University of Florence

School of Economics and Management

Master in Economics and Development

General information

Table of contents:

1) Introduction[1]

This two-year Master of Science program aims at providing students with the following skills and key competences:

1. Capacity to conduct theoretical and applied research in the fields of economic development, poverty analysis and international cooperation and integration; more in general, local, national and global development policies.
2. Ability to develop and manage complex cooperation programs within national and international organizations including Non-Governmental Organizations (NGOs) and private sector companies with an interest in developing countries.
3. Capability to evaluate and formulate global and sectorial economic policies.

The MSc program offers a range of distinct pathways that can be tailored to the individual student's preferences and needs. Individual study programs can be organized around two distinct curricula:

- *Economics* which provides students with the advanced quantitative methods and skills necessary to conduct both theoretical and applied research in economics and evaluate and formulate policies.

- ***Development Economics***. This curriculum can be maintained general; it can be tailored to *a more quantitative analysis for developing economies*, which equips students with advanced quantitative methods and skills for studying economic development phenomena; it can be oriented more to *Development Studies*, with a less technical and more interdisciplinary approach.

http://www.development-lm.unifi.it/

An overview of one of the entrances of the Social Science Campus with the buildings D10, D14 and D15.

[1] Editing assistance and pictures from Leonardo Mazzoni are kindly acknowledged.

2) Academic calendar

The teaching calendar for the academic year 2016/2017 is the following:
First semester: 12 September to 7 December 2016
Second semester: 27 February to 1 June 2017 (Easter break from 13 to 19 April)

The exam calendar* for the academic year 2016/2017 is the following:
- Winter: "1st Appello"** from 9/01/2017 to 27/01/2017 ; "2nd Appello" from 1/02/2017 to 24/02/2017
- Summer: "1st Appello from 5/06/2017 to 27/06/2017; "2nd Appello" from 3/07/2017 to 25/07/2017
- Fall: from 30/08/2017 to 12/09/2017
- Additional session: from 11/12/2017 to 22/12/2017

* This calendar is a generic indication of the time slot in which teachers will insert the exact date of their exam.
** Appello = exam session

3) How to register for an exam

Students have to use personal credentials (student enrollment number ('Matricola' in Italian) and password) to enroll for exams. Enrolment starts about 10 days before the exam date and closes 4 days before the exam. To enroll, please go to unifi-> Servizi online -> Studenti -> Prenotazione Esami
Incoming Erasmus students can find more information on http://www.unifi.it/vp-10340-incoming-erasmus-students.html?newlang=eng

How to contact your professors
To communicate with professors please use and check your personal "unifi" e-mail address which will be given to you at enrolment. To find information about a professor (e-mail, interests, CV, etc..) type her/his name on the Unifi web service "search for information or persons" (in Italian "cerca informazioni o persone") and click on "Scheda personale".

4) Offices and facilities of the Campus

D1: School of Economics and Management- first floor

Front office D1: 055-2759001

D4: Classrooms

Front office D4: 055-2759399

D5: Classrooms

Front office D5: 055-2759549

D6: Classrooms and Department of Economics and Management (second and third floor)

