

## **Advice on Covering Classes during a Prolonged Instructor Absence: Keep the Students Learning**

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### **Introduction**

Careers in academia have some situations different than careers in industry. One difference is the general ease of taking a prolonged trip at any time during the year. In industry, vacation or personal time can typically be scheduled by employees when needed. In academia, vacations and long trips are usually planned between semesters or during the summer. Occasionally a conference or committee meeting may require travel away from campus for several days. These short absences are less disrupting to students and can usually be covered by giving an exam, having a guest lecturer, assigning a special assignment or showing a video. Prolonged absences during a semester are rare and when they do occur are usually unplanned and result from a sudden personal family need to be somewhere away from campus. Graduate or post-doctoral students are often available to teach in these situations at research institutions. In other cases, faculty colleagues with similar expertise are able to cover a class or two. At small teaching institutions where graduate students are not available and faculty members are often the only one in their field, faculty must pursue other options on how to keep their students learning during such an absence.

A two week absence from campus was required for the author to complete an international adoption. Although the absence was anticipated from the beginning of the semester, the exact dates of the trip were not known until about one month before the trip. Without graduate students to cover the missed classes and laboratories, the instructor chose a combination of videotaped lectures and laboratories, exams, a computer design project, selected reading assignments, and professionally produced videotapes to keep students learning during the absence.

### **Students and Classes Affected**

The students affected were juniors in a BS degree program in Civil Engineering Technology (CET) at the University of Pittsburgh at Johnstown (UPJ). The courses were Soil Engineering, a four credit class consisting of a three credit lecture and a one credit hands-on laboratory period and Structural Steel Design, a four credit class consisting of a three credit lecture and a one credit recitation period. There were 30 different students in the two courses. Twenty-four students were registered for both classes. For both courses, the one credit laboratory and recitation were taught twice each week in smaller class settings than the larger lecture class size.

### **Timing of Absence**

The travel dates were not known before fall semester began, but travel was expected to be during

September or October. Delays resulted in the travel dates being at the end of October. The instructor was absent from class from Monday, October 28 through Friday, November 8, 2002. The timing of the trip late in the semester improved student understanding regarding the situation because a good level of rapport had developed between the author and students. The author made a conscious effort and used specific methods to develop good rapport with the students.<sup>1</sup>

### **Preparing for Absence**

The students were aware from the beginning of the semester that the instructor would miss about two weeks of classes, although the actual dates of travel were not known until late September.

In planning for the scheduled absence, the author spoke with senior faculty to obtain their suggestions on how to cover classes. Since UPJ is a small teaching institution with only five faculty in the CET department, each with their own specialties, it was not feasible to have another faculty member actively teach the missed classes. However, colleagues were eager to help out any way they could by proctoring exams, and setting up and starting videos. One colleague had used videotaped classes during a prior semester due to a week long absence. He provided students with an outline of the notes. As students watched the video, they were able to take additional notes based on the information presented. Others mentioned occasionally making up missed classes by keeping students in class longer on agreed upon days or meeting the class on a specified evening or weekend. The author did not feel it was feasible to make up two weeks of classes and laboratories in two courses, due to the complexity of the students' schedules. Rather than pursuing other options, the author decided to utilize videotaped lectures, along with an exam in each course and professionally produced videos to account for classes during the absence.

The author videotaped the lessons in a distance education classroom on campus. The students were able to view most of the videotaped classes in this room, as well. The accommodations in this room were more comfortable than the usual classroom for those involved. For the videotaping, the author stood at a podium and was videotaped while speaking. When writing notes, the video input was switched and captured a document camera image of the notes as they were being written. An outline of the notes was prepared using word processing software with an enlarged font. The instructor tried to write slowly and clearly in dark, block letters so students could take notes. The students would view the notes being written while hearing the instructor's voice on the audio of the tape.

The videotaped classes were shorter than the usual 50 minute class duration, ranging from about 36 minutes to 46 minutes in length. This is noted as being typical for videotaped classes used in distance education.<sup>2</sup> Without student – teacher interaction, the material can be presented in less time.

Students were provided with the preprinted outline of the notes at the beginning of each videotaped class. Before the absence, students were told that after each videotaped class, the department secretary would put the copy of the instructor's notes written during the videotaping into a binder for student use, if needed. Several students noted afterward that they utilized this binder to resolve questions regarding the notes. A sample page of the instructor's outline notes is presented in Appendix A.

Generally the topics for videotaped classes were selected because they involved more written notes, definitions, and discussion of engineering behavior. However, there were still some numerical examples and problem solving. To accomplish this with the limited space of the document camera, numerical problems were partially completed on both the instructor's and students' notes and only specific steps in the calculations were completed on the videotape.

