

Smart Classrooms

Using Technology in the
Classroom



CALIFORNIA STATE UNIVERSITY, SACRAMENTO

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WORKSHOP DESCRIPTION

Overview

Through this workshop, you will become acquainted with the technology found in the traditional Smart Classrooms. You will learn how to use the equipment, how to connect either your Windows or Macintosh laptop to the video projector, playback a DVD and VHS tape, connect to Campus TV, switch video source between laptop and DVD/VHS player, adjust the audio volume, turn Closed-Captioning ON and OFF, understand the cables you need to connect your laptop and learn how to report a problem or request assistance.

Prerequisites

Individuals taking this workshop should have basic knowledge about how to use a computer and some experience using traditional Smart Classroom equipment, but is not necessary.

Objectives

- To understand what a traditional Smart Classroom is.
- To apply what you have learned about Smart Classroom equipment and use it in various scenarios e.g. to show content from your laptop, to show a Video/DVD etc.
- To use a Smart Classroom.

THE TRADITIONAL SMART CLASSROOM

Introduction

As a professor teaching at Sacramento State, you have probably used some form of technology to enhance the course material covered. You may have used a video projector that connected to your laptop to display a PowerPoint presentation to your class, played a VHS/DVD movie that dealt with a topic discussed in the course, or used an overhead projector to show your transparencies on which you printed an important diagram or text from a book. The technology that enables a course to be more dynamic and provides you with more options to engage with your students is available in the traditional Smart Classroom. The basic equipment available through a traditional “smart classroom” includes a video projector, projector screen, DVD/VCR combo player (available in some classrooms), a smart panel mounted on the wall with controls that allow you to connect your laptop to the projector and in some cases a television set.

Eventually, all “Smart Classrooms” will be equipped in the same manner as the new Technology Assisted Classrooms. Likely, traditional smart classrooms will now be referred to as “Technology Assisted Classrooms” since all classrooms with integrated technology at Sacramento State will eventually follow the new Technology Assisted Classroom model.

This workshop will provide you with step by step instructions on how to use a traditional Smart Classroom so that you can become acquainted with the technology available in these classrooms and know how to operate it during your class session. Even though this workshop covers the traditional Smart Classrooms, you will also find this information useful when using equipment in the new Technology Assisted Classrooms.

Smart Classroom Defined...

A traditional Smart Classroom is a traditional lecture style teaching space that has available technological equipment that can be used to aid and enhance instruction of a course. The traditional Smart Classroom is equipped with the basic technology that will enable you to connect your laptop to the video projector or to play a VHS/DVD movie, just to name a few scenarios.

Smart Classroom Equipment

1. PC Computer (available in some classrooms)
2. Video Projector



Figure 1: Video Projector

3. DVD/VCR combo player (available in some classrooms)
 - a. If the smart classroom does not have a DVD/VCR combo player you can check one out by calling the IRT Service Desk at 278-7337.
 - b. In some cases the VCR or DVD players are located in a locked environment such as a cabinet. You will need to contact the IRT Service Desk at 278-7337 located in the AIRC 2005 to obtain a Key Issue Slip and take this slip to Key Issue Office of Facilities Management to have a key issued to you to access this equipment.



Figure 2: DVD/VCR Combo Player

SMART CLASSROOM CONTROLS

You may have one of the following Smart Classroom Control combinations in the classroom that enable you to use the video projector along with a Laptop, PC, and DVD/VCR combo player:

1. Smart Panel and Interface Panel mounted on wall.



Figure 3: Smart Panel and Interface Panel

Smart Panel enables you to:

- a. Turn Video projector **ON** or **OFF**
- b. Manipulate input source for video projector (what will display on projector screen) to be from a laptop, a desktop computer (where available), the VCR/DVD combo player (where available), or the Document Camera (where available)
- c. Adjust speaker volume

Interface Panel that has connections to:

- d. Connect your PC (windows) or Macintosh (Mac) laptop to the video projector
 - e. Connect Audio cable from laptop earphone/audio out jack to audio input jack on interface panel so that audio can be projected from laptop to classroom speakers.
2. All-in-One Smart Panel and Interface panel integrated into one wall mounted panel (in some classrooms) that allows for the functions indicated in item #1-Smart Panel.



Figure 4: Smart Panel (all in one)

3. Remote Control and Interface Panel: The remote control enables the same functions as a Smart Panel such as turning the projector on/off, manipulating input source, and adjusting volume. It is used along with an interface panel (see #1- Smart Panel items E and D).



Figure 5: Remote Control and Interface Panel

4. Control Panel and Interface Panel: The Control Panel enables the same functions as a smart panel such as turning the projector on/off, manipulating input source and adjusting volume. It is used along with an interface panel (see #1-Smart Panel items E and D).



Figure 6: Control Panel and Interface Panel

5. Projector Screen Switch to roll down projector screen.

6. Access to Campus TV
7. Closed-Captioning Decoder box to toggle closed-captioning ON or OFF for Campus TV feeds and/or VHS tapes you play in the class (VHS tapes must have “CC” available).



Figure 7: Closed Caption Decoder Box

8. Transparency Projector enables you to show content you have printed on a transparency sheet e.g. (diagram, text etc.)



Figure 8: Transparency Projector

9. Speakers mounted on wall (where available).

Instructions about how to use Smart Classroom equipment are available at each classroom near the Smart Panel and Interface Panel and through the [Technology Assisted Classrooms](http://webapps2.csus.edu/smartclassrooms/default.aspx) website (<http://webapps2.csus.edu/smartclassrooms/default.aspx>).

Smart Classroom Environment

In addition to the technological equipment available in a Smart Classroom, you also have access to environmental elements that work with the technology to enhance the learning experience.

