Managerial Economics/Strategy: Econ 308-001
Innovation Hall, Room 134; 3:00 -4:15 (Tuesday, Thursday)

Instructor: Professor Kevin McCabe, kmccabe@gmu.edu, (o) 703-993-9441

Office Hours: Wednesdays, 2:00-5:00, Room 5016, Metropolitan Bldg., Arlington Campus.

Overview: Every discipline of study endeavors to builds useful narratives about the world. Economics is no exception. We traditionally break down economics into microeconomics and macroeconomics with different narratives for each. In microeconomics there are three main narratives: price theory, game theory, and institutional theory. These narratives are subject to continuous change (some would even say improvement) and as such you should never believe you have learned the final word on any topic. The current narratives are largely based on the scientific method in an effort to connect economics to the other sciences. The power of the scientific method is to move as quickly as possible from 'thought experiments' to practical solutions, and to do so requires a great deal of decentralization or parallel processing within the field. With this in mind scientific narratives are designed to be logically consistent explanations of replicable data. Consequently mathematical models and computational algorithms are used to convey a narrative, and experiments and statistics are used to ground the narrative in the real world. There are traditionally two related performance measures with respect to scientific narratives. First, do they allow us to predict what will happen in the world, and second, do they allow us to build solutions to real world problems.

The prerequisite for this class is Intermediate Microeconomics which is largely a course on price theory with some introduction to game theory. In this course you explored the logically consistent narrative of the price system. The main branch of this narrative assumes that firms and households are self-interested, optimizing, price takers and that prices adjust to equilibrium and in equilibrium the choices firms and households make will result in the efficient use of our scarce resources. In many ways this course is designed to be the foundation for undergraduates in starting a career in economics. Those students who find they have an aptitude for economics will take more advanced courses to build on this foundation. They will take courses in game theory and institutional theory to learn more about the other important narratives in microeconomics. A history of economics thought course will teach them how these narratives evolved into what they are today. Econometrics will teach them how to apply these narrative to real world data. Field courses in industrial organization, public choice, labor economics, money, etc. will apply the narrative to specific economic questions. Finally, courses in experimental economics, economics system design, and computational economics will teach you how to use the scientific method to apply these narratives to real world problems.

Managerial economics/strategy is taught as a field course. It teaches students about business decision making. Traditionally such a course was about maximizing the shareholder value of the firm, and minimizing the cost of reaching productive goals. Steve Denning has this to say about that. http://www.forbes.com/sites/stevedenning/2012/10/31/dont-diss-the-paradigm-shift-in-management/ .

If, as Denning suggests, we need a paradigm shift it is in the practice of business decision making and not the theory of business decision making which has undergone significant paradigm shift over the last 20 years. First, we have a better understanding of the power of

markets, but also a better ability to design markets to avoid market failures. Second, we have a better understanding of the value of game theory and how to apply strategic thinking to organizational design. Third, we have a better understanding of the limits of cognitive computations in decision making and the effect this has on business decision making. This is now called behavioral economics. Fourth, we have a greater ability to apply Metrics, that is, applied econometrics, to big data to better model causation. Because of time limitation we will only cover the first, second, and third in this class, but I highly recommend you take a course on Metrics as well.

Prerequisites: Econ 306

Required Materials:

(RM) Ross M. Miller, Experimental Economics: How We Can Build Better Financial Markets, John Wiley and Sons, Inc., Hoboken New Jersey, 2002 (Paperback Version).

(JM) John McMillan, Games, Strategies, and Managers: How managers can use game theory to make better business decisions, Oxford University Press, 1996 (Paperback Version).

Student license to use Moblab. You will be sent an email on the morning of 1/21 asking you to register. The cost is $18. You need to join the class from Moblab's web-based student console, NOT their mobile app. However, once you have joined, you will use Moblab's mobile app in class to participate in experiments and answer questions.

Basic Course Structure: Week one is a getting organized week. Weeks three, seven, and twelve are set aside for team formation and team reports. The remaining weeks of the course will be organized as follows.

