

Teaching Remote Students Using the NTC Live Virtual Classroom – Introduction for Instructors

What is a Live Virtual Classroom? Your NTC classroom instruction is now accessible from student computers at any location. Streaming your class in real time from the National Training Center (NTC) in Denver provides a classroom-like experience for remote participants. Streaming is invaluable, especially to those who may not be able to travel. Remote students experience classes much the same as your students who are sitting in the classroom. From their computers, they can see and hear instructors as well as view presentation slides, white board and text screen questions.

Your in-the-classroom participants will not notice much of a difference when your class is streamed. A camera, occasional voice-over-internet questions along with chat screen questions sent to your co-instructor's computer in the back of the classroom are the only visible differences. Throughout your event an OED staff "producer" will ensure continuity of the streaming connection and the quality of the video signal sent to your remote student computers.

How does it Work? OED uses "USGS WebEx" to make NTC classrooms available to remote students. To enter your classroom virtually, they simply open a browser from their desk top computer using a provided link. Remote students can engage their instructors in real time from their computers using a chat screen window and/or telephone.

Is My Class a Good Choice for Video Streaming? Live, video streaming works equally well for brief, (one day) to longer, multi-day presentation style classes. OED recommends streamed classes have a minimum of two instructors. This allows one instructor to monitor and answer remote student questions via the chat screen while the other is "up front" teaching. For multiple day classes, the number of remote students should not significantly exceed the maximum student count for your course.

Course Modifications: Some modifications of your course materials may be necessary for effective streaming. PowerPoint slides should use a minimum 24pt, Sans-Serif font. As for all presentations, the amount of text on each slide should be limited. Using additional slides to explain a complex idea is recommended and slide colors/backgrounds should be consistent. Having each slide numbered along with any exercises is encouraged. Slides should be limited to 30 per hour with self-paced activities for each instructional module. This will provide maximum engagement and retention. Breaks should be announced with specific slides. In advance of your class, certified OED Staff are available to review your course content and provide recommendations if you wish.

Learner Engagement: Remote students are as equally important as your in-classroom students and appreciate being engaged by their instructors. Because they are not visible, remote students can sometimes be easy to forget. To help prevent this, we will put the names and locations of all your remote students on a whiteboard or flip chart that you can see. To keep your remote students on their "toes", instructors are encouraged to ask them specific questions by name.

Exercises: Participation in class exercises is also important for remote students. NTC staff will ensure your course materials are provided to registered remote students in advance. For some classes, remote

students may need access to class related software such as Modflow, S-Plus, or other software on their remote computers.

Streaming Handouts: To ensure your initial streamed class is a success, NTC provides a “Tips and Techniques” handout developed especially for USGS subject matter expert/instructors. OED will also provide your remote students with a handout “Virtual Classroom-What Students Need to Know.”

Technical Support: OED Staff briefs instructors and remote students about what to expect in advance. They will also monitor the video stream for the duration of your class. Real-time technical assistance is also available for remote students and instructors.

Associated Costs: The normal advertised tuition in DOI LEARN applies for remote students. Beyond the NTC learning support services fee, there are no additional charges to have your course video streamed.

Responsibilities of Remote Participants: Your remote students register and prepare for a video streamed class the same as their classmates in your classroom. They will be prompted to familiarize themselves with your course outline and any materials in advance. They are encouraged to ask questions during the class. OED Staff asks remote participants to login 30 minutes before the class starts on the first day so we can cover any last minute questions. We also let them know to be patient when asking questions via the chat screen, as your instructors may be simultaneously fielding questions from other remote students. For more involved classes, we recommend remote students “team up” with another person from their office to take your class. Supervisors need to be aware of the duration of the streamed class, start and end times and the need for their employees to stay at their computer for the duration of the class. OED staff will provide this information to remote student supervisors.

Your remote students will test their video streaming connection prior to the start of the class. NTC staff will schedule several tests prior to the start of the class. For longer classes, they are also invited to attend a debrief with the instructors at the conclusion of the first class day to provide feedback. This allows the instructors to make minor changes, if necessary.

Remote Participants - What’s needed?

- An internally networked computer with 2 GHZ processor speed
 - A minimum of 512 kps network connectivity
- A test of the video stream in advance of the class (This will be scheduled by NTC staff)
- Access to a second computer, if the class involves software instruction
- An informed and supportive supervisor

Video Streaming Works! Questions? Contact Patty Gonwa, pmgonwa@usgs.gov, Tel: 303-445-4680 or Ralph Roland, raroland@usgs.gov, Tel: 303-445-4678