

Classroom Challenges in a 1st-Year CS Course

High School CS Math Teacher Workshop, UTM, 2018

How to use a computer as a programmer

Did we forget to teach this?

Students with very different levels of CS background

Some are bored while some others struggle.

Uninterested students

Can they become interested?

Group work barely works

even for higher year students

Get student feedback

How are things going? Not easy to really know.

Plagiarism

especially bad for CS

Teaching debugging

Don't really have much time for that in the lectures.

Accommodate Different Learning Styles

visual, auditory, etc.

Build the virtue

Don't be satisfied until the code is clean, efficient and with good taste.

The ability to generalize

Can they solve a slightly modified version of a seen problem?

Problem solving skills

Not simply pattern matching a questions with what's seen before.

Math skills

Proofs make almost everyone uncomfortable.

Much stress for the students

to get into second year

Huge class size

Causing inconsistency, difficulty in management, missing pedagogical opportunities