These include:

1. Internet Access (via Ethernet cable)
2. Wireless Internet Access
3. Podium with stand attached or set up on table
4. ADA Station: consists of table and chair
5. White Boards
6. Lights switches at the front and back of the classroom that controls front, rear and one wall wash (board lights) of lights.
7. Telephone which allows for local (campus phone numbers) access only is mounted on the wall near the front of the classroom and includes directions on who to call if you have trouble operating classroom equipment.
8. Clock
9. Acoustics includes carpeting and other sound proofing material (where available)
10. Secondary Screen (where available)
11. Door Window (where available): Entry doors into the classroom have a window (minimum size 18" x 18") for viewing the classroom from the hallway.
12. Cabling: Sufficient conduit and/or electrical is run to supply electric power for the equipment as well as network connectivity.

Use Smart Classroom equipment to enhance your classroom experience by displaying PowerPoint presentations, videos or DVD movies that deal with your course topics, use the internet to show examples and explain reading material covered, or use the technology as it best fits your course objectives.

Classroom Classification Types

All traditional Smart Classrooms and the new Technology Assisted Classrooms are assigned a Classification Level (level 1, 2, 3 etc) based on the type of technology media that is available in that classroom. Visit the [Campus Buildings with Technology Assisted Classrooms](http://webapps2.csus.edu/smartclassrooms/locations.aspx) webpage (<http://webapps2.csus.edu/smartclassrooms/locations.aspx>) to view a list of Smart Classrooms. Through this webpage you can also view the student seat capacity, classification level, support group for the classroom and funding source. Upon selecting a classroom to view, you will also see detailed information about the classroom's environment, equipment, room images, and instructions on how to use the technology media in the classroom.

Smart Classroom Assistance

The following provides information on what steps to take if you need to access locked equipment in a Smart Classroom, need help operating Smart Classroom equipment, or need to reserve a Smart Classroom.

Key Issue Slips for Equipment

Some equipment and multimedia resources, such as a VCR and/or DVD player, throughout campus have been placed in locked environments to curtail theft and vandalism. If you are assigned to teach in a room that has the VCR in a locked cabinet, or are teaching in Mendocino Hall 1003, 1005, 1015, Riverside Hall 1017 or Solano Hall 2002, you will need a key to access these resources. The IRT Service Desk can provide a Key Issue Slip; this slip must then be taken to the Key Issue Office of Facilities Management in order to be issued the actual key. Contact the IRT Service Desk located at AIRC 2005 by calling 278-7337 for more information.

Who to Call for Help

If you require assistance when using a traditional Smart Classroom, please call Classroom Services (AIRC 2005) at 278-7337 (dial x87337) from the campus phone located in the classroom. Just-in-time support includes immediate on-site assistance with audio visual/multi-media hardware in classrooms, including interface and operation challenges in the classroom. Long term support includes training and advice on equipment utilization. Assistance is available: Monday - Thursday 7am - 7pm and Friday 7am – 5pm.

Reserving a Smart Classroom

Smart Classrooms may be booked for the semester in which you are teaching, for classes that use technology as an integral part of the teaching and learning of the course. Room assignments are done by academic department secretaries at the time a class is being scheduled before the beginning of each semester. If you do not require a full semester assignment to one of these Smart Classrooms but would like to use one for a few class sessions, please request reservations for these classrooms as needed through the [Office of Space Management](http://www.rms.csus.edu/space/) (<http://www.rms.csus.edu/space/>).

Equipment Needed to use a Smart Classroom

Smart Classrooms are fully equipped with audio/visual and multimedia equipment which includes a video projector, projector screen, DVD/VCR combo player (available in some classrooms), a Smart Panel mounted on the wall with controls that allow you turn on video projector, interface panel to connect your laptop to the video projector, ports to connect to the campus network (internet), and in some cases a television set. Some Smart Classrooms are not equipped with a PC desktop computer so you will probably connect your laptop to the video projector most of the time. Consequently, there are a few things you must bring with you to the classroom in order to use the equipment available to you.

Equipment-to-Bring Checklist

1. A **compatible laptop computer**. Most of the time you will bring your PC or Mac laptop and connect it to the video projector if you do not use the desktop computer in the classroom (when available). Smart Classrooms accommodate both Mac and Windows platforms.



Figure 9: Mac Laptop and PC Laptop

2. Appropriate **Cables** to connect your computer/laptop to the video projector and/or to the internet. You will need the following cables:
 - a. **VGA (Video Graphics Array) connector cable** to connect your laptop to the projector. This cable enables you connect your laptop to the video projector in the classroom and be able to project content from your laptop (whatever you want to present from your laptop e.g. PowerPoint Presentation) on the projector screen. The VGA cable would connect from the VGA port on your laptop/computer to the video input jack on the Interface Panel.



Figure 10: VGA Cable

- b. **1/8" mini audio cable** to connect audio from a laptop to the speakers in the classroom. The audio cable would connect from the headphone jack on your laptop to the audio input jack on the Interface Panel.



Figure 11: 1/8" Mini Audio Cable

- c. **Apple DVI to VGA Display Adapter:** If you will be using a Mac Laptop to connect to the projector, you will need a **Apple DVI to VGA Display Adapter** cable that connects from your Mac Laptop, to the VGA cable (see item "2a" above). Usually these VGA Adapter cables come with your laptop when you purchase it. Otherwise you can purchase an **Apple DVI to VGA Display Adapter** cable from the Hornet Bookstore or from any electronics store.



Figure 12: Apple DVI to VGA Display Adapter cable for a Mac laptop and an example of a VGA adapter cable connected to a Mac laptop

- d. **Ethernet Cable** allows you to be able to connect to the internet. You will need this cable if wireless access is not available. Currently, all Smart Classrooms have wireless access to the campus network (internet).



