Classroom Observation Form

Instructor: Cathy Chamberlin

Course: EOS/ENVIRON 322/722 Hydrologic Data Analysis

Peer/Observer: Kateri Salk

Date and Time: October 9 and 11, 2019 (1:25-2:40 pm)

Use criteria that apply to format of course observed.

Review Section	Description/Comments
1. **SUBJECT MATTER CONTENT** (shows good command and knowledge of subject matter; demonstrates breadth and depth of mastery)	Cathy was able to code "on the fly" to answer student questions. This shows a great depth of knowledge about the subject and also about how to query and code within the specific packages and datasets. Cathy led a unit on high frequency data, a topic she works on in her own research. She did a good job in making the subject material understandable for her audience, most of whom have not worked with this type of data.
2. **ORGANIZATION** (organizes subject matter; evidences preparation; is thorough; states clear objectives; emphasizes and summarizes main points, meets class at scheduled time, regularly monitors on-line course)	Good pace, extremely prepared and well-practiced. Provides simplification for the sake of time and to provide introductory content but suggests ways to go beyond default if doing a more complex analysis. Great way to point out how one would extend their skills on this topic. Modeled how to structure the code, which the students hadn't worked with previously. Then she instructed the students to apply the same code in a new context, providing the opportunity for more practice. Great example of scaffolding in action. Wrap-up at end of class was useful. On the second day there was a recap of the previous class at the beginning. Nice way to create continuity between class periods within a unit
3. **RAPPORT** (holds interest of students; is respectful, fair, and impartial; provides feedback, encourages participation; interacts with students, shows enthusiasm)	Visited all rows during student work periods, encouraged students to speak up and asked specific students to share thoughts on topics they were Participation: Cathy asks many questions and asks for volunteers to participate. Sometimes these were yes/no or option 1/option 2 type questions, which tended to receive more "blank stares" (perhaps too easy of questions?)
4. **TEACHING METHODS** (uses relevant teaching methods, aids, materials, techniques, and technology; includes variety, balance, imagination, group involvement; uses examples that are simple, clear, precise, and appropriate; stays focused on and meets stated objectives)	Suggested that if students finish with their independent tasks ahead of time, they can start making edits to visualizations. Great option to deal with students of varying skill levels Goes back and forth between white board, RStudio coding session, and references online. Provides citations for why we are using the methodology we are using

Review Section	Description/Comments
	Walks around during student work periods to help troubleshoot issues and answer questions
5. PRESENTATION (establishes online course or classroom environment conducive to learning; maintains eye contact; uses a clear voice, strong projection, proper enunciation, and standard English)	Cathy was sick the first day of class but mentioned this at the start of class to explain why she was speaking quietly and was not walking around the room as much as usual. Nice way to address the inevitable situation of teaching with a cold.
6. **MANAGEMENT** (uses time wisely; attends to course interaction; demonstrates leadership ability; maintains discipline and control; maintains effective e-platform management)	Cathy planned to cover two topics on the first day of class. The students asked lots of questions and the analysis took longer than anticipated (a common occurrence in courses, particularly for coding-heavy courses). Cathy pivoted and covered the second topic on the second day and prioritized topics accordingly. I thought this was a great way to get away from the compulsion to get through material quickly at the expense of covering the topic in sufficient detail.
7. **SENSITIVITY** (exhibits sensitivity to students' personal culture, gender differences and disabilities, responds appropriately in a non-threatening, pro-active learning environment)	This class has a mix of genders, cultures, and grads/undergrads. Cathy took the time to learn the more difficult names and uses them with correct pronunciation. There is also a student who is recovering from a medical procedure who needs to stand rather than sit, and the instructor team worked with this student to find a place in the classroom where the student can stand up and sit down as needed without disrupting the class.
8. **ASSISTANCE TO STUDENTS** (assists students with academic problems)	Walks around during student work periods to help troubleshoot issues and answer questions. This provides a personalized opportunity to deal with issues.
9. **PERSONAL** (evidences self-confidence; maintains professional comportment and appearance)	Very professional and confident.
10. **PHYSICAL ASPECTS OF CLASSROOM (optional)** (state location and physical attributes of classroom, number of students in attendance, layout of room, distractions if any; list any observations of how physical aspects affected content delivery)	Computer lab, organized into rows of 4-5 desks in two columns. 17 students in the class. Cathy presented from a projector screen but also used the white board for creating a list.

Strengths observed:
- Confident and well-practiced
- Designs course material to be challenging while drawing upon existing skillsets and knowledge base
- Uses a range of techniques within a single class
- Pulls relevant examples from current research in the discipline and uses them to illustrate fundamental concepts
- Approachable

Suggestions for improvement:
- When using complex and/or large datasets and analysis packages, have a backup plan for the students to access the technology if they have issues with plan A. Sometimes unforeseen setbacks are inevitable, and Cathy pivoted well for an unexpected road block in the class. We could have gotten back to the material a bit quicker if there were an alternate way to download the package and data we needed, though.
- Cathy asked a few questions that were a yes/no or an either/or type of answer. These questions could have been pivoted to more open-ended answers, like asking why something was the case rather than whether it was the case or not. This class in particular is a bit hesitant to participate, so finding ways for students to discuss on their own (e.g., think-pair-share) may have made the Q&A portions of class smoother.

