ITS Resource Center Home

Policies - Wireless Networking

Contact Information

Administrative Services
315-859-4169
its@hamilton.edu

Information Technology Services currently has wireless networks in all major buildings and outdoor areas on campus. The following are wireless policies and support procedures everyone must follow at the College. It is important to note the wireless network at Hamilton will **not** replace the wired infrastructure. The secure Hamilton wireless network is to be used only by faculty, staff and students at Hamilton. Wireless networking provides convenient access in many locations, albeit at a reduced speed.

The following policies define how people use wireless networking at Hamilton and how ITS will support wireless networking. The most important factor involved in supporting a wireless network is the potential for other devices to interfere or cause problems with the operation of the wireless network. Many of the policies below address this issue.

What is the Hamilton Wireless Network?

A wireless network consists of access points and wireless adapters. The access point is connected to the "wired" network and sends out radio waves to wireless adapters laptops and other devices. Several access points are installed such that their signals overlap. This allows for uninterrupted service while the individual/laptop is mobile. The radio waves are transmitted at 2.4GHz and allow the mobile units (laptops, PDAs, etc) to connect to the wired network. Although wireless network speeds are slower than the wired network, it is sufficient for most applications.

Hamilton is currently using Cisco architecture based on the **802.11b, 802.11g, and 802.11n** (802.11n in select locations) wireless standards. Depending on the environment, **802.11b/g/n** signals can travel up to 300 meters (802.11g signals are shorter). However, the farther you are from the access point the slower the transmission speed.

Where can I use Wireless Networking?

ITS has installed secure wireless networks in all buildings and outdoor areas around campus in the summer of 2007.

How much does it cost?

You will need a laptop and a compatible **802.11b/g or 802.11n** wireless networking adapter. Most new laptop computers have wireless network adapters installed by default. The college store has wireless adapters for sale. Other electronic stores also sell wireless network adapters.

What wireless adapters are supported?

You are free to use any **802.11b/g/n** compliant wireless adapter, however, ITS may only be able to provide limited support for certain adapters if you do not have the proper software or documentation.

What things are prohibited?

Only ITS staff are allowed to install wireless access points. The Apple AirPort Station for example, is NOT permitted on campus. This ban INCLUDES any wireless equipped Macintosh configured to act as an access station. Again, the adapter is permitted, but the access point or any wireless device acting as an access point is NOT permitted.

Can I get help setting this up?

Instructions are available to configure your wireless network adapter. If you need further assistance, contact the ITS Help Desk at 315-859-4181.

Policies

All campus users are subject to the following wireless guidelines as well as existing guidelines for the wired network. The wireless network is an extension of the existing network and therefore falls under the control and supervision of the ITS department. Due to the complex nature of wireless technologies it is imperative that users of the wireless network follow the guidelines and policies outlined in this document.

Wireless networks are NOT a replacement for wired networks. The purpose of the wireless network is to extend the wired network by providing Web browsing and e-mail access in areas of transient use such as common areas. Wireless networks have a much smaller bandwidth than wired networks; therefore, applications that require a large bandwidth may overload the wireless network. Wireless networks work best when the number of users is limited - the more users, the smaller the share of the bandwidth available to each.

Only wireless access points installed and managed by ITS will be allowed for use on the Hamilton wireless network. Students and faculty are not permitted to install their own wireless networking equipment. Departments wishing to implement a wireless network must notify the ITS department. ITS will survey the site and determine the feasibility of a wireless connection. Only access points pre-evaluated and installed by ITS will be used. ITS will publish and maintain a current list of acceptable devices on the ITS website.

Certain other "wireless" devices also use the same 2.4 GHz frequency band and can cause interference to users of the wireless network. These interferences can be intermittent and very difficult to diagnose. Some of these are: other IEEE **802.11** wireless LAN devices, Bluetooth wireless devices, cordless phones and audio speakers.

ITS needs help from all members of the campus community in minimizing the potential interference from those devices. ITS requests that use of all other 2.4 GHz devices be discontinued in Hamilton College owned buildings. We will not actively scan the airspace for potential interfering devices however, ITS reserves the right to restrict the use of all 2.4 GHz radio devices in all buildings and all outdoor spaces on the Hamilton College campus.

In cases where the device is being used for a specific class application, ITS will work with faculty to

determine whether there are circumstances under which use of the device may still be accommodated without causing interference to other wireless network users. If you think you have an existing system that may use 2.4 GHz radios for transmission please email ITS at: ns@hamilton.edu

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