AGED 421 Course Syllabus

Course Description:
Curriculum development and methods of teaching and motivating students in agricultural mechanics. 2.0 hours seminar, 3.0 hours laboratory.

Prerequisites:
Students should have completed AGET 120 and AGET 150 (or equivalent courses) before taking this class.

Instructor:
Michael Spiess

Office Hours and Contact Information:
Current contact information and office hours are available on Blackboard. See the Contact Me icon.

Note: Email is a good way to contact the instructor outside of class or office hours. Emails are generally answered within 12 hours or less. However some student messages may be trapped by the campus spam filter. To reduce your chances of having your message blocked always include a subject line, don’t add links to the message, and don’t type in all caps.

Class Meeting:
Wednesday 1700-2150 in Shop II. Attendance is also REQUIRED at the Chico State Fall Ag Mechanics Workout. See schedule for date.

Course Objectives:
Students will:

- Have an understanding of basic shop tasks commonly found in agriculture
- Be able to perform basic shop tasks common to agriculture
- Develop the ability to work safely in a shop environment.
- Demonstrate their ability to layout projects from drawings.
- Be able to create drawings of simple projects using computer aided drawing tools.
- Be able to correctly identify common tools and materials
- Develop an understanding of projects and materials that will enable them to create a bill of materials for common farm or classroom projects
- Be able to solve project construction problems such as efficient use of materials, materials selection, etc.
- Utilize various teaching procedures and techniques.
- Develop teaching objectives in Ag mechanics.
- Develop a file of appropriate lesson plans.
Select tools and materials used in effective shop classes.
Identify factors lending to an effectively laid-out shop facility.
Lead a discussion of student evaluations of demonstrations and lessons. Analyze lessons that incorporate the use of technology according to best practices and research findings.
Practice and model safety procedures in Ag mechanics shop lessons.
Successfully teach a "typical high school" lesson dealing with situations including, but not limited to: discipline, time limits, evaluation, management, etc.
Teach several lessons involving demonstrations in Ag shop.
Organize, plan and prepare for teaching Ag mechanics skills.
Select technological resources to support and enhance learning aligned with agricultural mechanics instruction and adopted state standards.
Use established selection criteria to evaluate electronic digital media including multimedia tools, Internet resources, computer-assisted instruction.
Use computer productivity tools (e.g. Office) for agricultural mechanics instruction and in the management of SAE and shop programs.
Demonstrate competence using technology during demonstrations and lessons. Identify exemplary practices of computer-based technology in teaching and learning. Use online tools to create lesson plans.
Use computer-based collaborative tools (such as threaded discussion group, listervs, online chat and audio/video conferences) as a regular part of the course (Blackboard) and the National Association for Agricultural Education Communities of Practice.
Demonstrate competence in the use of electronic research tools (such as Internet searches) and assess the authenticity reliability, and bias of information gathered. Demonstrate the use of R-2 and other data sources available to California Agricultural Teachers.

What the student should know:

The steps to follow in developing teaching objectives and lesson plans in Ag mechanics instruction.
The clinical teaching procedures and elements of good teaching as applied to non-classroom instruction.
The development of a shop program budget and how to purchase tools, materials and supplies.
Shop management and organization techniques.
The appropriate use of technology in agricultural mechanics instruction.
The general purposes and objectives of Ag mechanics instruction in Agricultural Education.
The teacher's legal responsibility for conducting shop and fieldwork activities.
Fully understand the California Educational Code relative to eye protection.
The importance of giving prompt attention to student first aid needs.
The obligation of the teacher relative to teacher liability in school shop accidents.

Required Texts:
Storm, Managing the Occupational Education Laboratory, Prakken Publications, Inc. 1993.
Herren, Agricultural Mechanics Fundamentals & Applications, 4th or 5th edition (or similar text)

Required Materials & Equipment:

Students are responsible for obtaining materials for lab assignments (lessons). SAFETY GLASSES are required for every class. Students must wear closed toed shoes in the shop. Students without safety glass will not be allowed to participate in shop activities.

