Windows XP – Wireless Network

Requirements
1. A Computer with an available PCMCIA or Wi-Fi card slot
2. Standard (wired) Ethernet connection
3. A PCMCIA or internal Wi-Fi card

Installing a Wi-Fi Card
Most, if not all new computers are capable of using the wireless internet, and many also come with a wi-fi card pre-installed. If your computer does not have a wi-fi card, it can be ordered from Cavalier Computers or some other vendor. If you are not comfortable installing the card Cavalier computers will install it for a fee.

Create Your Account
You need to create a UVASecure Wireless Account (https://www.web.virginia.edu/wire/) in order to use UVA’s Secure wireless network.

Please note: You must turn the wireless card off at least 10 minutes before creating your wireless account or create the account before installing the card.

You will need your username (your UVa computing ID) and password when you set up your wireless account, as well as the hardware address of your wi-fi card to complete your registration.

To find the hardware address of the wi-fi card (aka MAC address), consult the document, “Windows XP - Network Address”.

What is a Hardware (MAC) Address?
Your computer has two network addresses. One is a code assigned to the network chip that is installed by the manufacturer. This is the “hardware address”, also known as the MAC (Media Access Control) address, adapter address, or ethernet address. It is unique to your networking device, and allows network traffic destined for that device to ultimately find it. The format of a MAC address is xx:xx:xx:xx:xx:xx. It could be recorded with dashes or spaces instead of colons, or with no dividers at all. The numbers are hexadecimal, so the characters include 0-9 and A-F. An example of a hardware address is 08:34:A5:C7:47:98.

Your computer’s other address is the IP address. This is the four-part decimal address that is assigned by either the hostmaster of the site, or by a DHCP server. The format is xxx.xxx.xxx.xxx. The IP address is paired to the hardware address by the Domain Name Server for the network. An example of an IP address is 128.143.2.9. (Note that leading zeros were dropped here, although some applications include them.)

The hardware address is very useful in network troubleshooting and is required for UVA Wireless account creation. Both addresses may be needed in order to troubleshoot stolen or duplicated IP addresses. Frequently, the hardware address is shown on the network card itself, but you can also determine either address from your operating system.

If your machine has multiple network adapters, such as a modem, Ethernet card, and/or Wireless Ethernet card, it is important to note that each of these has its own set of addresses.

Finding Your MAC Address
1. Click the Start button, then select Run.
2. In the dialog box type cmd and press OK.

What is the Hardware Address?
The hardware address is very useful in network troubleshooting and is required for UVA Wireless account creation. Both addresses may be needed in order to troubleshoot stolen or duplicated IP addresses. Frequently, the hardware address is shown on the network card itself, but you can also determine either address from your operating system.

If your machine has multiple network adapters, such as a modem, Ethernet card, and/or Wireless Ethernet card, it is important to note that each of these has its own set of addresses.

Making Secure Wireless the Active Interface
The directions below will only work for computers equipped with wireless network cards that are Wi-Fi certified to support 128-bit WEP encryption (consult your vendor’s website to find out if your card is Wi-Fi certified.)

Prepare Your Computer for the Cavalier Network
1. Run Windows Update to make sure you have ‘Windows XP Service Pack 1’ - the easiest way to do this is to run Internet Explorer, open the Tools menu and choose the third option, Windows Update. Make sure that the left margin shows zero Critical Updates available. Ignore all other updates and drivers shown in this left margin. Some of the Recommended updates and Driver updates have been known to create problems that are difficult to fix. Stick to the Critical Updates only.
2. Upgrade your card’s drivers/firmware to the latest version (see the manufacturer’s web site).
3. Disable any third party wireless card management.

Verify You Have a U.Va. Personal Certificate on Your Computer
1. In Internet Explorer under Tools, open the Internet Options control panel.
2. Select the Content tab, click the Certificates button.
3. Double click your personal certificate. If you don’t have one, obtain a U.Va. Personal Certificate at the following web site: http://www.itc.virginia.edu/desktop/pki/quickCerts.phtml.
4. If the Valid from date is before 1/8/04 or if the Valid to date has expired, obtain a new U.Va. Personal Certificate from the address listed immediately above.

Configure the Card to Use the XP Wireless Client
1. Open the properties dialog for your wireless card.
a. Click the Start button (left edge of your Task Bar).
b. Click on Control Panel.
c. Make sure you are in Classic View.
d. Select your wireless card from the list connections.
e. In the left column, under ‘Network Tasks’ choose ‘Change settings of this connection’.

Verify You have a U.Va. Personal Certificate on Your Computer
1. In Internet Explorer under Tools, open the Internet Options control panel.
2. Select the Content tab, click the Certificates button.
3. Double click your personal certificate. If you don’t have one, obtain a U.Va. Personal Certificate at the following web site: http://www.itc.virginia.edu/desktop/pki/quickCerts.phtml.
4. If the Valid from date is before 1/8/04 or if the Valid to date has expired, obtain a new U.Va. Personal Certificate from the address listed immediately above.

Configure the Card to Use the XP Wireless Client
1. Open the properties dialog for your wireless card.
a. Click the Start button (left edge of your Task Bar).
b. Click on Control Panel.
c. Make sure you are in Classic View.
d. Select your wireless card from the list connections.
e. In the left column, under ‘Network Tasks’ choose ‘Change settings of this connection’.

WHAT IS A HARDWARE (MAC) ADDRESS?
The hardware address is very useful in network troubleshooting and is required for UVA Wireless account creation. Both addresses may be needed in order to troubleshoot stolen or duplicated IP addresses. Frequently, the hardware address is shown on the network card itself, but you can also determine either address from your operating system.

If your machine has multiple network adapters, such as a modem, Ethernet card, and/or Wireless Ethernet card, it is important to note that each of these has its own set of addresses.

Finding Your MAC Address
1. Click the Start button, then select Run.
2. In the dialog box type cmd and press OK.