Interactive Video for Distance Learning (IVDL) System
Faculty Tips and Recommendations

The university's new interactive video for distance learning (IVDL) system enables faculty and staff to teach and collaborate in two classrooms (STEM 2101 and Pearland 104) at the same time. The system provides real-time, two-way audio and video communication, enabling an instructor to communicate with learners at both sites, and enabling all students to communicate with one another and the instructor. After you start up the IVDL system and begin talking, a camera in the classroom will follow your movements and provide both audio and video of your presentation to students at the remote location. Other cameras in both locations zoom in on students when they use the desktop microphones to ask questions and contribute to class discussions. Instructions on how to start the IVDL system are available in another document, the IVDL Instructor's Start Up Guide. In this document, we'll present some tips and recommendations to make the most effective instructional use of the IVDL environment.

Before the Semester Begins

- Schedule one or more practice sessions using the IVDL equipment to teach. Your designated instructional designer will schedule an initial session, in which you'll practice starting the system, working with the wireless microphone, sharing visual contents from the computer workstation and from the document camera, and shutting the system down. However, you should follow that orientation session up with at least one more practice session to ensure that you can start, manage, and conclude an IVDL session unaided.
- Provision your Blackboard course for the class and make sure that information about the IVDL system is provided to students in Blackboard.
- [Optional] Consider sending an email to your students via E-Services during the week before classes begin. Let them know about the IVDL system and what to expect on the first night of class.

Instructional Planning

Although teaching in an IVDL classroom is, in many ways, similar to teaching any face-to-face class, you do need to consider how you will handle some of the ways in which IVDL teaching is a bit different.

- It's not uncommon for students in the remote classroom to feel disconnected from their instructor, so it's important that you make every effort to call on as many individual students in the remote classroom as you do the students physically in front of you.
- Keep an eye on the video monitor showing you the remote class, as it may be more difficult to rely on typical cues from students that they understand or are confused.
- Have an outline or plan written down for each session. Indicate what visual elements you need to use (and when), and where you will provide opportunities for student-to-student interactivity and questions/answers.
- Make sure that your students have everything that they need for class ahead of time. For example, if they will be analyzing an article, provide a copy in Blackboard a day or two ahead of time and encourage them to either print out a copy to bring to class, or be prepared to access it from their laptops/mobile devices during class.

- Plan and communicate to your students how you will handle class in the event that the technology fails and cannot be readily restored (e.g., a hardware component of the IVDL system unexpectedly fails). Your designated instructional designer can discuss several options with you, upon request, such as having the students go to the nearest on-campus computer lab and reconvene in Blackboard via Collaborate or Zoom. Having a "Plan B" in place and ensuring that you share the plan in advance with students will greatly reduce the loss of valuable instructional time.

Student Orientation

Although the concept of IVDL is not especially new, the technologies employed in the classroom are not as familiar to students as tools such as Blackboard, Skype, and Facebook. Therefore, we recommend that you dedicate part of your first day of class to familiarizing students with the IVDL system, as well as with your preferences for the use of the system and its features for class. For example, each two-person desk in both classrooms is equipped with a microphone. Students in both locations must press and hold the button on the microphone when they speak to ensure that students in both locations hear them. The camera will zoom in on the speaking student and it will zoom back out immediately when they stop talking or speak too softly.

- Have students practice using the microphones early in the initial class session. Simply having students at each location take turns introducing themselves is one way to let the students get comfortable with the technology.
- Use the orientation time to establish your preferred method for students to communicate with you from the remote location. One possibility is to have students, regardless of location, always raise their hand and be called upon before pressing the talk button on the microphone. If multiple students try to talk at once, the system will not be able to transmit their input. Specifying a procedure will allow you to establish and maintain an orderly learning environment in which questions and discussion can be used effectively.
- During the orientation, inform students of your plan for ensuring that class goes on in the event of a breakdown in technology, as described in the previous section on Instructional Planning. You may also want to include that "emergency plan" information either in your syllabus or post it as a separate file in your Blackboard course where students can readily access it, if needed.

Lectures in IVDL

The interactive learning classroom experience is drastically different from a typical face-to-face (F2F) teaching experience as it involves a slight transmission delay on both ends. In addition, the nature of IVDL-based teaching may require some adjustment to your lecture delivery pace and activities, and may entail you adjusting how you present "on the fly" visual information.

- In the IVDL classroom, it can be challenging for students in the remote location to see what is written on the white board, so you may want to rely on the system's document camera instead, which may take some practice on your part. The IVDL control panel enables you to fairly quickly switch between showing your PowerPoint (or other files) from the podium computer to the document camera and back again.
- Schedule frequent pauses in your lecture to check on your students at the remote classroom. A simple method is to pause and ask students at the remote location to give you a "thumbs up"

sign if they are doing OK. Based on their responses, you can stop and adjust or answer any questions, as needed. Additionally, you can also ask a quick feedback question to ensure that all learners, including those at the remote site, are still actively engaged.

- Design your lecture to include as much interactivity as possible. For example, you can form small groups in both locations to discuss a topic/question and then have one spokesperson from each group present their team's responses to students in both locations.

Basic Videoconferencing Checklist

The Penn State College of Earth and Mineral Sciences' website, *A Participant's Introduction to Videoconferencing*, includes an excellent checklist for presenters and participants in videoconferencing classes. Below is an abbreviated version of that list:

Before

☐ Arrive early so that you have plenty of time to get set up before the start time.

☐ Distribute an agenda and/or handouts for the session (via email, Blackboard, etc.).

☐ Clothing – to reduce distractions and improve camera clarity, wear neutral, pale colors (but not plain white) that are free of busy patterns.

☐ Presentation materials – PowerPoints and other computer-based materials should be concise and free of too much detail, too little white space, distracting fonts, colors, etc. A simple design is best. For the document camera, avoid black print on white paper. Instead, opt for black print on pastel-colored paper.

At the Start

☐ Remind students to mute phones and other devices that can be distracting (and ensure that you do the same). This is especially true of students at the instructor's location. Because the instructor's mic will be live throughout the session, tapping pencils/pens, whispering to classmates, rustling papers, etc. can be very distracting to students at the remote site.

☐ Remind students to signal you when they want to speak and then wait to be acknowledged before pressing the talk button on the microphone.

☐ Remind students to avoid side conversations, especially those that are relevant to the class. Students who wish to contribute should get the instructor's attention, wait to be acknowledged, and then press the talk button so that students in both locations can hear their questions/comments.

☐ Make sure that your wireless microphone is on and then ask students at the remote site if they can hear you (TIP: ask them to show you a "thumbs up" sign if they hear you).

During the Session

☐ Maintain eye contact.

☐ Speak strongly and clearly. If you are normally a fast speaker, you may want to try and slow down just a bit.

☐ Take short pauses between major points in your lecture and in between speakers, as there is a 1-2 second audio delay between the two locations.

☐ Use the document camera, rather than the white board, for on-the-fly writing during your lecture.

Ending the Session

- ☐ Plan at least 5 minutes at the end of class to wrap up the session, including reviewing things for students to do before the next class and any other critical announcements.
- ☐ Remember to return the wireless microphone to the computer lab at your location.

References

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