

- ▼ CS 301, October 17, 2004 (the value of wrong answers)
  - ▼ handouts
    - questions for self-paced tutors to ask
  - ▼ where do you expect to encounter a student with a wrong answer?
    - office hours: program bug, or wrong answer for homework or exam
    - lab: program bug
    - discussion section: wrong answer to a question you ask
  - what do you do with it? what should you not do with it?
  - what is your goal?
  - ▼ what should be your goals
    - ▼ exposing wrong answers
      - provide opportunities for active learning
      - peer instruction
      - questions we have tutors in the self-paced courses ask
    - ▼ find out the reasons for the wrong answer
      - Ed Dubinsky anecdote
      - misconceptions research
    - ▼ let student talk as much as possible; how do you know what he/she knows otherwise?
      - anecdote: debugging expert in self-paced
    - ▼ don't embarrass the student
      - anecdote: tic-tac-toe
    - ▼ helping students do better on exams
      - common reasons for wrong answers: not understanding material, careless errors, misunderstanding the question
      - a solution should target the problem, e.g. by having students generate problem interpretations rather than answers
  - ▼ emphasize process over end product
    - problem solving tree
    - case studies
    - small steps in curriculum