Interactive Learning Toolkit

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Outline

- **Peer Instruction**
  - Improves student understanding
  - Makes classroom learning more engaging
- **Using technology to help pedagogy**
  - Interactive learning toolkit

What is Peer Instruction?

- **Main features:**
  - Pre-class reading
  - In class: depth, not coverage
  - ConcepTests

What is Peer Instruction?

- **Move the information transfer out of the classroom:**
  - Assignments on reading material before class
- **Strategy:**
  - 2 questions on content
  - 1 feedback question
  - Graded on effort (semi-automatic)
- **Use web-based reading assignment to help students think about what they read**
- **Find out what needs attention in class**
- **Get to know the students**

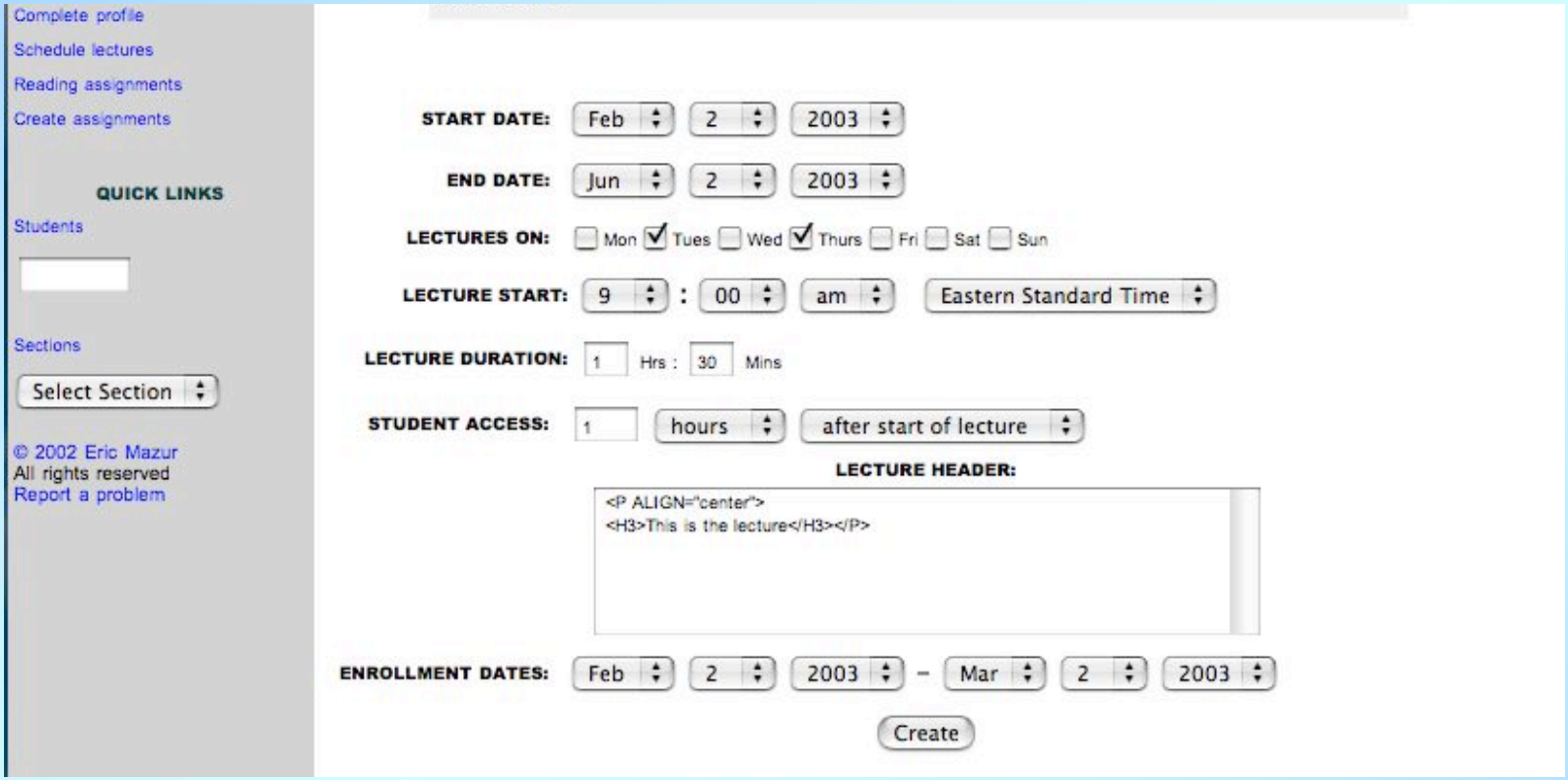
What is Peer Instruction?

- **Use classroom to deepen and broaden understanding**
- **by identifying key ideas**
- **and giving students opportunity to think**
- **Strategy:**
  - Frequent suitable ConcepTest questions
  - Rewards for participation
  - Adjust lecture based of feedback from question

How can technology help?

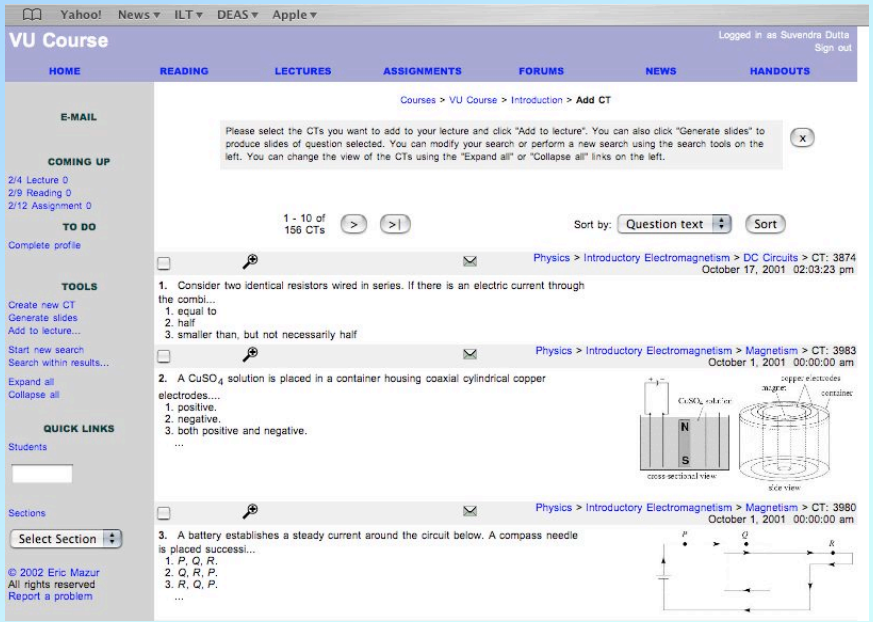
- **Information collection**
  - Collect student responses in classroom and outside
- **Information distribution**
  - Deliver materials and information to students
- **Information presentation**
  - Discover connections between all the different pieces of information that go with a course

