Top 10 Teaching Hints

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1. Good teaching takes time. You'll often hear there's no conflict between good teaching and good research; that' nonsense. Both require lots of time – in fact to do a good job at both they'll require more time than you'll be able to give them. Depending on where you are in your career, you'll have to prioritize.

2. Make sure you know what it is you want to teach. What are the core goals – what concepts, facts, and/or skills are important to communicate. Make sure that the outcome is the first thing you think about in designing a course, format and syllabus. For every lecture, lab, seminar and assignment and exam you should have a sense of your ultimate goal for that component.

3. Be organized – it will help you, but there are few things that students find more exasperating than disorganization. If you lose them with disorganization you'll never get them on the important things. Be organized in how you present the course as a whole, and how you present the material on a day to day basis. Set clear expectations, deadlines and time tables and stick to them. Be explicit on your grading policy, missed work policy, late policy, etc. from the beginning – don't make up rules as you go. If you stick to your part of the deal, you can expect them to stick to their part. But, if it is clear you have made a mistake or error in judgment, don't' be afraid to admit it.

4. Very often, particularly in large undergraduate courses you'll have three populations – the kids that get it and are great (a small group), the kids that are fine (most) and some who don't care, or are just taking up space. Enjoy the first group, and don't beat yourself over the last group. You'll not get everyone involved, and don't spend too much time worrying about it.

5. Once you've decided on the format (when starting out this may not be a choice – you may be assigned a format) – seminar, lecture, etc., think through what it is you'd like to accomplish in each session and how those sessions fit into the course as a whole. I'll often divide a course into units, where I can develop a topic over several units – a broad introduction, and then several specific topics discussed in greater detail. I design each lecture around a "story" – what is the big picture issue ("remember in the first lecture we talked about how ….") , and how does this fit into broader themes (here we are going to find a good example of X). Refer often back to major themes in the course and try to draw parallels between units. There are few subjects in biology where you won't have to pick and chose what you'll actually cover. Make sure a syllabus isn't just a list of topics, but something that lets you develop larger themes.

6. Make use of technology where appropriate and the resources that your school provides. Blackboard is incredibly clunky, but I've worked at making it a good resource and the students appreciate it. Make sure you throw in some fun stuff – add videos (it is unbelievable what you'll find on YouTube), find stuff that relates to current events, or appears on the New York Times science page; occasionally tell a story about one of the scientists. Make it human.

7. Don't try to do too much – in a course or in a lecture. Until you develop a "sixth sense" about how much material you can cover in a lecture it is a good idea to plan to cover about 60-75% of what you initially think you can cover – and then have some "extra" that you can add if it goes short. Don't use PowerPoint. The students hate it and it has a tendency to make you go too fast. Writing stuff on the board keeps you at a pace they can follow.

8. Don't get hung up on teaching theory – once you decide on a format (lecture, seminar, lab), think about it and maybe read a bit about it and work to make it effective. But there is no one way to do it. Incorporating student centered exercises is in vogue, and has its place, but it also can be a pointless distraction to many students. Lectures can be highly effective or a waste of time. Do what feels natural to you, and seems to work for the material and your specific goals.

9. Get feedback from the students, either during the course or at the end or both and incorporate that into your planning for the future. The teaching evaluations the University asks for are useless for you. Give a separate one that lets you improve your course. I always ask about their favorite topics; the topics they wanted to hear more about and topics that weren't interesting. Did the exams and assignments fairly test their knowledge; suggestions for improvements. The comments will generally be all over the map, but if you find similar comments in many responses it is a clue to do something about it.

10. Be passionate about the material. Just like nothing turns students off faster than disorganization, nothing gets their attention faster than passion and enthusiasm.