

UPON COMPLETION OF THE COURSE, STUDENT SHOULD:

COURSE OBJECTIVES	ASSESSMENT OF COMPETENCY
1. Describe the major components of a Gas Furnace	70% on ACR 1336 Lab manual
2. List the 2 gas fuels burned in gas furnaces and describe each	70% on ACR 1336 Lab manual
3. Discuss Gas pressure's and the tools used for measurement	70% on ACR 1336 Lab manual
4. Describe the 3 types of ignition systems used on gas furnaces	70% on ACR 1336 Lab manual
5. Describe Flue gas venting systems on standard and condensing furnaces	70% on ACR 1336 Lab manual
6. Draw a basic wiring diagram for a Gas fired furnace	70% on ACR 1336 Lab manual
7. Describe procedures for measurement of combustion by products	70% on ACR 1336 Lab manual
8. Summarize principles of electric Heating systems in residential applications	70% on ACR 1336 Lab manual
9. Proper Charging of Central Air Conditioning systems	70% on ACR 1336 Lab manual
1.0 Demonstrate proper use of Charging Calculator	70% on ACR 1336 Lab manual
1.1 Demonstrate proficiency on Residential A/C electrical systems	70% on ACR 1336 Lab manual
12. Describe and complete proper troubleshooting procedures on A/C systems	70% on ACR 1336 Lab manual
13. Program Digital thermostats	70% on ACR 1336 Lab manual
14. Properly Troubleshoot mechanical A/C systems	70% on ACR 1336 Lab manual
15. Perform A/C system analysis on split and package units	70% on ACR 1336 Lab manual
16. Explain the sequence of operation in Heating and Cooling	70% on ACR 1336 Lab manual

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...
- Complete reading assignments.
- Participate in group and individual presentations.
- Take examinations
- May be required to do quizzes

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

Lab Projects	33.3%
Theory	33.3%
Participation.....	33.3%
Total	100%

OSUIT 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.

THEORY- The overall theory grade will be 33% of the final grade. Unit tests will be counted as 200 points each. Homework assignments will mostly be counted as 100 points each with a select few that are counted at 50 points each. Pop quizzes will be counted as 50 points each and cannot be made up. The overall points from all assignments is estimated 2000.

LAB- Lab projects will account for 33% of the final grade. Lab projects are graded based on quantity, quality, safety, and time required to complete assigned projects.

PARTICIPATION- The overall participation grade will account for 33% of the final grade. Participation grades will be given to each student based on class participation, lab participation & overall involvement in all class activities. A student must be present and participating in discussions or lab work in order to receive a participation grade. If a student is absent or not participating in any fashion, there will be 6.67 points deducted for each occurrence. This scale is parallel to the university's attendance policy. Each student may have up to six (6) hours of excused absences if prior arrangements are made with the instructor.

RETURN OF ASSIGNMENTS- Daily and/or weekly quizzes, 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.

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. No cell phones or electronics are allowed to be used while in class or lab.

LATE WORK

All assignments are due within the first five (5) minutes on the particular due date. Late homework will have 20% deducted for each day late unless arrangements are made in advance. It is the student's responsibility to obtain any assignments from the instructor in the event of an absence or late arrival of the student.

There is no late work accepted on tests. If a student is absent or arrives late on a test date, they will not be allowed to take the test unless arrangements are made in advance. Pop quizzes cannot be made up unless prior arrangements were made with the instructor.

TESTING

All students are expected to maintain a very quiet test environment. Students may be asked to spread out evenly through the seating to allow extra space for each student testing. No type of notes or text can be used on tests unless otherwise noted by the instructor. Any questions that may arise during a test should be directed to the instructor. Students will not be allowed to leave

the testing area once the test has begun. Cell phones will not be allowed to be used on tests as a calculator or any other function. Students should provide their own simple calculator.

STUDENT CONDUCT: Students are expected to cooperate in maintaining a classroom environment conducive to learning. Courteous and respectful behavior will be expected from all students each day. All electronics, cellular phones, and music players should be turned off.

UNIVERSITY & COURSE EXPECTATIONS

It is the responsibility of each OSUIT student to read, abide by and maintain a copy of the syllabus for this course. Syllabi are available on the OSUIT website.

Students understand that excerpts or portions of their work may be utilized for institutional assessment purposes. The purpose of institutional assessment is for verification of student learning and program improvement. Every effort will be made to keep this information confidential.

