Western Illinois University – School of Agriculture
AGTM 350: Agricultural Machinery (4)
Course Syllabus – Spring 2016 "Subject to Change"

Course Meets: MWF 11:00 – 11:50 am in KH 307
TH 10:00 – 11:50 am in KH 307 or B1

Text: ***Farm Power & Machinery Management***, 11th Edition, Hunt and Wilson, ISBN: 1-4786-2696-8

Instructor: Dr. Daniel Atherton **E-mail:** DL-Atherton@wiu.edu
Office: B 22 Knoblauch Hall **Office Phone:** 309-298-2395

Lab Fee: $20.00

Office Hours: MTWF 10:00 to 11:00 or by appointment

Dr. Atherton's Spring 2016 Course Schedule

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 – 8:50		AGTM 365 (KH 307/B1)			
9:00 – 9:50	AGTM 365 (KH 307)	AGTM 365 (KH 307/B1)	AGTM 365 (KH 307)		AGTM 365 (KH 307)
10:00 – 10:50	Office Hour	Office Hour	Office Hour	AGTM 350 (KH 307/B1)	Office Hour
11:00 – 11:50	AGTM 350 (KH 307)		AGTM 350 (KH 307)	AGTM 350 (KH 307/B1)	AGTM 350 (KH 307)
12:00 – 12:50					
1:00 – 1:50		AGTM 250 (KH B3)			
2:00 – 2:50	AGTM 250 (KH 152)	AGTM 250 (KH B3)	AGTM 250 (KH 152)		
3:00 – 3:50		AGTM 250 (KH B3)			
4:00 – 4:50		AGTM 250 (KH B3)			

Course Description: 350 Agricultural Machinery - (4) Principles of owning, operating, and adjusting equipment for tillage, planting, harvesting, and chemical application. Principles, application, and repair of agricultural hydraulic equipment.

Course Objectives:

- Develop knowledge of the management principles involved in sizing agricultural machinery
- Expose student to current and future trends in agricultural machinery design and technology
- Develop knowledge of and skill in repairing agricultural hydraulic equipment

Quality of Work Policy: All assignments should be word processed with title of assignment, name, date, and a summary of the assignment included at the beginning of the assignment. Run spell-checker. If completing multiple-step problems, show all work. Your work should be neat and orderly.

Academic Dishonesty: Any violation of the Academic Dishonesty Policy in Student Handbook will result in an automatic failure of the course. Plagiarism and cheating are unacceptable.

Attendance: Attendance is mandatory. **You are allowed THREE absences. Starting on the FOURTH absence, your grade will drop 5% for each additional absence.** If you anticipate an absence, notify me in advance (in writing) and use the OARS system to report your absence (www.wiu.edu/oars). In cases where advanced notification is not feasible (e.g. accident, or emergency), you must provide notification by the end of the second working day after the absence. Notification for all absences should include a written explanation indicating the reason for the absence, why notice could not be sent prior to the missed class (if applicable), all documentation required, and suggested arrangements for making up what you missed in class (assignments, participation points, etc.) After two working days, notification and documentation for absences may not be accepted. It is the student's responsibility to coordinate with the instructor to make up missed work. Quizzes may be given at any time and no makeup quizzes will be given unless the instructor approves the absence prior to missing class.

Assessment and Grading: Your final grade is based on your overall weighted percent on the following components of the course:

Component	Percentage
Exam 1	15%
Exam 2	15%
Exam 3	15%
Final Exam (Comprehensive)	20%
Quizzes	10%
Project/Presentation	15%
Class & Lab Participation	10%

(Participation includes attendance, discussion, and lab clean up at end of lab session)

Grading Scale

A	93 – 100%	A-	90 – 92%
B+	87 – 89%	B	83 – 86%
B-	80 – 82%	C+	77 – 79%
C	73 – 76%	C-	70 – 72%
D+	67 – 69%	D	63 – 66%
D-	60 – 62%	F	< 60%

Students Rights and Responsibilities: www.wiu.edu/provost/students/

Final Grades: Unless a computational error was made, grades will not be changed after the end of the semester. Please do not come to the instructor with "extenuating circumstances" for why your grade should be changed – the semester grade represents the level of work you completed over the semester.

Late Assignments: No late assignments will be accepted unless the instructor approves of turning in an assignment late prior to the assignment's due date. Assignments will be due at the beginning of class on their

due date. Hand written assignments will not be accepted unless instructed otherwise. Assignments will be written in 12 point font with 1" margins. Points will be deducted for incorrect spelling and grammar.