Web Site and Computer Use:

Computers are an integral part of agricultural mechanics industry and students are expected to use this technology as part of the course. Some materials for this course are found on the course web site delivered by Blackboard. These materials are an integral part of the course and students will be expected to review it regularly. Written assignments are expected to be typed. Generally, assignments will be provided in MS-Word format allowing the student to print and edit the document. Students not familiar with computers or use of the Web (or Blackboard) are strongly encouraged to seek training (see instructor for further information). Computer portions of this course can be completed on a home computer with an internet connection or in a campus computer lab (see http://www.csuchico.edu/stcp/labs/). Information on other computer resources for students is available at: http://www.csuchico.edu/stcp/

On the web site students will find:

- Lecture Notes (PDF) provided as a study aid only.
- Assignments and Exercises
- Grades (generally posted after the 4th week)
- A current course activity schedule
- Other resources and required reading.
- Resource materials

Class Attendance:

Much of the course content is composed of demonstrations and lessons given by the students and the instructor. Class participation and feedback is a key part of the curriculum. Students will be graded on attendance. Students

Groups:

Each student will be assigned to a group. Groups are similar to department with multiple teachers. In the group you will produce presentations, support each other in development of project plans and demonstrations, and plan a portion of a CDE event. Time will be allocated to work in groups during class, but students should expect to work together outside of class. Class presentation will include a group score as well as individual points.

Group Demonstrations:

Each group will plan and deliver a demonstrations. The group will provide materials for the demonstrations and lessons. Demonstrations will be graded for time as well as content (see rubric).
Demonstration/lesson assignments are due at the time of presentation and copies for the class members are expected. Handouts and lesson plans will included as part of the “binder” assignment.

Course Management:

- Assignments are due on the due date and will not be accepted late. See Blackboard for due dates.
- Record your demonstration dates. No makeups are possible. Missed demonstrations will be given a zero score.
- Use of the shop outside of the scheduled class time will be permitted provided that an instructor is in the building and at least two students are in the shop (for safety). Students are expected to work safely and thoroughly cleanup. Abuse of this privilege will result in loss of the privilege.
- Cleanup of the shop is commonly part of the class activity. Students not participating in shop cleanup will have points deducted from their grades.
- Students are expected to complete the assigned reading prior to class and actively participate in discussion of the reading.
- Student collaboration is encouraged; however each student must do their own work. (e.g. graphs, written answers, etc.)
- Student grades will be posted on the Instructor’s web site and it is the responsibility of the student to check their grade for accuracy. If a student feels an error in grading has been made, the student has one week from the time of the assignment is returned to them (or the grade is posted on the web, whichever is later) to request a review of the grade. The request must be in writing — attached to the original assignment — and must include a specific statement as to what is in error, how it should be corrected, and what supporting evidence is available. It is highly recommend that students keep copies of assignments.
- Use of tobacco products is not allowed during class or lab.
- Students are expected to turn off all pagers, cell phones and other electronic devices during class time. No texting please.
- In class use of laptop computers is limited to use related to the course. NO email, IM, etc.
- Students are expected to pay attention and participate in class meetings.
- All class participants are expected to exhibit respectful behavior to other students and the instructor.
- All students have the right and privilege to learn in the class, free from harassment and disruption.
- Inappropriate or disruptive behavior will not be tolerated, nor will lewd or foul language.
- The class follows the standards set in the Code of Students Rights and Responsibilities (EM 96-38) and students are subject to disciplinary action for violation of that code.

Individual Demonstrations:

Each student will deliver a demonstration (15 minutes). Students will provide materials for the demonstrations and lessons. Demonstrations will be graded for time as well as content (see rubric).

Demonstration/lesson assignments are due at the time of presentation and copies for the class members are expected. Handouts and lesson plans will included as part of the “binder” assignment.
Course Binder:

Students are expected to keep a contemporaneous binder of lessons, assignments, and handouts during the class. The CDE portfolio is included in the Binder. Materials in the binder will be used in class discussion and must be brought to class. These materials will be useful references for new teachers.