AMERICANS WITH DISABILITIES ACT (ADA)

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Academic Accommodations/LASSO Center. Please advise the instructor of your disability as soon as possible, and contact The LASSO Center, to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified. The LASSO Center is located on the 3rd floor of the Noble Center. You may call [918.293.4855](tel:918.293.4855) for more information or fax documentation to [918.293.4853](tel:918.293.4853).

ACADEMIC DISHONESTY

Academic dishonesty or misconduct is neither condoned nor tolerated at OSUIT. Any student found guilty of academic dishonesty or misconduct shall be subject to disciplinary action. Academic dishonesty and/or misconduct includes, but is not limited to, the following actions: (1) Plagiarism: the representation of previously written, published, or creative work as one's own; (2) Unauthorized collaboration on projects; (3) Cheating on examinations; (4) Unauthorized advance access to exams; (5) Fraudulent alteration of academic materials; (6) Knowing cooperation with another person in an academically dishonest undertaking. Students are required to actively protect their work against misuse by others. For details, refer to The OSUIT Student Handbook (Student Rights and Responsibilities Governing Student Behavior) available online at http://www.osuit.edu/academics/forms/student_rights_responsibility.pdf.

ATTENDANCE POLICY FOR FACE TO FACE COURSES

A primary component of OSUIT's Mission is "to prepare and sustain a diverse student body as competitive members of a world-class workforce." Regular and consistent attendance not only

aids in academic success, dependable attendance is a requirement in today's real-world employment; therefore, regular and consistent attendance is a requirement in all OSUIT courses.

Definitions: Absent: Failing to attend all or a significant portion of a class or lab session.

- A. Students may not be marked as absent if missing class for situations such as, but not limited to
 - 1. participating in a required university activity such as a field trip;
 - 2. fulfilling a military obligation;
 - 3. a mandatory court appearance;
 - 4. death in the immediate family;
 - 5. extreme illness or accident to oneself or immediate family. Instructors, at their discretion, may require proof of such events.
 - B. It is the responsibility of the student to contact and inform the instructor and/or department in advance of such excused absences whenever possible.
- Tardy: Arriving late to class as defined by the individual class instructor. Faculty, at their discretion, may equate three tardies to equal one absence.

Procedures:

Early Intervention

- A. Any student who misses 10% of an individual course (or earlier at faculty discretion) during a regular fifteen-week semester, or the equivalent portion of time in a shorter session, will have their name submitted by that course instructor to the OSUIT Early Alert System for retention intervention.
- B. At the point the Early Alert is issued, the student *must* meet with their assigned faculty advisor or designated faculty/staff member within seven (7) academic calendar days for counseling on how to improve their attendance and academic success.

Excessive Absences

- A. The University reserves the right to administratively withdraw any student from an individual course who misses 20% of that course, whether excused or unexcused, and, in the opinion of the instructor, the student does not have a reasonable opportunity to be successful in the course.
- B. Students should be aware any of the following may impact their financial aid:
 - 1. being administratively withdrawn from a course
 - 2. dropping a course
 - 3. their last date of attendance in a course

Please see OSUIT Policy 2-021 for full details and procedures.

Course Schedule			
Course Outline Schedule	Topic	Assignment	Due Date
<i>Week 1</i>	Orientation and Review of Syllabus. Start Combustion, Gas Furnace Components	Read Unit 13 & 31----- Homework Unit 13-----	5-5-17 5-7-17
<i>Week 2</i>	Continue Components of Gas Furnaces.	Read Units 12 & 14----- Homework----- Exam -----	5-9-17 5-12-17 5-12-17
<i>Week 3</i>	Standing Pilot Furnace, Intermittent Pilot Furnace	Electrical Control Schematic- Homework----- Exam -----	5-19-17 5-19-17 5-19-17
<i>Week 4</i>	Direct Ignition Gas Furnaces	Homework----- Exam -----	5-26-17 5-26-17
<i>Week 5</i>	HE Condensing Furnaces	Homework----- Exam -----	6-2-17 6-2-17
<i>Week 6</i>	Electric Furnaces	Read Unit 30----- Homework----- Exam-----	6-5-17 6-9-17 6-9-17
<i>Week 7</i>	Air Conditioning	Read Unit 36----- Homework-----	6-12-17 6-16-17
<i>Week 8</i>	Intro to Heat Pump Semester Review	Read Unit 43----- Homework----- Final Exam-----	6-19-17 6-21-17 6-23-17

*This schedule may vary depending on unforeseeable circumstances that may arise and/or individual class rate of comprehension, this would occur by evaluation and discretion of the instructor. Pop quizzes and assignments can be given at any time.