Hands-on laboratory classes were not possible during the instructor's absence. Instead the two laboratories in Soil Engineering were devoted to other types of assignments. These involved viewing professionally produced videos followed by an assignment. For both laboratories, the instructor videotaped a short introduction to the main video and subsequent assignment. Students viewed these laboratory videos in the regular laboratory classroom noted for its poor acoustics. Similarly, it was decided not to go over homework problems on video for the two recitation periods for Structural Steel Design. Instead, one period was used for the midterm exam and the other was cancelled to allow students to work on a previously assigned computer assignment.

On the Friday before the absence began, the instructor provided a schedule listing each class/lab period and the topic. Also provided was space to list any questions or comments students had so that upon return, the instructor could collect these sheets to review and address their concerns. A copy of a typical schedule and question log sheet is included in Appendix B. On that Friday, the class also met in the distance education classroom for one of the two courses so students would know where they were supposed to go during the absence. In addition to discussing the class schedule during the absence, part of this class period was spent discussing the trip, international adoptions from China, and to answer any student questions regarding the absence. This open discussion helped to further develop rapport between the students and the author.

### **Topics Selected for Presentation during Absence**

Topics in the Soil Engineering course were more easily adapted for videotaped lectures and could be planned and recorded in advance without too much effect on the flow of the course. For the Structural Steel Design course, topics were sequential and required recording appropriate lectures much closer to the travel date. In addition, in each class, an exam was scheduled at the beginning of the absence. This was intended primarily to save time by not having to record two additional lectures. In both cases, the test was delayed by at least a week to fit into the time period of the absence.

Table 1 summarizes how the two weeks were covered in each class. As can be seen in this table, of the twelve 50-minute class periods, seven were covered by a videotaped lecture while students took notes on a prepared outline. A total of three class periods were covered by professionally produced videos. Two of these were accompanied by a short introductory video by the instructor. One class period was covered by giving a test. Another class period involved a short introductory video by the instructor and an in-class group assignment. Three of the four laboratory and recitation periods were covered by two professionally produced videos and a midterm exam. One recitation period was cancelled to allow students to work on a computer project assigned just prior to the absence.

Table 1. Summary of Class Coverage

	Soil Engineering		Structural Steel Design	
	50–Minute Classes	3–Hour Labs	50–Minute Classes	3–Hour Recitation
Exams / Tests	1 (50-minute)	0	0	1 (2+ hour midterm)
Videotaped lectures with outline of notes	4	0	3	0
Short videotaped introduction followed by assignment	0	0	1	0
Short videotaped introduction followed by professionally produced videos	1	2	2	0
Cancelled classes, labs or recitation periods	0	0	0	1 (students told to work on computer assignment)

### Instructor Observations and Student Comments

Overall, covering these two classes during this two-week absence went fairly smoothly. The videotaped lectures enabled the coverage of new material during these two weeks and continued the students' potential for learning without a prolonged break. The lack of personal interaction between the instructor and students made videotaping the lectures difficult at times. Talking to a room full of empty seats, asking questions, knowing you were going to provide the answer yourself and attempts at humor without knowing the response all contributed to the strangeness of the experience for the author. Technical difficulties also frustrated the author on one occasion. After spending part of an afternoon recording two lectures, the AV person indicated that some switch or button was not properly activated and that instead of recording the lectures, an hour and one-half of television was recorded. These two classes needed to be retaped.

Student feedback indicated they thought the videotaped lectures were good and easy to follow. They liked having the outline of the notes and only a few indicated that the material was presented too fast. Several also appreciated being able to review the instructor's notes from the binder of completed notes in the Engineering Technology office.

### Tests and Exams

One test was given in each class during the absence. Giving the tests during the absence was seen by the author a way to avoid having to record two more classes. This seemed like a good idea since the time before the trip was quite stressful. Trip preparations combined with trying to teach

current classes, as well as prepare notes for videotaping and finding time for the actual videotaping was difficult.

The delay between the students taking the two tests, which were perceived as quite difficult, and getting their grades after the instructor returned, was too long. In addition, the two tests were given at the beginning of the instructor's absence, and since they were difficult tests and students did not feel they did well, their motivation toward the rest of the videotaped classes and the assignments during the absence may have been affected. Students also complained that the proctor for one test handed the tests out five minutes after class had started and this affected their ability to complete the test.

In hindsight, the tests should have been given and graded when they were originally scheduled in the semester. Wankat<sup>3</sup> notes that giving tests when a professor is out of town is not recommended. A major disadvantage is that the professor is not present to answer any questions that may arise. Videotaping another class or providing an alternative assignment should have been more seriously considered.

### **Professionally Produced Videos**

The author normally does not use so many professionally produced videos in class situations. Usually they are used to supplement laboratory periods or portions of videos corresponding to a specific class topic are shown in class. Using these videos during the absence was seen as a way to fill up the entire class period. Most of the videos were associated with assignments that were intended to extend the student's learning outside of the usual textbook and classroom material. In several cases a short introduction was recorded, often dealing with the assignment and what things to look for in the video. The students generally had positive comments about these videos. A few noted they felt the videos, or portions of them were too long or boring. But many also noted they felt these videos were quite interesting.

