

# Lecture 1. Warming up

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# Knowing each other

1. Name;
2. Home country;
3. Current and previous program (Econ/Ag Econ; MS/PhD);
4. Research areas;
5. Expectation of the course.

(Up to 2 minutes)

# The course

1. Review of mathematics up to the master's level, but more weights are placed on the undergraduate levels;
2. Advanced materials are labelled with “\*”;
3. There will be 10 sessions for mathematics and 3 sessions for R (a start-up);
4. Attendance is not required;
5. The only course focusing on solving mathematic problems;
6. Questions are welcomed.

# Why mathematics?

1. A useful tool to simplify the real world issues and to understand economic problems:
  - What would a profit maximizing farmer do when fertilizer is becoming more expensive?
  - What would a utility maximizing consumer do when goods are becoming cheaper?
  - How do the price risks affect the import allocation?  
(Muhammad, 2012).
2. Very important for quantitative studies:
  - How to estimate or parameterize an economic model? (Villoria and Hertel, 2011)
  - Econometrics: what is ordinary least squares? What does “least squares” mean?

# Following ups

1. Class time;
2. First “assignment” by tomorrow morning at 10:00 am.

End.