Class Description:

Prerequisites: A Statistics class covering probability, estimation, confidence intervals and hypothesis testing.

Aim of the Course: Econometrics allows us to bridge theory about economic behavior both at the macro and the micro levels and measurement, that is the quantification of some observable phenomena. In this course we will take statistical instruments, probability and inference, and apply them to the workhorse of econometrics, i.e. the linear regression model. In it the goal is to ascertain whether the information we have available in the form of variables measured on individuals is of any use in determining the outcome of a variable of interest. While statistical association is always possible, econometrics is primarily concerned with the capability of this model to be used for prediction (i.e. evaluate the response in correspondence of hypothetical features in an individual), policy analysis (i.e. studying the conditions under which we can think of manipulating some instrument available to the policy maker, think of a tariff on imports, and determine the possible outcome - think of corresponding future growth). We need to navigate through technical dexterity (understanding the tools) and empirical relevance (applying the tools): using a software such as STATA or R will take away the burden on formula memorization and will allow us to focus on interpretation of the results.

Instructor Details:

Name: Giampiero M. Gallo
NYUGlobal Home Email Address: giampiero.gallo@nyu.edu
Teaching Assistant: Giulia Caprini giulia.caprini@eui.eu
Office Hours: After class on Monday or by appointment/Skype
Villa Ulivi Office Location: Top Floor
Villa Ulivi Phone Number: +39 055 5007 300

Desired Outcomes:

On completion of this course, students should:

- Have improved their mastery of economic- and business-related concepts;
- Have performed graphical and quantitative treatment of the theories;
• Have made relevant connections between theory and real-world examples, through references to media material, readings or case studies;
• Find an increased interest to read economic and business-related materials in the media.

Assessment Components

• Attendance and Participation: 20%
• Written Assignments (five Problem Sets): 20%
• Midterm Exam: 25%
• Final Exam: 35%

At the end of each class, we may suggest a kahoot game with multiple choice questions on the day’s issues, which will be answered via an app to be downloaded from Google Play or Apple Store.

Failure to submit or fulfill any required course component results in failure of the class.

Assessment Expectations:

• Grade A: The student’s work demonstrates an understanding of the subject that goes beyond assigned course readings. The student writes essays/exam questions that are an original synthesis of source materials, demonstrating the ability to evaluate source material critically. Written arguments are clear, well-organized and well-presented; oral presentations are concise, incisive and supplemented by appropriate visual materials. The student has distinguished himself/herself throughout the course of the semester for his/her contributions to class discussion.

• Grade B: The student’s work shows a clear understanding of assigned readings and materials covered in class. The student writes clear, well-organized and well-presented essays/exam questions; oral presentations are concise, incisive and supplemented by appropriate visual materials. The student is prepared in class and asks relevant questions.

• Grade C: The student’s work shows a basic understanding of the subject treated in assigned readings and covered in class. However, written and/or oral work is deficient in one or more of the following areas: clarity, organization or content. The student’s work is generally in need of improvement.

• Grade D: The student’s work shows occasional understanding of the subject treated in assigned readings and covered in class. Written and/or oral work is deficient in one of more of the follow areas: clarity, organization or content. The student does not participate in class discussion and has not frequented the instructor’s office hours.

• Grade F: The student’s work does not demonstrate understanding of the subject treated in assigned readings and covered in class. Written and/or oral work are either insufficient or are not submitted. The student appears unprepared in class and has not frequented the instructor’s office hours.

Grading Guidelines

A=94-100

A minus=90-93
B plus = 87-89
B = 84-86
B minus = 80-83
C plus = 77-79
C = 74-76
C minus = 70-73
D+ = 67-69
D = 65-66
F = below 65

Grading Policy:
Please refer to Assessment Expectations and the policy on late submission of work

Academic Accommodations:
Academic accommodations are available for students with documented disabilities. Please contact the Moses Center for Students with Disabilities at 212-998-4980 or see the Moses Center for further information.

Students with disabilities who believe that they may need accommodations in a class are encouraged to contact the Moses Center for Students with Disabilities at (212) 998-4980 as soon as possible to better ensure that such accommodations are implemented in a timely fashion. For more information, see Study Away and Disability.

Attendance Policy:

Study abroad at Global Academic Centers is an academically intensive and immersive experience, in which students from a wide range of backgrounds exchange ideas in discussion-based seminars. Learning in such an environment depends on the active participation of all students. And since classes typically meet once or twice a week, even a single absence can cause a student to miss a significant portion of a course. **To ensure the integrity of this academic experience, class attendance at the centers is mandatory, and unexcused absences will be penalized with a two percent deduction from the student’s final course grade.** Students are responsible for making up any work missed due to absence. Repeated absences in a course may result in failure.