Grading:

Grades will be determined by:

<table>
<thead>
<tr>
<th></th>
<th>Approximate Points</th>
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</thead>
<tbody>
<tr>
<td>Group Content Presentation</td>
<td>50</td>
</tr>
<tr>
<td>Group Demonstration</td>
<td>60</td>
</tr>
<tr>
<td>Group SAE Project</td>
<td>50</td>
</tr>
<tr>
<td>Group CDE (workout)</td>
<td>50</td>
</tr>
<tr>
<td>Individual SAE Portfolio</td>
<td>50</td>
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<tr>
<td>Individual Demonstration</td>
<td>60</td>
</tr>
<tr>
<td>Project &amp; Plan</td>
<td>100</td>
</tr>
<tr>
<td>Workout Summary, rubrics, and other individual assignments</td>
<td>200-300</td>
</tr>
<tr>
<td>Demonstration Attendance &amp; Feedback (10 points each day)</td>
<td>80</td>
</tr>
<tr>
<td>Binder</td>
<td>50</td>
</tr>
<tr>
<td>Final – Project Presentation</td>
<td>50</td>
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</tbody>
</table>

Grades will be assigned using the following scale:

- 94% - 100% A
- 90% - 92% A-
- 87% - 89% B+
- 83% - 86% B
- 80% - 82% B-
- 77% - 79% C+
- 73% - 76% C
- 70% - 72% C-
- 67% - 69% D+
- 60% - 66% D
- Below 60% Failure

Some of the group assignments are graded as a group and some as individual assignments. See Blackboard.

Policies Common to the University and College of Agriculture

University and College Policies will be enforced in this course. See Blackboard Link.

Professional Conduct

As future teachers students are expected to perform as professionals. Assignments should be turned in on time and completed in a professional manner. Students are expected to treat their peers professionally and provide constructive feedback. See Blackboard for more information.
## Course Schedule
The course schedule is subject to change. Changes will be announced in class and posted on the course web site (announcements). Reading should be completed before first lecture of the assigned week. “Online” reading will be posted on the web site. Assignments will be posted on the website and **actual due dates** posted there.