Figure 13: Ethernet Cable

Where to Purchase or Checkout Equipment

If you currently do not own a VGA/Audio/Ethernet cable, you can purchase a VGA/Audio/Ethernet Cable Pack from the Hornet Bookstore at a reasonable cost. Visit or contact the [Hornet Bookstore](http://www.bkstr.com/Home/10001-13528-1?demoKey=d) (916) 278-6446 (<http://www.bkstr.com/Home/10001-13528-1?demoKey=d>) for more information on purchasing the cable pack. Another option is to check-out a VGA and Audio cable from the [IRT Service Desk](http://www.csus.edu/irt/helpdesk/) (<http://www.csus.edu/irt/helpdesk/>) counter located at the Academic Information Resource Center AIRC Room 2005. You will need to present your OneCard in order to check out these cables. If you forgot your laptop and need to borrow one, you can pre-book a laptop through the Faculty Laptop Loan Program by calling the IRT Service Desk at (916) 278-7337. For questions about checking out cables or a laptop please contact the IRT Service Desk at (916) 278-7337.

If you need to checkout Audio/Visual Projection equipment (e.g. overhead projector, slide projector etc.) and/or multimedia systems equipment (e.g. digital still camera, auxiliary speakers etc.) please contact Classroom Services at 278-7337 for short term checkout of these items.

Using Equipment in a Smart Classroom

In order to use the equipment available in a Smart Classroom, you must make sure that all needed equipment is turned on correctly and that all cables you will be using to connect to equipment are plugged in correctly. The following provides an overview of the steps to follow if you are going to use a laptop, the PC computer (if available), the transparency projector, DVD/VCR combo player, Campus TV, Closed Caption Decoder box and other equipment in the classroom.

Connecting your Laptop to the Video Projector

The following provides an overview of the steps to follow to connect a PC or Mac laptop using 4 of the most common Smart Panel/Interface panel scenarios located in the Smart Classroom. Equipment you need includes: a laptop, VGA cable, and an Audio cable.

CONNECT YOUR PC LAPTOP

Smart Panel and Interface Panel Scenario

The following scenario describes how to connect a laptop to a standard Smart Panel and Interface Panel (see “Smart Classroom Controls” #1 for more details).



Figure 14: Smart Panel and Interface Panel

- step 1.* Locate the **“Video output”** port on your laptop computer and plug in one end of the **VGA connector cable** into the port. Take the other end of the VGA connector cable and connect it to the port labeled **“Video Input”** on the **Interface Panel**.



Figure 15: Video output port on a PC laptop

- step 2.* If you will be using sound in your presentation, connect one end of the **1/8” mini audio** cable to the **headphone jack** on your laptop and the other end of audio cable to the jack labeled **“Audio Input”** on the **Interface Panel**.
- step 3.* Press the Projector Screen Switch **down button** to roll down the projector screen.
- step 4.* On the **Smart Panel** press the Projector **“ON”** button to turn on the projector. Once the Projector is on you will see a blue screen appear on the projector screen.
- step 5.* On the **Smart Panel**, press the selection button beneath **“LAPTOP”** to make your laptop the input source (what you want the projector to connect to and display on the screen).
- step 6.* Turn on your laptop and wait for the projector to detect its signal. If the projector does not display your laptop’s desktop on the screen, then you will need to press down on the **“FN + F8 (CRT/LCD)”** keys on your keyboard to toggle to the correct screen and display your laptop’s desktop on the projector screen. If the resulting image on the screen is too small, check your laptop screen resolution. The maximum screen resolution that should be used is 1024 x 768.
- a.* If your desktop screen is still not showing on the projector screen, check your display properties on your desktop by right clicking on the Desktop > select Properties > On Display Properties Box select Settings tab > Under Display drop down menu select “Dual Monitors”> Click Apply button > Click OK. Toggle between screens using “FN + F8” keys until laptop’s desktop appears on projector screen.
 - b.* If you have toggled to the correct screen, checked display settings and the laptop is not being detected by the projector, shut down your laptop and turn it back on. Wait for the projector to detect your laptop and repeat steps 4 and 5 above. If you continue to experience difficulties contact **Classroom Services at (916) 278-7337 using the campus phone located in the classroom.**
- step 7.* If you are planning to play a DVD/CD on your laptop, insert the DVD/CD into your DVD/CD drive and use your laptop’s DVD/CD player menus to play your DVD/CD.

step 8. Adjust Volume by using the **Volume Up or Down arrows** on the **Smart Panel** and by using the volume icon on your laptop's taskbar.

All-in-One Smart Panel Scenario

The following scenario describes how to connect your PC laptop to the All-in-One Smart Panel scenario that integrates Smart Panel and Interface Panel functions and connections (see “Smart Classroom Controls” #2 for more details).



Figure 16: All in one Smart Panel

- step 1.* Locate the “**Video output**” port on your laptop computer and plug in one end of the **VGA connector cable** into the port. Take the other end of the VGA connector cable and connect it to the port labeled “**VGA**” on the **Smart Panel**.
- step 2.* If you will be using sound in your presentation, connect one end of the **1/8” mini audio** cable to the **headphone jack** on your laptop and the other end of audio cable to the jack labeled “**Audio**” on the **Smart Panel**.
- step 3.* Press the Projector Screen Switch **down button** to roll down the projector screen.
- step 4.* On the **Smart Panel** press the Projector “**ON**” button to turn on the projector. Once the Projector is on you will see a blue screen appear on the projector screen.
- step 5.* On the **Smart Panel**, press the selection button beneath “**LAPTOP**” to make your laptop the input source (what you want the projector to connect to and display on the screen).
- step 6.* Turn on your laptop and wait for the projector to detect its signal.
- step 7.* **Follow Steps 6 through Step 8** under “Smart Panel and Interface Panel Scenario.”