Front office D6: 055-2759749

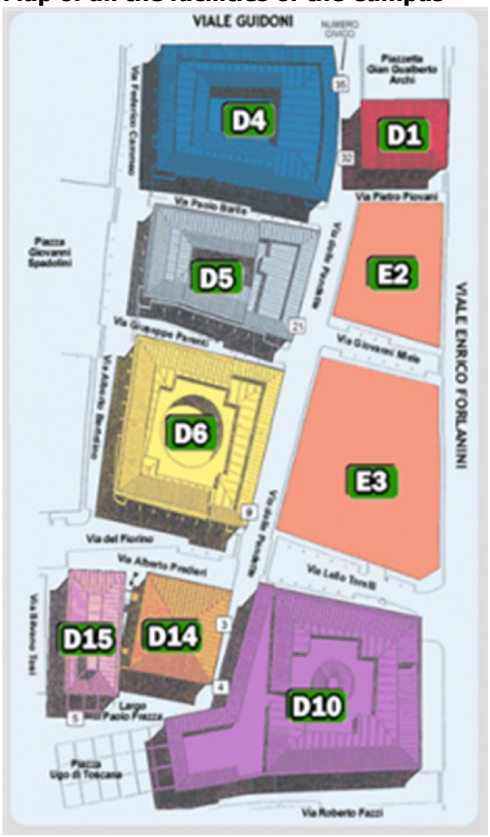
D10: Library- front office 055-2759879

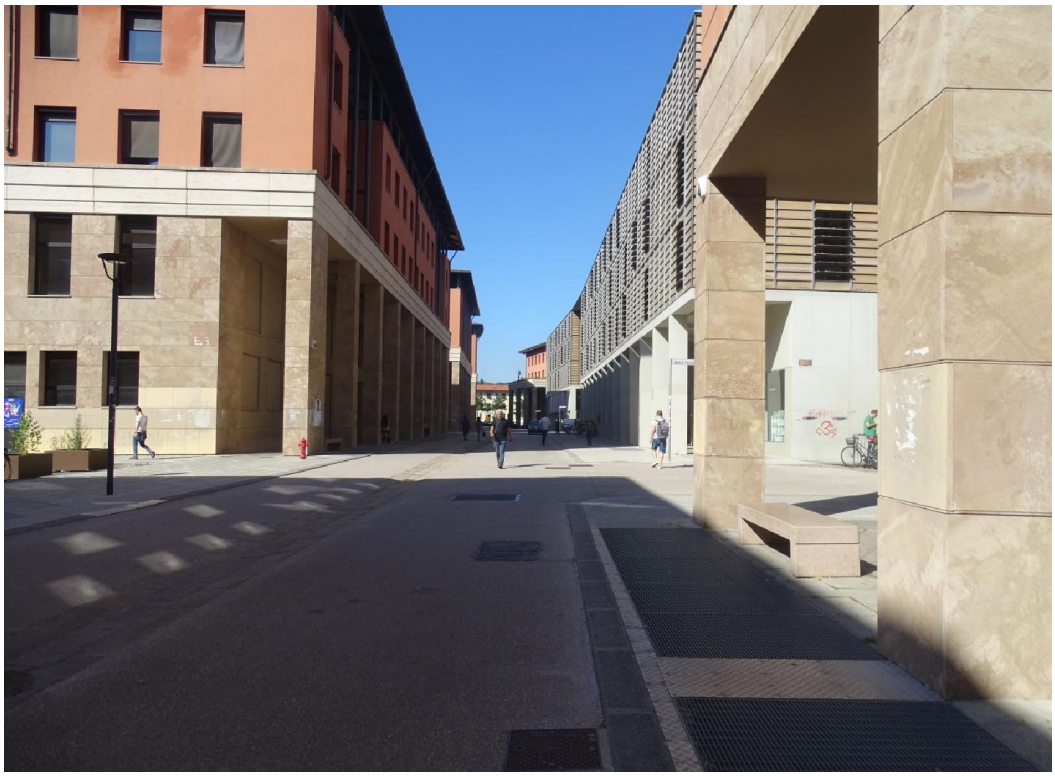
D14: Bar and Study rooms

Front office 055-2759818

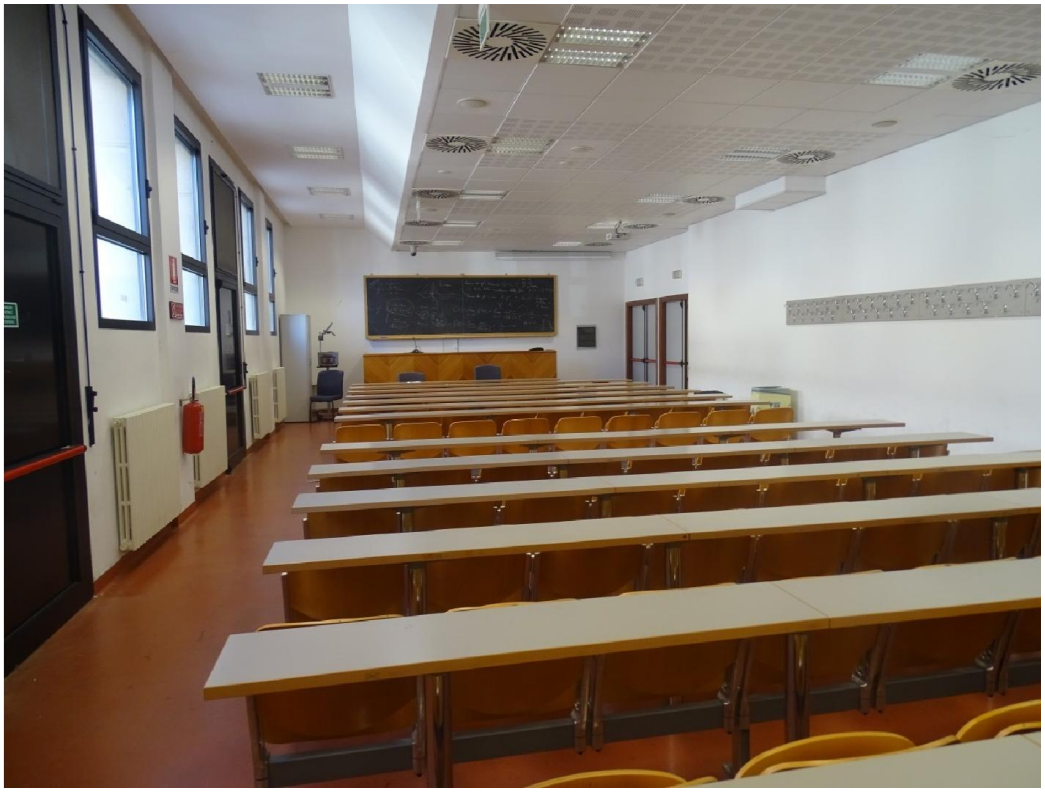
E2 and E3: Canteen "Caponnetto" and Dormitory rooms ("Residenza Caponnetto")

