student to the professor requires that the professor inform appropriate CSU channels to help ensure that the student’s safety and welfare is being addressed, even if the student requests that the disclosure not be shared.

For counseling support and assistance, please see The CSU HEALTH NETWORK, which includes a variety of counseling services that can be accessed at: http://www.health.colostate.edu/. And, The Sexual Assault Victim Assistance Team is a confidential resource for students that does not have a reporting requirement and that can be of great help to students who have experienced sexual assault. The web address is http://www.wgac.colostate.edu/need-help-support.
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<th>Date</th>
<th>Topic</th>
<th>Assignments/Notes</th>
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<tr>
<td>Week #1</td>
<td>General Information/Course Overview</td>
<td>Measurement, General Safety Overview, Cleaning the shop</td>
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<tr>
<td>Jan 21 &amp; 23</td>
<td>Lab Tour/ How do we clean it</td>
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<td>Week #2</td>
<td>General Safety Tests</td>
<td>Lab Tour Test, Measuring Test</td>
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<td>Jan 28 &amp; 30</td>
<td>Lab Tour Test</td>
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<td>Week #3</td>
<td>Lab Tour Test, Measuring Test</td>
<td>Non-power tool Overview/Demo/Safety/Skill Development</td>
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<td>Feb 4 &amp; 6</td>
<td>Measuring Test</td>
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<td>Week #4</td>
<td>General Safety Tests</td>
<td>There will not be class on Thursday because of the Ag Teacher Conference. There will be an alternate assignment</td>
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<td>Feb 11 &amp; 13</td>
<td>Lab Tour Test</td>
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<td>Week #5</td>
<td>Lab Tour Test</td>
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<td>Feb 18 &amp; 20</td>
<td>Measuring Test</td>
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<td>Week #6</td>
<td>Measuring Test</td>
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<td>Feb 25 &amp; 27</td>
<td>Lab Tour Test</td>
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<td>Week #7</td>
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<td>Mar 3 &amp; 5</td>
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<td>Week #8</td>
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<td>Mar 10 &amp; 1</td>
<td>Lab Tour Test</td>
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<td>Week #9</td>
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<td>Mar 24 &amp; 26</td>
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<td>Week #10</td>
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<td>Mar 31 &amp; Apr 2</td>
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<td>Week #11</td>
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<td>Apr 7 &amp; 9</td>
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<td>Week #12</td>
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<td>Apr 14 &amp; 16</td>
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<td>Week #13</td>
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<td>Apr 21 &amp; 23</td>
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<td>Week #14</td>
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<td>Apr 28 &amp; 30</td>
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<td>Week #15</td>
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<td>May 5 &amp; 7</td>
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<td>Week #16</td>
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<td>May 11 – 15</td>
<td>Lab Tour Test</td>
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