

# Reed College Campus Heating Control Guide



February 2024



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# General Campus Heating Overview

Heating in the majority of academic buildings, administrative buildings, and some residence halls are centrally controlled by Facilities Services. Heating to these centrally-controlled buildings is turned on each fall based on weather conditions. Historically, this occurs around the middle of October.

Other campus buildings have climate controls that occupants can adjust, much like you would find in a home. This document describes how occupants can adjust the temperature in these locations.

## Campus Heating Ventilation and Air Conditioning (HVAC) Overview

There are three types of systems on campus for the delivery of supporting the Heating Ventilation and Air Conditioning (HVAC) of buildings on campus.

- 1) Campus Central Plant Boilers (steam or hot water)
- 2) Local building level, gas fired heating units
- 3) Local electric element heating units

The HVAC in most buildings on campus is controlled by a direct digital control system that allows Facilities to monitor, access and schedule heating and cooling via web based controls. Other buildings containing local HVAC equipment are controlled by local thermostats, much like you would find in your own home. Listed below are descriptions of the heat and cooling systems in individual buildings, including where occupants can adjust settings in their buildings.

## Troubleshooting and Reporting an Issue

There are a few common issues that cause heating systems to inadequately warm a space. If your room or office is experiencing heating issues please check to see if one of the following simple problems is at fault. Your neighbors, area coordinator, colleagues, or other Reedies may be able to help troubleshoot the issue as well. If you are unable to resolve the issue please submit a [facilities work order request](#). If the loss of heating is an emergency situation please call Community Safety at 503-788-6666.

### Space Heaters

Space heaters may work well to warm a space, but the external source of heat tricks the main heating system into thinking it is providing enough heat to reach the desired temperature. This is especially true if the space heater is near the thermostat or other temperature monitoring



device. The artificially high temperature in one room will mean that all other rooms in the system will be cold.

Please refrain from using space heaters. Aside from the confusion they cause for the heating system, they are also extremely energy inefficient and a potential fire hazard.

## Open Windows

Though it may seem obvious, open windows can be the reason a room isn't warming to the desired temperature. If you have your blinds down or curtains drawn shut, please double check that all the windows are closed so heat doesn't escape.

## Heat Source Blockage

All heating systems require air movement to disperse heat throughout a room. Items stored on or in front of air vents, radiators, or baseboard heaters may prevent air circulation and heat flow. Please refrain from storing items on heat sources. This is a potential fire hazard as well.

## Closed Vents/Louvers

Often difficult to see, radiator units have louvers (flaps that open and close like vents) that allow some level of heat control in individual rooms. If your room is heated with a radiator, please check to make sure the louvers are open. More information is listed below by building.

## Preset Heating Schedule/Temperature Maximums

Many buildings allow individual temperature control to an extent, but are governed by overarching heating maximums and/or scheduled temperature drops in order to be more energy efficient. In such cases, turning up the local thermostat will not increase the temperature above the system-wide maximum (i.e. if you turn your thermostat to 80°F but the building maximum is only 75°F, then you will only get to 75°F).

Buildings where occupancy isn't expected overnight may experience a temperature drop in the evening with normal occupancy temperatures returning in the morning. There may be a delay in warming as the system catches up during the day.

## Noise

Radiator systems can create "banging," "clanging," "knocking," or "popping" sounds as they heat. This is normal and expected. The thermal expansion of metal pipes is the culprit. The pipes themselves may make the noise, or the brackets holding the pipes may shift and create a sound.

"Whooshing" or "swirling" noises from radiators are also common. This is caused by the introduction of new hot water or steam. The hot fluids meet the colder ones and mix, resulting in



heat supply but also some noise. “Dripping” or “waterfall-like” sounds are not normal and may be a sign of a leak. Please report these sounds to Facilities Services.

Forced air systems may also produce noise. A gentle sound of airflow is expected, but if you hear “banging,” “coughing,” or “scrapping” please let Facilities Services know.

## Residence Halls

### Anna Mann

**Can be adjusted by occupants.**

This space is heated with steam through radiators, 0 being off, 5 being high, these white plastic knobs are manually turned to increase or decrease temperature in the space.

### Aspen

**Can be adjusted by occupants.**

Aspen dorms are heated and cooled and cooled with VRF (variable refrigerant flow) units, with electronic thermostats that can be adjusted manually by the occupant, preferably left in the control setting of “central” labeled by a square icon, sun logo is heat only, snowflake is AC only, you can adjust your heating and cooling by hitting the arrow keys.