Map of all the facilities of the Campus

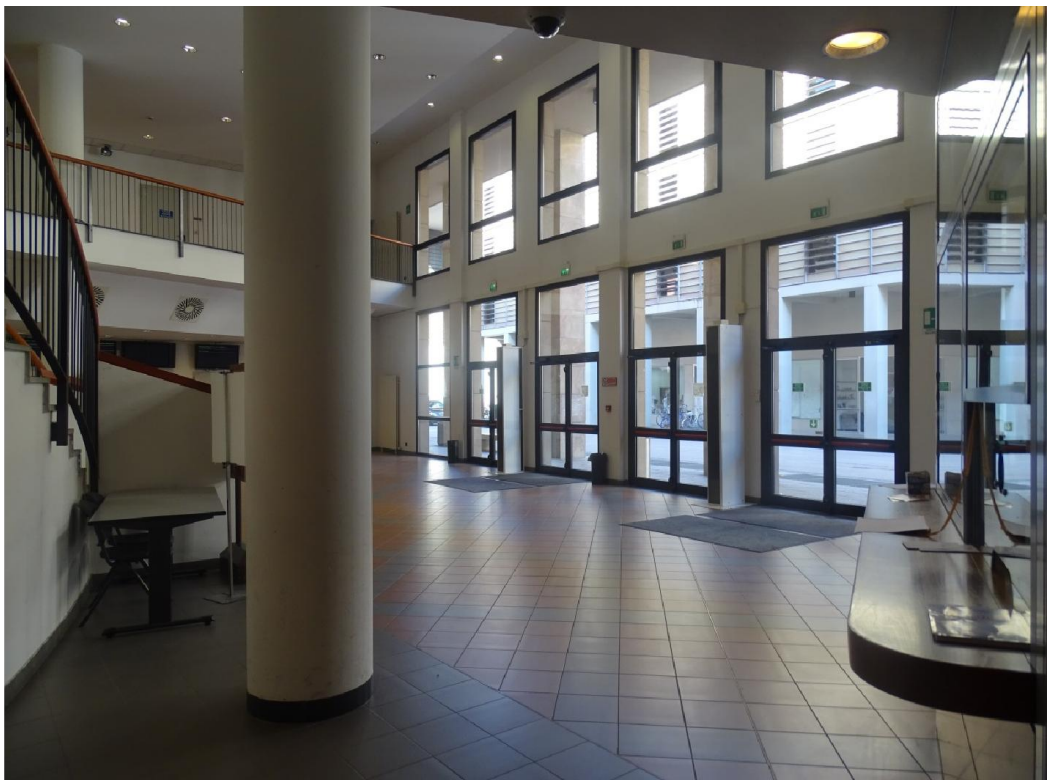


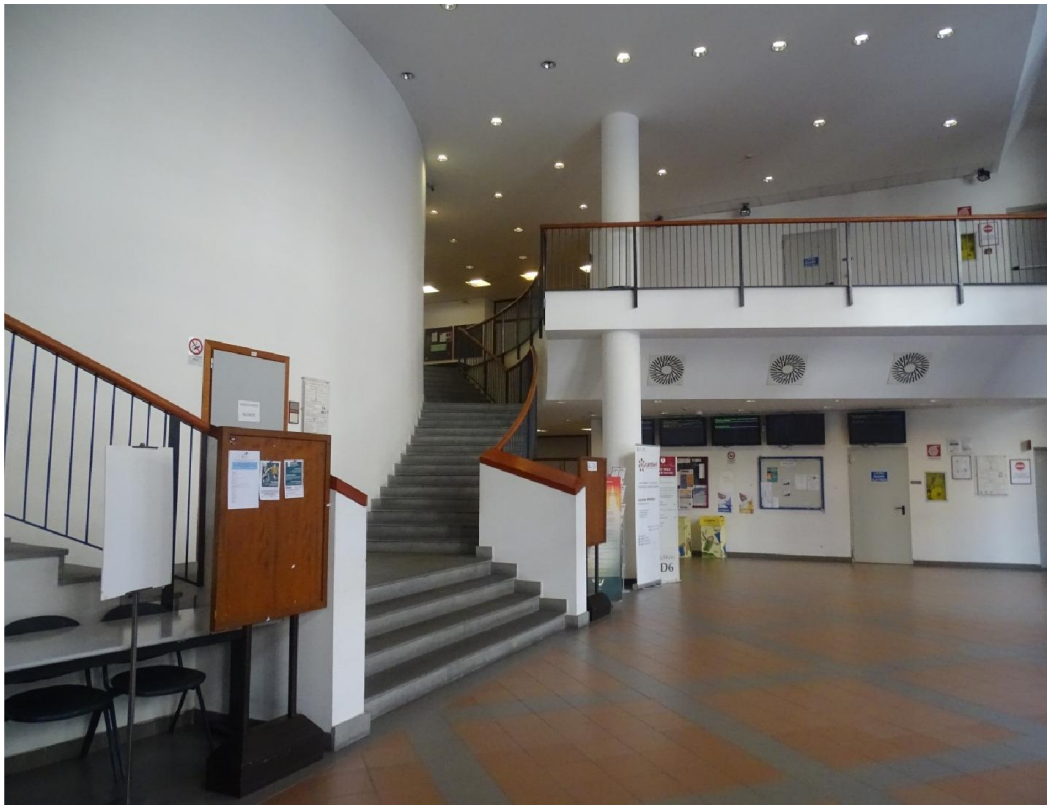


"Via delle Pandette", the main street of the Social Science Campus.



A classroom of the building D6.

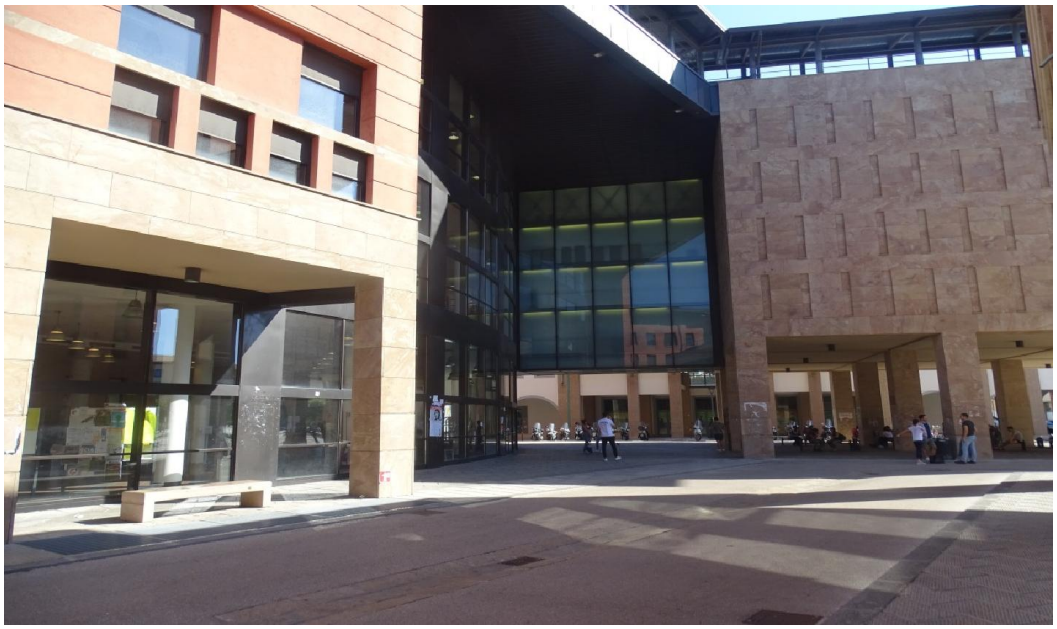




D6: The entrance of the Department of Economics and Management.

4.1) Library and study rooms

The library is open from Monday to Friday with opening hours 8:30 a.m. to 7:00 p.m.
(last access:6.45 p.m.).
All resources (books, articles, databases) are available at http://www.sba.unifi.it/ (only Italian version).
Study rooms (D14) are open from Monday to Friday from 8 a.m to 11 p.m and Saturday from 8 a.m to 6 p.m.



An external and internal overview of the Library of the Social Science Campus.

4.2) Learning languages at UNIFI

The University of Florence has its own language centre (CLA), where several courses are taught (also Italian). For further information please see http://www.cla.unifi.it/index.php

4.3) Canteen "Caponnetto"

The canteen service on campus is subject to the following rules (in terms of prices and meals):
http://www.dsu.toscana.it/it/ristorazione/Cateringservice/index.html

In order to be admitted to the canteen service a personal magnetic badge is required, for further information please see
http://www.dsu.toscana.it/it/ristorazione/Cateringservice/Admission/index.html

To have more information on all the University canteens please see:
http://www.dsu.toscana.it/it/ristorazione/mense/firenze (only italian version)

Opening times:
lunch: Mon-Sat: 12-14.15
dinner: Mon-Fri: 19-21

4.4) How to get to the Campus

The following buses go to the Campus from Florence's central station "Santa Maria Novella (SMN)" :
n° **57** - direction: "Sesto F.no-Via Gramsci" - stops: "Pegolotti" or "Forlanini"
n° **22** - direction: "Novoli- Via Valdinievole" - stops: "Boccherini" or "Ragghianti- The Space cinema"
n° **23** – direction:" Firenze Nova- Nuovo Pignone" - stop: "Terzolle"
More information on http://www.ataf.net/en/ataf.aspx?idC=2&LN=en-US

Bike is an alternative means of transport used by many students to go to the Social Science Campus.

