

January 31, 2020

Dr. David Kornreich, Chair  
Physics Department Personnel Committee  
PO Box 2000  
State University of New York College at Cortland  
Cortland, New York 13045

RE: Dr. Eric Edlund  
Review of qualifications for reappointment

Dear Dr. Kornreich:

On Wednesday, November 13, 2019, I observed Physics 202: Principles of Physics II taught by Dr. Eric Edlund. There were 17 students present, and the emphasis for the day was on magnetic fields and magnetic forces.

Whenever I observe a colleague's class, I take notes as though I were a student. I try to gauge the pacing and clarity of the lecture by how well I can keep up with explanations, illustrations on the board, etc. and how well I can follow and understand the lesson. I also watch students' body language and note-taking, and I listen for student questions that might indicate confusion. Since I observe and evaluate student teachers from adolescence science, I use a similar approach when observing a colleague. I noted the following from Dr. Edlund's class:

- **Time-management and pacing of instruction:** The class started promptly at 11:30. He asked students how the assigned reading (Chapter 26 on magnetic fields) was going. One student volunteered that it was a "tough read". Dr. Edlund encouraged the class to read through at least half of Ch. 26 by Friday. He interspersed the lecture with questions to check for student understanding and to give students opportunity to ask questions for clarification. Neither explanations of concepts nor responses to students' questions seemed rushed. He kept students focused and on task until the class concluded at 12:20.
- **Visual reinforcement and explanation of complex concepts/instructions:** At the beginning of class, Dr. Edlund wrote the overarching goals for Chapter 26 on the board:
  - Calculate magnetic forces on charges and currents.
  - Draw magnetic field lines.
  - Calculate magnetic fields that arise from a given current.
  - State and use Ampere's Law.

His explanations were clear and concise and were reinforced by board drawings/illustrations/calculations. He made frequent references to prior learning to help students tie new concepts with what they already knew. For example, he asked students to recall Gauss' Law related to magnetism and its similarity to Ampere's Law related to magnetic fields. Despite my not having done the assigned reading nor my recalling details

relating to magnetic fields and forces from my own experience in physics, I was able to follow explanations/examples/illustrations as he progressed through the class.

- **Student engagement:** It's important to mention that most of the students enrolled in PHY 202 were enrolled in PHY 201 with Dr. Edlund. His comfortable rapport with the class was fostered by his having worked with these same students during spring 2019. When he started today's class with a demonstration involving a bar magnet and iron filings set up on the document camera, students were very comfortable in making predictions of what would happen when the filings were sprinkled around the magnet.

He drew four different magnetic fields on the board and asked students to use the right-hand rule to determine the direction of the force of the magnetic field. Students worked individually or with a partner to answer the questions. As each example was discussed, the exchange between Dr. Edlund and the students clearly demonstrated their willingness to work together to understand concepts. Dr. Edlund was patient in guiding students through their reasoning process, and the students weren't afraid to offer answers. The "instruction" was more like a conversation than a lecture.

Further evidence of Dr. Edlund's commitment to quality teaching came during our post-observational debriefing. We discussed various aspects of his instructional methodology in light of what he wants to accomplish with students as they progress from PHY 201 to PHY 203 with him. He would like to:

- (1) be more explicit in communicating his course goals and objectives to the students.
- (2) establish the expectation that students complete assigned reading to align with what is introduced in lecture.
- (3) hold students to high but reasonable standards.
- (4) create an effective balance between time spent on teacher-centered instruction and time for students to work in groups to answer questions or solve problems during class.
- (5) consistently support student learning with visual reinforcement of complex concepts (e.g. working through solutions to problems with step-by-step modeling on the board) and use of relevant examples to help students see the application of physics to real life.

From our conversation, it was clear that Dr. Edlund wants his students to be successful, but he recognizes that not only does their success depend on the quality of his instruction, it also depends on their ability, motivation, and interest. He expects a lot of his students, but he communicates his willingness to meet them halfway and support their efforts to be successful. He is a consummate professional, and I value his positive outlook, collegial spirit, and commitment to our students.

Sincerely,



Rena Crockett Janke  
Associate Professor  
Biological Sciences Department