



# HEATING, VENTILATION AND AIR CONDITIONING TECHNOLOGY

**2009-2010 Program Options:**

**Cooling Certificate (30)**

**Heating Certificate (30)**

**HVAC Technician Diploma (48)**

**HVAC Technology AAS Degree (64)**

**Occupational Certificate: Cooling**

**Total Number of Credits: 30**

**Program Description:** Service and installation of cooling units. Most tasks are on domestic equipment, however some commercial will be offered. The EPA Section 608 Clean Air Act Certification is a requirement of completion.

**Application Requirements:** High School graduate or GED; ability to use hand and power tools, climb ladders, lift heavy objects and mobility to gain access to parts of mechanical systems.

**Core Requirements: 10 credits**

FST 1030	Basic Electricity	3
FST 1033	Basic Electrical Systems	3
HVAC 1000	Sheet Metal and Metal Brazing Practices	2
HVAC 1020	Load Calculating	2

**Career/Occupational Requirements: 17 credits**

HLTH 1003	Worker Right to Know: Health and Safety in the Workplace	1
HVAC 1041	Basic Refrigeration I	3
HVAC 1042	Basic Refrigeration II	3
HVAC 1069	Heat Pumps and Electric Heat	2
HVAC 2051	Advanced Refrigeration I	4
HVAC 2052	Advanced Refrigeration II	4

**General Education/MnTC Requirements: 3 credits**

**Goal 1 - Communication: 3 credits**

Select **ONE** of the following communication courses:

ENGL 1021	Composition I	4
COMM 1021	Fundamentals of Public Speaking	3
COMM 1031	Interpersonal Communication	3
COMM 1041	Small Group Communication	3
COMM 1051	Intercultural Communication	3

**Occupational Certificate: Heating**

**Total Number of Credits: 30**

**Program Description:** Service and installation processes of gas, oil and hydronic heating systems.

**Application Requirements:** High School graduate or GED; ability to use hand and power tools, climb ladders, lift heavy objects and mobility to gain access to parts of mechanical systems.

**Core Requirements: 10 credits**

FST 1030	Basic Electricity	3
FST 1033	Basic Electrical Systems	3
HVAC 1000	Sheet Metal and Metal Brazing Practices	2
HVAC 1020	Load Calculating	2

**Career/Occupational Requirements: 17 credits**

HVAC 1060	Fundamentals of Heating	2
HVAC 1063	Oil Heat	3
HVAC 1065	Oil Heating Service and Troubleshooting	3
HVAC 1067	Gas Heat	4
HVAC 1070	Electronic Ignition and Condensing Furnaces	2
HVAC 1073	Hydronic Heating/Boilers	3

**General Education/MnTC Requirements: 3 credits**

**Goal 1 - Communication: 3 credits**

Select **ONE** of the following communication courses:

ENGL 1021	Composition I	4
COMM 1021	Fundamentals of Public Speaking	3
COMM 1031	Interpersonal Communication	3
COMM 1041	Small Group Communication	3
COMM 1051	Intercultural Communication	3

**Diploma: Heating, Ventilation and Air Conditioning Technician**

**Total Number of Credits: 48**

**Program Description:** Service and installation of heating and cooling equipment. The main emphasis is on domestic, with some instruction on light commercial. When finished the student will have the EPA's Section 608 Clean Air Act Certification.

**Application Requirements:** High School graduate or GED; ability to use hand and power tools, climb ladders, lift heavy objects and mobility to gain access to parts of mechanical systems

**Core Requirements: 8 credits**

FST 1030	Basic Electricity	3	HVAC 1073	Hydronic Heating/Boilers	3
FST 1033	Basic Electrical Systems	3	HVAC 2051	Advanced Refrigeration I	4
HVAC 1000	Sheet Metal and Metal Brazing Practices	2	HVAC 2052	Advanced Refrigeration II	4

**Career/Occupational Requirements: 34 credits**

CAPL 1000	Computer Literacy	1	<b>General Education/MnTC Requirements: 6 credits</b>		
HVAC 1041	Basic Refrigeration I	3	<b>Goal 1 - Communication: 3 credits</b>		
HVAC 1042	Basic Refrigeration II	3	Select <b>ONE</b> of the following communication courses:		
HVAC 1060	Fundamentals of Heating	2	ENGL 1021	Composition I	4
HVAC 1063	Oil Heat	3	COMM 1021	Fundamentals of Public Speaking	3
HVAC 1065	Oil Heating Service and Troubleshooting	3	COMM 1031	Interpersonal Communication	3
HVAC 1067	Gas Heat	4	COMM 1041	Small Group Communication	3
HVAC 1069	Heat Pumps and Electric Heat	2	COMM 1051	Intercultural Communication	3
HVAC 1070	Electronic Ignition and Condensing Furnaces	2	<b>General Education/MnTC electives—2-3 credits</b>		

See MnTC course list for options.