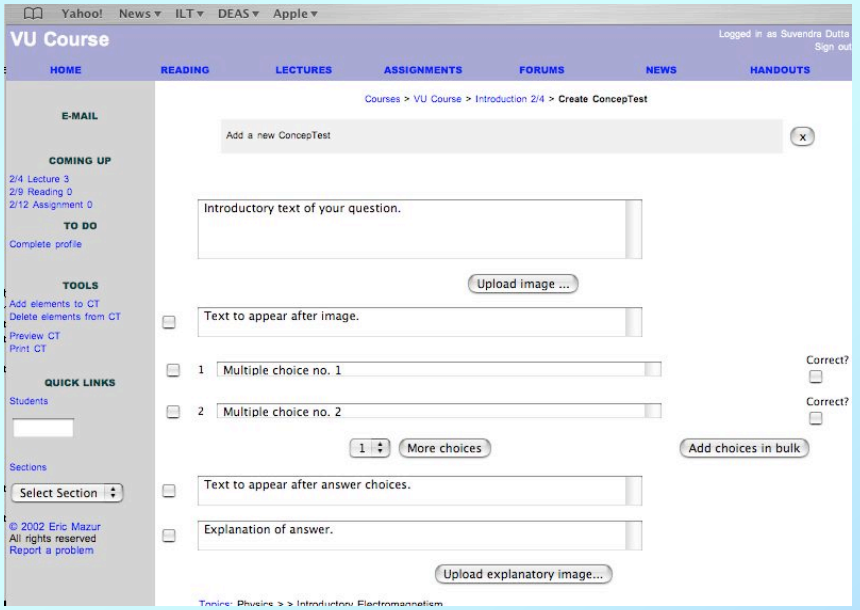
Peer Instruction in ILT



- **Create a calendar-based lecture schedule**

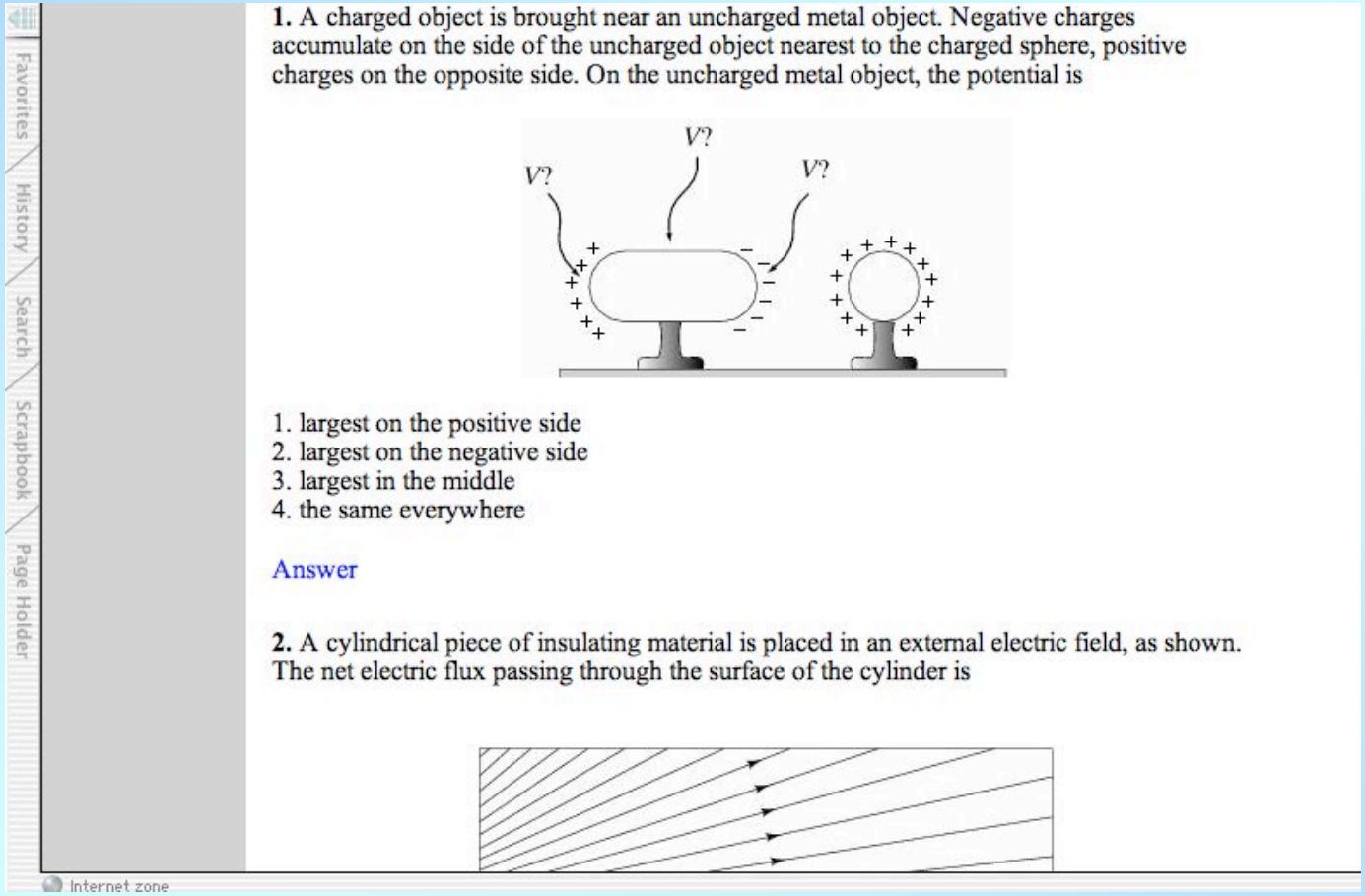
Peer Instruction in ILT





- **Pull in ConcepTest questions from a database**
- **Create new ones yourself and add to the database**