For courses that meet once a week, one unexcused absence will be penalized by a two percent deduction from the student’s final course grade. For courses that meet two or more times a week, the same penalty will apply to the number of class times over a single week
Excused Absences:
In case of absence, **regardless of the reason**, the student is responsible for completing missed assignments, getting notes and making up missed work in a timely manner based upon a schedule that is mutually agreed upon between the faculty member and the student. **The only excused absences are those approved by the Office of Academic Support**; they are as follows:

**Absence Due to Illness**
- If you are sick, please see a doctor. Contact the Office of Student Life for assistance.
- For absences that last for two or more consecutive days, a **doctor's certificate, “certificato medico”** is required. The doctor will indicate in writing the number of days of bed rest required. Please note these certificates can only be obtained on the day you see the doctor and cannot be written for you afterwards.
- Absences can ONLY be excused if they are reported WITHIN 48 HRS of your return to class via the online [NYU Florence Absence Form](#)
- OAS will not accept a student email or telephone call regarding an absence due to illness
- OAS will only notify faculty of absences REPORTED on the ABSENCE FORM
- The Office of Student Life, when assisting you in cases of severe or extended illness, will coordinate with the Office of Academic Support to properly record your absences

**Due to Religious Observance**
- Students observing a religious holiday during regularly scheduled class time are entitled to miss class without any penalty to their grade. This is for the holiday only and does not include the days of travel that may come before and/or after the holiday
- Information regarding absences due to religious observance must be provided at least SEVEN DAYS PRIOR to the date(s) in question using the online [NYU Florence Absence Form](#)
- Please note that no excused absences for reasons other than illness can be applied retroactively.

**Due to a class conflict with a program sponsored lecture, event, or activity**
- All students are entitled to miss one class period without any penalty to their grade in order to attend a lecture, event or activity that is sponsored by the Academic Program.
- Information regarding absences due to a class conflict must be provided at least SEVEN DAYS PRIOR to the date(s) in question using the online [NYU Florence Absence Form](#)
- Please note that no excused absences for reasons other than illness can be applied retroactively.

Students with questions or needing clarification about this policy are instructed to contact a member of the Office of Academic Support located in Villa Ulivi or to email florence.academicsupport@nyu.edu
Late Submission of Work

- All course work must be submitted on time, in class on the date specified on the syllabus.
- To request an extension on a deadline for an assignment, students must speak to the professor one week prior to the due date.
- To receive an incomplete for a course at the end of the semester, two weeks before final exams, both the student and the faculty member must meet with the Assistant Director of Academic Affairs to review the request and if granted, they must both sign an Incomplete Contract detailing the terms for completing missing coursework.

Plagiarism Policy

PLAGIARISM WILL NOT BE TOLERATED IN ANY FORM:
The presentation of another person’s words, ideas, judgment, images or data as though they were your own, whether intentionally or unintentionally, constitutes an act of plagiarism.

In the event of suspected or confirmed cases of plagiarism, the faculty member will consult first with the Assistant Director for Academic Affairs as definitions and procedures vary from school to school.

Writing Center:
The Writing Center, located in Villa Ulivi, offers you feedback on any type of writing, at any stage in planning or drafting. Sign up for a consultation at the Writing Center’s website and submit your working draft or ideas a day in advance to NYU Florence Writing Center. Drop in for a consultation M-Th, but remember that appointments are given priority. Be assured that very rough drafts are welcome. Please note that we do not correct or “fix” your writing; instead we prompt you to think and work. Our aim is to create stronger writers in the long term, not necessarily perfect papers in the short term.

Required Text(s):
Jeffrey M. Wooldridge - “Introductory Econometrics: A Modern Approach” (6th edition) - Cengage Learning (2016). Rather than purchasing the textbook, copies will be made available on loan from the Villa Ulivi Library for responsible use by students. Some sections of chapters may not be covered in class and students will be held responsible for the related material. We will make use of take-home-individual quizzes to assess knowledge throughout (instructions will follow).

For more information on Books and Course Materials go here.

Supplemental Texts(s):

- Some supplementary material will be provided during the semester
- The web page for the course on newclasses.nyu.edu where announcements for supplementary required readings will be posted.
- The student resources website for the book (includes a tutorial for STATA)
Internet Research Guidelines:

The careful use of internet resources is encouraged and a list of recommended websites will be given. Failure to cite internet and other non-traditional media sources in your written work constitutes plagiarism.

