

# Distance education classrooms at NC State University: A faculty guide

Effective distance education requires the integrated efforts of support staff, students, and faculty. The better you understand media operations, the better educational experience you can provide for your students.

## General Description of Distance Education Classrooms

NC State's Video Communications Services currently manages and operates six [distance education classrooms](#) with three additional classrooms planned for the near future.



NC State's distance education classrooms are equipped with state-of-the-art media enhancements. A document camera and [SMART](#) board allow you to capture and record work that you do in class. The computer provided in every classroom is set up to accommodate all media formats, computer-generated graphics, video/media files, and networked applications. Classrooms are also wired to allow you to use your own laptop computer. Two-way interaction with other university sites across the state provides "live" participation via the NC-REN network or by video-over IP (Internet protocol).

## Support Personnel in Distance Education Classrooms

Every distance education classroom is staffed with a video director who operates the audio and video equipment that records your distance education course. The video director reads your body language and oral cues to determine what element of your class to record. The director will assist you with your technical requirements, and will upload your class to your Internet locker or arrange for distribution through cable channel 18 or DVD.

## Equipment in the Distance Education Classroom

### Dry-erase board

Most distance education classrooms are equipped with a traditional classroom dry-erase board. The classroom camera captures notes that you write on the board.

### Document camera

Every distance education classroom is equipped with an overhead document camera. The document camera captures any document that you place on the camera zone of the classroom console, including notes that you write on 8-1/2" x 11" pads with the felt tip pens provided. Using the document camera has several advantages: First, because you don't need to turn your back to your class, you maintain better contact with your students. You don't block their view, and they hear you better. Second, by checking the monitor in the back of the room or on the console, you can see exactly what all of your students are seeing, on and off campus, and can ask the video director to adjust or magnify the image. Third, you can save a complete record of your board work to your computer. Encourage your in-class students or the video director to let you know when you might need to reposition the material under the document camera to provide them with a better view, or to tell you if you removed something too quickly.



If you want your class to have access to the notes you write for the document camera, you can post them, along with any handouts that you provide to your on-campus students, in your course locker. EOL faculty should give this material to the director before leaving the studio. EOL personnel will collect them and scan them into your online course Web site.

## **Classroom computer**

There is a computer installed in the instructor's console of every distance education classroom. The computer is Internet connected and equipped with most of the software licensed by NC State. If you need software not included in the standard configuration, contact your distance education program director before your first class session to arrange for it to be installed.

Before each class begins, transfer every file you will need to the classroom computer and test each file to ensure that you can access it. You can transfer files by flash drive or CD, or you can log in and access them from your NC State FTP locker.

Computer images appear on the room monitors and are recorded.

## **Connectivity for your computer**

You can also project files from your own laptop computer. The director will show you how to set up your laptop for video projection and recording. In many of the rooms you can switch back and forth between the distance education classroom computer and your laptop.

## **Media playback**

You can show your class pre-recorded media inserts in DVD or VHS formats. VHS recordings must be recorded in SP tape speed (standard play). Please notify your director in advance if you plan to use a pre-recorded tape. Be certain that your use of the insert complies with [copyright restrictions](#). If you need help obtaining permission for the use of copyright material, contact your distance education program coordinator.

If you have a videotape in a different format, please tell your director at least two lectures ahead of time. With enough notice the director may be able to provide the proper machine for your tape playback or duplicate your videotape to a standard format.

## **Cameras**

Each distance education classroom is equipped with four classroom cameras--two to record your presentation and two to record your students when they ask questions. Remember that the classroom camera represents your distance education students. Establish eye contact with the camera as often as possible.

## **Presentation screens and monitors**

Each distance education classroom has three or four large monitors, two or three for your on-campus students to watch and the other in the back of the room for you. The monitors usually show the same image that is seen by the document camera or on the computer.



By coordinating with the director, you can arrange for alternative displays on the monitors.

- Live programming: If you want your on-campus students to see exactly what is being recorded, you can direct your director to show it on the room monitors (e.g., special effects like split screens or highlighting).
- Media playback: When you show your class a pre-recorded media insert, the director will display it on the room monitors.

### **SMART whiteboard**

What appears to be the main presentation screen in the front of many distance education classrooms is actually a [SMART](#) interactive whiteboard. You can use the SMART board like a traditional whiteboard, like a standard monitor, or combine the two and write over applications on the screen using the markers provided. You can save multiple screens as you produce them, and can retrieve a screen after you have moved on.



