VIDEO DEMO SHOWCASE

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COURSE:
PHYSICS OF FLUIDS
(PHYS 432)

SUMMARY

Students work in pairs to create an educational video that demos a topic related to the course.

GOALS

- Provide an opportunity for students to make connections between course content and everyday life
- Allow students to be creative and learn by doing

> ***"Students learn by seeing things with their own eyes, and they learn even more by designing something and explaining why it works the way it does."***
>
> - Eve Lee

STEPS

Students have to build an apparatus demonstrating cool fluid phenomena and describe the underlying physics.

1. Four weeks before the assignment due date, students receive instructions (along with workflow information) that outline the major steps of the assignment.
2. Students find a partner and then choose a topic. They post the topic to a myCourses discussion forum to ensure everyone is working on a different topic.
3. Two weeks before the due date, using a template, students are encouraged to post their demo plan to the forum. No grade is attached to this step, but if students do it, they receive feedback from the instructor. Students are invited to comment on each other's plans.
4. Students record a video (max. 12 min.) of the demo and their description of the underlying physics, and upload it to myCourses.
5. Students watch the videos together in class. After each video, the presenters have to field questions from the audience.

ASSESSMENT

The assignment is worth 25% of the grade.

Video demos are assessed according to a rubric:

- The structure of the video
- Clarity and appropriateness of the demo
- Accuracy and quality of the explanation (including ability to field questions from audience)
- Originality

The production quality of the video is not assessed as long as all the necessary information can be seen and heard.

READY TO TRY IT OUT?

HERE'S SOME ADVICE ...

- Be clear about your motivation for having students do this assignment so that you design your rubric appropriately.
- When students select their topics, try to foresee challenges, such as obtaining the necessary materials, so that you can provide students with guidance.

BENEFITS

- The demo allows students to apply the course content to real world concepts/phenomena.
- Students gain a better understanding of course content from doing a hands-on project.
- Designing a demo and explaining to peers why it works fosters deep learning.

CHALLENGES

- When choosing a topic, students have to keep in mind that they are responsible for obtaining the materials they will need for the demo.

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