5) Activities organized by the University

University sports club - More info: www.cus.firenze.it

University Choir - More info: spettacolo@unifi.it; coro@unifi.it

The Orchestra - More info: iltempiodellemuse@gmail.com

"Binario di Scambio" Theatre Company - More info:

spettacolo@unifi.it;binario.scambio@gmail.com

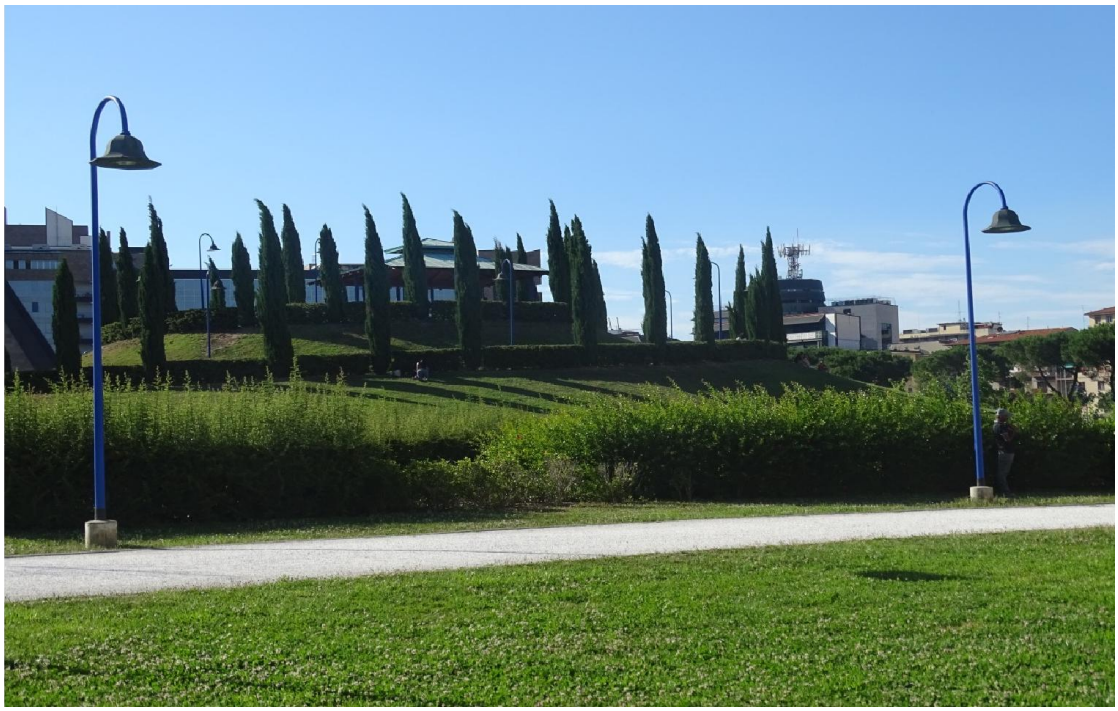
All nature in a museum - More info*: www.msn.unifi.it*

Science with passion - More info: openlab@adm.unifi.it

Encounters with the Town - More info: www.unifi.it/incontri

6) Further information

For further information on the University of Florence, please visit:
http://www.unifi.it/ls-43-programmes.html?newlang=eng
For further information on accommodation, canteens, transportation, Italian courses and other services provided by the University of Florence, please see (English version is from page 73):
http://www.unifi.it/upload/sub/studenti/1516/guida_dello_studente_2015_2016.pdf
For further information on the School of Economics, please see (only Italian version):
http://www.economia.unifi.it/upload/sub/scuola-varie/guida1516.pdf
General information for Incoming Erasmus students:
http://www.unifi.it/vp-10340-incoming-erasmus-students.html?newlang=eng



San Donato Park close to the Social Science campus.

7) Curriculum in *Development Economics*

7.1) Introduction

The Development Economics curriculum of the two-year Master of Science program in Economics and Development aims at providing students with the following skills and key competences:

- Capacity to conduct theoretical and applied research in the fields of economics, economic development, poverty analysis and international cooperation and integration.

- Ability to use economic and econometric methods and tools to analyze and possibly solve socio-economic problems, ability to develop and manage cooperation programs within national and international organizations, including Non-Governmental Organizations (NGOs) and private sector companies with interests in developing countries.

- Capability to evaluate and formulate global and sectorial economic policies.

Graduates will be able to collect and analyze quantitative and qualitative information from local, national and international datasets. Their knowledge of economic phenomena will enable them to relate micro and macro phenomena, to use theoretical and applied (including econometric) tools in order to analyze economic systems and to evaluate and formulate economic policies. Courses aim at providing a sound background in economics and quantitative methods, but also allow a multidisciplinary approach (historical, legal etc). The Master of Science in Economics and Development provides an ideal background for pursuing a PhD program in Italy or abroad (in Economics and related topics) or for a medium-high level entry into research or professional jobs in the field of economics and economic policy. Notable careers include academic teaching and research, civil service appointments and posts in national and international organizations or in private economic consultancy agencies.

The Development Economics curriculum can be maintained general; be tailored to a more Quantitative Analysis for Developing Economies, which equips students with advanced quantitative methods and skills for studying economic development phenomena; or be oriented more to Development Studies for Local Development and International Cooperation, which complements advanced training in development economics with a broader understanding of local and international development that draws on cross-disciplinary social science.