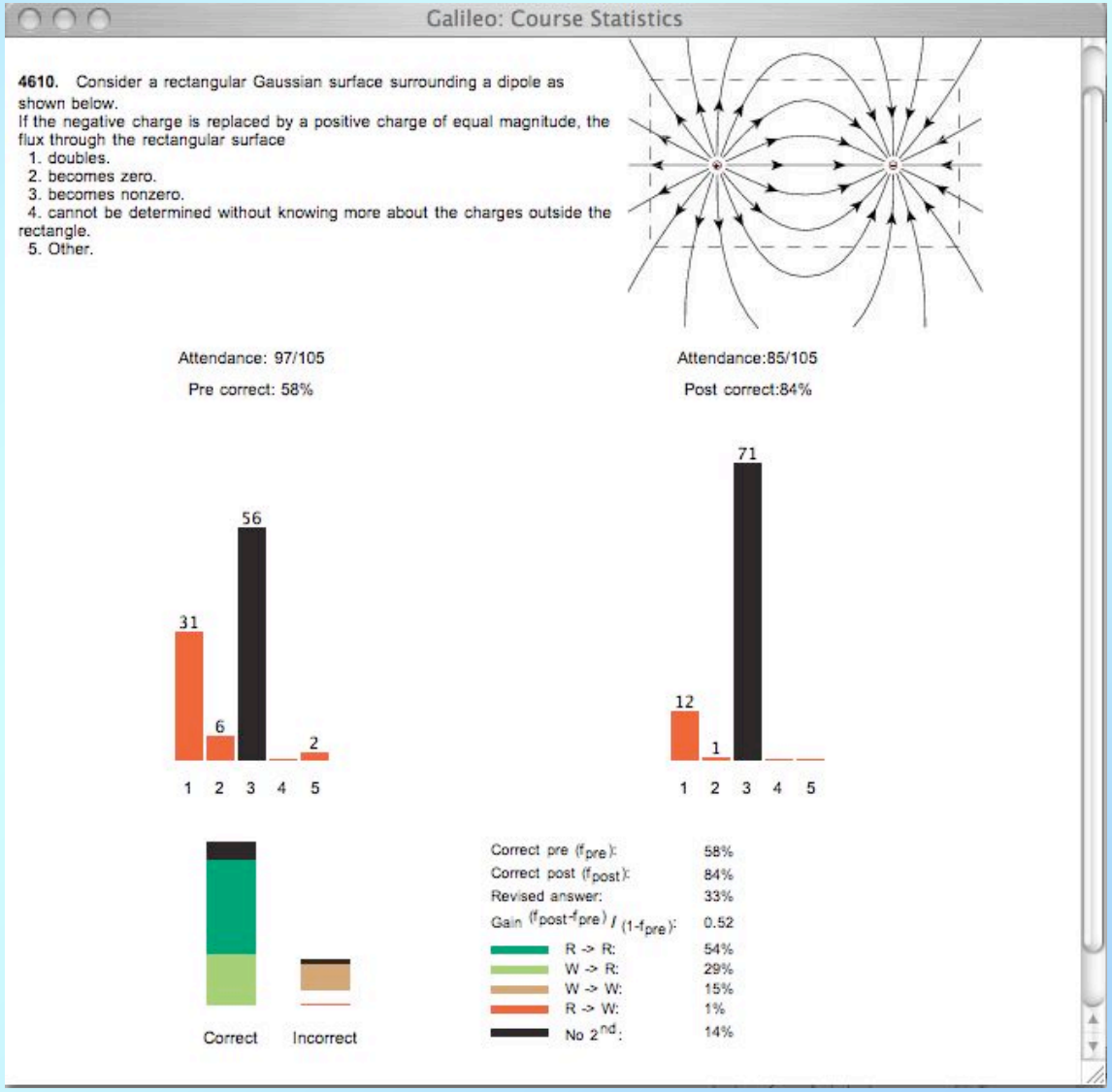
Peer Instruction in ILT



- **Student view of lecture automatically created**
- **And published to students when specified**

Peer Instruction in ILT

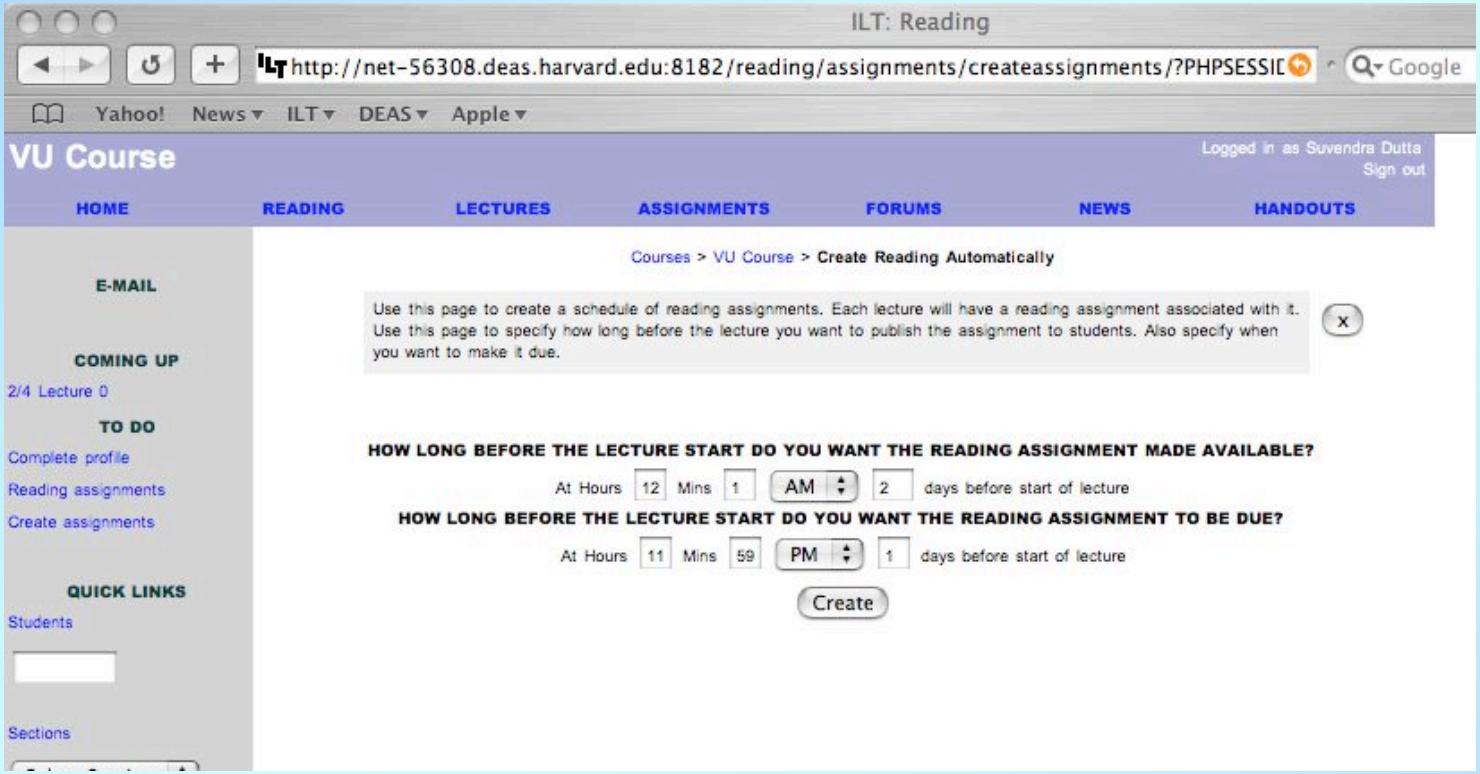
- **Upload PRS session files**
- **Automatically grade students for participation**
- **Grade questions for effectiveness**



