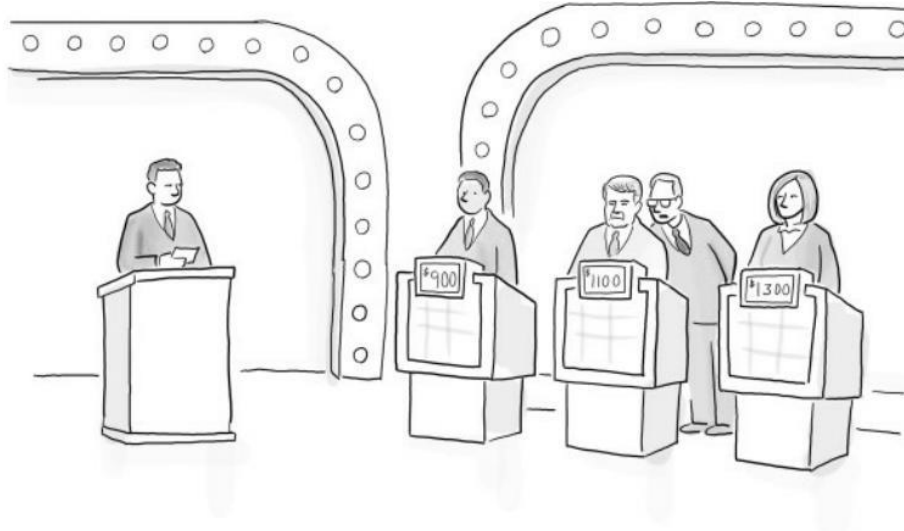




MBA 5910: Game Theory



"Guys. It's time for some game theory."

PAUL
NOTA

INSTRUCTOR:

Travis Roach, Ph.D.

Office: Thatcher 221

Phone: 405-974-2934

Email: troach2@uco.edu

Office Hours: Zoom by appointment

UCO MBA MISSION STATEMENT:

The MBA Program at the University of Central Oklahoma provides a unique learning experience that will give each graduate the managerial and leadership skills to be productive, creative, ethical, and engaged, excelling in everyday decision-making in varied business environments.

UCO MBA Values:

1. Professionalism at all times.
2. Integrity in all actions.
3. Intensity in all pursuits.
4. High expectations of ourselves and those around us.
5. Be a leader that understands when to follow.

MBA LEARNING GOALS:

UCO MBA graduates:

1. Identify both problems and opportunities in a variety of organizational contexts, presenting solutions that are both unique and viable.
2. Possess a depth and breadth of functional knowledge that allow them to provide key insights to organizational issues by being able to cross functional boundaries.



3. Display behavioral competencies necessary for success as a 21st century manager.
4. Are capable team members who can adapt to leading or following, as the situation requires.
5. Are effective communicators, both oral and written, who understand both the audience and the message before crafting the appropriate response.

COURSE DESCRIPTION:

The intent of this course is to prepare business leaders to make optimal decisions that are guided by economic theory in a wide variety of situations and market structures. Insight and creativity are integral characteristics of an effective manager which can be cultivated with the study of economics in general, and game theory in particular. This course will further these skills by considering a multitude of real-world problems and case studies as well as hands on project-based learning.

TRANSFORMATIVE LEARNING STATEMENT:

The University is committed to providing students transformative learning experiences in six core areas: discipline knowledge; leadership; research, creative and scholarly activities; service learning and civic engagement; global and cultural competencies; and health and wellness. This class supports these goals by:

1. Developing students' basic knowledge of game-theoretic decision making (Discipline Knowledge)
2. Developing analytical and quantitative techniques necessary to be a quantitatively literate, strategic manager (RCSA, Discipline Knowledge)
3. Discuss the role of the manager and business leader, from an economic point of view, in nurturing a work environment that empowers globally-minded civic leaders that are cognizant of the larger impact of their firm's practices on employee, customer, and societal health and sustainability (all)

REQUIRED BOOKS/MATERIALS:

- Games, Strategies, and Managers; John McMillan

COURSE LEVEL LEARNING OUTCOMES:

By the end of the course the successful student will:

- Effectively use the tools of game theory in a variety of business situations including inter-personal decisions and competitive firm behavior
- Multistage decision making and optimization
- Optimal pricing strategies and timing by market structure

WRITING GUIDELINES:

All MBA courses follow the College of Business Writing Guidelines (see Appendix A).

COMMON RUBRICS:

MBA courses draw from a common pool of writing and presentation rubrics (see Appendix A).

MBA Policy on Attendance:

All students are expected to attend each and every class period. However, each instructor develops their own specific attendance policy.

**MBA Policy on Professional Dress:**

Any in class presentation which is planned in advance requires professional dress from all individual and/or team members presenting. If the instructor does not explicitly state a dress requirement, the MBA Policy here defaults to:

- Business Professional:
 - For men: 1) matching suit or 2) dress pants and dress suit, with matching sport coat and tie.
 - For women: 1) skirt, blouse and/or dress shirt or 2) professional pantsuit with dress shirt or blouse

MBA Policy on Electronic Mail Communications:

As professionalism is one of the core values of the UCO MBA, we have a policy relating to reading and returning emails. Specifically, any email communication received by students or faculty in the MBA program that is deemed unprofessional may be returned to the sender by the recipient, and marked "Unprofessional communication." Examples *may include, but are not limited to*:

- Emails failing to properly address the receiver (e.g., Dude or Hey vs. Dr./Mrs./Mr.)
- Emails from an unprofessional or non-corporate email (e.g., superfunguy@hotmail.com)
- Emails utilizing slang language

ACCOMMODATIONS:

The University of Central Oklahoma complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Students with disabilities who need special accommodations must contact the assistant director of Disability Support Services, Kim Fields, in room 309 of the Nigh University Center, (405) 974-2549. It is the student's responsibility to contact the instructor as soon as possible after the DSS has verified the need for accommodations to ensure that such accommodations are implemented in a timely fashion.

ACADEMIC AFFAIRS INFORMATION SHEET:

The University of Central Oklahoma Student Information Sheet and Syllabus Attachment is available and currently located at the URL provided below. Students are required to read and familiarize themselves with this document. The information contained in this document is considered part of the course syllabus.

<http://www.uco.edu/academic-affairs/files/aa-forms/StudentInfoSheet.pdf>


SCHEDULE OF COURSE TOPICS:

Week	Topic	Deliverables
1	1 – Game Theory Basics	
2	1 – Repeated Games, Extensive Form Games	Read part 1, problem set 1
3	2 - Negotiating	Read part 2, problem set 2
4	3 - Contracting	Read part 3, problem set 3 →Presentation 1
5	Game Night/Movie Night	
6	4 - Bidding	Read part 4, problem set 4
7	5 – The Strategic Manager	Read part 5, problem set 5
8	Pricing Games, Advanced Games	Combined Project write-up and presentation

GRADING STRUCTURE:

- Problem Sets – 40%
- Group Presentation 1 – 20%
- Combined Project (Presentation) – 20%
- Combined Project (Write-up)– 20%