**Associate in Applied Science Degree: HVAC Technology****Total Number of Credits: 64**

**Program Description:** Service and installation of heating and cooling equipment. The main emphasis is on domestic, with some instruction on light commercial. When finished the student will have the EPA's Section 608 Clean Air Act Certification. In addition to these core concepts, the General Education courses required will help ensure individuals have the necessary oral, written and critical thinking skills to help them with their professional responsibilities.

**Application Requirements:** High School graduate or GED; ability to use hand and power tools, climb ladders, lift heavy objects and mobility to gain access to parts of mechanical systems.

**Core Requirements: 10 credits**

FST 1030	Basic Electricity	3
FST 1033	Basic Electrical Systems	3
HVAC 1000	Sheet Metal and Metal Brazing Practices	2
HVAC 1020	Load Calculating	2

**Career/Occupational Requirements: 33 credits**

HVAC 1041	Basic Refrigeration I	3
HVAC 1042	Basic Refrigeration II	3
HVAC 1060	Fundamentals of Heating	2
HVAC 1063	Oil Heat	3
HVAC 1065	Oil Heating Service and Troubleshooting	3
HVAC 1067	Gas Heat	4
HVAC 1069	Heat Pumps and Electric Heat	2
HVAC 1070	Electronic Ignition and Condensing Furnaces	2
HVAC 1073	Hydronic Heating/Boilers	3
HVAC 2051	Advanced Refrigeration I	4
HVAC 2052	Advanced Refrigeration II	4

**General Education/MnTC Requirements: 20 credits**

*Four (4) credits beyond the minimums are needed to reach 20 credits. See MnTC course list for options.*

**Goal 1 - Communication: 7 credits**

ENGL 1021	Composition I	4
Select <b>ONE</b> of the following COMM courses:		
COMM 1021	Fundamentals of Public Speaking	3
COMM 1031	Interpersonal Communication	
COMM 1041	Small Group Communication	
COMM 1051	Intercultural Communication	

**Goal 2 – Critical Thinking is automatically fulfilled when all other MnTC goals are complete.**

**Goal 3 and/or Goal 4 – Sciences/Math/Logical Reasoning: 3 credits**

**Goal 5 – History/Social and Behavioral Sciences: 3 credits**

**Goal 6 – Humanities and Fine Arts: 3 credits**

**Goals 7-10: Three credits in one of these four goals (Fulfilled by COMM course)**

**Additional requirements:** Sufficient credits to total 64.

**General Requirements:**

- Certificates: Up to 30 earned college-level credits; one third of credits must be earned at Century College.  
Diplomas: 31 to 48 earned college-level credits; one third of credits must be earned at Century College.  
AAS: At least 64 earned college-level credits (numbered 1000 or above). At least 20 credits must be earned at Century College.
- Century college-level GPA of 2.0; required career and occupational courses GPA of 2.0; MnTC GPA of 2.0.
- A grade of C or higher in ENGL 1021 (for Diplomas and 30 credit Certificates ONLY IF this is the Goal 1 course selected.) (Exception: 16 credit certificates)

**Assessment: Assessments are required for all students** before registering for classes. Students may be required to take developmental courses in English, Reading and Mathematics based upon their assessment scores. For important information and exemptions see [www.century.edu/futurestudents/assessment](http://www.century.edu/futurestudents/assessment).

**References to the Minnesota General Education Transfer Curriculum (MnTC):** On this guidesheet, notations such as “Goal 1-Communication: 3 credits” are used to refer to the goals of the Minnesota General Education Transfer Curriculum. Refer to the MnTC Course List for the specific courses from which students may choose to fulfill the MnTC requirements of the program, found in the catalog, the Counseling Center, and on the Century website. Students should be aware that it may be necessary to select additional MnTC credits beyond the minimum required in each goal area, to reach the total MnTC/General Education credits required for their program.

**Career Information:** Counselors are available in the Counseling and Career Center, Room 2400 West, to assist with educational and career planning. Resources available include career interest and personality inventories and print and web-based occupational and educational information, e.g., occupational descriptions, employment outlook, earnings, education/training requirements and sources. Consult the **GPS LifePlan** link on the Century website for information on these and more resources for your career, work, and educational planning!

**Transfer:** Some programs are intended primarily for employment preparation rather than transfer to a four-year institution. Some courses may not transfer to a number of four-year colleges. If you are considering the possibility of transfer, you may wish to talk with a counselor or the program instructor before registering to discuss your goals and look at programs designed for transfer.

**Time Limit for Meeting Graduation Requirements:** See Century College catalog “Graduation” for information.

**Academic Petitions:** Any exceptions to the program requirements must be petitioned through the Vice President of Academic Affairs.

**Costs:** In addition to tuition costs, text books and materials for the program will cost approximately \$800. Tools and instruments cost approximately \$850. These costs are subject to change.

**Important Telephone Numbers: (651 Area Code)**

Admission Office	773-1700
Counseling Office	779-3285
Financial Aid Office	779-3305

**Program Instructor:**

Dennis Kerschner 779-3433  
Office: 1326 East