Peer Instruction in ILT

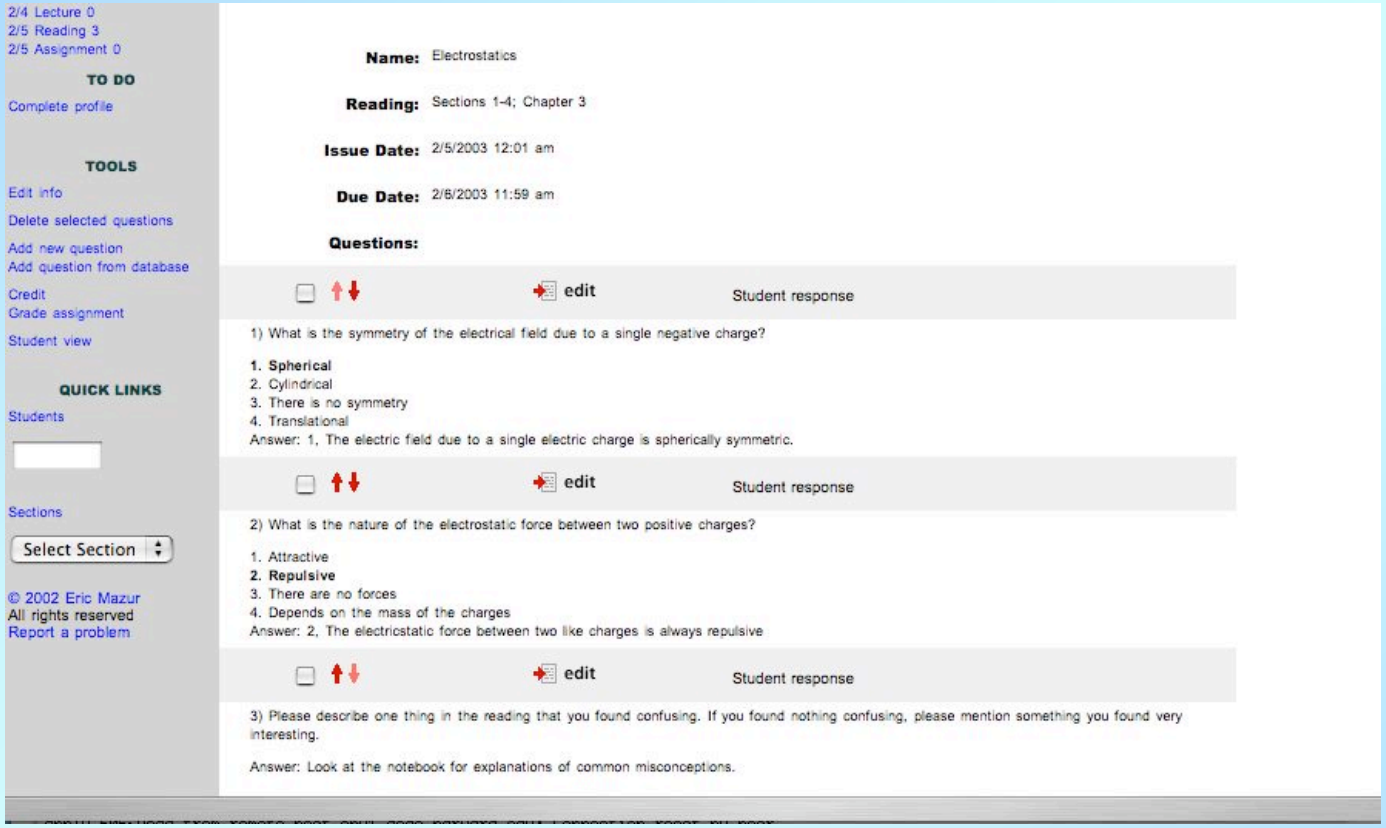
- **Benefits**
  - Automated grading (effort-based) of students
  - Automated attendance recording
  - Instant feedback to instructor
  - Ever growing database of questions
  - Systematic method of assessing quality of question

Reading assignments in ILT



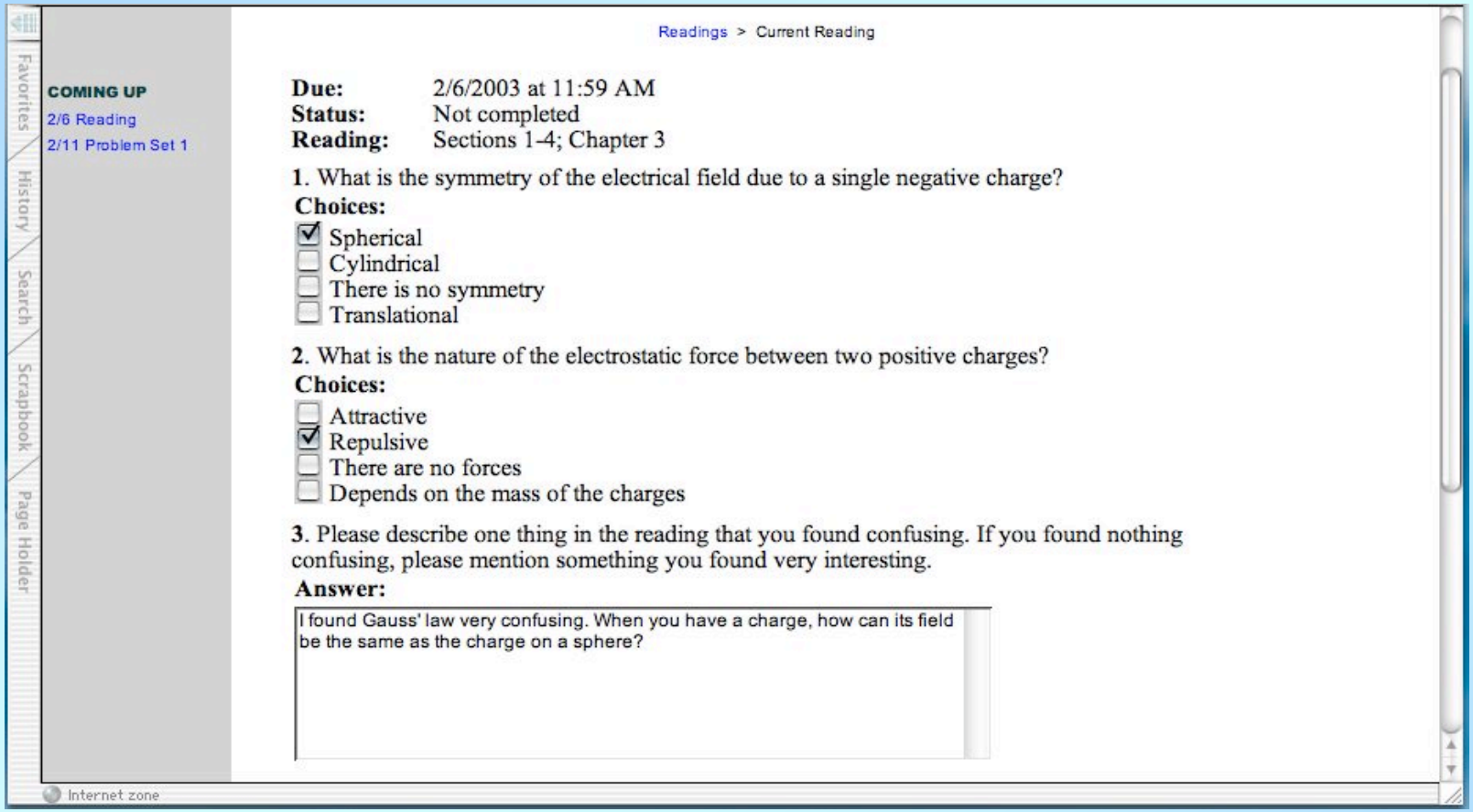
- **Create reading assignments schedule based on the lectures**

