ECONOMICS 410.01
GAME THEORY
SPRING 2021, TTH 11:00 - 12:20 PM
PROFESSOR LISA ANDERSON
MEETING ROOM: SWEM LIBRARY, FORD ROOM
JANUARY 27, 2021 VERSION

Due to the ongoing pandemic, details listed on this syllabus are subject to change. I will make every effort to notify you of any significant changes at least two weeks in advance.

Assigned Classroom/Meeting Details
        The Ford Room in Swem Library is available for you to use every Tuesday and Thursday from 11 to 12:20. In general, I will meet with you during our regular class time using Zoom. The meeting link is: https://cwm.zoom.us/j/91645607658 and the ID is: 916 4560 7658. Please join the Zoom session with your video <u>on</u> and your audio <u>muted</u>.   If conditions permit, I will periodically meet in person with you in our assigned classroom. You must take exams in person in our assigned classroom.

Course Description
        Game theory is a set of mathematical models used to study how individuals make decisions when their actions affect each other. The emphasis of the course material is a mix of formal theory and applications, including bargaining, public choice and information. While economists turn to game theory to model many situations, the field is firmly rooted in mathematics. Thus, you will struggle in the course if you are not very comfortable with college-level algebra and basic calculus. In addition to mathematical modeling, this course will make extensive use of economics experiments to identify situations where game theory predicts actual behavior and to learn more about why game theory fails to predict behavior in some settings.

A Common Complaint
        The most common complaint I receive about this course is that "the exams are much harder than the sample problems." Of course **the exams are much harder than the sample problems**. When working on sample problems, you do not have time limits. You can use your text and notes to solve these problems. The sample problems cover material from only one chapter of the text, while an exam combines material from many chapters. To earn a good grade in this course, you must be able to take material from your text and class notes and apply it to new problems. Many people find that difficult, and the average grade in this course in any given semester is about one and a half letter grades lower than the average GPA reported on course evaluations.

Useful Information
        Office: Tyler Hall, Room 265
        Office Phone: 221.2359 (I will not be in my office on a regular basis during the Spring 2021 semester so please contact me via e-mail.)
        Office Hours: by appointment
        E-mail: lisa.anderson@wm.edu

Important Dates
        Last day to add/drop and for Juniors and Seniors to elect to take a course Pass/Fail or Audit: February 5.
        Last Day to Withdraw: March 29.
        Spring Break Day: Thursday, March 4.
        Midterm Exam: Tuesday, March 9. This exam will cover chapters 1 – 6.

Spring Break Day: Tuesday, April 6.
Group projects begin on April 20.
Last Day of Class: May 6.
Cumulative Final Exam: Wednesday, May 12, 2 to 5 pm. Consult the final exam schedule later in the semester to verify this date and time: https://www.wm.edu/offices/registrar/calendarsandexams/examschedules/spring21exam/index.php#start

Required Reading

The text for this course is *Games of Strategy*, 5th Edition, by Dixit, Reiley and McAdams. Other readings and class information will be available through the blackboard system.

Grades and Policies

Your grade for this course will come from class participation and a group project (20%), an optional midterm exam (35%), and a **cumulative** final exam (45% or 80%). Class participation includes attending Zoom lectures and participating in class experiments. Details about the group project are available on Blackboard.

It is your responsibility to back up all files. I do not grant extensions on assignments because of computer viruses, dead hard drives, stolen laptops, etc.

There will be **no makeup exams**, no exceptions. In the event that you do not take the midterm exam, your final exam will count for 80% of your course grade. I cannot change the time or date of the final exam, so please plan your travel accordingly.

Please do not tell me what grade you <u>need</u> in this class. If you have a goal to earn a certain grade in this class, you should choose behaviors (attending class, studying for exams, etc.) to help you achieve that goal.

Accommodations

William & Mary accommodates students with disabilities in accordance with federal laws and university policy. Any student who feels they may need an accommodation based on the impact of a learning, psychiatric, physical, or chronic health diagnosis should contact Student Accessibility Services staff at 757-221-2512 or at sas@wm.edu to determine if accommodations are warranted and to obtain an official letter of accommodation. For more information, please see www.wm.edu/sas.

Honor Code

William & Mary has had an honor code since at least 1779. Academic integrity is at the heart of the university, and we all are responsible for upholding the ideals of honor and integrity. The student-led honor system is responsible for resolving any suspected violations of the Honor Code, and I will report all suspected instances of academic dishonesty to the honor system. The *Student Handbook* (**www.wm.edu/studenthandbook**) includes your responsibilities as a student. Your full participation and observance of the Honor Code is expected. To read the Honor Code, see **www.wm.edu/honor**.

Course Outline and Readings

I.   Rules of the Game

      A.   Introduction to Game Theory, Chapters 1-2
      B.   Sequential Games, Chapter 3
      C.   Simultaneous Games with Pure Strategies, Chapters 4 - 5