### Bidwell

**Can be adjusted by occupants.**

This space is heated and cooled through individual room VRF (variable refrigerant flow) units, with electronic thermostats that can be adjusted manually by the occupant, preferably left in the control setting of “central” labeled by a square icon, sun logo is heat only, snowflake is AC only, you can adjust your heating and cooling by hitting the arrow keys.

### Birchwoods

**Can be adjusted by occupants.**

Birchwoods are heated through electric baseboards that are manually controlled by either the dial on the face of the unit, or a wall mounted thermostat with temperature settings.

### Bragdon

**Centrally controlled, occupants can adjust settings in sleeping rooms.**

There is a furnace system in the attic that heats hallways. Radiant heating controls residence rooms, and electric heaters are located in bathroom areas.



## Canyon house

**Can be adjusted by occupants.**

This space is heated through a gas fired furnace controlled by thermostats on the walls.

## Chittick

**Can be adjusted by occupants.**

This building is heated with steam through radiators with 0 being off and 5 being high. These white plastic knobs are manually turned to increase or decrease temperature in the space.

## Farm house

**Can be adjusted by occupants.**

This house is heated from a gas furnace in the basement, heating is controlled by a wall mounted thermostat, using arrow keys to adjust temperature.

## Foster

**Centrally controlled, occupants cannot adjust settings.**

This space is heated with steam. The steam is converted to hot water which passes through a coil system providing radiant heat. The slotted grooved cabinet near the window wall is the coil system and there are pull chains that can be lifted and locked into place which open a baffle that allows the heat to rise into the space. There are no controls other than the ability to open and close the baffle to allow more or less heat to rise into the space.

## Garden house

**Can be adjusted by occupants.**

This building is heated from a furnace in the basement and is controlled by wall mounted thermostats.

## Griffin

**Can be adjusted by occupants.**

This building is heated with hot water through radiators with manual controls, 0 being off, 5 being high. These white plastic knobs are manually turned to increase or decrease temperature in the space.



## Language houses (Chinese, French, German, Russian)

### **Can be adjusted by occupants.**

The language houses are heated with gas furnaces located in the basement. Temperature is controlled through wall mounted thermostats.

## Spanish House

### **Can be adjusted by occupants.**

This building is heated with hot water from a gas fired boiler. Hot water radiators throughout the building are adjustable by the occupant with the dial on the side.

## McKinley

### **Can be adjusted by occupants.**

This space is heated with hot water through radiators with manual controls, 0 being off, 5 being high. These white plastic knobs are manually turned to increase or decrease temp in the space

## McNaughton

### **Occupants can adjust settings.**

This space is heated with steam. The steam is converted to hot water which passes through a coil system providing radiant heat. The slotted grooved cabinet near the window wall is the coil system and there are pull chains that can be lifted and locked into place which open a baffle that allows the heat to rise into the space. There are no controls other than the ability to open and close the baffle to allow more or less heat to rise into the space.

## Garden house

### **Can be adjusted by occupants.**

The Garden House is heated from a furnace in the basement and temperature is controlled by wall mounted thermostats.

## Naito

### **Can be adjusted by occupants.**

The furnace system in the attic heats hallways. Radiant hot water heating heats rooms, and electric heaters are located in bathroom areas.





## ODB

### **Occupants can adjust settings.**

This building is heated via steam generated in the physical plant boilers. These boilers are fired up in the fall as the weather cools off. The steam is dispersed throughout the building into a radiant heating system (radiators) which are controlled by a Dan Fauss dial, 0 being off, 5 being high, turning counter clockwise to increase heat, These numbers do not represent temperature but the amount of steam allowed to enter the radiator, 5 being the radiator fully open to the main building steam system.

## RCA

### **Can be adjusted by occupants.**

This space is heated through electric baseboards that are manually controlled by either the dial on the face of the unit, or a wall mounted thermostat with temperature settings.

## Scholz

### **Occupants can adjust settings.**

This space is heated with steam. The steam is converted to hot water which passes through a coil system providing radiant heat. The slotted grooved cabinet near the window wall is the coil system and there are pull chains that can be lifted and locked into place which open a baffle that allows the heat to rise into the space. There are no controls other than the ability to open and close the baffle to allow more or less heat to rise into the space.