Application forms can be downloaded at:

http://www.unifi.it/upload/sub/studenti/1516/modulistica/1516_domanda_valutazione_accesso_magistrali_inglese.pdf

Contact:

- Prof. Vittorioemanuele Ferrante (vittorioemanuele.ferrante@unifi.it)

7.2) Prerequisites

Applicants should have a final undergraduate grade with pass proceed (i.e. permit to proceed to graduate studies). Applicants who graduated in Italy should have a final grade of at least 99/110 (for foreign students: if the pass proceed is not indicated it will be calculated and should be equivalent to 99/110). Students who do not fulfill this requirement but are motivated to apply can do so but may be asked to sit for an interview (if necessary also via internet) or a test (admission decisions are taken by the Admission Committee - AC).
As far as credits (CFU) are concerned, the current academic entry requirements from a BA degree course are to have earned at least 18 credits in Economics, 6 credits in Statistics, and 6 credits in Mathematics. It is compulsory to have a very good working knowledge (written and oral) of the English Language (at least a B2 level of the Common European Framework i.e. equivalent to a Cambridge First Certificate). Students who do not meet these academic requirements (in terms of credits or English knowledge), need to earn the missing credit points before being formally admitted either at the University of Florence (as individual exams) or in the University of origin of the potential candidates.
To satisfy the English language proficiency requirements students need to:

- give evidence that their undergraduate degree course was taught entirely in English;
- certify their knowledge at a European B2 level (Cambridge First certificate, TOEFL, IELTS etc.)
- pass a B2 English language test organised by Dr. Ilona V. Cziraky (ilona.cziraky@unifi.it), who is in charge of the degree course's language admission test.
- have passed the English language test/exam of the degree courses in Economia Aziendale, Economia Commercio, SECI-OP and Statistica at the University of Florence.

Furthermore, basic knowledge computer skills (such as writing software and spread sheets) are recommended. Basic Italian is an advantage but is not essential.

7.3) Preliminary Courses

Preliminary Courses 2016-2017

The Master of Science in Economics and Development organizes two preliminary courses in STATISTICAL INFERENCE and MATHEMATICS FOR ECONOMICS which will be held at the beginning of September 2016.

7.4) Study Plan*

First year

Course	Scientific sector Code	CFU Credits	Semester	Lecturer
Development Microeconomics	SECS-P/01	9	I	Alessandro Cigno
Development Macroeconomics	SECS-P/01	9	I	Giovanni Andrea Cornia
Statistical Inference	SECS-S/01	9	I	Fabrizio Cipollini
Choose two from				
Economics of Innovation	SECS-P/01	12	I	Mauro Lombardi
Human Development and International Cooperation	SECS-P/01		I	Mario Biggeri
Health and Education Economics	SECS-P/03		I	Lisa Grazzini
Choose one from				
Mathematical methods for economic analysis	SECS-S/06	6	II	Domenico Colucci
Topics in mathematics for economics 1	SECS-S/06		I	Antonio Villanacci
Topics in mathematics for economics 2	SECS-S/06		II	Antonio Villanacci
Measurement and Causes of Poverty	SECS-S/05		II	Filomena Maggino
Choose one between				
Corporate Governance and financial institutions	SECS-P/08 and SECS-P/11	12	II	Sara De Masi and Federica Ielasi
Economics and management of local system	SECS-P/08		I	Luciana Lazzeretti
Choose one from				
Agricultural and environmental policy evaluation lab.	AGR/01	6	II	Gianluca Stefani and Benedetto Rocchi
Econometrics lab	SECS-P/05		II	Giampiero Maria Gallo
Statistical Data Elaboration lab.	SECS-S/01		II	Margherita Velucchi and TBA
English	L-LIN/12		I	Ilona V. Cziraky
Spanish	L-LIN/07		II	Jacopo Caucci
French	L-LIN/04		I	TBA
German	L-LIN/14		I	TBA
Total credits for the first year		63		

Second year

Course	Scientific sector Code	CFU Credits	Semester	Lecturer
Choose one between				
International Economics II	SECS-P/01	6	I	Giorgia Giovannetti
International and Financial Economics	SECS-P/01		II	Giulio Cifarelli
Choose one from				
Financial services and markets law	IUS/05	6	II	Filippo Zatti
Law and economics	IUS/05		II	Filippo Zatti
International law	IUS/13		I	Antonio Bultrini
Choose two from				
Economic History of Globalization(**)	SECS-P/12	12	I	Luciano Segreto
International conflict of transformation	SPS/11		I	Giovanni Scotto
Politics of Globalisation and Human Rights(**)	IUS/20		II	Lucia Re
Anthropology and Development	M-DEA/01		II	Alberto Cacopardo
Environment and Development	M-GGR/02		II	Filippo Randelli
Agriculture, development and poverty	AGR/01		II	Donato Romano
Microeconometrics	SECS-P/05		I	Giorgio Calzolari
Local and industrial development	SECS-P/06		I	Marco Bellandi and Mario Biggeri
Labour economics	SECS-P/02		I	Gianna Claudia Giannelli
Optional Courses***		18		
Final dissertation and examination		15		
Total credits for the second year		57		

Notes:

* Please note that the study plan has to be defined by each student and validated by the commission before the end of the first semester of the first year (the head of the commission is Prof. Domenico Colucci).
** Classes are held at the Syracuse University, Piazza Savonarola 15.
*** (a) Optional courses can be chosen from courses enclosed in the Study Plan list or from other courses offered by the University of Florence (with need of validation by the teaching committee)
(b) Other activities can be an internship, or other courses needed to enter the job market

Contact:
Prof. Domenico Colucci (domenico.colucci@unifi.it)

7.5) Courses and Instructors

Agriculture, Development and Poverty

CFU: 6

Year: II

Instructor: Donato Romano

The overall objective is providing the theoretical and methodological foundations for quantitative evaluation of policy impacts on poverty and food security in rural areas in LDCs. The course approach is based on two coordinated sets of contents, namely: (i) critical review of theories and models, and (ii) empirical analysis of case studies. The contents of the lectures are the following: Policy impact evaluation, The profit function approach, Agricultural supply response, Food security, Farmer behaviour and welfare under risk, Agricultural household models, Partial equilibrium analysis of price distortions, Sectoral impacts of macroeconomic policies, The real exchange rate, Transaction costs and agrarian institutions, Input-output tables, Social accounting matrices, CGE models.

Sadoulet, E., and de Janvry, A., 1995. *Quantitative Development Policy Analysis*. Baltimore: The Johns Hopkins University Press

Agricultural and environmental policy evaluation lab

CFU: 6

Year: II

Instructor: Gianluca Stefani

The Course provides an introduction to Impact Analysis underlining its role within the Policy Cycle. The main techniques of analysis (differences in differences, regression discontinuity design, matching, as well as instrumental variables) are illustrated with empirical applications using the Stata software. Case studies are analysed working in groups on technical reports and scientific articles dealing with either poverty or agri-environmental issues.

Gertler, P.J., Martinez S., Premand,P., Rawlings, L.B., and Vermeersch,C.M.J.,2011. *Impact Evaluation in Practice.* Washington, D.C.: The World Bank.

