Tips for Lecturing

CSTeachingTips.org/Tips-for-Lecturing

1 Integrate active learning

to increase students' learning and engagement.

Discuss the question with your partner.

2 Motivate lecture content

to help students understand the relevance.

This skill is needed to solve problems like …

3 Make learning goals explicit

to help students identify the important ideas.

By the end of lecture you should be able to …

4 Encourage questions

to have a chance to clarify unclear content.

What was unclear? What questions do you have?

5 Require students to self-assess

to help students identify what they understand.

See if you can apply this idea to the problem in your handout.

6 Ask students for feedback

to adapt to their needs & show that you care.

Thumbs up or down – did that make sense?

7 Explain your pedagogical moves

to help students understand your teaching strategies.

I'm providing this example to help motivate today's content.

csteachingtips

1 Integrate active learning

There is often pressure to cover a lot of content in lecture. However, it is unrealistic for students to sustain their attention throughout an entire lecture period. Students learn best when they can engage with the content rather than just listening! During the lecture engage your students in problem solving, discussing or debating content, practicing skills, or presenting or summarizing information. Even a few 2-minute breaks during class increases students' learning and retention! Not convinced? Read: tinyurl.com/activeLearningNYT

2 Motivate lecture content

We may be motivated by the lecture content independent of any practical applications. Help motivate students by explaining the applicability of lecture topics both inside and outside of the course. Assume that students will have diverse interests and try to provide variation when motivating topics. Try starting class with an example of CS from current events.

3 Make learning goals explicit

Novices often have difficulty seeing the forest for the trees. We can help our students see the central ideas by making our learning goals and expectations for them explicit. Documenting our learning goals can also be helpful for students when they are studying.

4 Encourage questions

By encouraging students to ask questions during lecture you can gain insights into parts of your explanation that were unclear and better understand what students find difficult about the topic. Ask students "What questions do you have?" rather than "Do you have any questions?" to set the expectation that questions are part of the learning process.

5 Require students to self-assess

During lecture provide opportunities for students to assess their understanding. You can ask students to re-explain a topic to a neighbor or solve a problem that requires them to apply a new idea or skill. Students might otherwise assume that they understand the content better than they do. This can help them identify what they don't understand and help develop their metacognitive skills. You can circulate and answer questions that come up.

6 Ask students for feedback

Solicit student feedback to communicate to students that you want to be as effective helping them learn as possible. Ask for students' feedback during lecture (e.g., asking for thumbs up/down if they understood an explanation) and in written form throughout the semester. Whenever you receive feedback make sure you summarize the feedback for students and explain what changes you will or won't be making based upon their feedback.

7 Explain your pedagogical moves

Some of your teaching practices (e.g., asking students to talk to a neighbor) might make them uncomfortable. Explain your pedagogical moves so that students understand your intentions and teaching strategies. For example, if you do not allow laptops in class share the research finding that when students use a computer during class they learn and retain less as do the students around them.