Section 1
Instructor, Course Information & Objectives

Advanced Academic Programs
Zanvyl Krieger School of Arts and Sciences
Johns Hopkins University

40.304 – Math Methods for Economists

Instructor Information

Instructor:	Ken Danger
Telephone Number:	(202) 418 - 5576
Email Address:	kdanger1@jhu.edu
Office Hours:	by appointment

Course Description

440.304 – Math Methods for Economists
After a review of single-variable Differential Calculus, this course covers those parts of Integral Calculus, Multivariable Calculus, Optimization Theory, and Linear Algebra, which are necessary to pursue economics. Applications to economics are emphasized.

Prerequisite: A course in Calculus

Section 2
Course Materials

Textbook

Required: Mathematics for Economists by Carl Simon and Lawrence Blume.

ISBN-10: 0393957330
ISBN-13: 978-0393957334
Publisher: W. W. Norton & Company; 1 edition (April 17, 1994)

This text book can be purchased on the internet at places like Amazon.

Other Readings

Optional: Fundamental Methods of Mathematical Economics by Alpha Chiang and Kevin WainWright.

Publisher: McGraw-Hill/Irwin; 4 edition (October 2004)

ISBN-10: 0070109109

ISBN-13: 978-0070109100

This text book can be purchased on the internet at places like Amazon

Specific Technology Requirements & Skills for this Course

Learning online requires some basic knowledge of computer technology. At a minimum, you need to be able to:

- Navigate in and use Blackboard; the Blackboard Student Orientation course on your "My Institution" page
- Create and save MS Word documents; see MS Word tutorials for PC users (all versions); Word Help for Mac users
- Find basic resources on Internet; see Internet Tutorials
- Create and organize files & folders on your computer
- Send, receive, and manage email
- Scan documents and upload to internet

Section 3

About Your Course

Course Topics

Unit 1: One variable calculus
Unit 2: Second derivatives; graphing functions; chain rule
Unit 3: Exponents and logarithms
Unit 4: Integration rules and Definite Integrals
Unit 5: Systems of linear equations
Unit 6: Matrix inversion and Crammer's rule
Unit 7: Midterm
Unit 8: Calculus of several variables
Unit 9: Differentials and total derivatives
Unit 10: Multivariate unconstrained optimization – first order conditions
Unit 11: Multivariate unconstrained optimization – second order conditions
Unit 12: Multivariate unconstrained optimization – first and second order conditions

Unit 13: Kuhn-Tucker Conditions
Unit 14: Final

Directions for Students

Next Steps: Carefully review the remaining sections of the syllabus section of this course before beginning Unit 1 activities, which are located in the **Lessons** folder in your Blackboard Course.

- Once you feel that you are ready to dive into the first week's activities, click on the **Lessons** button on the left-side navigation. Then, click on **Unit 1** and begin with the Summary and Objectives.

What To Expect in this Course

This course is 14 weeks in length. Please review the course syllabus thoroughly to learn about specific course outcomes and requirements.

Each week, you will complete readings that may include videos, multimedia presentations, and web-based resources.

In this course, you will also experience online learning activities, which include discussion boards and online multimedia presentations.

Be sure to refer to the Student **Checklist** each week, which provides a week-at-a-glance and shows targeted dates for the completion of activities.

Section 4
Assessments and Grading Policy

Assignments and Exams

There are two tests (a midterm and a final) and 12 problem sets. Dates for each problem set and exam are identified below. Your final grade is based on the following weights:

Problem sets – 20%
Midterm – 40%
Final – 40% The final is a comprehensive exam that covers the entire course.

Midterm and Final - How they work?

You have 6 hours to complete the midterm and final after you down load the exam. Thus, after you download it, you must submit your answers within six hours. You must take the midterm and final within 4 days of the day that the exam is first available. Thus, if the first day you can take the exam is Sunday, you can take the exam on Monday, Tuesday, or Wednesday.

Assignments/Exams	**Due Dates**	**Points Possible**
Assignment #1:	9/4/16	*100*
Assignment #2:	9/11/16	*100*
Assignment #3:	9/18/16	*100*
Assignment #4:	9/25/16	*100*
Assignment #5:	10/2/16	*100*
Assignment #6:	10/9/16	*100*
Midterm	**10/15/16-10/18/16**	***100***
Assignment #8:	10/23/16	*100*
Assignment #9:	10/30/16	*100*
Assignment #10:	11/6/16	*100*
Assignment #11:	11/13/16	*100*
Assignment #12	11/20/16	100
Assignment #13	12/4/16	100
Final:	**12/9/16-12/12/16**	***100***

Grading

Late problem sets will be graded as a zero. All work must be shown. Extra credit is not available in this course. Grades are NOT based on a curve. The grading schema applied to this course is as follows:

Letter Grade	Percentage Range
A+	98% to 100%
A	94% to less than 98%
A-	90% to less than 94%
B+	88% to less than 90%
B	84% to less than 88%
B-	80% to less than 84%
C	70% to less than 80%
F	Less than 70%

Assignment Guidelines

How should assignments be submitted?
The weekly directions will indicate where assignments will be posted (e.g. in assignment tool within the Lessons folder). If submitting documents to a assignment or forum, please specify the assignment name in the discussion thread and/or the document title. When creating files, include your name and the name of the assignment in the file title. Also, please be sure to only include one period in file names. The period should be between the file name and the extension. For example: mmentzer_assignment1.doc

Important. Please submit ONE (and only one) file. Please submit a PDF file only. Please write your name at the top of the document. Note: You do not need to type your answers. If you do not submit a PDF file or write your name on your document, 10 points will be subtracted from your score.

When will assignments be due?
Assignment due dates are listed in this syllabus and the weekly checklists. Assignment due dates can also be found within the Assignment Guidelines area of your online classroom. The instructor via an announcement in Blackboard will announce changes.

When will completed assignments be returned?
The instructor will aim to return assignments to you within 5-7 days following the due date, depending on the length of the assignment. You will receive feedback under the My Grades link on the left hand menu of your course.

What is the policy for late assignments?
You are expected to contact your instructor in advance if you think you cannot meet an assignment deadline. However, if an assignment is late and prior

arrangements have not been made with the instructor, the assignment score will be zero.

Time Management Expectations

What is the time demand and schedule of the course?
Because this is a graduate-level course that is offered in a condensed format, the rigor and time commitment is higher than a traditional 15-week semester course. It is expected that you look ahead to schedule your time. Plan to complete coursework across several days of the week rather than all in one day.

Section 5
Course Participation & Communication Policy

Participation

What are the participation requirements?
You are expected to log into the Blackboard at least (three) times a week, though a daily check-in is recommended. It is your responsibility to read all announcements and discussion postings within your assigned forums. You should revisit the discussion multiple times over the week to contribute to the dialogue.

Network Etiquette (i.e. “Netiquette”)

In this course, online discussion will be primarily take place in our online discussion board. In all textual online communication it’s important to follow proper rules of netiquette.

What is netiquette? Simply stated, it's network etiquette -- that is, the etiquette of cyberspace. And "etiquette" means the social and culture norms of communicating with others in a proper and respectful way. In other words, netiquette is a set of rules for behaving and interacting properly online.

The Netiquette “Core Rules” linked below are a set of general guidelines for cyberspace behavior. They probably won't cover all situations, but they should give you some basic principles to use in communicating online.
For Netiquette Core Rules visit this web page: www.albion.com/netiquette/corerules.html

Contacting the Instructor

The instructor for this course is Ken Danger *(kdanger1@jhu.edu).*
Feel free to contact your instructor with comments, questions, and concerns. You will receive a response within 24-48 hours.

All email messages will be sent to you via your JHU email account, so you should be in the habit of checking that account every day or you should ensure that your JHU email account forwards messages to another account of your choice.

Section 6

Course Protocols & Getting Help

Course Protocols

How will I know about changes to the course?
Frequently, you will find new announcements posted in the Announcements, which contain information about current course activities that you are working on and any changes to the course. Please check announcements every time that you log into the Bb.

How should I communicate with others in this course?
You should communicate often with your classmates and with your instructor. The majority of communication will take place within the Discussion forums. When you have a question about an assignment or a question about the course, please contact your instructor, or post your question in the course's "Syllabus & Assignment Question" forum.

Are there any requirements for sending e-mail messages?
When you send an e-mail message to the instructor or to another participant in the course, please observe the following guidelines:
Include the title of the course in the subject field (e.g., JHU 40.304 – Math Methods for Economists).

- Keep messages concise, and check spelling and grammar.
- Send longer messages as attachments.
- Sign your full name (the sender's email is not always obvious).

Getting Help
You have a variety of methods to get help on Blackboard. Please consult the help resources listed in the online classroom for additional information.
Important Note: If you encounter technical difficulty in completing or submitting any online assessment, immediately contact the 24-hour Help Desk. Also, contact your instructor at the email address listed atop this syllabus.

Section 7
University Policies

General
This course adheres to all University policies described in the academic catalog. A few to pay close attention to are noted below.

Students with Disabilities
Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the Disability Accommodations page. Further information and a link to the Student Request for Accommodation form can also be found on the Disability Accommodations page.

Ethics & Plagiarism
JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor.
Read and adhere to JHU's Notice on Plagiarism.

Dropping the Course
You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the Academic Calendar.

Getting Help
You have a variety of methods to get help on Blackboard. Please consult the help listed in the "Blackboard Help" link for important information. **If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the AAP online support page**. Also, contact your instructor at the email address listed atop this syllabus.