Attention Education Majors: The changes within the state certification require all education majors to receive a grade of a "C" or better in this course in order to meet these new requirements. With the university +/- grading system, receiving a "C-" or below will require you to retake this course or find a substitute course to meet School of Agriculture graduation requirements.

Professional Learning Environment: Please be respectful of your fellow students and the instructor and do your part to maintain the professional learning environment of this course. **Please silence your cell phones. Avoid texting during class.** Individual disruptions, such as **entering the classroom late**, **allowing your cell phone to ring audibly**, **engaging in unrelated activities** (e.g., **texting or surfing the web**) during class time, or **packing your belongings before class ends**, distract other students and detract from the quality of the learning environment for the whole class. Infractions will be noted and your class participation grade will suffer. The instructor reserves the right to ask for cell phones to be returned to students after the class period or to remove from group work a student who is demonstrating inadequate levels of participation.

Students with Disabilities: In accordance with University values and disability law, students with disabilities may request academic accommodations where there are aspects of a course that result in barriers to inclusion or accurate assessment of achievement. To file an official request for disability-related accommodations, please contact the Disability Resource Center at 309-298-2512, disability@wiu.edu or in 143 Memorial Hall. Please notify the instructor as soon as possible to ensure that this course is accessible to you in a timely manner.

*** Scheduling and weekly topics are subject to change at instructor's discretion ***

Schedule:

Week 1 - (week of 1/18): Course introduction, introduction to machinery management, unit conversions

Week 2 - (week of 1/25): Economic performance – machine performance, power performance, and operator performance and cost determination – chap. 1-4.

Week 3 - (week of 2/1): Economic performance – machine performance, power performance, and operator performance and cost determination – chap. 1-4. Operations – Tillage, Seedbed Preparation, Cultivation – chap. 5-7. WIU Farm Expo at Western Hall

Week 4 - (week of 2/8): Operations – Tillage, Seedbed Preparation, Cultivation – chap. 5-7.

Week 5 - (week of 2/15): Operations – Tillage, Seedbed Prep., Cultivation – chap. 5-7. Operations – Seeding Machines, Chemical Application, Grain Harvesting, Forage Harvesting, Farm Processing, Materials Handling, Special Crop Machines – chap. 8-14. Exam 1 (chap. 1-7)

Week 6 - (week of 2/22): Operations – Seeding Machines, Chemical Application, Grain Harvesting, Forage Harvesting, Farm Processing, Materials Handling, Special Crop Machines – chap. 8-14.

Week 7 - (week of 2/29): Operations – Seeding Machines, Chemical Application, Grain Harvesting, Forage Harvesting, Farm Processing, Materials Handling, Special Crop Machines – chap. 8-14.

Week 8 - (week of 3/7): Operations – Seeding Machines, Chemical Application, Grain Harvesting, Forage Harvesting, Farm Processing, Materials Handling, Special Crop Machines – chap. 8-14. Exam 2 (chap. 8-14)

Week of 3/14: Spring Break Week – No Classes

Week 9 - (week of 3/21): Hydraulics – Principles, Pumps and Motors, Cylinders, Control Valves, Component Selection, Troubleshooting.

Week 10 - (week of 3/28): Hydraulics – Principles, Pumps and Motors, Cylinders, Control Valves, Component Selection, Troubleshooting.

Week 11 - (week of 4/4): Hydraulics – Principles, Pumps and Motors, Cylinders, Control Valves, Component Selection, Troubleshooting. Power – Engines, Fuels, Combustion, Ignition and Electrical Circuits, Lubrication, Power Transmission, Operations, Maintenance – chap. 15.

Week 12 - (week of 4/11): Power – Engines, Fuels, Combustion, Ignition and Electrical Circuits, Lubrication, Power Transmission, Operations, Maintenance – chap. 15.

Week 13 - (week of 4/18): Power – Engines, Fuels, Combustion, Ignition and Electrical Circuits, Lubrication, Power Transmission, Operations, Maintenance – chap. 15. Equipment Selection – Machinery Selection, Power Selection, and Used Equipment – chap. 16-18).

Week 14 - (week of 4/25): Equipment Selection – Machinery Selection, Power Selection, and Used Equipment – chap. 16-18). Exam 3 (chap. 15-18 and Hydraulics). Student Presentations.

Week 15 - (week of 5/2): Student Presentations.

Final Exam: Wednesday, May 11th from 10:00 – 11:50 am KH 307

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