### **Assignments**

Assignments during the absence provided students opportunities to apply what they were learning. In the Soil Engineering course, a number of assignments were given, while in the Structural Steel Design course, only a few assignments were given, since the students were given a computer assignment to work on. Most of the assignments were writing assignments, but a few were computational. Students felt that the assignments were excessive and required too much of their time during the author's absence. Several students requested that the instructor not go away again, as it was too hard on them. In each class, students "negotiated" one assignment due after the instructor's return into an "extra credit" assignment, including the computer assignment. This negotiation helped restore good rapport between the instructor and students after the absence. Surprisingly, almost the entire class turned in the extra credit assignment in the Soil Engineering class.

An unforeseen affect of the number of assignments was on the instructor's ability to get them graded and returned to the students quickly. Not considered was the effect of parenthood on the author and the amount of time that a 1-year old baby requires from its parents. Getting all the exams and assignments graded took fully three weeks after the instructor returned while teaching classes and having increased responsibilities at home. In hindsight, fewer assignments should have

been planned for the absence.

### **Return and Follow Up**

The author returned to the U.S. on a Saturday. On the Monday following, both classes met but jet lag was still affecting the author and laboratory was cancelled for that day. That day class time was spent discussing the classes covered on the videotapes, students turned in sheets with any questions, and the trip was briefly discussed. Students voiced strong feelings that they were overworked during the absence and hoped that the author would not go away again. Students were naturally curious about the trip and I discussed some of the interesting aspects. These discussions included the baby, who was doing well, the food, which was surprisingly western, and some of the sites related to civil engineering. Large cable-stayed and suspension bridges were seen in China and Hong Kong, large slope stabilization and erosion control projects were common on the hill and mountain sides of Hong Kong, and bamboo scaffolding was common throughout China not only for small buildings but also for the tallest skyscrapers. Within two weeks after returning, the baby made a visit to the Soil Engineering class and was happily welcomed to UPJ.

Grading concentrated first on the exams, followed by written and numerical assignments. The instructor continued covering new material in both classes, however, no additional assignments, other than laboratory reports, were assigned through the end of the semester.

### **Possible Alternatives**

At many institutions, alternatives exist for providing instructional materials online. The University of Pittsburgh provides faculty access to CourseInfo v. 3.0, the online course management system from Blackboard, Inc. The author had attended a one-day workshop in 2000 introducing CourseInfo. Limited use by other faculty within the Engineering Technology Division and the amount of time required to prepare materials, resulted in the author not incorporating CourseInfo into his teaching at that time. Experience within the University of Pittsburgh suggests that using CourseInfo in classes is most successful when it is incorporated from the beginning of the semester and used consistently throughout the semester. Students are noted to resist use of the on-line system when it is implemented partway through the semester.

Although the author chose not to pursue use of Blackboard, Inc.'s CourseInfo software, it can be a useful resource for faculty familiar with its use, or to those with the time and willingness to learn and implement it properly. The author believes that some assignments appropriately designed and completed by students online with Blackboard's quiz/grading system would have reduced the amount of grading necessary upon return.

Review of the literature suggests other possible ways or improvements to address instructor absences. Videotaped classes and laboratories have been used for distance education programs with some success.<sup>4,5,6</sup> However, a major disadvantage of their use is they lack the ability for real-time discussion and interaction.<sup>7</sup> Experiences with videotaping laboratory experiments indicates that a major shortcoming is they lack a hands-on quality which may require revising course descriptions to match course delivery. In addition, if students are truly to observe and record data from a video of a laboratory experiment, professional videotaping is essential to ensure that dial gages and other measurement devices can be accurately read on the video.<sup>5</sup>

Experiences using videotaped classes, videoconferencing and on-line classes for distance education provide much insight into using video technology to cover short-term absences. The technology available has improved considerably and for a short-term instructor absence, videotaped classes may be the best alternative for the given situation. In other cases, more interactive means of teaching or preparing videos may provide a better learning experience for the students.

One way for an instructor to make a videotaped class more interactive would be to set up a conference call from the their location to a speaker phone in the classroom while the video is being shown to the students.<sup>2</sup> Although students can not see the instructor live, the videotape can be paused as needed or at predetermined times to incorporate discussions between the instructor and the students.<sup>2</sup> This study also noted students preferred video conferencing where the instructor is viewed teaching the class while students at a remote site view the class being taught and can interact with the instructor, over other methods of course delivery for distance education classes.<sup>2</sup> While this may be possible when the absent instructor is at a site with these facilities, for most instructor absences this will not be the case.