Reading assignments in ILT



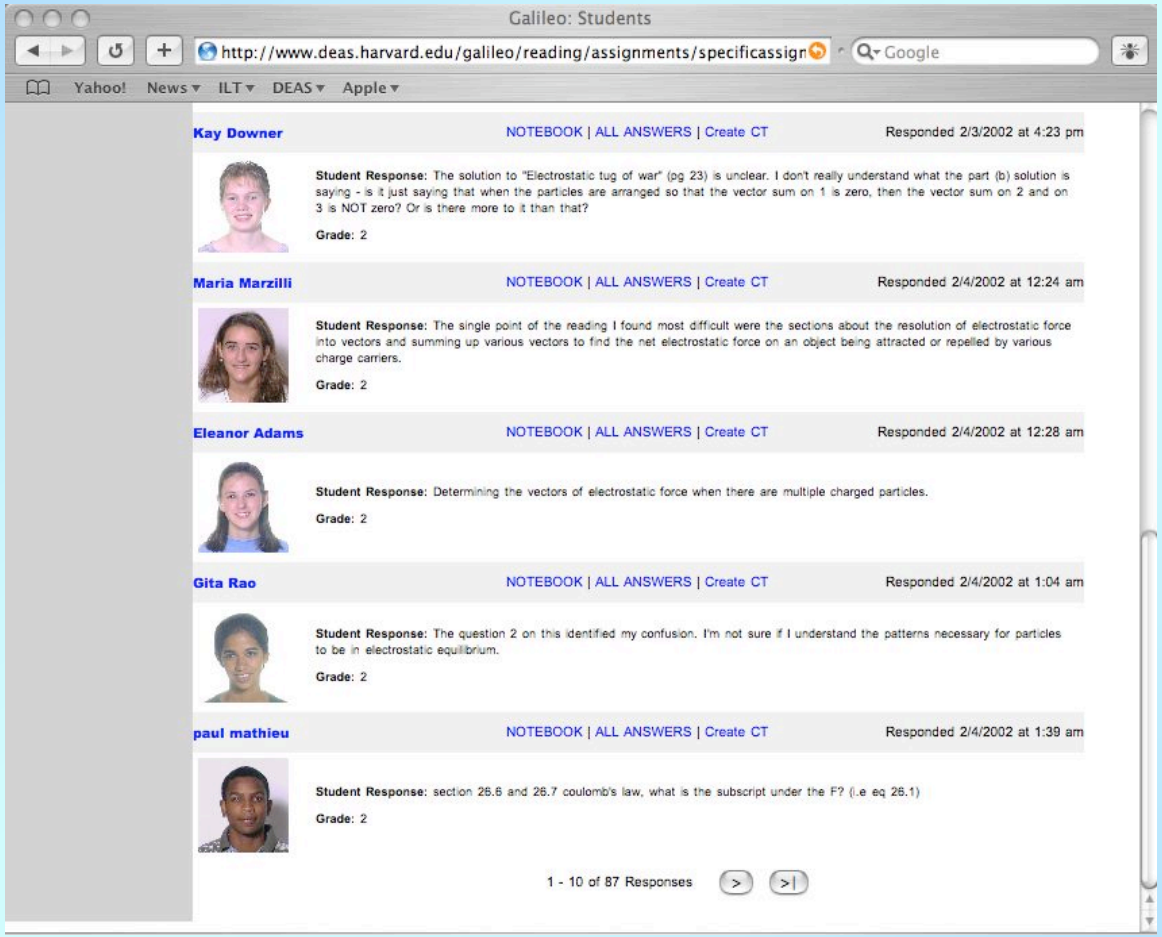
- **Add questions to the assignment**

Reading assignments in ILT



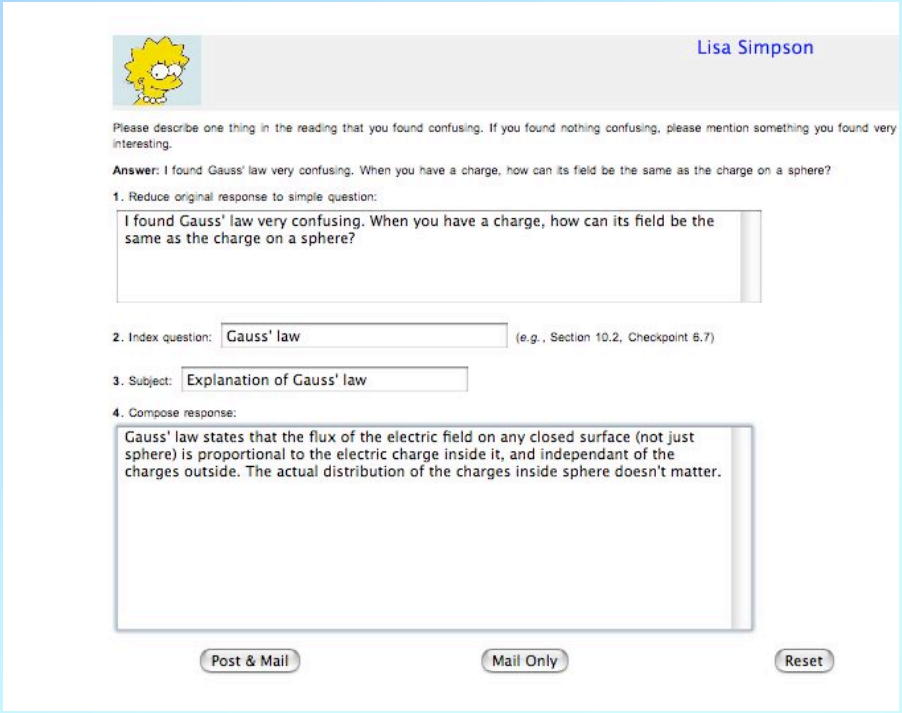
- **Students can answer the assignment when it is available to them**