Additional Required Equipment:

A pocket calculator (with the same functions as like a Casio FX-220 Plus) is required, to be brought to every class. Smartphones will not be allowed during exams. Please download app Kahoot! for Apple or Android. We will be using the econometric software STATA which will be downloaded and installed on individual student PCs. www.stata.com

Class Assignments and Topics:

Session 1 – Sep. 2, 2019
   General introduction to the course
   Wooldridge Ch. 1

Session 2- Sep. 9, 2019
   Fundamentals of Probability
   Wooldridge Appendix B

Session 3- Sep. 16, 2019
   Fundamentals of Mathematical Statistics
   Wooldridge Appendix C

Session 4 - Sep. 23, 2019
   The Simple Regression Model
   Wooldridge Ch. 2

Session 5- Sep. 30, 2019
   Multiple Regression Analysis: Estimation
   Wooldridge Ch. 3

Session 6- Oct. 7, 2019
   Multiple Regression Analysis: Inference
Wooldridge Ch. 4

Session 7 - Oct. 14, 2019
Multiple Regression Analysis: Further Issues

Wooldridge Ch. 6

Session 8 - Oct. 21, 2019
Midterm in Class

Week of Oct. 28 Fall Break

Session 9 – Nov. 4, 2019
Multiple Regression Analysis w/ Qualitative Information

Wooldridge Ch. 7

Session 10 – Nov. 11, 2019
Heteroskedasticity

Wooldridge Ch. 8

Session 11 - Nov. 18, 2019
Basic Regression Analysis with Time Series Data

Wooldridge Ch. 10

Session 12 - Nov. 25, 2019
Pooling Cross Sections across Time: Simple Panel Data Method

Wooldridge Ch. 13

Session 13 – Dec. 2, 2019
Buffer Class: discussion of some empirical econometric results in published articles

Wooldridge Ch. 19

Session 14 – Dec. 9, 2019
Cumulative Final Exam in class

Session 15 – date TBA
Extra review session or participation in seminar/conference

Problem Sets Schedule
### Topics Distribution

<table>
<thead>
<tr>
<th>Problem Set</th>
<th>Topics</th>
<th>Distribution Date</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Problem Set 1</td>
<td>Chapter 1 and Appendices B and C</td>
<td>Sep 18</td>
<td>Sep 25</td>
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<tr>
<td>Problem Set 2</td>
<td>Chapters 2 and 3</td>
<td>Oct 2</td>
<td>Oct 9</td>
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<tr>
<td>Problem Set 3</td>
<td>Chapters 4 and 6</td>
<td>Oct 9</td>
<td>Oct 16</td>
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<td><strong>Midterm and Spring Break</strong></td>
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<td><strong>Classes resume on Nov 4</strong></td>
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<tr>
<td>Problem Set 4</td>
<td>Chapters 7 and 8</td>
<td>Nov 13</td>
<td>Nov 20</td>
</tr>
<tr>
<td>Problem Set 5</td>
<td>Chapters 10 and 13 and overall review</td>
<td>Nov 27</td>
<td>Dec 4</td>
</tr>
</tbody>
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### Classroom Etiquette

- Eating is not permitted in the classrooms. Water is permitted (make use of the fountain in Villa Ulivi, refrain from plastic bottled water).
- Cell phones should be turned off during class time.
- The use of personal laptops and other electronic handheld devices are prohibited in the classroom unless otherwise specified by the professor.
- We recycle! So, keep it green! Please dispose of trash in the clearly marked recycle bins located throughout the on-campus buildings.

### Required Co-curricular Activities

N/A

### Suggested Co-curricular Activities

Additional suggested optional co-curricular activities will be announced in class and/or via email by the professor throughout the semester.

### Your Instructor

Giampiero M. Gallo holds a Ph.D. in Economics from the University of Pennsylvania (1989) and is a Consigliere (Judge) in the Italian Court of Audits, a judicial body in charge of preventive and subsequent controls on public expenditure. He was elected Fellow of the Society for Financial Econometrics in 2018. He was Professor of Econometrics at the School of Economics and Management at the Università di Firenze, Italy between 1991 and 2017. He taught or held positions at Queen Mary University of London, Johns Hopkins University, Bologna, LUISS, New York University, UC San Diego, Université de Paris (Panthéon-Sorbonne), UNC-Chapel Hill, Université de Genève and worked as a research fellow at the UN-UPenn Project Link, at the Central Planning Bureau in The Hague, and at INSEE-CREST in Paris. His research interests are in financial volatility modeling, financial crises, macroeconomic forecasting,
public debt sustainability having published extensively in top Journals. He was appointed Economic Advisor to Prime Minister Renzi between 2014 and 2016, and he served as President of the Italian Econometric Association (SIDE) in the same period. He is married with two children. He is an avid urban biker and a collector of Le Petit Prince editions.