

AGRICULTURAL SYSTEMS MANAGEMENT (ASM)
ASM 374: **Tractor and Power Units Lab**

Class Information:

Credit – 1
Spring 2020
Class Room: ABEN Service Center
Time: 2:00 – 4:50 pm Thurs.

Instructor:

Matt Olhoft
ABEN 204
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Office Hours: By appointment or drop in. Usually available Tuesdays 8-5.

Course Description: Overview of engines and power units. Understanding what makes a system function on an engine increases the ability to diagnose, understand, and fix problems in that system.

TEXT: "Engine and Tractor Power", Goering, 4th edition 2004

COURSE OBJECTIVES:

1. To develop an introductory understanding of engines and their systems.
2. To develop good problem solving skills and to learn to look for alternative solutions to problems.
3. To solve basic, applied, and practical problems on tractors and power units.
4. To provide an introduction to higher level thinking and problem solving in engines.

REQUIRED RESOURCES: Text book, non-spiral letter size paper for homework, pencil, eraser, basic calculator, and safety glasses.

BLACKBOARD: Blackboard will be used for announcements, class presentations, assignments, and temporary grades presentation

GRADING

<u>Items</u>		<u>Total Points</u>
Demonstrations	(100 pts)	100
Quizzes	(5 quizzes, 20 pts each)	100
Unannounced quizzes	(2 per semester, 1 in each 8 weeks, 10 points each)	20
		Total pts: 220

All the demonstrations and quizzes must be submitted on time. No late submissions are accepted. Demonstrations will consist of a (10+2) minute demonstration of any engine principle, test equipment/tool, or engine accessory.

(There may be extra credits for students in addition to the formal grading. So the total grade points can be more than 200).

The cut off for letter grades: 100-90% = A; 89-80% = B; 79-70% = C; 69-60% = D; 59% = F

If you are unable to attend the class, let the instructor know ahead of time by e-mail or other written formats. In this case, the instructor will not have unannounced quiz.

MISSING LABS

You are expected to attend all lab periods, but there is no roll-call. If a lab is missed, contact the instructor or class mates for notes. This is a “hands on lab” so you will not be able to make up what you missed. Quizzes and demonstrations will be given during lab times!

IMPORTANT NOTIFICATION

Academic Honesty: All students taking any course in the College of Agriculture, Food Systems, and Natural Resources are under the Honor System (<http://www.ag.ndsu.edu/academics/honor-system-1>). The Honor System is a system that is governed by the students and operates on the premise that most students are honest and work best when their honesty, and the honesty of others, is not in question. It functions to prevent cheating as well as penalize those who are dishonest. It is the responsibility of the students to report any violations of the honor pledge to the instructor, honor commission or the Dean of the College of Agriculture, Food Systems, and Natural Resources.

The academic community is operated on the basis of honesty, integrity, and fair play. [NDSU Policy 335: Code of Academic Responsibility and Conduct](#) applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the [Office of Registration and Records](#). Informational resources about academic honesty for students and instructional staff members can be found at www.ndsu.edu/academichonesty.

Students with special requirements: Any students with disabilities or other special needs, who need special accommodations in this course are invited to share these concerns or requests with the instructor as soon as possible. The instructor may ask for verification and that, plus other assistance, can be requested from Disability Services in Wallman Wellness Center 170 (231-8463). <http://www.ndsu.edu/disabilityservices/>.

Veterans and military personnel: Veterans or military personnel with special circumstances or who are activated are encouraged to notify the instructor as early as possible.