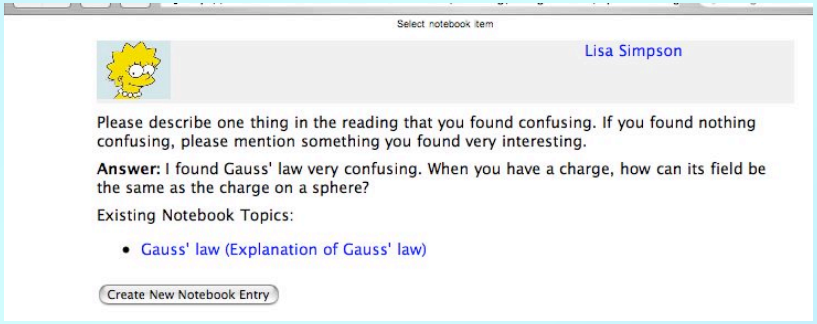
Reading assignments in ILT

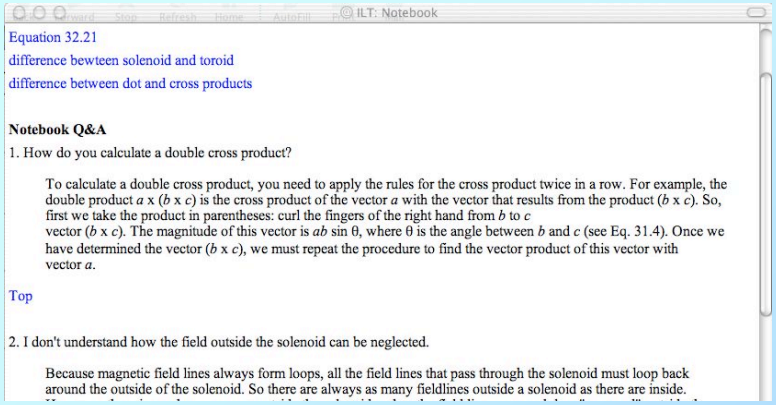


- **Students' work, face and names are all connected**

Reading assignments in ILT





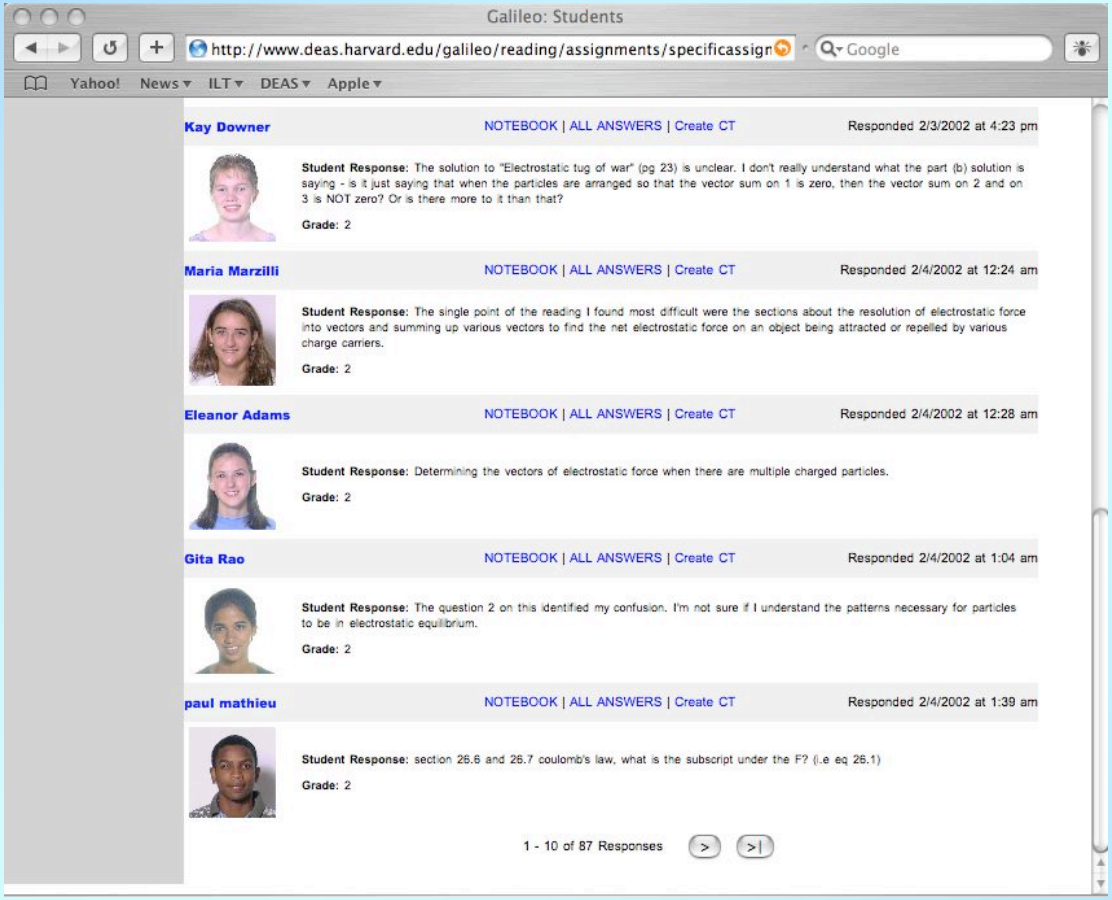


- **Quickly respond to students' queries**
- **Build responses from previous responses to other students**
- **Automatically generate FAQ on student site**

Reading assignments in ILT

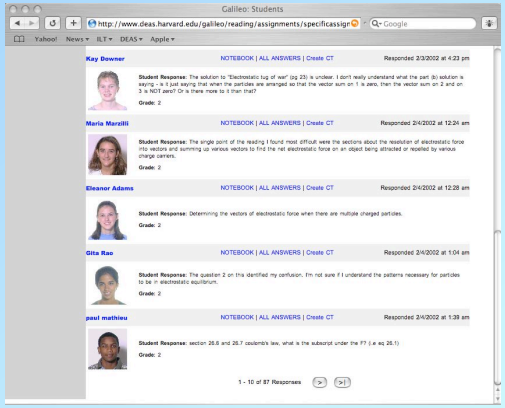
- **Benefits**
  - Better use of class time
  - Connects names, faces and work
  - Increases student faculty interaction
  - Study resource for students

Face book



- **By connecting every element of the course together with the student, ILT makes it easier to get to "know" a large class**

Face book



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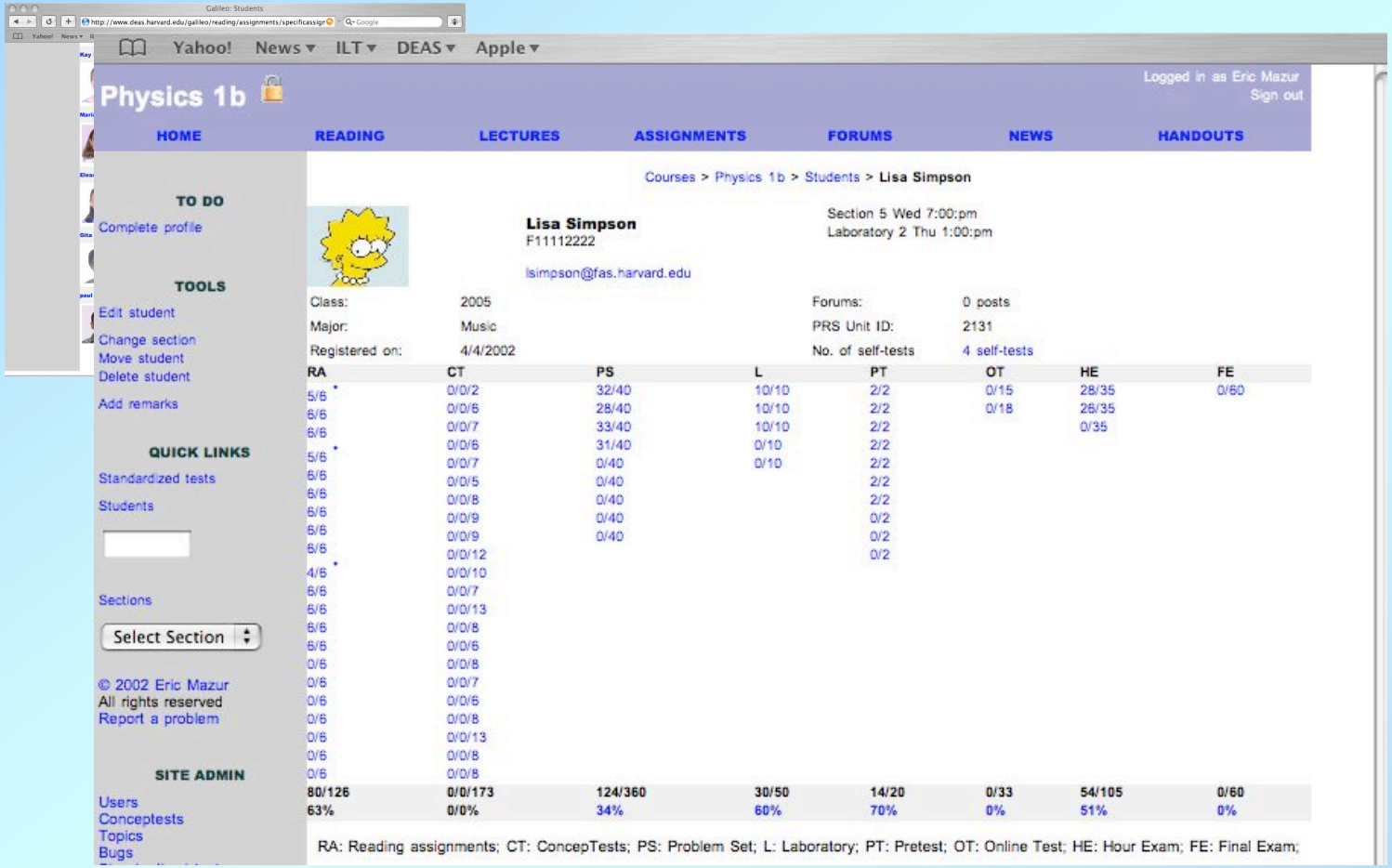