Depending on the instructor's location and reason for the absence, the internet or email may provide an option for conducting a class remotely. Classes can be held real-time on line<sup>9</sup> or they can be prerecorded<sup>10</sup> and accessed by students during the absence. Recent articles<sup>11,12</sup> discussed the experiences of two instructors who used Blackboard or provided MS Powerpoint class notes online to teach during a family leave associated with childbirth. In both cases, successes and difficulties were noted.

Classes presented on line may also suffer from a lack personal interaction.<sup>7</sup> Email<sup>9</sup> correspondence can be used to add an element of personal interaction by transmitting assignments, questions and responses that would otherwise accumulate, or be forgotten. In some cases, such as the author's trip to China for an adoption, the 12-hour time difference, limited access to computing facilities and the personal need to be removed from work issues prevented this from being feasible. Although the author was not aware before the trip, it was quite easy to receive emails at the hotel in China. Emails sent to the hotel email address to the attention of hotel guests were received, printed out and delivered to guests free of charge, although attachments were not allowed.

Team teaching is noted<sup>8</sup> to provide flexibility for faculty occasionally out of town. Even if team teaching is not usually used, if an absence is anticipated for a given semester, arrangements can be made to teach courses that semester as a team. This would involve scheduling a colleague to teach a block of classes on a prearranged topic during the other instructor's absence.

Perhaps a more meaningful way to cover missed classed and provide students a meaningful learning experience would have been to reduce the number of videotaped lectures and professional videos and instead incorporate team design projects into the courses during the absence. Several classes could have been used before the absence to introduce the projects, get students started, and answer questions. Videotaped classes could then be used to provide additional information or present and discuss results for different steps of the project. Some classes could be cancelled or only require a brief meeting to allow students to meet and work on

the project during the absence. The disadvantage of this is that the instructor is unavailable to answer student questions during the absence. Email correspondence could possibly remove this limitation, however, with the visual nature of many engineering projects, some questions are best answered in person. When planning for a second adoption in the future, if travel does not coincide with summer break, the author hopes to use Blackboard and incorporate design projects to cover classes during the absence.

### **Recommendations**

Based on the author's experience covering two classes with videotaped lectures, exams, professional videos and assignments during a two-week absence, a number of recommendations can be made:

1. When an absence from class is necessary, instructors should explain the reason for the absence. This may be difficult if the reason is personal. However, students will be more accepting of the situation if they understand why you will be absent and it also helps maintain good rapport.
2. Research the options available at your institution. Consider online course delivery and videotaped classes as possible alternatives. If possible, use email communication to transmit assignments and provide feedback.
3. For videotaped classes, provide students with preprinted outlines of your class notes. When adding information to the outline on the video, speak clearly, write slowly and neatly allowing time for students to take notes. Providing access to a copy of the completed notes is also helpful if students have difficulty completing the notes while watching the video.
4. Provide students with a way to note any questions or comments they might have during each class. A log sheet turned in upon return could be helpful. Remind them at the beginning of each videotaped class to use it.
5. When videotaping classes, try to use the facilities of a distance education classroom. The equipment is typically better and a better quality video will result. Do not try to fill the entire class time with information on the video. End the videotaped class earlier than if you were physically present to account for the time normally used for interaction with students and moving around the classroom.
6. Be reasonable with what you assign. Try not to overload students with assignments. If you give a project, do not give other major assignments to complete simultaneously. Don't forget, every assignment you have them do you are going to have to grade when you return, and assignments can pile up quickly.
7. Avoid giving exams during the absence. Instructors should be present to answer student questions and exams should be graded and returned to students more quickly than a prolonged absence from class typically allows.
8. When you return, try to grade and return assignments as quickly as possible.
9. Share your experiences with your students, especially if they can be related to class content. In any case, relating your experiences dealing with the real world joys and pressures we all face in our careers and personal lives will hopefully benefit the students in their own life experiences.

Learning can continue for students during a prolonged instructor absence if the instructor properly plans to teach the students while being absent physically and the students are aware of and understand the reason for the absence.



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## **Appendix A**

### **Typical Page of Outline Notes for Videotaped Classes (18 point Arial font used)**

#### **Soil Formation**

#### **Geologic Cycle**

#### **Weathering**

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**Appendix B**

**Typical Page of Class Schedule and Question/Comment Sheet used by Students during Absence**

Please indicate any questions or comments that may arise during each videotaped lecture. Keep this sheet and turn in on Monday, November 11. Use additional sheets if necessary.

<b>Date</b>	<b>Day</b>	<b>Room</b>	<b>Topic</b>
October 28	Monday	201 Biddle	Test 2 – 1 sheet with any info you want
October 30	Wednesday	201 Biddle	Soil Formation and Soil Deposits
November 1	Friday	201 Biddle	Rissa Landslide Video

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