Core Managerial Statistics

A review by a sub-committee of the CBS Executive Committee

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Overview

- Unusual length and schedule for Core offering as result of last Core Curriculum reform
  - 22 sessions taught in 8 weeks within first half of first semester

- Well received by students
  - Consistently good ratings for course and instructors
    - At least for regular faculty
  - Demand for lengthening the course

- Faculty motivated to teach it

- Uniformity of topic coverage and teaching materials
  - With one exception (Juran)

Recent course evaluations

Term	Professor	Course Evaluation	Professor Evaluation
Fall 03	Costis Maglaras	4.4	4.9
	Costis Maglaras	4.7	4.9
	Assaf Zeevi	4.5	4.9
	Assaf Zeevi	4.5	4.8
	Paul Thurman	4.7	4.8
	Paul Thurman	4.5	4.7
	David Juran	4.7	4.9
	David Juran	4.6	4.7
Spring 04	Paul Glasserman	4.7	4.9
	Paul Glasserman	4.9	5.0
	Sid Browne	3.1	2.9
Fall 04	Costis Maglaras	4.4	4.7
	Costis Maglaras	4.7	4.9
	Assaf Zeevi	4.7	5.0
	Assaf Zeevi	4.7	4.9
	David Juran	4.6	4.8
	David Juran	4.1	4.4
	Nicolas Stier	3.8	3.9
	Nicolas Stier	4.0	4.1
Spring 05	Fred Silverman	3.5	3.6
	David Juran	4.5	4.7
	David Juran	4.6	4.7

EMBA course evaluations

Term	Professor	Course Evaluation	Professor Evaluation
Fall 03	Donald Sexton	4.3	4.6
	Donald Sexton	4.3	4.6
Spring 04	Donald Pardue	3.3	3.2
	Donald Pardue	2.9	2.8
Summer 04	Donald Sexton	4.5	4.8
Fall 04	Donald Sexton (EMBA)	3.8	3.9
	Donald Sexton (EMBA)	4.0	4.1
Spring 05	David Juran	4.4	4.8
	David Juran	4.2	4.4

Steps we took

- Read course materials—notes, cases, problem sets

- Interviewed two course instructors
  - Including course coordinator

- Held student focus group
  - Both 1st and 2nd year students
  - Academic reps from both regular and J-term

Topic coverage

- Provides a standard overview of statistics
  - Basic descriptive statistics
    - Includes ethics lecture on "how to lie with statistics"
  - Inferential statistics
    - Basic probability theory
      - Except for Juran sections, course no longer covers binomial distribution
    - Sampling theory
    - Estimation
    - Hypothesis testing
    - Regression
- Possible expansions
  - Exploratory data analysis
  - Reinstate binomial distribution

Student focus group

- Open-ended opportunity for comments
- Follow-up questions on
  - Time allocation to topics
  - Course materials
  - Data analysis packages
  - Exercises/Problem Sets
  - Exams
  - Pedagogy/Instructors
  - Peer tutors

Focus Group General Feedback

- Course seen as providing important skills used in subsequent courses

- Preterm math ramp-up necessary
  - Bimodal distribution of student math skills
  - Math camp not sufficient

- Provide better preterm instruction in EXCEL
  - Recommended model
    - "Training the Street; offered by Investment Banking Club for $200

- Course is too short
  - Decision models course too long for its content
    - Combine the two courses

- Course is too dense
  - Not enough time between classes to absorb material
  - Learn only mechanics; no time to develop statistical intuition

Specific Student and Instructor Feedback and Concerns

- Time Allocation to Course Topics
  - Desirable to spend more time on regression
    - Currently last 4 lectures
    - Recommendation seconded by both course instructors

- Course materials
  - Course note-book and Case book well received
    - Nobody looks at any additional materials
      - Supplementary text book
      - Bernstein's "Against the gods: The remarkable study of risk" book
  - Juran course materials three times as voluminous
    - Desirable to standardize materials across all sections

- Data analysis packages
  - EXCEL seen as sufficient
    - No need for other packages like Stata
    - Yet, need for better training in EXCEL
    - EXCEL use should be demonstrated more in lectures

Specific Student and Instructor Feedback and Concerns

- Graded Exercises/Problem Sets
  - Seen as adequate and useful
  - Graded timely and with detailed feedback
  - 5-6 graded problem sets in 6 weeks seen as too rushed
  - Group format (up to 3 students) considered helpful, with group members acting as informal tutors to each other

- Peer Tutors
  - Seen as extremely valuable
  - Availability was problematic in recent year

- Exams
  - Students are happy with paper-and-pencil format

Specific Student and Instructor Feedback and Concerns

- Pedagogy/Instructors
  - Instructors seen as excellent
    - Provide different modes of explaining course materials (e.g., visually vs. numerically)

  - Technique of developing an argument in real-time on overhead transparency or board seen as valuable
    - Students need to think and write along

  - More active student participation in lectures desired
    - Have student volunteer solve a practice problem on the board

  - Desire to get more previews of where specific statistics or techniques will be used in subsequent courses and on the job
    - Done well by one instructor (former hedge fund manager)

Conclusions and Recommendations

- Course is in very good shape, but there is room for small improvements

- Rethink (or at very least, re-explain to students) course schedule and topic coverage and relationship to Decision Models course
  - Intense first-semester early Statistics experience seems to unite clusters, but also creates anxieties
    - Explain value of experience better
    - Reduce anxiety by better preparation and ready availability of peer tutors

Conclusions and Recommendations

- Provide better incentives for peer tutors
  - Earlier recruitment efforts by Student Affairs
  - More and more public recognition (e.g., by dean's office)

- Better math and EXCEL preparation should be provided
  - Reorganize Math Bootcamp
  - What happened to UNext online math course?
  - Develop or import EXCEL workshop