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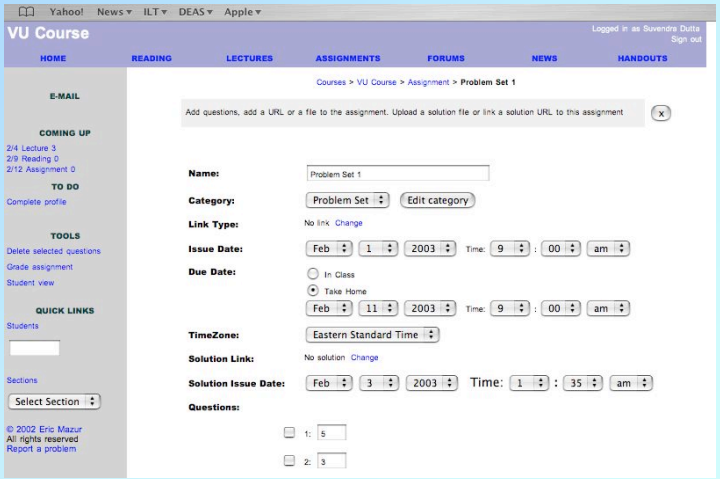
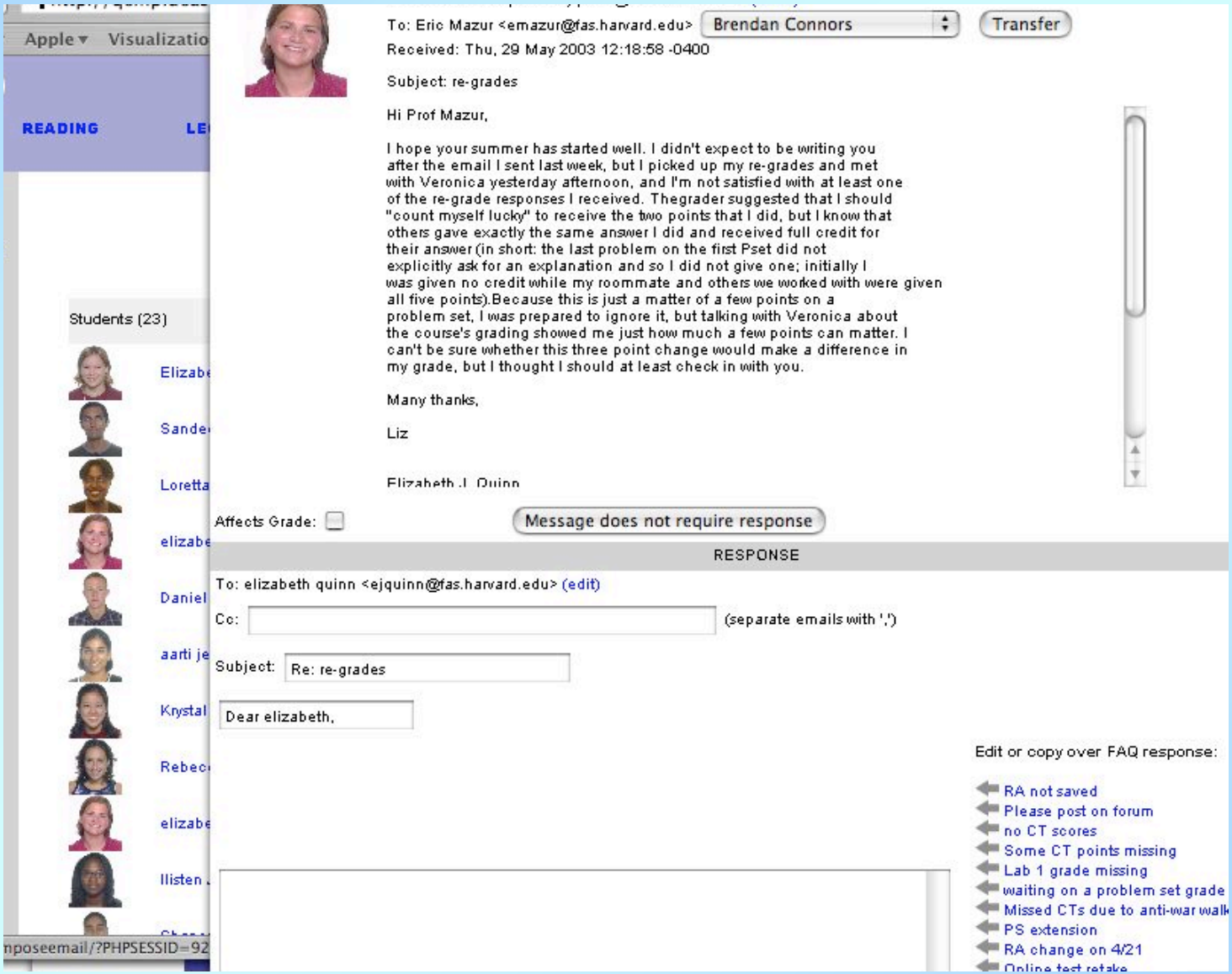
Grade book

