ORIE 4154 - Pricing and Market Design

Instructor: Siddhartha Banerjee

Spring 2017



Cornell University

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Essential Course Information (contd.)

Lectures Course Number: ORIE 4154 Class time: TR 11:40am-12:55pm Class location: Thurston 205 Course Communication: Piazza: http://piazza.com/cornell/spring2017/orie4154 Website[.] http://people.orie.cornell.edu/sbanerjee/ ORIE4154/orie4154s17.html Blackboard: http://blackboard.cornell.edu (Search for ORIE 4154)

Essential Course Information

Instructor Sid Banerjee Office: 229 Rhodes Hall E-mail: sbanerjee@cornell.edu Website: people.orie.cornell.edu/sbanerjee/ Office hours: Tuesday 3pm-5pm (or by appointment) Teaching Assistants Alberto Vera (email: aav39@cornell.edu) James Dong (email: jd748@cornell.edu;) Office hours: Monday, Wednesday 3-5pm Room no: TBD

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Why study revenue optimization? A canonical example

What is RM?



- Consider the decisions faced in selling a house?
 - When should we put it on the market?
 - What price should we ask?
 - Given an offer, should we accept it?
 - If there are no offers, should we <u>lower the</u> <u>asking price</u>? If so, <u>by how much</u>? <u>When</u>?

Courtesy: Huseyin Topaloglu



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- Hilton Honors program: demand management AirBnB Reputation mechanisms: market design

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Prerequisites:

- Probability: at the level of ORIE 3500
- Optimization: at the level of ORIE 3300
- Programming: (Ideally in Python)

Reference: Course notes posted online; no required textbook (refer to syllabus for textbook suggestions)



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- Optional project:
 - Used in place of either 3 assignment grades (after dropping lowest) OR the prelim grade
 - Used for determining $\mathsf{A}+\mathsf{grade}$
 - Ideally groups of 2-3



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- 3. Structure of available information





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