Course Planning, Part 2

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Portions courtesy Fred Brooks, Jim Anderson, Samarjit Chakraborty
Course Planning

• First, **context**: We can talk about planning w.r.t.
  – the course you teach at UNC (less interesting),
  – or a course you may teach in the “real world” (more interesting). Two possibilities:
    • a teaching college;
    • a research university.
  – What are your expectations regarding teaching load?
  – How long do you think it takes to prep a new class?
Course Planning

• How to determine how much can be covered in a semester?
  – Look at syllabi created by people you trust.
  – Search the web and see what’s covered at other schools.
  – Guess.
    • I can guess pretty accurately based on slide count.
  – Keep records.
    • The first time you teach a class, you may not get it completely right.
Syllabus

• Forces you to think about the practicalities of the course, it’s a contract
• How much time – lectures, homework, studying ...
• Contents – schedule, special rules, evaluation criteria
• More details, the better it is
• Should help students understand what is expected from them

UNC prescribes a lot of content
Course Policies

• Parenting 101: You get the behavior you reward

• So, what behavior do you want?
  – Trying again on an assignment / learning from mistakes
    • Gary Bishop would give half credit on a resubmitted assignment for all missed questions
  – Self-management of minor scheduling conflicts
    • I give 72 late hours with no penalty, raises threshold of issues I handle
  – Students helping other students?
    • Group assignments: (effective) bonus for working alone or not?
Textbook and Reading Materials

• Textbook or not? What is the course?
• Compile chapters from multiple textbooks
• Cost of the textbook
  – Consider older editions or delta in a newer revision
• Assign reading materials judiciously
Course Planning

• How many exams?
  – One midterm is too stressful.
  – Good to have first midterm by drop day.
  – Avoid major religious holidays (and for graduate courses, perhaps major conference deadlines too).
    • Specifically consider holy days of obligation

• Make a plan in advance for missed exams
  – My strategy:
    • I usually ask for all conflicts by 2nd week of the class, possibly move on a big boo boo
    • Ask students to make up exam early (why?)
    • If a student doesn’t come at all, average other exams (why?)
Course Planning

• Other issues:
  – What can you assume about student background?
    • Do you teach to the A students, the B students, the C students,... ?
  – What are your goals?
    • How do your goals affect planning?
  – How does your course fit within the broader course sequence?
    • Why would this be an issue?
    • Advice: Teach the prereq course to your “usual” course
  – Should a project be required?
  – Powerpoint or white board?
  – Record lectures / whiteboard contents or not?
A Basic Planning Model

From: Teaching at Carolina - A Handbook for Instructors

- What is the place of this course in the curriculum?
- What kinds of skills and levels of knowledge can you expect of students?
  - Teaching at UNC is probably different from both MIT and App. State.
- How do you want students to be “different” by the end of the class?
  - “Research has shown that factual content beyond the final exam is ... lost within a few weeks.”
- What themes, fundamental principles, or synthesizing ideas does the course involve?
- What are the major instructional units which the course naturally divides?
- What kinds of learning experiences seems appropriate for students to master the course goals and objectives?
- How will you evaluate student achievement?
Topological Sort

• Different topics invariably related by dependencies on some way.
• Think hard about how to do topological sort to create linear ordering.
• Think hard about the rate at which complexity should be exposed.
Controversial Issues

• Topics that bring up:
  – Competing values and interests, and/or,
  – Strong emotional reactions

• In CS, I usually see two families of controversial issues:
  – Technical controversy
    • Is fork() really a good idea?
  – Social controversy / current issues
    • What obligation do CS researchers have to address climate change?
Why cover a controversial issue?

• It is germane to the course
  – Hard to teach an AI course without talking about the impact of ChatGPT on education and work
  – Ethics of offensive security, responsible disclosure

• To teach students to think and argue
  – C.f., debate teams
  – I routinely crap on Unix to break through the “halo effect”

• Professional development
  – We would do our students a disservice not to discuss DEI
  – How to navigate toxic culture?
    • e.g., Linux kernel mailing list
  – How to effectively field non-friendly questions?
Why *not* cover a controversial issue?

Governor DeSantis Announces Legislative Proposal to Stop W.O.K.E. Activism and Critical Race Theory in Schools and Corporations

*On December 15, 2021, in News Releases, by Staff*

**WILDWOOD, Fla.** – Today, Governor Ron DeSantis announced the Stop the Wrongs to Our Kids and Employees (W.O.K.E.) Act, a legislative proposal that will give businesses, employees, children and families tools to fight back against woke indoctrination. The Stop W.O.K.E. Act will be the first in the nation to specifically address the harmful effects of Critical Race Theory and other anti-family and anti-free speech movements.

Governor DeSantis has already taken to ban Critical Race Theory in Florida’s schools. For more information about
Why (else) *not* cover a controversial issue?

- It may undermine the learning objectives! How?
- Students may not be on an even footing to disagree
  - Minority opinion among students
  - Power dynamics
- Students may perceive their opinion affects grade
- Your IQ is lowered when you are upset/stressed
  - By analogy: we let students take exams in a quiet room
- Silence != assent

*Proceed with caution*
Many bad role models for disagreement
Advice 1: Plan

• Have a crisp idea what you want to cover/ NOT cover
• How are to bring it up?
• How are to ensure civil dialog/ what are the ground rules?
  – Note that most students don’t have a lot of experience with conflict resolution that doesn’t involve an authority figure
• How to end discussion if things get messy?
  – Consider timing: near the end of a lecture period
Moderating Student Discussion

• Allow students to share their own perspectives
• Acknowledge societal shortcomings and the need for improvement
• Ensure civil behavior, no personal attacks
• Try to stay rooted to the topic at hand
• Link arguments to evidence and logic whenever possible
Social Controversy

• Sincere question: Is it appropriate to comment on social issues / current topics?
  – “Processing” the 2016 or 2020 election results?
  – Google firing Timnit Gebru?
  – Nikole-Hannah Jones situation at UNC?
Advice 2: Tread Lightly on Social Issues

• Choose your battles
  – I often avoid giving too many personal details/opinions

• Interrogate your motives
  – Am I just looking to ventilate in a friendly environment?

• Signaling importance matters
  – I look for opportunities to highlight DEI issues, briefly

• Explicit delimiters around “test content” and “meta content”

• Only open discussion if you want other opinions

• Choose your words carefully:
  – Shorter excerpts may sound worse without context
Advice 3: Be prepared to argue both sides

• My graduate architecture course involved many technical debates

• When discussion got too unbalanced, instructor jumped in and argued the other position, vociferously
  – Even against instructor’s papers or prior positions!
  – Trying to predict instructor’s bias was a losing strategy

• Heaped praise on lone dissenter

Again, you get the behavior you reward!