EFFECTIVE TEACHING AND CLASS MANAGEMENT

Amy Briggs

and

Melanie Wu

Introduction - Amy Briggs

- PhD Cornell University 1995 (Computer Science)
- Middlebury College, VT 1994-present
  - Professor of Computer Science; Department Chair 2004-07; Acting Dean of Curriculum 2007-08
- Research in computer science education

Introductions -- Yuqing Melanie Wu

- Ph.D. of Computer Science, University of Michigan   2004
- Indiana University University, Bloomington
            2004 - 2015
    - Assistant Professor, Associate Professor
    - Trustee's teaching award (2), advisor of the year, ...
- Pomona College
                        2015 - present
    - Professor, Chair of the CS department
- Research: database and data management, query languages, optimization.
- CRA-W board member
- ACM-W council member

About this session

- **Organization:**
  - Interactive
  - Topics chosen by you
- **Effective teaching**
- **Class management**
- **Wrap up**
- **Q & A**

Effective Teaching: Possible Issues for Discussion

- How to best use class time
  - How to actively engage all
  - How to encourage participation
  - Effective use of technology
- Possible teaching techniques
  - Interesting lectures
  - Group problem solving
  - Think-Pair-Share
  - Flipping the classroom
  - Class discussion
  - Other?

- Considerations for planning
  - Dealing with large classes
  - Matching teaching style to class size and material
  - Teaching students with special needs
- Teaching evaluations
  - Responding to feedback
  - What to do about low evals
- Others topics?

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Class Management: Possible Issues for Discussion

- Syllabus
  - How to plan topics and pace
  - How to distribute workload among HW, quizzes, etc
- Discussion
  - How to incorporate discussion
  - How to manage so all students participate comparably
- Team Projects
  - How to set up teams?
  - How to manage teams?

- Grading
  - How to grade efficiently
  - How to work with TAs
  - Dealing with complaints
- Student Preparation
  - How to work with students with different prior experience
  - How to understand and respond to student needs
- Other topics?

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Burning questions

- How to engage all students
- Differing student backgrounds, how to pitch level
- How to make theory courses more popular with students
- Recorded lectures can lead to low attendance
- How to promote collaboration in the classroom
- How to get students to think more deeply about topics in class
- How can I best share what I learn with colleagues?
- How to handle student complaints
- How to handle large student enrollments; want all to feel included

Summary of discussion

- Student engagement, especially in larger classes. Student attendance – problem or not? Learning student names is worth it. How to call on students? Ideas: share in pairs, whiteboard apps

- Large enrollment classes, grading. Managerial structure. Piazza or course space email address, so instructor doesn't need to process all emails. TA training, getting Tas to generate list of issues, eg, how to help students feel comfortable in office hours.

Summary of discussion

- How to pace course with students possibly falling behind. Group projects, peer mentoring with students who took course previously. Videos can help support students, eg, giving them a chance to review a proof. Cheating is an issue.

- How to encourage students to think more deeply and how to manage student complaints. Provide in-class assignments that give students a chance to think and reflect. Incrementally give different parts, have students work towards milestones. Be explicit about learning objectives. Include estimate of how much time assignment will take. Give rubrics. Midterm course assessment can help.

Questions?

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