Remote Control and Interface Panel Scenario

The following scenario describes how you would connect your laptop to the video projector using a combination of Remote Control and Interface Panel (see “Smart Classroom Controls” #3 for more details).



Figure 17: Remote Control and Interface Panel

- step 1.* Locate the “**Video output**” port on your laptop computer and plug in one end of the **VGA connector cable** into the port. Take the other end of the VGA connector cable and connect it to the port labeled “**Video Input**” on the **Interface Panel**.
- step 2.* If you will be using sound in your presentation, connect one end of the **1/8” mini audio** cable to the **headphone jack** on your laptop and the other end of audio cable to the jack labeled “**Audio Input**” on the **Interface Panel**.
- step 3.* Press the Projector Screen Switch **down button** to roll down the projector screen.
- step 4.* On the **Remote Control** press the **Power** button to turn on the projector. Once the Projector is on you will see a blue screen appear on the projector screen.
- step 5.* Use the **Remote Control** to change the input source. Input selection varies; it may be indicated by a button labeled: “**Input**”, “**Computer**”, “**Video**” or “**Mode**”.
Laptop =Computer1. In this example the input button is labeled “**Computer**” see Figure 17 above. Press the **Computer** selection button on the remote until you see the word **Computer1** on the screen.
- step 6.* Turn on your laptop and wait for the projector to detect its signal which will be indicated by your laptop’s desktop displaying on the screen.
- step 7.* **Follow Step 6 through 7 above** under “Smart Panel and Interface Panel Scenario.”
- step 8.* Adjust Volume by using the **Volume buttons** on the **Remote Control** and by using the volume icon on your laptop’s taskbar.

Control Panel and Interface Panel Scenario

Another variation of the Smart Classroom controls used to connect your laptop to the video projector includes a **Control Panel** and an **Interface Panel**. (see “Smart Classroom Controls” #4 for more details).



Figure 18: Control Panel and Interface Panel

- step 1.* Locate the “**Video output**” port on your laptop computer and plug in one end of the **VGA connector cable** into the port. Take the other end of the VGA connector cable and connect it to the port labeled “**Video**” **Input** on the **Interface Panel**.
- step 2.* If you will be using sound in your presentation, connect one end of the **1/8” mini audio** cable to the **headphone jack** on your laptop and the other end of audio cable to the jack labeled “**Audio Input**” on the **Interface Panel**.
- step 3.* Press the Projector Screen Switch **down button** to roll down the projector screen.
- step 4.* On the **Control Panel** press the “**Power ON**” button to turn on the projector. Once the Projector is on you will see a blue screen appear on the projector screen.
- step 5.* On the **Control Panel**, press the “**Source COMP**” button to make your laptop the input source (what you want the projector to connect to and display on the screen).
- step 6.* Turn on your laptop and wait for the projector to detect its signal.
- step 8.* **Follow Step 6 through Step 7** under “Smart Panel and Interface Panel Scenario.”
- step 9.* Adjust Volume by using the **Volume Up or Down arrows** on the **Control Panel** and by using the volume icon on your laptop’s taskbar.

CONNECT YOUR MAC LAPTOP

You will need your laptop, DVI-VGA adapter cable, VGA cable, and Audio Cable. The following provides steps on how to connect your Mac laptop to the projector in 4 different scenarios.

Smart Panel and Interface Panel Scenario

step 1. Locate the **“DVI-I/Video Output”** port on your laptop computer and plug in one end of the **Apple DVI to VGA Display Adapter** cable into your laptop. Connect the other end of the Apple DVI-VGA adapter cable to the standard **“VGA”** cable. Take the remaining end of the VGA cable and connect it to the port labeled **“Computer Input”** on the **Interface Panel**.

Please Note: The DVI-VGA adapter cable required to connect a Mac laptop varies across computer models. Refer to your computer user’s manual, to the [Apple Manuals](#) webpage and to the [Cables](#) page to understand what DVI to VGA adapter cable you need for your specific laptop model.

step 2. If you will be using sound in your presentation, connect one end of the **1/8” mini audio** cable to the headphone jack on your laptop and the other end to the jack labeled **“Audio Input”** on the **Interface Panel**.

step 3. Press the Projector Screen Switch **down button** to roll down the projector screen.

step 4. On the **Smart Panel** press the Projector **“ON”** button to turn on the projector. The Projector will warm up for a few seconds and then turn on. Once the Projector is on you will see a blue screen appear on the projector screen.

step 5. On the **Smart Panel**, press the selection button beneath **“LAPTOP”** to make your laptop the input source (what you want the projector to connect to and display on the screen).

step 6. Turn on your laptop and wait for the projector to detect its signal. If the projector does not display your laptop’s desktop on the screen, then you will need to:

a. Check that the resolution setting is either 800 x 600 (SVGA) or 1024 x 768 (XGA). To check the resolution go to the Apple Menu > System Preferences > Displays. On the Displays dialog box under the Hardware section select “Displays”. Select the appropriate resolution from the Resolution list: 800 x 600 (SVGA) or 1024 x 768 (XGA).

b. If the projected image on the screen only displays the background or wallpaper without any icons that means you have “Extended Desktop” Enabled. To view the display properly you need to enable “Video Mirroring” mode by going to Apple Menu > System Preferences > Displays. Under Arrange Tab, enable Mirror Displays by dragging one monitor over each other. After completing these steps you will see a mirror image of your display on the projector screen.

c. If you have checked the resolution and the display settings but your laptop screen is still not displaying, shut down your laptop and turn it back on. Wait for the projector to detect your laptop and repeat steps 4 and 5 above. If you continue to experience difficulties contact **Classroom Services at (916) 278-7337** using the campus phone located in the classroom.

step 7. If you are planning to play a DVD/CD on your laptop, insert the DVD/CD into your DVD/CD drive and use your laptop’s DVD/CD player menus to play your DVD/CD.

step 8. Adjust Volume by using the **Volume Up or Down arrows** on the **Smart Panel** and by using the volume icon on your laptop’s taskbar.