Tuesday: Advanced Assignment: Reading from RM or JM announced on Blackboard.
Demonstration Experiment (45 Minutes)
Class Discussion of Reading and Experiment (30 Minutes)

Thursday: Advanced Assignment: On Blackboard
Lecture with Questions (45 Minutes)
Team Meetings (30 Minutes)

Grading: You will be graded as follows:

Class participation (40%). So it is important that you come to class and do the necessary preparation to participate. You will be allowed two absences throughout the semester. You must inform Professor McCabe by email at least three days before an absence. Other extreme cases will be handled on a case by case basis.

Final team project paper (20%). Your team project is to design a solution to a business problem based on the material and readings covered in class. You may choose, either the design (either new or improved) of a market to buy or sell some kind of good, or the design of an institution (either new or improved) to improve the operations of some organization. Your final paper will be no more than 15 pages typed double spaced including figures and

references. More details will be given out in class. The paper must be sent to Professor McCabe by email no later than 5:00 p.m. on 5/11/2015.

Two team presentations (5% each). On the weeks of 3/3 and 4/7 you will do a ten minute team presentation in PowerPoint on the progress of your team project. More details will be explained in class.

Two individual reports (10% each). On the week of 3/3 and 4/7 you will be asked to type a one page review of another team's presentation. This review is due at the next class. More details will be given in class.

Team assigned grade (10%). So it is important that you come to class and do the necessary preparation to participate. Each team member will send Professor Mccabe a one page typed assessment of their team members. This assessment is private and cannot be shared with the other team members. It will be one page typed. The assessment will include what each team member did on the project, a grade from 0 to 10, and a reason for the grade. Professor McCabe will drop your lowest grade and average the remaining grades to get your team assigned grade.

Students with Disabilities: If you have a learning or physical difference that may affect your academic work, you will need to furnish appropriate documentation to the Office of Disability Services. If you qualify for accommodation, the ODS staff will give you a form detailing appropriate accommodations for your instructor. In addition to providing your professors with the appropriate form, please take the initiative to discuss accommodation with them at the beginning of the semester and as needed during the term. Because of the range of learning differences, faculty members need to learn from you the most effective ways to assist you. If you have contacted the Office of Disability Services and are waiting to hear from a counselor, please tell me.

Honor Code: George Mason University is an Honor Code university; please see the Office for Academic Integrity for a full description of the code and the honor committee process. What does academic integrity mean in this course? Essentially this:

(1) When you are responsible for a task, you will perform that task. The individual reports are to be done completed independently. Any interaction with others during these times is in violation of the honor code.

(2) When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form.

(3) Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions.

Course Syllabus: The content of this syllabus might undergo some further revision.

1/20 Overview of class. 1/21 Invite to Moblab. 1/22 Microeconomic Systems, Using Moblab
1/27 Price Discovery Experiment. 1/29 Alternatives to Double Auction, Entrepreneur briefs due
2/3 Entrepreneur presentations; Team Formation (3 or 4), Work on projects. 2/5 Work on projects.
2/10 Asset Market Experiment. 2/12 Solving Bubbles Problems
2/17 Asymmetric Information Experiment. 2/19 Solving Asymmetric Information Problems
2/24 Auction Experiment. 2/26 Market Design.
3/3 First Report on Project. 3/5 First Report on Project.
3/10 Spring Break
3/17 Risk Assessment Experiment. 3/19 Risk Sharing
3/24 Guessing Experiment. 3/26 Search and Information
3/31 Beauty Contest Experiment. 4/2 Coordination and Rationality
4/7 Second Reports on Project. 4/9 Second Report on Project
4/14 Voluntary Contributions Game. 4/16 Property Right Solutions
4/21 Bargaining Games. 4/22 Negotiating Strategies
4/28 Effort Game. 4/30 Contracting
5/7 Reading day – No Class
5/11 Final Papers Due