

EE400D (Teaching Engineering): Classroom Observation

Faculty/Instructor: Sasha Aravkin

Date/Time of Observation: 9/30/19

Observer: Victor Cannestro

Course Number (Course Title): AMATH 581

Format Observed (Lecture, Lab, Quiz Section): Lecture

Number of Students Enrolled: 62

Number of Students Attending: 42

Instructions

This observation worksheet contains both close-ended (Likert Scale) questions and open-ended (descriptive) questions regarding what the instructor is doing during the observed time period (session) and what the students are doing. Not all behaviors or activities are covered in the close-ended questions; those activities that are not included in the close-ended questions can be integrated into the open-ended questions. Please highlight your answers in a different, but legible color, minimize white space, and provide clean and consistent formatted in the completed observation.

During the Observed Session:

Not at All Somewhat Satisfactory Outstanding

The instructor provides objectives for the class session (written, verbal, or both).				X
The instructor relates the session content to learning outcomes for the course.		X		
The instructor uses visual aids that are clear, organized, and relevant.				X
The instructor uses practical, "real-world" examples to support teaching.		X		
The instructor refers to the relevant portions of the textbook, reading, or other supplement.				X
The instructor uses humor effectively to promote student engagement and rapport.				X
The instructor answers questions well and demonstrates knowledge of the subject.				X
The instructor shows clear interest or enthusiasm in teaching.				X
The instructor uses student names.		X		
The instructor asks specific questions.			X	
The instructor pauses after asking a question.		X		
The instructor asks questions of students that result in responses from students.		X		
The instructor changes gears periodically from one style of teaching to another.			X	
The instructor engages students periodically through think/pair/share, problem solving, or other active learning exercises.	X			
The instructor uses guided notes.		X		
The instructor involves students periodically in what is to be covered during the session.	X			

During the Observed Session:

Not at All Somewhat Satisfactory Outstanding

The instructor uses more than one way to explain problems or concepts.				X
The opening of the class session gets students' attention.				X
The instructor provides a summary of what has been covered and accomplished at the end of the observed session.		X		
The instructor provides a preview of the next session or ideas of what to consider for the next class at the end of the observed session.				X
The instructor could be easily heard.				X
The instructor moves around in the classroom and refrains from standing/sitting in one place.				X
The instructor uses analogies or metaphors to relate the concepts to students' experience.	X			
The instructor emphasizes key points throughout the observed session.			X	
The instructor makes eye contact with students.				X
The instructor uses open (not closed) body language during the observed session.				X
The instructor engages in behaviors that develop rapport and trust with the students.				X
The instructor relates the material/concepts to personal or societal concerns.	X			
The instructor is available before class.		X		
The instructor is available after class.	X			

What types of visual aids (dry-erase board, chalkboard, powerpoint, etc) does the instructor use during the observed session? How are these visual aids used?

Sasha mainly lectured on a dry-erase board, but he switched styles and utilized an HDMI connection with his laptop to show MATLAB scripts.

In your opinion, what was the best/most effective teaching moment observed in this session?

Sasha compared forward, backward, and forward-backward Euler methods then generalized the solution form so that plugging in different constants or making minor changes would result these different schemes.

In your opinion, what was the most unique teaching moment observed in this session?

Sasha recounted a funny story when he was abroad collaborating with a peer, discussing the backwards Euler method. His peer referred to it as “euler backwards”. It was unexpected and his guffaw created a lighter atmosphere.

In an organized paragraph with complete sentences, describe what the instructor did throughout the session (150-250 words).

Sasha came in and answered a student’s question. He then started off the class with some bookkeeping: when the next homework is due, how to submit the homework on scorelator, when his office hours were, and when the TAs’ office hours were. Next, he listed the class goals for the lecture: simple ODE schemes and the error analysis of each scheme. Afterwards, he dove straight into definition of the forwards Euler method, what it looks like graphically, and introduced the idea of error analysis. He answered a student’s question on the meaning of the big-O notation. Next, he covered the backwards Euler method, including its derivation and error analysis, and provided intermediary steps after a student asked where the result came from. He told a funny joke about an experience he had with a colleague. Then, he showed how the two can be combined to cover their individual shortcomings in the forward-backward scheme. MATLAB was then brought up to show some numerical trajectories. At the end of the class, Sasha introduced the next concept by writing the formula on the board and explaining how it differs from the methods considered so far. He promised to go into more depth next lecture.

During the Observed Session:

None Few Some Many Most

Students maintain attention toward the instructor (for example – eye contact).					X
Students remain awake and alert during the observed session.					X
Students are using their cell phones or other electronic devices in activities unrelated to class.	X				
Students are over one minute late to class.		X			
Students pack up early at the end of class.	X				
Students are reading the newspaper or doing other non-electronic activities unrelated to class.	X				
Students interact with the instructor before class.			X		
Students interact with the instructor after class.	X				
Students initiate questions.			X		
Students respond to questions posed by the instructor.			X		
Students ask follow up questions.	X				
Students participate in class when asked to do so by the instructor.					X
Students are taking notes.					X

In your opinion, how would you best describe students’ interest in the observed session?

Students were engaged during the session and attentively took notes.

In your opinion, how would you best describe students’ affect (emotion) in the observed session?

Students showed determination and curiosity in their faces with open expressions and eye contact and in their upright postures.

In an organized paragraph with complete sentences, describe what the students were doing during the observed session (150-250 words).

All students but one arrived on time. Seating ran out so the last one had to sit on the floor with a poor view of the dry erase board. There was light conversation about how the homework was coming along and on the quality of the course reading. Sasha came in and one student asked about Python vs MATLAB implementations of the homework. Side conversations stopped when class announcements were being made. Some students took notes on these. Most students were taking lecture notes using pen and paper, trying to match Sasha's speed on the board. Some in the back-right corner of the classroom had trouble seeing the far-left corner of the dry erase board due to the podium being in the way. One student was on their phone for an indiscernible reason. Another student asked about big-O notation, admitting unfamiliarity. There was a student who asked for clarification on a step of a derivation. Many students laughed at the joke Sasha made. Students packed up and left when the session ended.

Are there any items that you believe should be added to this classroom observations worksheet? If so, please describe.