All-in-One Smart Panel Scenario

- step 1.* Locate the **“DVI-I/Video Output” port (Mini DisplayPort)** on your laptop computer and plug in one end of the **Apple DVI to VGA Display Adapter** cable into your laptop. Connect the other end of the Apple DVI-VGA adapter cable to the standard **“VGA”** cable. Take the remaining end of the VGA cable and connect it to the port labeled **“VGA” Input** on the **Smart Panel**.
- step 2.* If you will be using sound in your presentation, connect one end of the **1/8” mini audio** cable to the headphone jack on your laptop and the other end to the jack labeled **“Audio”** on the **Smart Panel**.
- step 3.* Press the Projector Screen Switch **down button** to roll down the projector screen.
- step 4.* On the **Smart Panel** press the Projector **“ON”** button to turn on the projector. Once the Projector is on you will see a blue screen appear on the projector screen.
- step 5.* On the **Smart Panel**, press the selection button beneath **“LAPTOP”** to make your laptop the input source (what you want the projector to connect to and display on the screen).
- step 6.* Turn on your laptop and wait for the projector to detect its signal.
- step 7.* Follow Steps 7 – 9 under **“Smart Panel and Interface Panel Scenario”**.

Remote Control and Interface Panel Scenario

- step 1.* Locate the **“DVI-I/Video Output” port** on your laptop computer and plug in one end of the **Apple DVI to VGA Display Adapter** cable into your laptop. Connect the other end of the Apple DVI-VGA adapter cable to the standard **“VGA”** cable. Take the remaining end of the VGA cable and connect it to the port labeled **“Computer Input”** on the **Interface Panel**.
- step 2.* If you will be using sound in your presentation, connect one end of the **1/8” mini audio** cable to the **headphone jack** on your laptop and the other end of audio cable to the jack labeled **“Audio Input”** on the **Interface Panel**.
- step 3.* Press the Projector Screen Switch **down button** to roll down the projector screen.
- step 4.* On the **Remote Control** press the **Power** button to turn on the projector. Once the Projector is on you will see a blue screen appear on the projector screen.
- step 5.* Use the **Remote Control** to change the input source. Input selection varies; it may be indicated by **“Input”**, **“Computer”**, **“Video”** or **“Mode”**. **Laptop = Computer1**. Press the **Computer** selection button on remote until you see the word **Computer1** on the screen.
- step 6.* Turn on your laptop and wait for the projector to detect its signal.
- step 7.* Follow Steps 7-8 under **“Smart Panel and Interface Panel Scenario”**.
- step 8.* Use the remote control’s volume buttons to adjust volume.

Control Panel and Interface Panel Scenario

- step 1.* Locate the **“DVI-I/Video Output” port** on your laptop computer and plug in one end of the **Apple DVI to VGA Display Adapter** cable into your laptop. Connect the other end of the Apple DVI-VGA adapter cable to the standard **“VGA”** cable. Take the remaining end of the VGA cable and connect it to the port labeled **“Computer Input”** on the **Interface Panel**.

- step 2.* If you will be using sound in your presentation, connect one end of the **1/8” mini audio** cable to the **headphone jack** on your laptop and the other end of audio cable to the jack labeled **“Audio Input”** on the **Interface Panel**.
- step 3.* Press the Projector Screen Switch **down button** to roll down the projector screen.
- step 4.* On the **Control Panel** press the **“Power ON”** button to turn on the projector. Once the Projector is on you will see a blue screen appear on the projector screen.
- step 5.* On the **Control Panel**, press the **“Source COMP”** button to make your laptop the input source (what you want the projector to connect to and display on the screen).
- step 6.* Turn on your laptop and wait for the projector to detect its signal.
- step 7.* **Follow Steps 7-8 “Smart Panel and Interface Panel Scenario”.**
- step 8.* Use the Control Panel’s Volume and up and down arrows to adjust volume.

TURNING OFF EQUIPMENT

To turn off equipment:

- step 1.* Close all application windows, eject any CD/DVD, USB Drives or any other media you used. Use the appropriate menus to shut down your laptop.
- step 2.* On the **Control or Smart Panel** press the **“Proj OFF”** button. The projector will turn off after a few seconds.
- step 3.* Press the Projector Screen Up switch to roll up the projector screen.
- step 4.* Unplug the VGA connector cable, Apple DVI-VGA adapter cable and Audio cable from the Interface Panel and from your laptop.
- step 5.* If you checked out cables and equipment (e.g. laptop) from the IRT Service Desk, be sure to return these to the appropriate location.

Using a Classroom PC

Some of the Smart Classrooms are equipped with a classroom PC desktop computer. Usually you should be able to turn on the computer and log-in using your Saclink username and password. However, some computers in these classrooms are department managed so you may need to contact your department in order to get the log-in information and be able to use the classroom computer. The following provides directions on how to make the PC computer to be the input source for the video projector if Saclink User Name and Password are required to use the computer.

- step 1.* Press the Projector Screen Switch to roll down the projector screen.
- step 2.* Press the **Projector On** button on the **Smart Panel**. The projector will turn on after it warms up for a few seconds.
- step 3.* Press the **selection button** below **“Lecturer Computer”** button on the **Smart Panel** to choose the PC computer as your input source (what will display on the projector screen).
- step 4.* Turn on the PC by pressing the **Power button** on the computer box. Wait a brief moment for the computer to turn on. The projector will detect the computer once the computer turns on. The projector screen should now display what is on the computer screen.

