

AGRICULTURAL SYSTEMS MANAGEMENT (ASM)
ASM125: **Fabrication and Construction Technology**

Class Information:

Credit – 3

Fall 2023

Class Room: Morrill Hall Rm 101

Time: Lecture: 9-9:50 am MW

Lab Section 1: 2:00-4:50 pm Mon.

Instructor:

Matt Olhoft

Ladd Hall 104H

Phone: 701-231-7269

E-mail: matthew.olhoft@ndsu.edu

Office Hours: By appointment or drop in. Usually available Tuesdays and Thursdays 8-5.

Course Description: Overview of Agricultural techniques of fabrication and construction related to engines, machinery, structures, electricity, processing, and conservation applications.

TEXTS: **"The Visual Handbook of Building and Remodeling"** by Charles Wing. Third Edition. The Taunton Press, 63 South Main Street, PO Box 5506, Newtown, CT 06470-5506.
"Farm and Workshop Welding" by Andrew Pearce. First Edition. Fox Chapel Publishing, FoxChapelPublishing.com

COURSE OBJECTIVES:

1. To develop and introduce new ideas in the many study areas in Agricultural Systems Management.
2. To develop and introduce new terminology in the many study areas in Agricultural Systems Management.
3. To solve basic, applied, and practical problems in Agricultural Systems Management.
4. To provide a tactile opportunity to practice skills in an agricultural shop system.

REQUIRED RESOURCES: Text book, non-spiral letter size paper for homework, pencil, eraser, basic calculator. (For Lab) Personal protection equipment consisting of long pants, closed toed shoes, and safety glasses. Safety glasses will be worn at all times in the shop/lab. No exceptions!

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

GRADING

<u>Items</u>		Total Points
Tests	(Four tests, 100 pts each)	400
Lab work	(10 Lab projects, 10 points each)	100
<u>Unannounced quizzes</u>	<u>(2 quizzes, once in every 8 weeks, 15 pts each)</u>	<u>30</u>
Total pts: 530		

All the home works and quizzes must be submitted in time. The due date for homework will be announced when the home work is given. No late submissions are accepted.

(There may be extra credits for students in addition to the formal grading. So the total grade points can be more than 530).

Grading will be on the straight system: A=100-90%, B=89-80%, C=79-70%, D=69-60%, F=59%

The students are encouraged to work lab problems sets together. Working together can be a good learning experience. But the solution and submission of home work and lab problem sets should be individual. There will be two unannounced quizzes, once in each eight weeks, either at the beginning or end of the class.

MISSING EXAMS

The exam dates are set at the beginning of the semester. All other extracurricular activities should not be scheduled on these dates. If for some **emergency reasons**, someone misses an exam, the instructor **must** be notified **BEFORE** the exam is given. Notification by e-mail or other written formats are acceptable. Missing an exam without notifying the instructor **BEFORE** the exam date will result in a **"0"** for that exam - **no exceptions!**

MISSING HOMEWORK ASSIGNMENTS

Homework is an important learning tool and assessment for you. It helps to understand the concepts discussed in class and it helps to develop good problem solving skills, which will be important in later courses and in professional life. You are expected to complete all homework assignments and hand them in for grading on time. Homework will be collected at the beginning of class. **No late submissions of Homework are accepted.**

MISSING QUIZZES

Quizzes **cannot** be made up. For legitimate emergency, contact me before the class and allowance can be made. If you miss a quiz, your score for the quiz is **"0"**. Quizzes will be unannounced and will be given for one or more of the following reasons:

1. To see if the class understands some of the concepts.
2. To encourage response to questions in the form of quiz.
3. To encourage class attendance.

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 CLASSES

You are expected to attend all class periods but there is no roll-call. If a class is missed, contact the instructor or class mates for notes. The PowerPoint presentations will be posted in the blackboard.

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

Aug 21	Mon	Classes begin at 4:00 p.m.
Aug 22	Tue	First full day of classes
Aug 28	Mon	Last day to be added to Campus Connection Wait Lists
Aug 30	Wed	Last day to Add classes via Campus Connection * Permit needed.
Aug 30	Wed	Last day for no-record Drop of classes @ 100% refund* (<i>full s only</i>)
Aug 30	Wed	Last day to Withdraw to Zero Credits @ 100% refund* (<i>full s only</i>)