Important Dates:

Spring 2020

[Variable Length Session Drop/Add Deadlines](#)

Date	Day	Description
Jan 1	Wed	HOLIDAY — New Year's Day Observed (<i>offices closed</i>)
Jan 13	Mon	Classes begin at 4:00 p.m.
Jan 14	Tue	First full day of classes
Jan 20	Mon	HOLIDAY — Martin Luther King, Jr. Day (<i>no classes, offices closed</i>)
Jan 22	Wed	Last day for Campus Connection Wait Lists to run
Jan 23	Thu	Last day to Add classes via Campus Connection* Permit needed after this date.
Jan 23	Thu	Last day for no-record Drop of classes @ 100% refund* (<i>full semester classes only</i>)
Jan 23	Thu	Last day to Withdraw to Zero Credits @ 100% refund* (<i>full semester classes only</i>)
Jan 23	Thu	Attempted credits calculated for financial aid SAP (11:59 p.m.)**
Jan 23	Thu	Eligible Pell/TEACH/ND Grants/Scholarships based on enrollment at 11:59 p.m.
Jan 28	Tue	Financial aid applied to NDSU account balances
Jan 29	Wed	Payments due for NDSU account balances*
Feb 3	Mon	Last day to submit requests to Audit, Pass/Fail
Feb 7	Fri	Undergraduate/Professional Spring and Summer Degree Applications due
Feb 7	Fri	Graduate student Spring Graduate Degree Applications due

Feb 10	Mon	Last day to Add full semester classes. Permit & Appeal needed after this date.
Feb 17	Mon	HOLIDAY — Presidents' Day (<i>no classes, offices closed</i>)
Feb 24	Mon	Last day to Withdraw to Zero Credits @ 75% refund* <i>full semester classes only</i>)
Mar First	Week	Summer/Fall schedule available
Mar 6	Fri	Grades of 'Incomplete' convert to 'F'
Mar 9	Mon	2nd half (8-week session) of Spring semester begins
Mar 15	Sun	Late fee applied to unpaid account balances (11:59 p.m.)
Mar 16-20	Mon-Fri	Spring Break Week (<i>no classes, offices open</i>)
		Last day to Withdraw to Zero Credits @ 50% refund* (<i>full semester classes only</i>)
Mar 26	Thu	No refunds issued for withdraw to zero credits after this date.
Mar 30- Apr 19	Mon	Summer/Fall registration begins online based on total credits completed
Apr 9	Thu	Last day to Drop classes with 'W' record*
Apr 9	Thu	Last day to Withdraw to Zero Credits for Spring
Apr 10-13	Fri-Mon	HOLIDAY -- Spring Recess (<i>no classes, offices closed Friday, offices open Monday</i>)
Apr 15	Wed	Late fees applied to unpaid account balances (11:59 p.m.)
Apr 17	Fri	Graduate student Initial Disquisition submission for May graduation
Apr 20	Mon	Open registration for summer/fall
Apr 24	Fri	Spring Commencement Participation deadline
May 4-8	Mon-Fri	Dead Week
May 5	Tue	Grade entry begins
May 8	Fri	Last day of Spring classes
May 11-15	Mon-Fri	Final Examinations
May 15	Fri	Graduate student Final Disquisition copy due for May graduation
May 15	Fri	Late fees applied to unpaid account balances (11:59 p.m.)
May 16	Sat	Commencement ceremonies (10:00 & 2:00 in Fargodome)
May 19	Tue	Grades due (12:00 p.m.)

GENERAL CLASS SCHEDULE (subject to change as semester develops)

Period	Date	Topic	Unit
1		Introduction, Measuring tools, ATE or Demo	
2		Valve Grinding	
3		Lubrication and measurement	
4		(Test 1) Compression ratio	
5		Valve timing and adjustment	
6		(Test 2) Ignition and diesel systems	
7		Starting and charging systems	
8		(Test 3) Power and drive trains	
9		Horsepower and Hydraulics	
10		(Test 4) Small engines	
11		Small engines	

12		Small engines	
13		(Test 5) Demonstrations or ATE	
14		Demonstrations	
15		Demonstrations	
16		Dead week	

These are tentative dates for tests and material covered, the actual dates and material may vary. **That is why attendance is important.** Any change in schedule will be notified ahead of time as much as possible.