- step 5.* Once the computer turns on, you will be prompted to hold down the keys **“CTRL +ALT + Delete”** on the keyboard to proceed to logging in. After doing so you will be prompted to log-in to the station. Use your Saclink username and password to log-in. Make sure the **“Log on to”** field displays **“CSUS”** and click **OK**.
- step 6.* Once logged in you should be able to use software and applications (e.g. MS Office, Internet Explorer, Windows Media Player etc.) as needed. Additionally, the PC is connected to the campus network so you will have full access to the internet.
- step 7.* You may use the Computer to play a DVD or a CD. Insert the CD or DVD into the CD/DVD drive on the computer and use the controls of the Media Player Application (e.g. Windows Media Player, PowerDVD Player) you choose to use on the computer to play your CD or DVD, to skip to a song or scene, and to play/stop/pause CD or DVD.
- step 8.* Adjust volume settings by using the **volume icon** on the computer task bar and/or by adjusting the volume using the **Volume arrow buttons on the Smart panel**. The Computer has been pre-set so that audio can be projected through the wall speakers in the classroom.
- step 9.* If you need to save work onto the podium PC, you should save your work to your U-drive (click on “My Computer” icon on desktop to get a list of drives you have access to) which can be accessed from any campus computer after logging in with your Saclink account information. Anything saved on to your U-drive can only be accessed by you whenever you log-in to a Saclink authenticated computer station on the CSUS campus network.

TURNING OFF THE CLASSROOM PC

To turn off the computer and equipment:

- step 1.* Close all application windows, eject any CD/DVD, USB Drives or any other media you used and go to the **Start menu > Shut down button > Select shut down** from the drop down list and click the **OK** button. The computer will shut down.
- step 2.* On the **Smart/Control Panel** press the **Projector Off** button. The projector will turn off in a few seconds. Roll up the projector screen by pressing the Up screen switch.

Using the Transparency Projector

Most Smart Classrooms are equipped with a traditional overhead transparency projector that uses mirrors and light tables to project images to a screen. These images can be diagrams, text, or any other course related materials. In order to use a transparency projector follow these steps:



Figure 19: Transparency Projector

- step 1.* Roll down the projector screen manually or by pressing the Screen Switch down in the classroom.
- step 2.* Plug in the transparency projector's power cable into a wall outlet. Place the transparency projector in a suitable location so that projection of materials is on the screen.
- step 3.* Press the transparency projector on button (usually located on the right side). The projector light will turn on. Place your transparencies on the bed and adjust the projector mirror and focus.

CHANGING THE TRANSPARENCY PROJECTOR LIGHTBULB

- step 1.* In the event that the transparency projector turns on but the light bulb is not working, you can switch the light bulb by sliding the light bulb control at the front of the projector to the right or left side. After you slide the control a working light bulb should turn on. All projectors come with two light bulbs. If both bulbs are burned out, please contact Classroom Services at x87337.



Figure 20: Light bulb control switch

TURNING OFF TRANSPARENCY PROJECTOR

- step 1.* Press the power button located on the right side of the projector.
- step 2.* Unplug the projector and remove any transparencies from the projector bed.

Campus TV

CSUS has a robust campus closed circuit television system (Campus TV) wired to virtually every classroom on campus. Televised courses can be viewed through Campus TV in any of the Smart Classrooms. Refer to the [Course Listing Information](#) webpage (<http://www.csus.edu/atcs/distance/courses/>) managed by the Distance and Distributed Education department at Sac State to view courses that are offered through Campus TV feeds. On this page you will be able to obtain course listings and the campus cable channel you must select in order to view the televised course.

Additionally, videotapes, live off-air broadcasts, satellite downlinks, and even 16mm films can all be electronically distributed directly to the classroom using Campus TV. In addition, most rooms have "red phones" (campus phones) that can be used to remotely access the playback control of the videotape and/or film. Lastly, Classroom Services assists in the scheduling and retrieval of CSUS Library Media Center Materials to be broadcast over CSUS-CCTV (Campus TV). Faculty can schedule playbacks in person at the IRT Service Desk (ARC 2005), over the phone at 278-7337 or by submitting the [web request form](#).

TURNING CAMPUS TV ON

The following steps indicate how to connect to televised courses broadcast over Campus Television with a DVD/VCR combo player.

- step 1.* Press the Projector Screen switch to roll down the projector screen.
- step 2.* Turn on the Projector by pressing the **Projector On** button on the **Smart Panel**. The projector will turn on after it warms up for a few seconds.
- step 3.* Turn on the DVD/VCR combo player by pressing the power button on the equipment. The DVD/VCR combo is usually located near the Smart Panel.
- step 4.* Press the selection button below "**DVD/VCR**" on the **Smart Panel** to make the DVD/VCR combo player your input source for the projector (what will display on the projector screen). The light under VCR will light up when in VCR mode.
- step 5.* Use the **Channel Up and Down arrow** buttons located on the DVD/VCR combo player to select a campus television channel. Once you select a channel, it will display on the projector screen.
- step 6.* Adjust volume by using the **Volume up and down arrows** on the Smart Panel.

TURNING CAMPUS TV OFF

- step 1.* Press the **Power** button on the DVD/VCR combo player to turn it off.
- step 2.* On the **Smart Panel** press the **Projector Off** button. The projector screen will turn off in a few seconds.
- step 3.* Press the Projector Screen switch to roll the projector screen back up.

Play a VHS Tape or DVD

Most Smart Classrooms are equipped with a DVD/VCR combo player. If you have any VHS videos or DVD's you would like to show your class to enhance the course, you can use the

DVD/VCR combo player to do so. The following steps show you how to turn on the equipment and use the DVD/VCR combo player to show a DVD or VHS tape.