<table>
<thead>
<tr>
<th>Week Of</th>
<th>Topic</th>
<th>Group</th>
<th>Reading*</th>
<th>Assignments**</th>
<th>Activities***</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/25/2014</td>
<td>Introduction to Class Grading Rubrics for Ag Mechanics/ CDE/Curriculum/Standards</td>
<td>Organize Groups SAE Group Project #1</td>
<td>CalAgEd Curriculum &amp; Standards</td>
<td>Rubric #1 Project Outcomes</td>
<td>Group Organization Rubric Activity #1 Project Outcomes Tool Inventory Assignment</td>
</tr>
<tr>
<td>9/1/2014</td>
<td>Student Learning Outcomes/ Into the Project/Professional Conduct/Demonstrations / Ag Mechanics CDE</td>
<td>SAE Group Project #2</td>
<td>CATA Code</td>
<td>Inventory</td>
<td>Signup for Group Demo CDE Discussion &amp; Activities Assignment</td>
</tr>
<tr>
<td>9/8/2014</td>
<td>NAAE – COP / Safety</td>
<td>Safety Video Chap 6 - Safety</td>
<td>Chap 6</td>
<td>COP</td>
<td>Safety Quiz/ SAE Project Build/Storyboard</td>
</tr>
<tr>
<td>9/15/2014</td>
<td>Field Trip – Las Plumas H.S.</td>
<td></td>
<td>Field Trip Report</td>
<td></td>
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<tr>
<td>9/22/2014</td>
<td>Field Trip Review, CTE Online, SAE Project</td>
<td>Chap 2 - Equip</td>
<td>Chap 2 / CAD Tutorials</td>
<td>SAE Project CAD</td>
<td>Sign up for SAE Project Plan / SAE Project Build</td>
</tr>
<tr>
<td>9/29/2014</td>
<td>CAD</td>
<td>Chap 4 – Material &amp; Tool Control</td>
<td>Chap 4</td>
<td>Project #1</td>
<td>Group Demo Prep/ SAE Project Build</td>
</tr>
<tr>
<td>10/6/2014</td>
<td>CDE Workout Reports</td>
<td>Chap 3 - Facilities</td>
<td>Shop Materials Budget</td>
<td></td>
<td>Group Demo #1</td>
</tr>
<tr>
<td>10/13/2014</td>
<td>CAD</td>
<td>Chap 5 - Maintenance</td>
<td>Chap 5</td>
<td>Project #2</td>
<td>Group Demo #2 Hazard Hunt</td>
</tr>
<tr>
<td>Week Of</td>
<td>Topic</td>
<td>Group</td>
<td>Reading*</td>
<td>Assignments**</td>
<td>Activities***</td>
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<tr>
<td>10/20/2014</td>
<td>Curriculum from other states and sources/Internet Resources (CRAPP) / Budget</td>
<td>Chap 8 – Budget Prep</td>
<td>Chap 8</td>
<td>CDE Activities</td>
<td>Skill Demo Prep</td>
</tr>
<tr>
<td>10/27/2014</td>
<td>CDE Review – Tie to Classroom skills</td>
<td></td>
<td></td>
<td>Project #3</td>
<td>CDE Planning</td>
</tr>
<tr>
<td>11/3/2014</td>
<td>Torchmate / Student Activities</td>
<td></td>
<td>Chap 9</td>
<td>Project Plan - BOM</td>
<td>Skill Demo #1</td>
</tr>
<tr>
<td>11/10/2014</td>
<td>Budget Discussion/Record Book Discussion</td>
<td></td>
<td></td>
<td>Project #3</td>
<td>CDE Setup SAT 11/15 Required 7-2</td>
</tr>
<tr>
<td>11/17/2014</td>
<td>Ag Mechanics Instruction supports academic skills. Cross-ref lesson</td>
<td></td>
<td>Chap 12</td>
<td>Project Plan - Contract</td>
<td>Skill Demo #2</td>
</tr>
<tr>
<td>11/24/2014</td>
<td>Thanksgiving Break</td>
<td></td>
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<tr>
<td>12/1/2014</td>
<td>Teacher Liability</td>
<td></td>
<td>Tort Reading</td>
<td>Project Record Book</td>
<td>Skill Demo #3</td>
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<tr>
<td>12/8/2014</td>
<td>Service Learning</td>
<td></td>
<td></td>
<td>SAE Project Individual Portfolio</td>
<td>Skill Demo #4</td>
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<tr>
<td></td>
<td>Final Wednesday 6-7:50 p.m.</td>
<td></td>
<td></td>
<td>Binder</td>
<td>Project Presentation Video Presentation</td>
</tr>
</tbody>
</table>

*Complete before first lecture of the assigned week.

** Assignments can be found on the course web site and may change during the semester. See the calendar and assignments for current schedule. Due dates are posted in Blackboard (see Assignments and the Calendar).

***Preliminary schedule, if dates change see Blackboard Announcements.
Leading Discussion:

Each group will plan and present the following chapters or topics. Use PPT to present. Each member should take a part. Scoring will be on

Group Presentation Assignment – See Syllabus for schedule

<table>
<thead>
<tr>
<th>Group</th>
<th>Chapter</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 – Equipment &amp; Supplies</td>
<td>Illustrate with a plan to add small engines to the curriculum.</td>
</tr>
<tr>
<td>2</td>
<td>3 – Facilities Planning</td>
<td>Include photos to illustrate various methods. Update with ideas for computer use – text is outdated.</td>
</tr>
<tr>
<td>3</td>
<td>4 – Material (and Tool Control)</td>
<td>Use Shop II to illustrate</td>
</tr>
<tr>
<td>4</td>
<td>5 – Maintenance &amp; Records</td>
<td>Sample Safety Test. Example letter to parents, etc.</td>
</tr>
<tr>
<td>5</td>
<td>6 – Safety</td>
<td>Develop a capital and annual budget for an Intro to Ag Class (AGET 120) to illustrate this chapter. Incorporate the materials spreadsheet.</td>
</tr>
<tr>
<td>6</td>
<td>8 – Budget Prep</td>
<td>Use AGET 120 as</td>
</tr>
</tbody>
</table>