## **SMART Sympodium lectern**

Most distance education classrooms are equipped with a [SMART Sympodium](#) interactive lectern. The interactive screen of the Sympodium connects to the video classroom computer and displays the desktop image. You touch the screen with a stylus to control applications or use an interactive pen to write notes over the top of the computer application. The images you create will be displayed on the monitors and you can save your work.



## **Microphones**

All distance education classrooms are wired to a lavalier microphone to clip to your shirt or blouse. The microphone provided must be switched on before you begin. Please remember to switch it off and remove it before you leave the classroom.

Student desks are equipped with flat-pyramid or round-button microphones. These microphones are sensitive to ambient noises including paper rustling, pencil tapping, and nervous student movement. Many of the student-conduct rules that are specific to the distance education classroom are intended to protect this equipment and keep it operational.

During your class, the director will adjust the sound level of the microphone input according to class activity. If you are lecturing, he will lower the level of the student microphones. During question-and-answer sessions, he will raise the level.

## **Supplies**

VCS provides special felt-tip pens and pads for use with the overhead camera. Pens and pads will be on the desk when you arrive. We also supply pens for the whiteboards. If supplies are missing or if the pens run dry during the lecture, ask the director for more. Please leave pens and pads in the classroom.

## Effective teaching in the media-rich classroom

You and your students will quickly become accustomed to the technological features of the media-rich classroom. As you teach, keep in mind that you have extra students—the distance learners. Imagine that the camera represents those extra students, and engage them by addressing the camera directly as often as possible.

Remember that the camera cannot ask you to repeat a question or ask for clarification. It cannot follow your movements around the room as quickly or as comprehensively as a student's eyes.

To mitigate these deficiencies, consider incorporating these teaching strategies into your usual style:

- Make liberal use of visual aids. The distance learning classroom is especially conducive to computer images, including PowerPoint presentations, slides, and video footage.
- Format your course materials so that they will transmit well. Use a horizontal (landscape) format. Select a large point size (at least 24 points), boldface, and a sans serif font (Arial or Helvetica). Avoid white backgrounds; use at least 20 percent gray. Avoid saturated or bright colors such as reds, yellows, true whites, magentas and yellow-greens.
- Enunciate your words, and use volume and pitch variations to add interest.
- Repeat on-campus students' questions, re-stating them if necessary, before you answer them. When the director notices that you fail to repeat a question that did not get picked up by the microphone, he will remind you by saying, "Question, please."
- Avoid rapid movements under the document camera, especially when the camera is in an extreme close-up.
- Use either verbal cues or body language to telegraph your movement around the room to your director so he can maneuver the cameras into position.
- Dress conservatively in muted colors. Avoid striped or white shirts and blouses, which do not videorecord well. Choose a style with a collar or placket so that you will have a place to attach the lavalier microphone. Avoid wearing jewelry, eyeglass chains, or other items that may touch the microphone, causing audio interference.
- Keep communication open with video director. The director should feel free to make suggestions to help you with technical/visual/audio aspects of the class. Ask for feedback on mannerisms that may distract your distance students. Feel free to make suggestions to the director before, during, or after the class. Doublecheck to be sure that the director is aware of any announcements you have made to the class that might affect him, such as scheduling changes, review sessions, and upcoming exams.

## Conducting class

On the first day, arrive at least 15-20 minutes early to meet with the director, find your way around the equipment, and arrange materials. After the first day, the classroom will be locked until 15 minutes before the start of your class. If you want earlier access, check with the director.

If your class runs back to back with another class, please be patient while the director resets and tests the equipment. He will address your special requests as quickly as possible.

Take attendance and do any other time-consuming tasks that do not pertain to remote students before or after the recording. Explain to your on-campus students that they should feel no differently about taking a course in a video classroom than in any other campus classroom. They should feel free to ask questions, volunteer information, participate in discussion groups as you direct--in short, everything they would do in an ordinary classroom. Ask them to accommodate their off-campus classmates by respecting classroom security, protecting the equipment, and minimizing audio interference (see Rules for Student Conduct at the end of this faculty guide).

When you are ready to begin, tell the video director. He needs about 90 seconds to get under way. Wait to begin until the "slate" designating the date and lecture number appears on the room monitors. Your lectures are numbered consecutively, and do not include class sessions (such as in-class exams) that are not recorded.

