Course Assessments
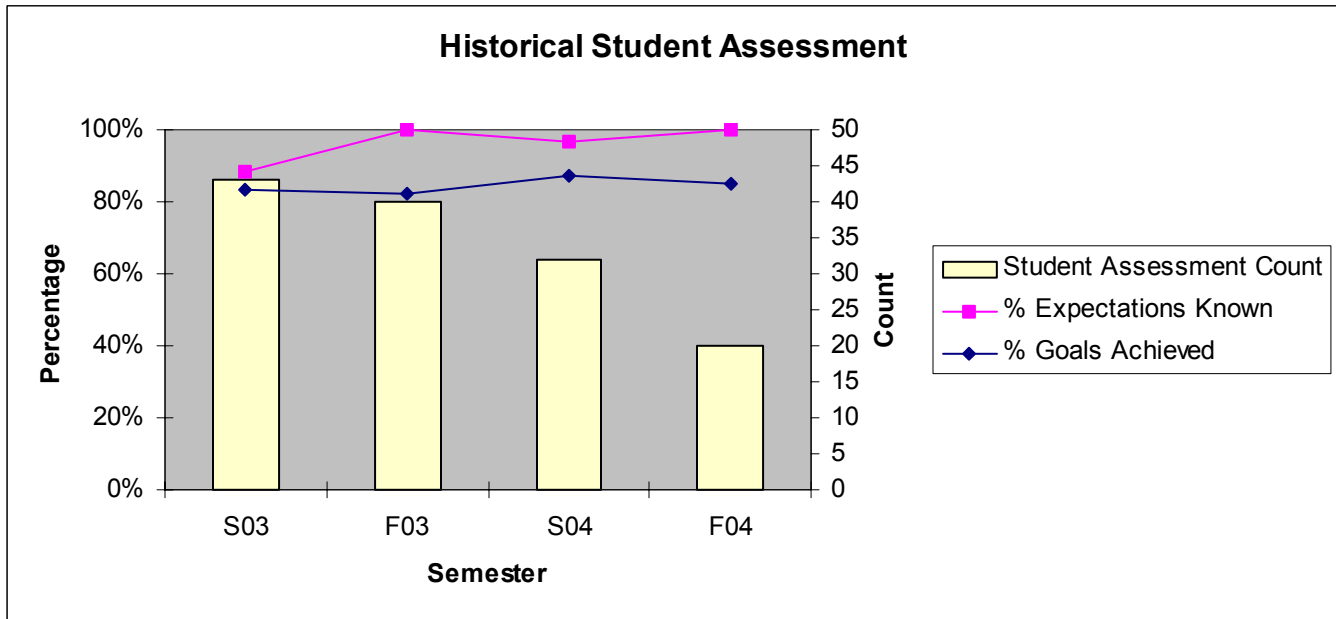## CS330 - Discrete Structures   Course Manager - Kapoor
(most recent semester first, recommendations in red, changes in blue)

Historical Student Assessment

Fall 04 Sections - **CS330 All Sections** Instructor(s) - **Bauer**
Student Count=**25** Assessment Count=**20**
Did you understand what was expected of you in the course? Y=**100%** N=**0%**
Do you think that you achieved the course goals for the course? Y=**85%** N=**15%**
Were you adequately prepared to take this course by prerequisite computer science courses? Y=**75%** N=**5%**
N/A=**20%**
What did you like best about this course?
**theoretical aspect/topics(10); schedule/pace good(3); slides good(1); instructor/lecture(5); fair
tests/related to HW(4); detailed answer keys for hw/exams(1); no lab(2);**
What, if anything, would you change about this course?
**not challenging(1); more time on last topics(1); more time on proving(1); hw too hard(1); too much logic
basics(1); book poor(2); change nothing(6); more help resourses on HW; expectations not stated(1); slides
too confusing(1);**
Fall 04 Instructor - If you were to teach the course again, what changes would you make?
more real world applications; review syllabus/goals for correct coverage