Khandker, S.R., Koolwal, G.B.,and Samad, H.A.,2010. *Handbook on Impact Evaluation. Quantitative Methods and Practices.* Washington, D.C.: The World Bank

Course Web Page

Anthropology and Development

CFU: 6

Year: II

Instructor: Alberto Cacopardo

The course will be divided in two parts. The first one will deal with some key anthropological concepts involved in the understanding of cultural diversity and of the traits and dynamics of the economy and politics of non-Western societies, with special regard to local, small-scale societies and groups. The second part will present a set of different research methodologies and technical tools useful to enforce the participation, the empowerment and the capabilities of local communities.

Wilk, Richard R. & Cligget, Lisa C., *Economies and Cultures: Foundations of Economic Anthropology.* Second Edition. Boulder: Westview Press, 2007, 236 pp.
Olivier de Sardan, Jean-Pierre*, Anthropology and Development: Understanding Contemporary Social Change*. London: Zed Books, 2005, 243 pp*.*
Chambers Robert, *Whose Reality Counts? Putting the first last. Bourton on Dunsmore: Practical Action Publishing,* 2009 [Intermediate Technology Publications, 1997], 297 pp.
Wilk, Richard R. & Cligget, Lisa C., *Economies and Cultures: Foundations of Economic Anthropology.* Second Edition. Boulder: Westview Press, 2007, 236 pp.
Olivier de Sardan, Jean-Pierre*, Anthropology and Development: Understanding Contemporary Social Change*. London: Zed Books, 2005, 243 pp*.*
Chambers Robert, *Whose Reality Counts? Putting the first last. Bourton on Dunsmore: Practical Action Publishing,* 2009 [Intermediate Technology Publications, 1997], 297 pp.

Corporate Governance and Financial Institutions

CFU: 12
Year: I
Instructors: Sara De Masi and Federica Ielasi
Corporate Governance - Sara De Masi
Corporate Governance - Sara De Masi
The recent financial crisis and corporate scandals have put the light on how companies are managed.
Corporate governance deals with the set of policies, process and customs by which an organization is directed. This course aims to provide a deep understanding of the fundamentals of corporate governance from a variety of angles - the board of directors, senior management, investors, media, regulators and society ñ and from an international perspective. After a highlight on the main corporate governance systems (Anglo-American, German and Italian), relevant theories and issues of corporate governance practices will be analyzed (e.g. ownership and control, conflict of interests, board of directors, institutional environments). Students will gain skills required for understanding corporate behaviors. They will be introduced to issues in corporate governance through lectures, class discussions and cases study.
Course overview:
Definitions of corporate governance; main theories; corporate governance systems around the world (outsider systems versus insider systems); Boards of directors: roles and functions, composition and gender diversity, CEO compensation and stock options, Corporate governance codes, Corporate governance in banks.
Tricker B., 2009, *Corporate Governance. Principle, Policies and Practices*, Oxford University Press.
Goergen M., 2012, *International Corporate Governance*, Pearson ed.
Financial Insitutions - Federica Ielasi
The course aims to give a complete view of the Önancial system and the recent innovations in the national and international regulation concerning the Önancial institutions. The first part of the course aims at analyzing several issues relating to fundamentals of financial markets and institutions, analyzing the main financial intermediaries: commercial banks, pension funds, investment companies. The second part of the course concerns the analysis of the main risks faced by financial institutions: credit risk, liquidity risk, interest rate risk, and insolvency risk. The last part of the course deepens the main methodologies for managing risks of the balance sheet

with derivative securities, loan sales and securitization. The objectives of the course are to strengthen the knowledge about financial markets and institutions, to strenghten the skills associated with the comprehension of the function of financial markets and their recent evolution, both in the national and international field, and to strenghten the knowledge about models for measuring and managing financial risks.
Saunders, Cornett, 2015, *Financial Markets and Institutions,* 6th edition, McGraw-Hill

Development Macroeconomics
CFU: 9
Year: I
Instructor: Giovanni Andrea Cornia
The purpose of the course is to unable the students to understand the complex functioning of the macroeconomy of developing countries so as to be able torespond to their real life macro problems. Part 1 offers an overview of standard models used in the advanced economies. Part 2 discusses the main structural and institutional differences between developed and developing countries that justify the construction of alternative models for the latter. Part 3 discusses long-term and short-term growth models reflecting the real-life conditions of poor countries. Such models show that the conclusions reached on their basis often differ from those arrived at on the basis of standard macroeconomics. Part 3 illustrates models of dependent economies, commodity exporters, 'gaps models', and others that are important in developing countries. Finally, Part 4 discusses macro topics, such as the inequality-growth-poverty nexus and macro policies to ensure stable growth and poverty reduction. The theoretical approach of the Teaching Notes is eclectic, though its overall slant is Keynesian-Structuralist.
Teaching Notes of 300 pages prepared by Professor Cornia

Development Microeconomics
CFU: 9
Year: I
Instructor: Alessandro Cigno
Advanced microeconomics course, focused on the problems of developing countries. Particular attention is given to the role of subsistence constraints and information asymmetries in credit markets, insurance and labor. The issues of child labor and infant mortality are treated in depth.
Bardhan, P. and C. Udry (1999, 2001), *Development Microeconomics,* Oxford University Press
Cigno, A. and F. C. Rosati (2005, 2006), *The Economics of Child Labour,* Oxford University Pres

Econometrics lab
CFU:6
Year: II
Instructor: Giampiero Maria Gallo
Introduction to a matrix based programming language (MATLAB). Basics: importing data, the command line, review of matrix algebra, storing the results. The Classical Linear Econometric Model in matrix form. OLS estimators and covariance matrix. Robust forms under heteroskedasticity and serial correlation. Testing linear and nonlinear restrictions. Residual

diagnostics, auxiliary regressions. Simulation based analysis of estimators properties and departures from ideal conditions. The second half of the course will be devoted to the replication of the results from some published papers, both in macro and in micro applications.
Greene W, 2008, Econometric Analysis Sixth Ed., Pearson.
Class notes, online videos, help manuals

