Oklahoma State University Institute of Technology
Face-to-Face Common Syllabus
Fall 2017

CNS 2413 MECHANICAL SYSTEMS

An in-depth examination is made of mechanical systems as to identification, application and function. Emphasis is placed on plumbing, heating, cooling, air distribution and ventilation systems.

Course Purpose:
The purpose of this course is to familiarize the student with the types of mechanical and plumbing systems commonly used in commercial construction projects.

Type of Course: Theory/Lab
Credit Hours: _3_; Total clock hours of theory per semester: _40_;
Total clock hours of lab per semester: _35_.
Class Length: Full Semester
Class Days and Times: M,W,F 12:00 – 1:40
Prerequisites: None

Instructor Name: Darren Woodard **Instructor Phone:** (918) 293-4738
Office: Bldg. CNS1 Room # 105 **Instructor Email:** *darren.woodard@okstate.edu*
Contact: My preferred method of contact is email. Please allow 24-48 hours to return your correspondence during the normal work week.

Instructor's Office Hours: Posted on office door or by appointment

School Name: Construction Technologies **School Main Phone:** 918-293-4742

REQUIRED TEXT, REFERENCES, AND MATERIALS

Texts:	Mechanical and Electrical Systems for Construction Managers (Third Edition), by ATP ISBN # 978-0-8269-9363-2
References:	None
Materials:	Calculator, notebooks, writing utensils, USB Flash Drive.
Uniform/Tools:	None

Estimated Cost for Materials: $ 175.00
Estimated Cost for Uniform/Tools: None

Optional Resources: None

Upon completion of the course, students should:

Course Objectives	Assessment of Objectives
Demonstrate knowledge of safety issues related to mechanical systems and construction.	Reports, Written tests, Lab assignments
Demonstrate knowledge of systems history.	Reports, Written tests, Lab assignments
Demonstrate knowledge of plumbing systems.	Reports, Written tests, Lab assignments
Demonstrate knowledge of electrical system support.	Reports, Written tests, Lab assignments
Demonstrate knowledge of hydronic systems.	Reports, Written tests, Lab assignments
Demonstrate knowledge of Heating, Ventilation, and Air Conditioning systems.	Reports, Written tests, Lab assignments
Demonstrate knowledge of properly penetrating Fire Rated Assemblies.	Reports, Written tests, Lab assignments
Demonstrate knowledge of how various systems should work together and in unison.	Reports, Written tests, Lab assignments

Aspects of the course objective assessments may be used in the university's assessment of student learning. If applicable, an asterisk (*) above indicates this assignment is used in the university assessment program.

COURSE ACTIVITIES

In this course students will:

- Participate in class discussions and activities.
- View videos that depict the various concepts.
- Take examinations.
- Complete reading assignments.
- May be required to do quizzes.

EVALUATION - GRADES WILL BE BASED ON THE QUALITY AND COMPLETION OF THESE TASKS:

(NOTE-Please indicate the course specific evaluations. List assignment(s) used in the university's assessment of student learning as separate line items and marked with an asterisk.)

Homework/Labs	20%
Class Participation	10%
Unit Exams/Quizzes	60%
Final Exam	10%
Total	100%

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Grading Scale

A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% & below

*The student's grade for this assignment will be used in the university's assessment of student learning. A 70% competency or higher receives a Pass rating. This Pass/Fail rating is independent of the student's course grade.

Daily and/or weekly quizzes, small weekly assignments and similar type projects: Normal return time to student by next class meeting or no later than one (1) week.

Extensive assignments, large lab projects, extensive quizzes, exams and similar type projects: Normal return time to students in one (1) to two (2) weeks.

RECOMMENDED STUDENT COMPETENCIES/SKILLS

None

AUTHORIZED TOOLS

Students may use any/all course materials, including books and notes, while participating in classroom activities. All quizzes and written assignments are to be completed independently; no collaboration with classmates is permitted and any instance of such will be considered academic dishonesty.

