Teaching and Learning in Maths Courses

A student perspective



Vishal Khatri

Department of Civil Engineering, IIT Bombay

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I will be talking about four major themes:

► Teaching with slides

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- Tutorials

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- Exams

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- Tutorials
- Exams
- Grading Scheme

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- This is specially problematic in a subject like Mathematics.
- ▶ In addition, the students might also miss out on an alternate method, an analogy or an impromptu comment by the instructor.

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- ► Students don't write notes. They feel out of sync and are more probable to falling asleep.
- The conventional blackboard-and-chalk teaching gives one enough time before it is erased.

Many core courses have tutorials taken by the instructor- problem solving instead of a lecture- with TAs and the instructor roaming around the class.

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- ▶ Insightful comments/variations of a problem by the instructor
- ▶ Improves one-to-one interaction
- Instructor gets to know what the students have understood and where they have problems first hand
- might lead to chaos at times



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- ► Can devote half a lecture more to problem solving
- Or one and a half hour slot for tutorials

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- Some weightage of tutorial performance in grading
- Submission of written solutions as an assignment, specially for students not doing well

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- Uploading model solutions for tutorial questions

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- ► Instead of multiple choice, we can have fill in the blanks since they require more understanding
- ► Many department core courses have the concept of bonus/challenging problems in exams- no weightage but a certain prestige associated



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- Example: Polynomials are continuous
- 1. f(x) = x is continuous with $\delta = \epsilon$;
- 2. Powers of x are continuous by product rule
- 3. Scalar times x^n is continuous
- 4. Sum of continuous functions is continuous



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- ▶ No assignments in Maths courses- can give some weightage to assignments