Economic History of Globalization
CFU: 6
Year: I
Instructor: Luciano Segreto
The course aims to offer a general overview of the new international economic order following the end of Cold War. This period is frequently associated with the concept of globalization. The mainstream affirms that this process has been possible because of liberalization, deregulation and in general thanks to a massive reduction of the state intervention. This course will challenge this vision, offering a completely different image of the reasons and the instruments that permitted the transformation of the world economy in the last 25 years. Globalization is asking for more but also for a different state intervention. Emerging economies are building their future both on very old economic policies such as trade tariffs and on the support of the state in implementing the most advanced technologies in their economic structure. Transnational companies are sometimes bigger than the countries where they invest in but international or transnational institutions try to limit their power. China economic reforms and modernization appears to some extent a new form of state (authoritarian) capitalism. Russia more controversial transition to market economy did create a very similar model. Capital markets are more and more powerful, but national and supranational institutions work every day to increase levels of regulations and to make more efficient those already existing. Producers, consumers and traders of raw materials and commodities are acting as a sort of "hidden" power that states are trying to counterbalance and to regulate in order to keep a balance in this framework, where economic and financial aspects are continuously interfering and sometimes conflicting with the social dimension of the market.
Ravenhill J., 2011, Global Political Economy, Oxford UP. Gilpin R., 2011, The Challenge of Global Capitalism: The World Economy in the 21st Century, Princeton UP. Bhagwati J.N., 2007, In Defense of Globalization, Oxford UP

Economics and management of local systems
CFU: 12
Year: I
Instructor: Luciana Lazzeretti
The course deals with competitive analysis of industries and local systems through theoretical and empirical focuses.
The course is divided into two modules:
Module A: competitive analysis and examination of concepts of industry, network, systems, clusters and districts.
Module B: theory and empirical case studies of cultural and creative industries, creative networks and creative capacity of culture.

Approaches: industry analysis in the perspective of industrial economics, business and urban-regional economics, evolutionary and ecological economics.
Concepts: industry, supply chain, networks, value chain, local systems (clusters, districts and cities). Methods: Case studies, statistical analyses, social network analysis, ecological analyses and other quantitative methods.
Module A: Becattini G, (2002), "From Marshall's to the Italian "Industrial Districts" A brief critical reconstruction" in Quadrio Curzio A. and Fortis M. (2002) (eds.), Complexity and Industrial cluster Dynamics and Models in Theory and Practices, Springer.
Module B: Lazzeretti (Ed.), Creative industries and innovation in Europe, London: Routledge.

Economics of Innovation
CFU: 6
Year: I
Instructor: Mauro Lombardi
The digital age we are living in: the second economy (Arthur), ubicomp (ubiquitous computing), "calm technology" (Weiser, 1991, 1993). The age of the spiritual machine (Kurzweil): what technology is. The starting point: the invention of invention (Landes, 1998). Technology and the Economy: some stylized facts. Taxonomy of innovations: radical, incremental, modular, architectural. Technological paradigms, technological trajectories, techno-economic landscapes. Different approaches to the analysis of production processes. Innovation processes between path dependence and path creation. Decision making processes: 1) standard mainstream paradigm, 2) evolutionary approach, the agents of techno-economic dynamics: individuals, firms, socio-technical systems. Basic concepts for the current Century (I): systems and complex systems. Basic concepts for the current Century (II): disruptive technologies, big data and data analytics, augmented reality, cloud computing and their consequences for business models.
Brian Arthur, 2009, The Nature of Technology, Free PressChandler.
Hagstrom, Solvell, 1999, The dynamic firm. The role of technology, strategy, organization, and regions, Oxford University.
Files and other material provided by the teacher.

English
CFU: 6
Year: I
Instructor: Ilona V. Cziraky
Students will learn:
a) the micro and macro writing skills necessary to produce well-structured academic texts and conference abstracts and to describe/interpret economic trends
b) the communication skills necessary to produce effective and well-argued oral presentations in power point format on topics studied during their degree course.
A monolingual dictionary, e.g. MacMillan English Dictionary for Advanced learners, Longman Dictionary of Contemporary English, Oxford Learner's Dictionary, etc.
NON attending students: Grussendorf M., English for Presentations (Oxford Business English), OUP.

Environment and Development

CFU: 6
Year: II
Instructor: Filippo Randelli
The aim of this course is to provide students with tools to analyse in an integrated manner environmental aspects of economic, social and political development in developed and developing countries at both micro and macro levels. Economic expertise complemented with environmental analysis is increasingly appreciated by public and private sector organizations at local and international levels. This course will enable students to systematically analyse environmental issues and to cooperate in the planning and decision making process implied by the sustainable development objectives of private and public agents in developed and developing countries.
The course makes references to a wide range of concrete geographical contexts and scenarios at the national and international level, looking at territories as a whole as well as at single material, energy and environmental resources.

Financial Services and Markets law

CFU: 6
Year: II
Instructor: Filippo Zatti
The course examines the EU's regulation of the capital markets. It considers the harmonized regulatory regime which applies to capital market actors across the Member States and which supports the integrated market. The topics covered include: the foundations of capital markets legislature in Europe focusing on the strategies adopted for market integration and on the role of law; the basics of capital markets law regarding capital markets, financial instruments, market participants and the regulatory authorities, including the role of the European Securities and Markets Authority; the regulation of insider dealing and market manipulation, other than short selling; the prospectus and disclosure regime; market access of investment firms and the passport for investment services; compliance in investment firms; financial analysts; rating agencies.
Veil R. (ed.), 2013, Europan Capital Markets Law, Oxford and Portland, Oregon.

French

CFU: 6
Year: I
Instructor: TBA
I. Comparative analysis of some tourist guides.
II. Communication Strategies in Areas of Traditional Tourism, Sustainable Tourism, Environment and Humanitarian Organizations.
A practical part includes the analysis of advertisements in France and, in addition, some documents written in Italian will allow to combine analysis and practice of translation.

German

CFU: 6
Year: I
Instructor: TBA
Development of language competence through the reception of authentic texts of increasing thematic and linguistic complexity, focusing on complex German language tools for written and oral business, socio-economic and professional communication, in particular in the field of leisure and tourism. Familiarity with topics related to sustainable tourism, to specific disciplinary areas and actual aspects, referring to the German-speaking countries in the framework of the enlarged EU.