- step 1.* Press the Projector Screen switch to roll down the projector screen.
- step 2.* Turn on the Projector by pressing the **Projector On** button on the **Smart Panel**. The projector will turn on after it warms up for a few seconds.
- step 3.* Turn on the DVD/VCR combo player by pressing the power button(s) on the equipment. The DVD/VCR combo player is usually located near the smart classroom panel.
- step 4.* Press the selection button below **“DVD/VCR”** on the **Smart Panel** to make the DVD/VCR combo player your input source for the projector (what will display on the projector screen).
- step 5.* Insert your DVD or VHS tape.
- step 6.* Use the **DVD & VCR Control** buttons (Menu, Prev/Rew, Play, etc.) to control playback of DVD or VHS tape or the combo player’s remote control (if available).

TURNING OFF DVD/VCR COMBO PLAYER

- step 1.* On the **Control Panel** press the **Projector Off** button. The projector will turn off after a few seconds.
- step 2.* Press the Projector Screen switch to roll projector screen up.
- step 3.* Eject any DVD or VHS tape that is in the DVD/VCR combo player.
- step 4.* Press the Power button on the DVD/VCR combo player to turn it off.



TIP : If the VCR player in the classroom is locked down, please refer to the “Key Issue Slips for Equipment” section in this document to learn how to access these resources.

Closed Captioning

Closed-Captioning is available in the traditional Smart Classroom and can be turned on to enable captions on a VHS movie you show in class and when viewing a Campus TV feed. You can also enable Subtitles for the Deaf and Hard of Hearing SDHH on your DVD movies by using the DVD player controls or laptop/desktop computer DVD player menus. You do not require Closed-Captioning to be “On” for DVD subtitles. The following describes some scenarios in which closed captioning or subtitles are used in the classroom.

ENABLE CLOSED CAPTIONING FOR VHS MOVIE

If you will be showing a VHS tape that has closed-captions available, you can enable these closed-captions using the Closed-Captioning decoder box located in the Smart Classroom. The following steps indicate how to turn closed-captioning on for a VHS tape that has “CC” available by using a DVD/VCR combo player and a closed-captioning decoder box.

- step 1.* Press the Projector Switch to roll down the projector screen.
- step 2.* Turn on the Projector by pressing the **Projector On** button on the **Smart Panel**. The projector screen will turn on after it warms up for a few seconds.
- step 3.* Turn on the DVD/VCR combo player by pressing the power button. The DVD/VCR combo player is usually located near the Smart Panel.
- step 4.* Press the selection button under “**DVD/VCR**” on the **Smart Panel** to make the DVD/VCR combo player your input source for the projector (what will display on the projector screen).
- step 5.* Insert the VHS tape into the VCR player and press play. The movie should start playing and you will see it on the projector screen.
- step 6.* Below the DVD/VCR player you will see a box called a **Closed-Captioning Decoder Box**. A red **Power** button will be lit “red” indicating that that decoder box is “**On**”.
- step 7.* To turn Closed Captions **ON**, on the Closed Caption Decoder box press the button beneath “BY PASS” so that the green light above BY PASS is NOT turned on. If the green light is on above the word BY PASS then that means that Closed Captions are turned OFF. You can press BY PASS to toggle captions on or off. If the video has “CC” available, you will start seeing the closed-captions on the screen as any speech/audio is spoken in the movie.
- step 8.* Do not press/turn on the “**LNG II**” or “**TXT**” buttons on the Closed Caption Decoder box. Doing so may cause your Captions to disappear from the screen because the VHS tape does not have this type of captioning format available.



- step 9.* Use the DVD/VCR combo box buttons to control playback of VHS tape or use the combo player remote control (if available).
- step 10.* If a VCR/Combo player, VCR, and closed-captioning decoder box are not available in the classroom, you can arrange to have Classroom Services broadcast the closed-captioned video into the classroom. Be sure to ask them to use a closed caption decoder. Classroom Services staff require at least two day’s advance notice to arrange for the connections. Arrangements to reserve equipment can be made by contacting Classroom Services at 278-7337 AIRC 2005.

ENABLE CLOSED-CAPTIONING FOR CAMPUS TV

When viewing Campus TV in a Smart Classroom you can enable closed-captioning for a televised course (if closed-captioning is available for the course) or for an over-the air broadcast program (if closed captioning is available). The following provides steps to enable closed-captioning for Campus TV when a DVD/VCR combo player and closed-captioning decoder box are available in the classroom.



Figure 21: TV Broadcast with Closed Captioning enabled on screen

- step 1.* Press the Projector Screen switch to roll down the projector screen.
- step 2.* Turn on the Projector by pressing the **Projector On** button on the **Smart Panel**. The projector will turn on after it warms up for a few seconds.
- step 3.* Turn on the DVD/VCR combo player by pressing the power button. The combo player is usually located near the smart panel.
- step 4.* Press the selection button under “**DVD/VCR**” on the **Smart Panel** to make the DVD/VCR combo player your input source for the projector (what will display on the projector screen). The projector will detect the DVD/VCR combo player.
- step 5.* Use the **Channel Up and Down arrow buttons** located on the DVD/VCR combo player to select a campus television channel. Once you select a channel, it will display on the projector screen.
- step 11.* Below the DVD/VCR combo player you will see a box called a **Closed Caption Decoder Box**. A red **Power** button will be lit “red” indicating that that decoder box is “**On**”.
- step 12.* To turn Closed Captions **ON**, on the Closed Caption Decoder box **press the button beneath “BY PASS” so that the green light above BY PASS is NOT turned on. If the green light is on above the word BY PASS then that means that Closed Captions are turned OFF.** You can press BY PASS to toggle captions on or off. If Campus TV channel has “CC” available, you will start seeing the closed-captions on the screen as any speech/audio is spoken.
- step 6.* Do not press/turn on the “**LNG II**” or “**TXT**” buttons on the Closed Caption Decoder box. Doing so may cause your Captions to disappear from the screen because the broadcast may not have this type of captioning format available.
- step 7.* Adjust volume by using the **Volume up and down arrows** on the Smart Panel.