Spring 04 Sections - **CS330 & MATH230** Instructor(s) - **Bauer/McGee**
Student Count=**53** Assessment Count=**32**
Did you understand what was expected of you in the course? Y=**97%** N=**3%**
Do you think that you achieved the course goals for the course? Y=**88%** N=**13%**
Were you adequately prepared to take this course by prerequisite computer science courses? Y=**84%** N=**3%**
N/A=**13%**
What did you like best about this course?
**examples in class(2); trees/graphs(2); notes handed out(1); good mix of theory/applications; logic
topics(4); good syllabus/schedule/breadth(4); lectures/proefessor(3); recurrence relations(1); only 6
hw(1); materials on www(1); no required attendance(1); topics interesting(2); graphs(3); algorithms(1);
class discussions(1); numerical analysis/number theory(1); probability(1)**
What, if anything, would you change about this course?
**more real applications/too boring/too much grunt work(5); too much math theory(1); more focus on
important principles/too many topics(1); no coding on exams/more questions like HW(3); slower
paced/more thought out(1); leave out excess probability topics(1); better book/too hard(2); add computer**

Numbers in student comments represent number of student who made the comment

aided tools/simulations(1); time of class bad(1); more HW/more often(1); test structure bad(1); more examples/less theory(2); more math/less CS(1); better spread of topics over semester/test(1)
Spring 04 Instructor - If you were to teach the course again, what changes would you make?
more sample problems/applications; less breadth/more depth

CS Undergraduate Committee - CS330 Course Review – Fall 2003
During the Fall 2003 semester a detailed course review was done of CS330. The following materials were collected and reviewed by the CS Undergraduate Studies Committee and discussed with the instructor:
- **Course Overview. syllabus, textbook, lab manual, lecture notes**
- **Sample graded labs, quizzes, exams**

Conclusions were:
- **Review objectives/syllabus for possible slight adjustments (see details below)**
- **Increase real-world/CS applications of discrete structures**

Detailed Notes:
Lecture/Syllabus Review - The lecture material covers all the topics in the syllabus quite well to a satisfactory depth for this survey course, with the exception of formal models of computation. I don't think, however, that this is a serious lack, provided that formal models of computation are covered in depth in a later course (CS440). There should, however, be some discussion of computability, i.e., the Halting Problem, recursive and recursively-enumerable sets, and so on. Another small issue is in the discussion of Predicate Calculus, in that function symbols are not mentioned at all, though without them, expressiveness is considerably reduced. Also, it would be nice to have a discussion somewhere in the curriculum of the semantics of First-Order Logic together with proof theory, however, that may require more mathematical sophistication, and certainly would require knowledge of most topics discussed in this course, so it should probably not be covered in this course. In all, the lecture material as it stands is of high quality and good coverage. (Contributed by Shlomo Argamon.)

Assignment Review - The errors are clearly marked, thus, the students know where they lose points. Students received the solution to the questions for each exams to be able to see and learn the correct answers to the problems. Considering having such solution sheets, the amount of the feedback to the students on their graded exam has been minimal, assuming the marked problems along with the solution sheet will be sufficient. (Contributed by Nazli Goharian.)

Assignment Review - I saw a sample of the work the covered counting, recursion, and relations. The breadth of coverage of the material was decent, although I didn't see anything on Bayes Theorem (conditional probability). Judging from the answers given to the students, the homework problems were described in a high-level manner, using real-world cases. I did not look at the text, so I do not know the exact forms of the questions. The questions on the exam I saw (exam 2) were more analytical in nature, and therefore do not test the student's ability to apply concepts as well as the homeworks may. This might have been done for expedience, as the students are under time-pressure in an exam. (Contributed by Wai Gen Yee.)

