



## CEC121 Heating System Fundamentals II

### Course Information

Credits	2
Campus	Washburn Institute of Technology
Address	5724 SW Huntoon
City/State/Zip	Topeka, Kansas 66604
Office Fax	785-273-7080

### Description

The heating System Fundamentals II course is designed to walk student through the requirements of the Uniform Mechanical Code in relation to Gas Piping and exhaust ventilation. Student will gain a thorough understanding and be able to apply skills in sizing vents and pipe upon completion of this course.

### Textbooks

Carter Stanfield & David Skaves, *AHRI Fundamentals of HVACR*, Edition: 2nd, ISBN: 978-0-13-285061-5  
2012 Uniform Mechanical code, IAPMO

### Student Learning Outcomes:

- A. Communicate effectively
- B. Integrate technology
- C. Learn effectively
- D. Demonstrate cooperative teamwork skills
- E. Apply safety in the workplace
- F. Think critically and creatively
- G. Demonstrate responsible work ethics

### Competencies

- 1. Determine gas pipe size per the uniform mechanical code.
- 2. Determine vent size for fuel burning appliances
- 3. Determine the ventilation rate of the occupied space per the uniform mechanical code.
- 4. Determine combustion air requirements per the uniform mechanical code.
- 5. Identify requirements for safe installations of mechanical units.
- 6. Prepare steel pipe for installation
- 7. Join lengths of threaded pipe together and install fittings.

8. Describe the main points to consider when installing pipe runs.
9. Describe the methods used to join piping.

## Guidelines for Success

### Assessment Plan

Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution's technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

### Grading Scale

92 - 100%	= A
85 - 91%	= B
78 - 84%	= C
70 - 77%	= D
<70%	= F

### Attendance

Classroom attendance is required. Material missed must be made up with the instructor.

### Disability

The Americans with Disabilities Act (ADA) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities **MUST** self-identify by completing an application. In addition students must provide appropriate medical documentation to the ADA coordinator to be eligible for accommodations. New requests for accommodations should be submitted at least two months or more prior to the date the accommodations are needed. However, please contact the ADA office as soon as a need may arise. Depending on the accommodation request, four to eight weeks lead time may be needed for timely and effective provision of accommodations.

The ADA Office coordinates and assists in arranging accommodations it deems appropriate for eligible students on a case-by-case basis. If you are a student with a disability that may substantially limit your ability to participate in any of our classes and you believe that you will need accommodations, it is your responsibility to contact: ADA Coordinator, 785.670.3365 or [Gloria.christian@washburn.edu](mailto:Gloria.christian@washburn.edu).

Washburn University [prohibits discrimination](#) on the basis of race, color, religion, age, national origin, ancestry, disability, sex, sexual orientation, gender identity, genetic information, veteran status, or marital or parental status. The following person has been designated to handle inquiries regarding the non-discrimination policies: Dr. Pamela Foster, Equal Opportunity Director/Title IX Coordinator, Washburn University, 1700 SW College Ave, Topeka, Kansas 66621, 785.670.1509, [eodirector@washburn.edu](mailto:eodirector@washburn.edu)