LATE WORK

No late work will be accepted, unless arrangements have been made prior to the due date.

TESTING

Refer to "Academic Dishonesty" in the syllabus attachment

OTHER LAB AND CLASSROOM POLICIES

None

SYLLABUS ATTACHMENT

View the Syllabus Attachment, which contains other important information, by visiting http://osuit.edu/center/student_syllabus_information

Course Schedule			
Course Outline Schedule	**Topic**	**Assignment**	**Due Date**
Day 2 Week 1	*Syllabus & Chpt 1 History of Mechanical Systems*	*Read Chpt 1 & 2 Chpt 1 Workbook*	*6-Sep*
Day 3 Week 1	*Chpt 2- Plumbing Materials*	*Chpt 2 Workbook*	*8-Sep*
Day 1 Week 2	*Chpt 3 Sanitary Drainage*	*Chpt 3 Workbook*	
Day 2 Week 2	*Review for Exam #1*		
Day 3 Week 2	*Exam # 1 Chpt 1, 2 , & 3*		*15-Sep*
Day 1 Week 3	*Chpt 4 - Sizing Sanitary Drainage*	*Read Chpt 4 & 5*	*18-Sep*
Day 2 Week 3	*Chpt 5 - Sizing Water Supply Piping*	*Chpt 4 & 5 Workbook*	*20-Sep*
Day 3 Week 3			
Day 1 Week 4	*Review for Exam #2*		
Day 2 Week 4	*Exam #2 Chpt 4 & 5*		*27-Sep*
Day 3 Week 4			
Day 1 Week 5	*Chpt 6 - Plumbing Fixtures*	*Read Chpt 6 & 7*	*2-Oct*
Day 2 Week 5	*Chpt 7 Testing & Inspecting Plumbing Systems*		*4-Oct*
Day 3 Week 5	*Dallas Educators Conference No Class*	*Chpt 6 & 7 Workbook*	*6-Oct*
Day 1 Week 6	*Review Exam # 3*		
Day 2 Week 6	*Exam #3 Chpt 6 & 7*		*11-Oct*
Day 3 Week 6			
Day 1 Week 7	*Chpt 8 - Comfort*	*Read Chpt's 8 & 9*	*16-Oct*
Day 2 Week 7	*Chpt 9 - Psychrometrics*	*Chpt's 8 & 9 Workbook*	*18-Oct*
Day 3 Week 7			
Day 1 Week 8	*Review Exam # 4*		
Day 2 Week 8	*Exam #4 Chpt 8 & 9*		*3-Nov*
Day 3 Week 8			
Day 1 Week 9	*Chpt 10 - Forced Air Heating*	*Read Chpt 10 & 11*	*30-Oct*
Day 2 Week 9			
Day 3 Week 9			
Day 1 Week 10	*Chpt 11 - Steam & Hydronic Systems*	*Chpt 10 & 11 Workbook*	*6-Nov*
Day 2 Week 10			
Day 3 Week 10			
Day 1 Week 11	*Chpt 12 - Refrigeration*	*Read Chpt 12 & 13*	*13-Nov*

Day 2 Week 11			
Day 3 Week 11	*Chpt 13 - Air Conditioning*		
Day 1 Week 12			
Day 2 Week 12	*Thanksgiving Break*		*22-Nov*
Day 3 Week 12	*Thanksgiving Break*		*24-Nov*
Day 1 Week 13	*Chpt 15 Building Controll Sys*	*Chpt 12 & 13 Workbook*	*27-Nov*
Day 2 Week 13	Review for Exam 5		*29-Nov*
Day 3 Week 13			
Day 1 Week 14	Exam 5 Chpt 10, 11, 12, & 13		*4-Dec*
Day 2 Week 14			
Day 3 Week 14	*Field Trip*		*8-Dec*
Day 1 Week 15	*Review for Final Exam*		
Day 2 Week 15	*Final Exam*		*13-Dec*
Day 3 Week 15			
Christmas Break			

Schedule is subject to change at instructor discretion.