Mathematical Economics	**Professor Tra**
Eco 740-1001	**Office: BEH 525**
Fall 2016	**Phone: 895-3366**
M 5:30pm-8:15pm	**constant.tra@unlv.edu**
BEH 215	**Hours: Mondays 2pm-3pm**

Required Text: *Mathematical Economics*, 3ⁿᵈ edition*, by Jeffery Baldani, James Bradfield and Robert Turner (BBT).

Recommended Text: Schaum's Outline of Introduction to Mathematical Economics, 3ⁿᵈ edition, by Edward Dowling. Available on Amazon.com. The Schaum's Outline text proves most useful for those students who need a lot of practice with their math skills.

Student Learning Objectives: Students who successfully complete this course will be able to apply the tools of differential calculus, matrix algebra, optimization, and integral calculus to economics. All of the tools covered will receive illustration with applications from both microeconomics and macroeconomics.

Prerequisite: The course material assumes that students have completed one semester of Calculus (Math 176 or Math 181).

Grading Procedure:
Midterm exam (25%), final exam (35%), homework (40%)

Letter grades will be assigned as follows:

94% - 100% = A	84% - 86% = B	70% - 76% = C
90% - 93% = A-	80% - 83% = B-	60% - 69% = D
87% - 89% = B+	77% - 79% = C+	Below 60% = F

All percentages are rounded to the nearest integer.

Homework policy:
Homework will be assigned on most weeks. On the due date, homework will be collected at the beginning of class. There will be no exceptions. Homework will be graded on clarity, explanation of steps, and final answers. Handwritten homework is acceptable but must be clearly readable. Any unreadable portion of a student's homework will not receive credit. There will be no excuses.

WebCampus: This course is a WebCampus course. I will post the course syllabus, assignments, other handouts, and so on at the WebCampus site. You can access this site 24/7, except for scheduled maintenance on the system and unexpected downtimes due to technical glitches.

Make-up Policy: There will be no make-ups for homework assignments or exams.

Student Conduct Policy: Student behavior and language should be respectful at all times toward other classmates and the instructor. Inappropriate behavior will not be accepted in class. A student may be asked to leave the classroom if the instructor considers his/her behavior inappropriate.

Rebelmail: By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. **Emailing within WebCampus is acceptable.**

Preliminary Course Schedule (all dates are subject to change):

Week Class date	Material Covered	Required Reading Assignments & Homework
Week 1 8/29	Review of differential calculus (derivatives, single-variable optimization)	Textbook chapters: 1.3, 1A.2-1A.5, 2.3, 2.4, 2.7 Homework 1: Due week 3
Week 2	**No Class on Labor Day**	
Week 3 9/12	Introduction to matrix algebra	Textbook chapters: 3.2-3.9 Homework 2: Due week 5
Week 4 9/19	Introduction to matrix algebra (cont'd) Applications of matrix algebra to linear models	Textbook chapters: 4.2, 4.3, 4.7, 4.8
Week 5 9/26	Multivariate Calculus and Applications to Economics	Textbook chapters: 5.2-5.4, 6.2, 6.5-6.7 Homework 3: Due week 6
Week 6 10/3	Multivariate optimization theory	Textbook chapters: 7.1-7.10 Homework 4: Due week 8
Week 7 10/10	Economic applications of multivariate optimization	Textbook chapters: 8.2, 8.3, 8.6, 8.8
Week 8 10/17	**Midterm Exam (covers weeks 1-7)**	
Week 9 10/24	Constrained optimization	Textbook chapters: 9.2, 9.3 Homework 5: Due week 11
Week 10 10/31	Economic applications of constrained optimization Textbook chapters: 10.2-10.4, 10.8	
Week 11 11/7	Optimization with inequality constraints	Textbook chapters: 11.3-11.5, 12.3, 12.4, 12.6 Homework 6: Due week 12
Week 12 11/14	Homework 5 & 6 solutions Value functions and the envelope theorem	Textbook chapters: 13.2-13.6 Homework 7: Due week 14
Week 13 11/21	Duality and other economic applications of value functions and the envelope theorem	Textbook chapters: 14.2-14.5, 14.7, 14.8
Week 14 11/28	Introduction to integral calculus and economic applications	Textbook chapters: See WebCampus for handout Homework 8: Due week 15
Week 15 12/5	Final review	
Week 16 TBD	**FINAL EXAM (covers weeks 9-15)**	

UNLV Policies:

Academic Misconduct – Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the *Student Academic Misconduct Policy* (approved December 9, 2005) located at: http://studentconduct.unlv.edu/misconduct/policy.html.

Copyright – The University requires all members of the University Community to familiarize themselves and to follow copyright and fair use requirements. **You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws.** Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: http://www.unlv.edu/provost/copyright .

Disability Resource Center (DRC) – The UNLV Disability Resource Center (SSC-A 143, http://drc.unlv.edu/, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Religious Holidays Policy – Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor no later than the end of the first two weeks of classes, January 29, 2016, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: http://catalog.unlv.edu/content.php?catoid=6&navoid=531.

Transparency in Learning and Teaching - The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information:
https://www.unlv.edu/provost/teachingandlearning
https://www.unlv.edu/provost/transparency

Incomplete Grades - The grade of I – Incomplete – can be granted when a student has satisfactorily completed all course work up to the withdrawal date of that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. A student who receives an I is responsible for making up whatever work was lacking at the end of the semester. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

Library - Students may consult with a librarian on research needs. For this class, the web address for the subject librarian is: http://guides.library.unlv.edu/prf.php?account_id=46057. UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at: https://www.library.unlv.edu/.

Tutoring – The Academic Success Center (ASC) provides tutoring and academic assistance for all UNLV students taking UNLV courses. Students are encouraged to stop by the ASC to learn more about subjects offered, tutoring times and other academic resources. The ASC is located across from the Student Services Complex (SSC). Students

may learn more about tutoring services by calling (702) 895-3177 or visiting the tutoring web site at: http://academicsuccess.unlv.edu/tutoring/.

UNLV Writing Center – One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: http://writingcenter.unlv.edu/

Final Examinations – The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: http://www.unlv.edu/registrar/calendars