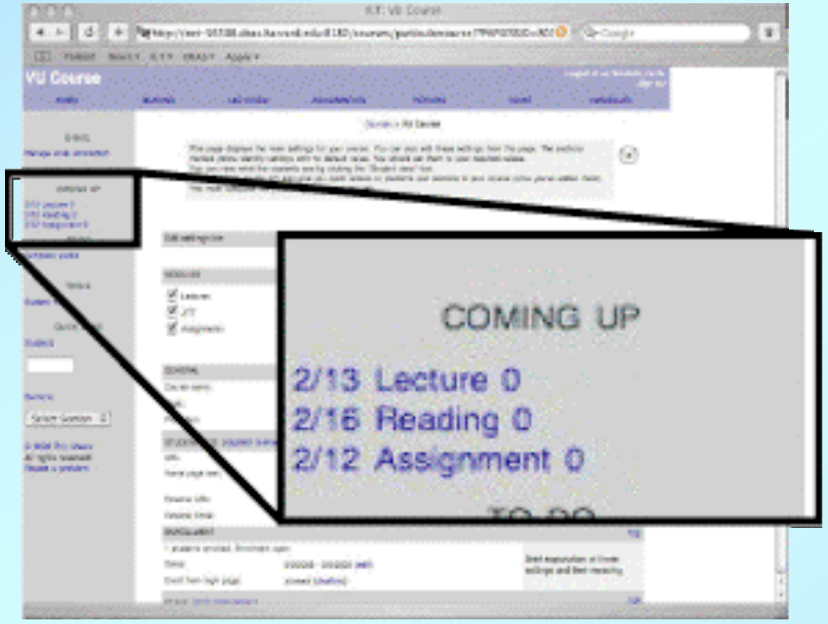


- **A simple grade book which keeps a record of student scores in different assignments.**

Email

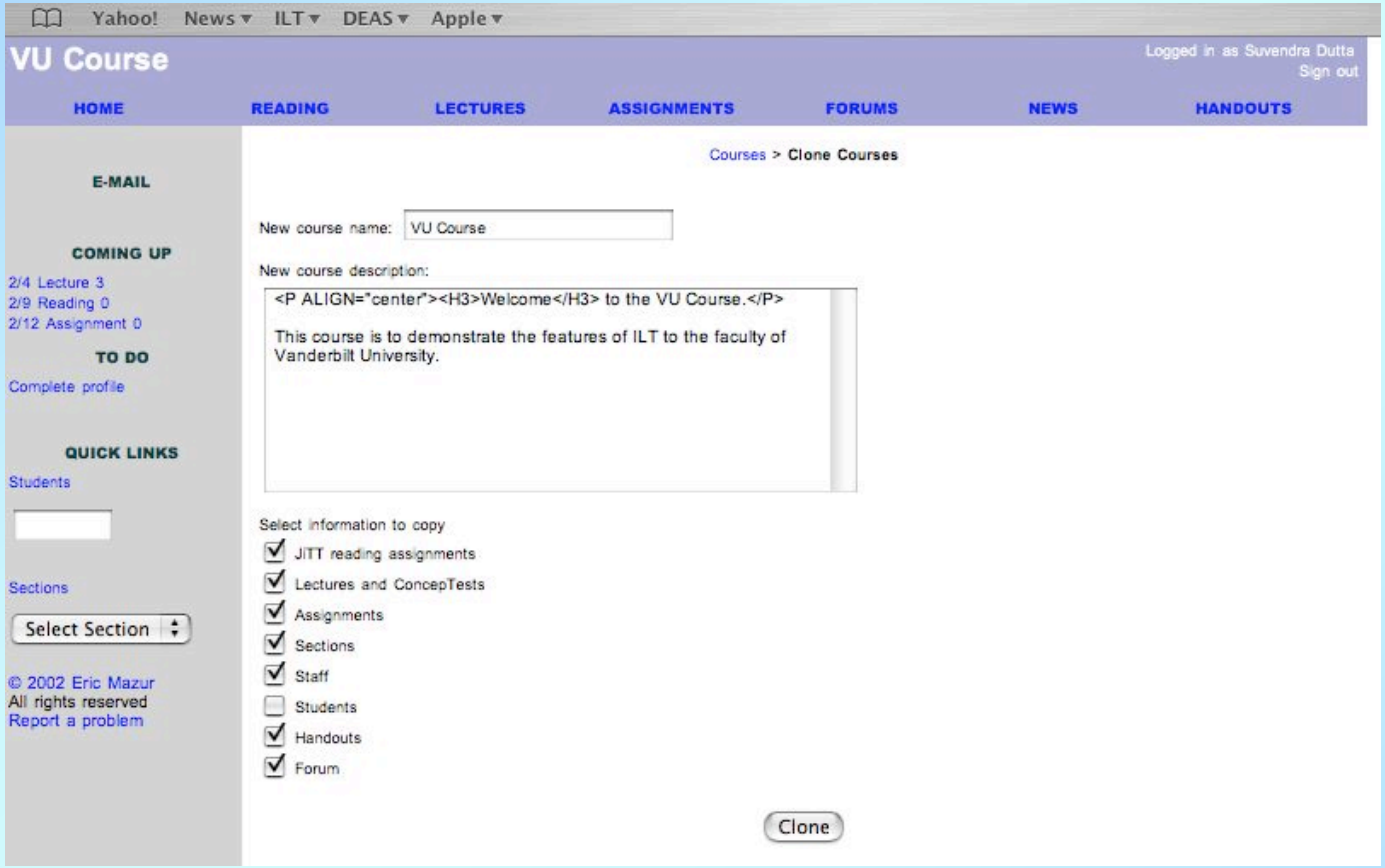

Apple ▾ Visualizatio
READING
Students (23)
To: Eric Mazur <emazur@fas.harvard.edu>
Brendan Connors
Transfer
Received: Thu, 29 May 2003 12:18:58 -0400
Subject: re-grades
Hi Prof Mazur,
I hope your summer has started well. I didn't expect to be writing you after the email I sent last week, but I picked up my re-grades and met with Veronica yesterday afternoon, and I'm not satisfied with at least one of the re-grade responses I received. Thegrader suggested that I should "count myself lucky" to receive the two points that I did, but I know that others gave exactly the same answer I did and received full credit for their answer (in short: the last problem on the first Pset did not explicitly ask for an explanation and so I did not give one; initially I was given no credit while my roommate and others we worked with were given all five points).Because this is just a matter of a few points on a problem set, I was prepared to ignore it, but talking with Veronica about the course's grading showed me just how much a few points can matter. I can't be sure whether this three point change would make a difference in my grade, but I thought I should at least check in with you.
Many thanks,
Liz
Affects Grade:
Message does not require response
RESPONSE
To: elizabeth quinn <ejquinn@fas.harvard.edu> (edit)
Cc:
(separate emails with ',')
Subject:
Re: re-grades
Dear elizabeth,
Edit or copy over FAQ response:
RA not saved
Please post on forum
no CT scores
Some CT points missing
Lab 1 grade missing
waiting on a problem set grade
Missed CTs due to anti-war walk
PS extension
RA change on 4/21

Making it easier for the instructor



- **Calendar-based schedule means the application can advise instructor on the course elements that need attention**

Clone a course



- **Ability to "clone" a course saves an enormous amount of time the second time the course is taught!**

Summary

- **Reduce time spent in non-instructional activities**
- **Implementation of tools for research-based pedagogies**
- **Features field tested in classrooms**
- **Modular implementation**
- **Students have easy access to study materials**
- **And have new avenues of interaction with instructor!**

Acknowledgments

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DEAS Information Technology Group

For more information please visit:

http://mazur-www.harvard.edu

http://www.deas.harvard.edu/galileo