## Sequoia

### **Can be adjusted by occupants.**

This building is heated and cooled with VRF (variable refrigerant flow) units. These are controlled through single room mini split systems. The electronic thermostats can be adjusted manually by the occupant. It's most efficient and ecological if left in the control setting indicated by the square icon labeled "central." The sun logo is heat only, snowflake is AC only, you can adjust your heating and cooling by hitting the arrow keys.

## Sitka

### **Can be adjusted by occupants.**

This building is heated and cooled with VRF (variable refrigerant flow) units. These are controlled through single room mini split systems. The electronic thermostats can be adjusted manually by the occupant. It's most efficient if left in the control setting indicated by the square



icon labeled “central.” The sun logo is heat only, snowflake is AC only, you can adjust your heating and cooling by hitting the arrow keys.

## Sullivan

### **Can be adjusted by occupants.**

There is a furnace system in the attic that heats the hallways and is controlled via remote digital controls system in facilities. Dorm rooms contain wall mounted thermostats, and electric heaters are located in bathroom areas.

## Trillium

### **Can be adjusted by occupants.**

This Leed Platinum certified building has modern, efficient electric cove heaters located in each room. These are controlled by wall mounted thermostats.

## Woodbridge

### **Can be adjusted by occupants.**

This space is heated with hot water through radiators, 0 being off, 5 being high, these white plastic knobs are manually turned to increase or decrease temp in the space.

## Academic/Administrative Buildings

### Biology

#### **Centrally controlled, occupants cannot adjust settings.**

Steam from the central plant is supplied to the building where heat is exchanged from steam to water. Comfort and ventilation is controlled solely by the automated building management system which is monitored by Facilities. There are also three gas fired air handlers that provide heating and cooling to limited spaces within the building. These are controlled via the automated building management system.

### Chemistry

#### **Centrally controlled, occupants cannot adjust settings.**

Steam is delivered to the building from the Central Plant. Some steam is used to heat water for room level reheat units. Steam is used for two large air handlers in the penthouse that provide all the air for the building. Cooling is provided for the building via a large chilled water system on the roof. All systems are controlled via the automated building management system monitored by Facilities.



## Dorothy Johansen (DoJo)

### **Can be adjusted by occupants.**

There is a rooftop gas unit that provides heat for this building. Local thermostat control is located on the wall inside the building.

## Educational Technology Center (ETC)

### **Centrally controlled, occupants cannot adjust settings.**

Heat is supplied by the Central Plant to the Library where it is converted to hot water in the penthouse. The water is pumped from the Library to ETC where it supplies the heat to two large air handlers that provided tempered air to the building (both hot and chilled water)

Hot water is also delivered to small reheat fan powered boxes (FPB) that provide additional comfort heating for individual spaces, such as offices and classrooms. These units and spaces are controlled via the automated building management system and monitored by Facilities.

## Eliot Hall

Steam is delivered to the building from the Central Plant where it is converted to hot water for some terminal units (radiators) and steam is delivered to other terminal units (steam radiators).

### 1st floor

#### **Centrally controlled, occupants cannot adjust settings.**

Heat for many spaces on the 1st floor is supplied through fan coil units(FCU) in the ceiling. These units supply some outside air and are controlled via the building management system monitored by Facilities. Some offices on the 1st floor have local hot water radiators which are controlled via the building management system monitored by Facilities.

### 2nd & 3rd floors

#### **Can be adjusted by occupants.**

Heat is supplied to all spaces from steam to steam radiators. These radiators are controlled by the room occupant with spring automated valves on the side of the radiators. The valve dial operates from 0 to 5; 0 = off, 5 = High. Generally speaking 3 should keep the spaces at approximately 70 degrees, however, this is largely influenced by the current climate conditions and the size of the room.

### 4th floor

#### **Centrally controlled, occupants cannot adjust settings.**



Heat is supplied from steam to fan coil units. Ventilation is provided through the use of operable windows and skylight vents in the ceiling of the hallway. The heat is controlled via the automated building management system monitored by Facilities.

Eliot Hall is heated via steam generated in the physical plant boilers. These boilers are fired up in the fall as the weather cools off. The steam is dispersed throughout the building into a radiant heating system (radiators) which are controlled by a Dan Fauss dial (white plastic knob on radiator) , 0 being off, 5 being high, turning counter clockwise to increase heat, These numbers do not represent temperature but the amount of steam allowed to enter the radiator, 5 being the radiator fully open to the main building steam system.

