

CODE LAB*

NIFTY TOOLS AND ASSIGNMENTS

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What should a Computer Science professor be doing?

- a) Teaching
- b) Research
- c) Outreach
- d) Summer Camps
- e) All of the above

The answer is e: "All of the above." And how many hours in the day do we have? Not enough!

These are questions that trouble me all of the time. At a teaching university, teaching is where the largest amount of time is spent, especially when it comes to grading. I want to do all of the above items but I do not have enough time. Are there any tools that can free up time so time can be spent in the other areas?

CodeLab is a tool that can significantly free up the amount of time that is spent on grading homework and the discussion of homework assignments. CodeLab is a web-based interactive programming exercise system for introductory programming classes in Java. CodeLab has over 300 short exercises with each exercise focusing on a particular programming concept. Student submissions are automatically judged for the correctness of the solution, and offers hints when the submission is incorrect. If incorrect, the student modifies their solution, and submits it for verification.

During fall 2007 and spring 2008, I integrated CodeLab into my CS1 courses. The tool has potential benefits to both the student and instructor as well. The benefits to the students: [1]

1. Higher Test Scores
2. No Brick Wall
3. More Efficient Studying
4. Better Grades on Projects

The benefits to the instructor: [1]

1. Take the high road!
2. Grading relief / Automatic class rostering

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3. Frees up office hours
4. Decrease attrition

In addition, there are benefits to the CS Department: [1]

1. Retention
2. Language Switching
3. Confidence of Achievement Level
4. Automated Placement Exam

[1] <http://turningscraft.com>