Aug 30	Wed	Attempted credits calculated for financial aid SAP (11:59 p.m.)
Aug 30	Wed	Eligible Pell/TEACH/ND Grants/Scholarships based on enrollment at 11:59 p.m.
Sep 4	Mon	HOLIDAY — Labor Day (<i>no classes, offices closed</i>)
Sep 5	Tue	Financial aid applied to NDSU account balances
Sep 6	Wed	Payments due for NDSU account balances
Sep 8	Fri	Last day to submit ND Resident Student Status Application for Fall 2023
Sep 11	Mon	Last day to submit requests to Audit, Pass/Fail
Sep 18	Mon	Enrollment Census
Sep 29	Fri	Last day to Withdraw to Zero Credits @ 75% refund* (<i>full semester classes only</i>).
Oct (First Week)		Spring/Summer registration schedule available
Oct (Second Week)		Spring/Summer registration appointment times available
Oct 13	Fri	Grades of 'Incomplete' convert to 'F'
Oct 15	Sun	Late fees applied to unpaid account balances (11:59 p.m.)
Oct 16	Mon	Undergraduate/Professional Fall Graduation Applications due
Oct 16	Mon	Graduate student Intent to Graduate survey
Oct 16	Mon	2nd half (8-week session) of Fall semester begins
Oct 26	Thu	Spring/Summer registration begins online based on total credits completed

Oct 29	Sun	Last day to Withdraw to Zero Credits @ 50% refund* (<i>full semester classes only</i>). No refunds issued for withdraw to zero credits after this date.
Nov 9	Thu	Last day to Drop classes with 'W' record
Nov 9	Thu	Last day to Withdraw to Zero Credits for Fall
Nov 10	Fri	HOLIDAY — Veterans Day Observed (<i>no classes, offices closed</i>)
Nov 15	Wed	Late fees applied to unpaid account balances (11:59 p.m.)
Nov 15	Wed	Graduate student Oral Defense Deadline
Nov 17	Fri	Fall Commencement Participation deadline
Nov 17	Fri	Graduate student Post-Defense Submission for Format Review
Nov 20	Mon	Registration Appointment times no longer needed for spring
Nov 22-24	Wed-Fri	HOLIDAY — Thanksgiving (<i>no classes; offices closed Thursday, offices open Wednesday & Friday</i>)
Dec 4-8	Mon-Fri	Dead Week
Dec 5	Tue	Grade entry begins
Dec 8	Fri	Last day of Fall classes
Dec 11-15	Mon-Fri	Final Examinations
Dec 15	Fri	Late fees applied to unpaid account balances (11:59 p.m.)
Dec 15	Fri	Graduate student Final Degree Clearance Deadline

Dec 15 Fri [Graduation Application](#) and [fee](#) (Certificate and Plan C Students).

Dec 15 Fri [Commencement](#) ceremony (2:00 p.m. and 5:00 p.m. in Sanford Health Athletic Complex)

GENERAL CLASS SCHEDULE (subject to change)

Period	Date	Topic	Unit
1	Aug. 23	Introduction	
2	28	Planning	1&2
3	30	Planning	1&2
4	Sept. 04	Construction of Small Buildings	3&4
5	06	Construction of Small Buildings	3&4
6	11	Lumber	5&7
7	13	Lumber	5&7
8	18	Lumber	5&7
9	20	Framing	6
10	25	Exam 1	
11	27	Siding, Walls, Roofing	8,9,10,13
12	Oct. 02	Siding, Walls, Roofing	8,9,10,13
13	04	Siding, Walls, Roofing	8.9.10,13
14	09	Plumbing	11
15	11	Exam 2	
16	16	Electrical	12
17	18	Hand Tools	pp
18	23	Power Tools	pp
19	25	Fasteners and Hardware	21
20	30	Metal Fabrication	Intro
21	Nov. 01	Exam 3	
22	06	Metal Fabrication	Intro
23	08	Arc Welding	1
24	13	Arc Welding	1
25	15	MIG Welding	2
26	20	Oxy Fuel Welding	3&5
27	22	Oxy Fuel Welding	3&5
28	27	TIG Welding	4&8

29	29	Tap, Dies, and Soldering	7&9
30	Dec. 04	Blacksmithing and Tempering	10
31	06	Plastic Welding	
32			

ASM 125 Labs

Period	Topics
1	Introduction
2	Bill of materials
3	Drawing of garage framing
4	Gears, chains, and belts
5	Stair and rafter layout, Connector construction
6	Tool fitting
7	Hot metal, welding, lathe
8	Hot metal, welding, lathe
9	Plumbing
10	Electric wiring
11	Wood wall construction
12	Electrical motors and test equipment
13	3D Printing
14	Review or makeup

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.

THE DATE FOR FINAL EXAM IS Wednesday December 13, 2023 at 10:30 am.