## Greenwood

**Centrally controlled, occupants cannot adjust settings.**

Heat and ventilation is provided by two rooftop, gas fired air handlers that are controlled via the automated building management system monitored by Facilities.

## Grey Campus Center (GCC)

**Centrally controlled, occupants cannot adjust settings.**

Steam is delivered to the building where it is converted to hot water and distributed to a large air handler that provides heat and ventilation to the entire building. Hot water reheats provide localized comfort heating to individual spaces. Heat and ventilation is provided to the GCC conference rooms via a rooftop gas fired air handler. All systems are controlled via the automated building management system monitored by Facilities.

## Greywood

**Can be adjusted by occupants.**

This building is heated and cooled through two rooftop units. The system is controlled with local wall mounted programmable thermostats.

## Growing Seeds

**Centrally controlled, occupants cannot adjust settings.**

This building is heated and cooled through several air handling units. The temperature is monitored and controlled through automated systems.

## Health and Counseling Center

**Can be adjusted by occupants.**



The building is heated and cooled by two rooftop air handling units and controlled via local wall mounted programmable thermostats.

## Kaul

**Centrally controlled, occupants cannot adjust settings.**

Heating, cooling, and ventilation is provided through three air handling units. Control is supplied via the automated building management system monitored by Facilities.

## Library

**Centrally controlled, occupants cannot adjust settings.**

The Hauser Library is heated with steam. This building is controlled predominantly by our digital controls system.

## Performing Arts Building (PAB)

**Centrally controlled, occupants cannot adjust settings.**

Heat is provided from two local high efficiency hot water boilers in the building. Ventilation is provided through seven large air handling units and cooling through a large rooftop chiller. Controls are provided via the automated building management system monitored by facilities.

## Physics

**Centrally controlled, occupants cannot adjust settings.**

Steam is delivered from the central plant where heat is exchanged from steam to water. Comfort and ventilation is controlled solely by the automated building management system which is monitored by Facilities. While Physics is connected to the Biology building the HVAC systems are largely separate with the exception of one shared hot water heated air handler in the penthouse mechanical room. Other spaces are supported with individual unit ventilators under the windows to provide local room level comfort heating and fresh air. All of these systems are controlled by the automated building management system.

## Prexy

**Can be adjusted by occupants.**

Heat is provided by a local gas fired hot water boiler. Distributed hot water is delivered to room radiators that are controlled individually with control valves found on the side of the radiators. The valve dial operates from 0 to 5; 0 = off, 5 = High. Generally speaking 3 should keep the spaces at approximately 70 degrees, however, this is largely influenced by the current climate conditions and the size of the room.



## Psychology

**Centrally controlled, occupants cannot adjust settings.**

Heat is provided by seven rooftop units and controlled via the automated building management system.

## Reactor

**Centrally controlled, occupants cannot adjust settings.**

The reactor space is heated via hot water and is controlled through automated control systems monitored by facilities.

## Sports Center

**Centrally controlled, occupants cannot adjust settings.**

This building, including the swimming pool is heated by steam and controlled via a digital controls system in facilities.

## Student Center

**Can be adjusted by occupants.**

This space is heated via steam generated in the physical plant boilers. These boilers are fired up in the fall as the weather cools off. The steam is dispersed throughout the building into a radiant heating system (radiators) which are controlled by a dial, 0 being off, 5 being high, turning counter clockwise to increase heat, These numbers do not represent temperature but the amount of steam allowed to enter the radiator, 5 being the radiator fully open to the main building steam system.

## Studio Art Building

**Can be adjusted by occupants.**

Building space conditioning is largely provided by local gas fired units both on the roof and in storage areas, for comfort and ventilation. Some limited area's do have air conditioned spaces. These units are controlled both with the building management system as well as some local control through the use of individual space thermostats in offices and some common areas.

## Vollum

**Centrally controlled, occupants cannot adjust settings.**

This space is heated by steam that is converted to hot water. The hot water warms air that is distributed through the building. It is controlled via a digital controls system in facilities.



## 28 West

**Can be adjusted by occupants.**

This building is heated by a gas furnace in the basement. There are smart thermostats mounted to the walls for manual and digital control.