ENABLING CLOSED CAPTIONING VIA A TV SET

If you will be watching an over-the air broadcast via a television set in the classroom, you can enable closed captioning by doing the following:

- step 1.* Turn on the television set and turn to the television channel you would like to view.
- step 2.* Use the TV remote control to activate captions by tuning it to “**C1**” (not “C2” or “TEXT1”). The remote should have a button labeled “closed captioning” or “CC”.
- step 3.* If the class does not have a DVD/VCR combo player or a television set, you can borrow a TV cart with a Closed Caption Decoder from Classroom Services at AIRC 2005 and contacting them at 278-7337.

TURNING CLOSED CAPTIONING OFF

To turn closed captioning off, on the Closed Caption Decoder box press the button under “BY PASS” until the light above this word is lit green. This indicates that closed captioning is off. Be sure to eject any VHS tape you were playing, turn off VCR/Combo player, projector and roll projector screen back up.

PLAYING DVD WITH SUBTITLES USING DVD/VCR COMBO PLAYER

To show a DVD with Subtitles for the Deaf and Hard of Hearing (SDH) follow these steps to enable subtitles on the DVD using the DVD/VCR combo player:

- step 1.* Roll down the projector screen and turn on the Projector by pressing the **Projector On** button on the **Smart Panel**. The projector will turn on after it warms up for a few seconds.
- step 2.* Turn on the DVD/VCR combo player by pressing the power button. The DVD/VCR combo is located near the smart panel.
- step 3.* Press the selection button under “**DVD/VCR**” button on the **Smart Panel** to make the DVD/VCR combo player your input source for the projector (what will display on the projector screen).
- step 4.* Insert the DVD into the DVD player.
- step 5.* Use the **DVD & VCR Combo Player Control** buttons to go to the DVD’s **Menu**.
- step 6.* Enable Subtitles for the Deaf and Hard of Hearing (SDH) under “**Set Up**” or “**Language**” on the DVD menus. Use the DVD & VCR Control buttons to select the subtitles. **No closed-captioning decoder is required for this process.**

PLAYING DVD WITH SUBTITLES USING CLASSROOM COMPUTER

To show a DVD with Subtitles for the Deaf and Hard of Hearing (SDH) using a classroom computer do the following:

- step 1.* After turning on the projector and podium PC computer (see “Using a Classroom PC” section in this document), insert the DVD into the computer’s DVD drive.
- step 2.* Use the menus on the computer DVD player application (Window’s Media Player etc.) to navigate to the DVD menu.

step 3. On the DVD menus **Set Up or Language**, enable “Subtitles for the Deaf and Hard of Hearing (SDH)”. **No closed-captioning decoder is required for this process.**

PLAYING DVD WITH SUBTITLES USING LAPTOP DVD PLAYER

To show a DVD with Subtitles for the Deaf and Hard of Hearing (SDH) using your laptop do the following:

step 1. After turning on the projector and connecting your laptop to the projector insert the DVD into your laptop’s DVD drive.

step 2. Use the menus on your laptop’s DVD player application (Window’s Media Player etc.) to navigate to the DVD menu.

step 3. On the DVD menus **Set Up or Language**, enable “Subtitles for the Deaf and Hard of Hearing (SDH)”. **No closed-captioning decoder is required for this process.**

View the [Tips for Faculty Regarding Captions or Subtitles for Deaf/Hard of Hearing Students](http://www.csus.edu/sswd/deaftips.html) (<http://www.csus.edu/sswd/deaftips.html>) webpage to view more information about enabling closed-captioning on VHS tape and DVD’s using the equipment in a Technology Assisted Classroom. Please contact Classroom Services (278-7337, ARC 2005 or helpdesk@csus.edu) if you have any questions.

Frequently Asked Questions

Obtain answers to most frequently asked questions by visiting the [Smart Classrooms FAQ](http://webapps2.csus.edu/smartclassrooms/smart-classrooms-faq.aspx) page (<http://webapps2.csus.edu/smartclassrooms/smart-classrooms-faq.aspx>)

RESOURCES

Faculty/Staff Resource Center

Located in ARC 3012. Assistance available on walk-in-basis.

Open Lab on Fridays, 1-4 pm (Fall, Winter, and Spring)

Open Lab on Thursdays 1-4 pm (Summer Only)

FSRC Website

<http://www.csus.edu/atcs/tools/fsrc/index.stm>

<http://www.csus.edu/irt/acr/fsrc/>

Getting Help

[IRT Service Desk](#)

(916) 278-7337 or helpdesk@csus.edu

[Classroom Support Services](#)

(916) 278-6611

<http://www.csus.edu/irt/acr/cs/>

Monday - Thursday 7am - 7pm and Friday 7am – 5pm.

Campus Resources

[Technology Assisted Classrooms](#)

<http://webapps2.csus.edu/smartclassrooms/default.aspx>

[Technology Assisted Classroom Training Documentation](#)

<http://webapps2.csus.edu/smartclassrooms/training.aspx>

[Tips for Faculty Regarding Captions or Subtitles for Deaf/Hard of Hearing Students](#)

<http://www.csus.edu/sswd/deaftips.html>

[Training](#)

<http://www.csus.edu/training>

[Training Handouts](#)

<http://www.csus.edu/training/handouts>

[Online Tutorials](#)

<http://www.csus.edu/atcs/tools/training/tutorials.stm>

[Educational Tools](#)

<http://www.csus.edu/atcs/tools/index.stm>

[Accessibility at Sacramento State](#)

<http://www.csus.edu/accessibility>