Overall impression of teaching effectiveness:

Cathy is a competent and thoughtful instructor, and her students learn a lot from her instruction and the lessons she designs. Cathy has a lot of expertise in the subject matter of this course, but she approaches it in a way that is understandable for everyone (and has designed it to be this way from the start). She designs her lessons to be student-centered while providing just enough background information to get the students going in the right direction. She also has the ability to "roll with the punches" when coding or timing don't go exactly as planned (something that happens often in this type of course).

Your name_Cambre Kelly_____   Date completed_9/18/19___

1) Describe what happened in this class session. What was done by the TA/instructor and/or the students? What teaching methods did you observe? How effective were these activities and methods in achieving the goal or student outcome that the TA/instructor had set out for this class session? Explain.

The TA instructed the class using a data set on river water quality to guide the lesson. The approach gave the class structure and was fluid to move between discussions as a group, group work/discussion, and individual work with the code. The structure was very effective and it seems like the students were used to this flow for class.

2) What "worked" particularly well during this class session? Were there any small-group activities, assignments, or teaching strategies in particular that you think the TA/instructor should continue to use?

The TA had a good pace, and combination of discussing as a whole group, "lecture" from the podium as she walked through examples or gave background, group work and discussion. The class size is small which enabled her to check in on each group, aid in individual questions, and guide the larger group discussion very well. The group activities were well interspersed and seemed very well though out.

3) Was there a point during this class session when the TA/instructor "lost" student attention? If so, what do you think caused it? How did the TA/instructor react, what did he/she do to regain student attention? Were the TA/instructor's efforts in this regard effective?

3) How did the physical surroundings or environment of the class session affect the learning experience, if at all? (For example, the temperature or set up of the classroom, the time of day, number of students in the class, outside noise, lighting, problems with equipment or technology, etc.)

There was an issue with the card reader on the door. Also it was in a computer lab, but most students were working from the own machines, so it seemed like the large monitors were impedance more than useful as it blocked the views.

4) What suggestions do you have for the TA/instructor you observed in terms of expansion of particularly effective teaching strategies, improvement of teaching strategies that didn't work well, solving problems you observed, etc.?

Very good pace for the lesson, knows all the student's names, and cold calls each group equally so no one group can "hide". The lesson was well planned and had good built in checks to make sure students were keeping pace. If anything, the lesson could have moved slightly faster so there could have been more time for the groups to report out on the statistical findings at the end of class. Also, the wrap up at the end of class was slightly rushed, and one student left right at time (likely to make another meeting or class) so making sure to save 5-10 minutes to end class is ideal.

5) Other comments or observations:

Students were very engaged and interested in the material. For a class where all students are working on computers, I did not see anyone browsing the internet or online shopping which means their attention was on the lesson. Clearly a well planned and thoughtful lecture.

Your name_____Seth Morgan_____Date completed__10/14/19_____

1) *Describe what happened in this class session. What was done by the TA/instructor and/or the students? What teaching methods did you observe? How effective were these activities and methods in achieving the goal or student outcome that the TA/instructor had set out for this class session? Explain.*

Cathy lectured on the subject of high frequency data, introducing students to a source of data, and concepts such as quick flow, base flow and flashiness that describe features of the hydrological data.

Methods used:

- Lecture
- Visuals
    o R code projected on screen
    o Graphs generated in class from data
- Discussion
    o Examples, concept elaboration
- Projects
    o Students working on example code in class

2) What "worked" particularly well during this class session? Were there any small-group activities, assignments, or teaching strategies in particular that you think the TA/instructor should continue to use?

The students were engaged and seemed used to being interactive and responsive in class. Some particularly good moments:

1. Good intro with asking students to come up with examples of high-frequency data, gathering responses on board. Nice elaboration.
2. Very well-running data exercise separating quick flow from base flow.
3. Nice interaction while discussing which creeks had more quick flow and what that might mean about their watershed. Good back and forth between doing data work, discussing, and thinking about the implications. Impressive for a short exercise.

3) Was there a point during this class session when the TA/instructor "lost" student attention? If so, what do you think caused it? How did the TA/instructor react, what did he/she do to regain student attention? Were the TA/instructor's efforts in this regard effective?

I don't think the whole class's attention was ever lost. The class mostly seemed engaged with the R scripts they were working on when they weren't looking up at you. There were a couple of students just in front of me who may have gotten confused with the final exercise. One looked like he may have given up on the last bit when he was supposed to find a new stream to analyze. You came by and talked to him though and answered some questions and he seemed like he would figure it out after class.

4) How did the physical surroundings or environment of the class session affect the learning experience, if at all? (For example, the temperature or set up of the classroom, the time of day, number of students in the class, outside noise, lighting, problems with equipment or technology, etc.)

The classroom is large and there are screens in front of each student, even those who are not using the lab computers. This does tend to separate the instructor from the students a bit. You did a good job of engaging them anyway, but I can see how that would be a challenge. The number of students is small enough discussion is possible, but it might be hard to see if someone has checked out or not.

5) What suggestions do you have for the TA/instructor you observed in terms of expansion of particularly effective teaching strategies, improvement of teaching strategies that didn't work well, solving problems you observed, etc.?

It might have been fun to have google earth images of the streams you were analyzing, just so the students could picture the watersheds, have a bit a of a visual element.

In general I would wait a bit longer after you ask a question (eight seconds they said in class!).

I noticed that the colors could have been a bit more distinct on the graphs, for students to be able to distinguish the lines from a few rows back.

6) Other comments or observations:

Nice job! I enjoyed learning a little about hydrological data, and I thought you did a great job of taking the students through the class activities.