Syllabus Review - When I taught 330, I did not have time for the whole of the syllabus. In particular, the material on models beyond FSAs got skipped. I did do Bayes thm. (Reingold)

Fall03 Course Manager Recommendations on Course (not instructor)
Include more real world examples and more CS significance

Fall 03 Sections - **CS330 & MATH230** Instructor(s) - **Bauer/McGee**
Student Count=**55** Assessment Count=**40**

Numbers in student comments represent number of student who made the comment

Did you understand what was expected of you in the course? Y=**100%** N=**0%**
Do you think that you achieved the course goals for the course? Y=**83%** N=**18%**
Were you adequately prepared to take this course by prerequisite computer science courses? Y=**80%** N=**8%**
N/A=**13%**
What did you like best about this course?
lectures/instructor/slides(15); math focus; easy; good pace(4); advanced topics(5); conincided with ECE218; homework; real applications in CS; lectures(5); homework
What, if anything, would you change about this course?
too much math notation; more in depth in topics; hw weighted too heavily; more examples(6); don't teach from powerpoint(5); worked out answers; more homework assignments/less problems each; put slides on www; textbook too difficult(4); instructor bad(2); TA bad(2); more CS applications(4); more assignments collected
Fall 03 Instructor - If you were to teach the course again, what changes would you make?
more real world examples; more CS significance; more interaction in lectures; possible trim content

Fall02/Spring03 Corrective Action (on course)
Fall 2003 - review CS330 by CS UG Studies; possible redesign for Fall 2004

Fall02/Spring03 Course Manager Recommendations on Course (not instructor)
students found course too hard; possible lack of math maturity in students

Spring 03 Sections - **CS330 & MATH230** Instructor(s) - **Reingold/McGee**
Student Count=**84** Assessment Count=**43**
Did you understand what was expected of you in the course? Y=**88%** N=**12%**
Do you think that you achieved the course goals for the course? Y=**83%** N=**17%**
Were you adequately prepared to take this course by prerequisite computer science courses? Y=70% N=**12%**
N/A=**16%**
What did you like best about this course?
lecture notes available(4); HW/exams related to lectures(3); algorithm analysis(2); data structures; good review of math; instructor(6); problem solving(5); finite state machines; instructor(10); topics(10); hw not collected; frequency of exams
What, if anything, would you change about this course?
more HW so all topics covered(3); real world examples(3); less math theory(2); how to find a recurrence relation; HW should be assigned/graded before exam(2); exams/HW too hard(3); TA english bad(2); order topics to match data structures(3); lecture not related to book or TA(3); teacher handwriting/explaining bad(2); more pictures/less words; hw/project too much work(2); less exams; not related to textbook/cover all topics(2); collect hw; instructor late/unorganized; more real world applications; course too slow; connection to CS unclear; better review before exam
Spring 03 Instructor - If you were to teach the course again, what changes would you make?
more HW so all topics covered(3); real world examples(3); less math theory(2); how to find a recurrence relation; HW should be assigned/graded before exam(2); exams/HW too hard(3); TA english bad(2); order topics to match data structures(3); lecture not related to book or TA(3); teacher handwriting/explaining bad(2); more pictures/less words; hw/project too much work(2); less exams; not related to textbook/cover all topics(2); collect hw; instructor late/unorganized; more real world applications; course too slow; connection to CS unclear; better review before exam

Fall 02 Sections - **CS330 & MATH230** Instructor(s) - **Bistriceanu/McGee**
Student Count=**64** Assessment Count=**0**
Did you understand what was expected of you in the course? Y=**n/a** N=**n/a**
Do you think that you achieved the course goals for the course? Y=**n/a** N=**n/a**
Were you adequately prepared to take this course by prerequisite computer science courses? Y=**n/a** N=**n/a**
N/A=**n/a**
Numbers in student comments represent number of student who made the comment

What did you like best about this course?
What, if anything, would you change about this course?
Fall 02 Instructor - If you were to teach the course again, what changes would you make?
none

S02 Planned Course Enhancements
o New course description - Introduction to the use of formal mathematical structures to represent problems and computational processes. Topics covered include sets, functions and relations, counting methods, recursive structures, logic, partially ordered sets, graphs, formal machines and languages. Prerequisite: CS 106 or CS 200. (3?0?3) (Fall 2002)
o Replacement of programming assignments with additional quizzes or homework assignments (Fall 2002)