In subsequent sessions, meet with your director to discuss special circumstances, e.g., group discussions, in-class exams, or use of special materials. Give your director advance notice if you need him to arrange for special equipment.

**Murphy's Law:** There is a great deal of redundancy built into the video classroom to reduce the consequences of a breakdown. However, the technology is not perfect, and neither are the directors. Something could go wrong. Although catastrophic failures are rare, if a recording proves to be unusable, you will be requested to re-record that lecture.

## Availability of classes

**Real-time distance education:** NC State's interactive classrooms are equipped to broadcast your class to remote sites connected to the North Carolina Research and Education Network (NCREN). Students at the remote sites can see and hear you on monitors and can ask questions.

**DELTA distance education:** If your course was recorded in a previous semester, DVD recordings for your current distance students are available for sale through the [NC State Bookstores](#). If your course is taking place this semester, you can arrange for the video director to upload your classes to your course locker so that your students can view them online with streaming video. Classes are usually available within fifteen minutes of recording.

Some classes air on cable channel 18. There is a lag of approximately one week between the time your class is recorded and its appearance on channel 18. DVD copies of distance education classes offered on cable channel 18 are placed in the D.H. Hill Library's [Media Center](#), Erdahl-Cloyd Wing, approximately one week after the class is recorded. The DVDs remain at the Media Center until the end of the semester. Students can check out the DVDs and headphones at the circulation desk in the Media Center and view them on a library DVD player. They cannot check out DVDs for use outside of the Media Center.

**Engineering Online:** The video director will upload any distance education class offered through Engineering Online to your course locker so that your students can view it online with streaming video. Classes are usually available within fifteen minutes of recording.

## Orientation to the distance education classroom

Before the semester begins you'll be asked to attend an orientation in the distance education classroom where you'll be teaching. VCS will schedule this orientation at your convenience.

During the orientation, you will ...

- Meet the video director who will be responsible for the production of your class
- Receive contact, emergency, and scheduling information for your classroom
- Get acquainted with the room setup, including the control room, monitors, overhead camera, and other recording devices
- Discuss recording procedures
- Discuss the routing capabilities, graphics, and the default routing setup for the monitors
- Discuss the microphone system, including the levels set for the student microphones and potential problems

- Discuss strategies for communicating with the director before and during a class lecture
- Discuss the rules students must follow in the classroom.

## **Rules for Student Conduct**

1. Do not enter the room unless an operator or instructor is present.
2. Turn off your cell phone.
3. Do not eat or drink in the classroom.
4. Do not lay books, papers, or other materials on desk-mounted microphones.
5. Do not tear paper, bang pencils, or make soft noises around microphones.
6. Do not disturb cables or cable jacks on or under the tables.
7. Do not mark or write on the tables or mar upholstered furniture.
8. Pick up after yourself, and take away items you have brought into the classroom.  
This includes newspapers, papers, etc.

## **Useful links**

### [Copyright requirements of the TEACH Act](http://www.lib.ncsu.edu/scc/tutorial/copyuse/pandd2.html)

(<http://www.lib.ncsu.edu/scc/tutorial/copyuse/pandd2.html>)

### [Disability services for students](http://www.ncsu.edu/provost/offices/affirm_action/dss/accommodations/)

[http://www.ncsu.edu/provost/offices/affirm\\_action/dss/accommodations/](http://www.ncsu.edu/provost/offices/affirm_action/dss/accommodations/)

### [Tips for producing graphics for TV and video-streaming presentations](http://citnews.unl.edu/presentations/video.html)

(<http://citnews.unl.edu/presentations/video.html>)

### [Two-minute tutorials on SMART board and Symposium](http://www.smarttech.com/trainingcenter/tutorials.asp)

(<http://www.smarttech.com/trainingcenter/tutorials.asp>)

### [Scheduling and operation of distance education classrooms](http://delta2.ncsu.edu/lts/dev/docs/teach/SOP_DEClassrooms_Document_0615061.pdf)

([http://delta2.ncsu.edu/lts/dev/docs/teach/SOP\\_DEClassrooms\\_Document\\_0615061.pdf](http://delta2.ncsu.edu/lts/dev/docs/teach/SOP_DEClassrooms_Document_0615061.pdf))