Course Description

Algebraic operations; Equations; Functions and Graphs; Mathematical computations in economics and business; Limits; Continuity; Derivatives and differentiation techniques; Second order derivatives; Optimization; Graphic description of functions, Global extremum of a continuous function, the intermediate value theorem, rolle's theorem, Integrals.

Course Goals

Functions and limits and their applications.

Grading

- A homework assignment will be posted once a week. You do not need to turn it in
at any time. However, past experience shows that students who do not consistently complete every homework assignment are unlikely to pass the final exam.

- **Weekly problem sets**: There will be 12 problem sets, one problem set per weekly lesson that is on our syllabus, which must be completed in full. Each week the previous week's problem set solution will be posted on the course website in the form of detailed videos.

- **Final exam**: There will be one all-inclusive, comprehensive final exam. The final exam will cover material from the assigned textbook readings, online videos, homework assignments, as well as class meetings, and will include several open questions.

  A formula sheet will be provided with the exam, an example of which will be published on the course's moodle website.

- The final course grade will be based entirely on the final exam grade.

- **You must pass the exam in a grade of 60 in order to pass the course.**

### Learning Outcomes

**General Instruction for making progress in this course**

This course requires your full attention throughout the semester. This means that you are expected to:

1. Read the relevant chapters of the textbook and watch the theory videos (which will be posted on the course website) ahead of each class meeting.
2. Attend class regularly.
3. Engage in class discussion: listen carefully to the lecturer and raise your hand to ask him questions about parts of the material that you do not understand.
4. Take careful notes during class meetings.
5. Solve the weekly problem sets by the due date (see below).
6. Review solution videos and study your mistakes.
7. Consult your lecturer on issues that are not resolved by any of the above means.
8. The best rule of thumb is to devote three hours outside of class to the study of this material for each hour you spend in class.

### Lecturer Office Hours

**Availability**: The lecturer will make every effort to be available for consultation. You may schedule a meeting with your lecturer at a mutually agreed time. You can contact your lecturer via email. He will attempt to respond to all emails within 72 hours, and usually much sooner.
**Additional Notes**

**Classroom decorum:** This course is conducted on a college level, adult and mature basis. You are expected to behave in class in a way that does not distract yourself and other students from learning. In particular, this means that you are expected to:

a) Not engage in any discussions with other students (whether regarding the course material or not).

b) Keep your computer, mobile phone and any other device silent.

c) Arrive to class meetings on time, stay until the end of the meeting, and refrain from traffic in and out of the classroom during the meeting.

**Reading List**