Health and Education and Economics

CFU: 6
Year: I
Instructor: Lisa Grazzini
Both education and health are important determinants of human capital which is widely recognised as a key issue for individual well-being and economic development. On the education side, the course first explores the determinants of educational decisions. It investigates the basic model of education as a human capital investment, discussing the difference between the private and the social return of education, and the models of education as a signaling and a screening device. The roles of human capital for growth are then analysed, by taking also into account the channels through which education and growth may be linked to the process of democratization of a country. On the health side, the course analyses the basic model of health as a human capital investment, stressing the importance of complementarities between health and education, and the optimal insurance policies with adverse selection and moral hazard. Finally, the impact of improved health on growth is investigated with a particular focus on the joint effect of the level and the accumulation of health on economic growth.
A full reading list will be available on http://e-l.unifi.it/ It will contain papers from international journals and some chapters of books as for example:
Checchi D., 2005, The Economics of Education. Human Capital, Family Background and Inequality, Cambridge University Press.
Hindriks, J., Myles, G.D., 2013, Intermediate Public Economics, MIT Press

Human Development and International Cooperation

CFU: 6
Year: I
Instructor: Mario Biggeri
The course covers theories, objectives and instruments as well as the analysis of the economic and social effects of international cooperation programs, economic aid and development projects. The course is structured into four parts. Following some introductory lectures on the changing landscape of international cooperation and general theoretical and descriptive data analysis, the course examines theoretical models and empirical issues regarding international aid for development will be presented (part A,B), then the course addresses the key elements the of the Human Development Paradigm and Amartya Sen's capability approach (part C). The last part (D)

is devoted to research methods, impact evaluations and case studies. Several seminars will also be held during the course.

International and Financial Economics

CFU: 6

Year: II

Instructor: Giulio Cifarelli

In the course the following topics shall be discussed: the foreign exchange market and the main financial markets; the efficient markets approach and the statistical properties of the financial time series; the monetary approach to the Balance of Payments and the portfolio balance approach; the exchange rate regimes and the "fear of floating" debate; the recent (excess) foreign exchange reserve policy of central banks; the theory of (ir)rational speculative bubbles; the recent financial crises and the literature on contagion; the relevance of speculation and the interaction between fundamentalists and chartists.

MacDonald R., 2007, Exchange Rate Economics. Theories and Evidence, Routledge, London, or McKinnon R.I., 1979, Money in International Exchange. The Convertible Currency System, Oxford University Press, Oxford

International conflict transformation

CFU: 6

Year: II

Instructor: Giovanni Scotto

The course presents concepts and theories related to the peaceful transformation of international violent conflicts, illustrating them with examples driven from global peace initiatives, European and Italian experiences in the field. Particular attention will be devoted to exploring practical tools for conflict analysis, integrative negotiation and the design of peacebuilding processes.

Classes will be held combining different forms of teaching and learning: lectures, group discussions on assigned readings, students presentations, experiential training and in class exercises, and videos shown in order to present actual case studies and encourage reflection and discussion.

Main text: Lederach, J.P., The moral imagination. The art and soul of building peace. Oxford / New York: Oxford University Press, 2005.

International Economics II

CFU: 6

Year: II

Instructor: Giorgia Giovannetti

The main aim of the course is to help understand specific features of the current wave of globalization as well as countries' and firms' reactions to it. The first part of the course, after an introduction on how to measure globalization, also accounting for the value added in each country, analyzes historical trends in integration (trade, capital, people, ideas) on the base of existing models of international trade (from Ricardo to models of heterogeneous firms). It also highlights the role of China and India in the global economy. The second part illustrates new

issues raised by the globalization process, such as offshoring, outsourcing, and the theories recently developed to address them ('new new' trade theories). It also emphasises the role of imported inputs for the competitiveness of a country. Key topics include: globalization: useful definitions; statistical and economic indicators of globalization, specialization, imbalances; Ricardo's model of International Trade (brief); Hescker-Olin model; Imperfect competition models; geography models; New theory versus New New theory (Melitz); Movements of capital and workers; Offshoring and outsourcing; FDI and multinational. Other topics: R&D internationalization; Migrations; Trade policies and International agreements (TTIP).
Feenstra, R.C., Taylor, A., 2015, International Economics, 4th Edition.
Feenstra, R.C.,2015. Advanced International Trade: Theory and Evidence, second edition, Princeton University Press.

International Law

CFU: 6
Year: II
Instructor: Antonio Bultrini
The course aims to provide a solid and in-depth introduction to International Law. It is not an advanced/sectional International Law course but it offers nevertheless a particularly detailed and practical discussion of the subject. It may therefore suit also those students who may have already attended a basic International Law course in Italian. Furthermore, special attention is dedicated to some areas which are of great relevance also for Development Economics students, such as the law of the sea. The course thus covers the most important topics of International Law, including: subjects of international law, international law-making, immunities, international organizations, the law of the sea, international responsibility, the settlement of disputes. The adopted textbook is: Malcolm N. Shaw, International Law (handbook), Cambridge University Press, latest edition. The program is completed by complementary/updated elements edited by Prof. Bultrini.

Labour Economics

CFU: 6
Year: II
Instructor: Gianna Claudia Giannelli
The purpose of the course is to give the theoretical and applied tools to understand the economics of labour markets with a special focus on the relationship with development. The first part illustrates how economic models are applied to labour market phenomena, such as labour supply and participation, labour demand by firms, and wage determination under different institutional settings. Furthermore, it is shown how alternative theories can be tested empirically and how economic models can be applied to evaluate the employment effects of economic policies, such as reforms of the labour market and of the welfare system. The second part of the course explores key issues of labour markets in developing countries such as the introduction of a minimum wage, the distinction between formal and informal employment, rural and urban labour markets, the role of education and human capital, the determinants of returns to human capital investments, labour migration and remittances, discrimination and ethnicity, gender gaps, health

and nutrition effects on labour productivity. The course is intended for both the curricula in economics and development.
Borjas G.J., 2013, Labor Economics, Mc Graw Hill
Cazes S. and Verick S.(Ed.), Perspectives on Labour Economics for Development, ILO, 2013

Law and Economics

CFU: 6
Year: II
Instructor: Filippo Zatti
The Law and Economics course aims to give an overview of the principles of European Economic Law in order to deepen the EU economic constitution and the founding principles of the Internal Market. As a consequence, class deals with the four basic freedoms of movement of goods, capital, persons and services as well as EU competition law.

Local and Industrial Development

CFU: 6
Year: II
Instructors: Marco Bellandi and Mario Biggeri
Module A Marco Bellandi
Application of theories of local development and industrial districts, in terms of methods of analysis of various configurations and relations between the territory and industries. Theoretical approaches and research methods on Local and industrial development in emerging countries. International cooperation. Case studies.
Reading lists, compulsory and hinted, are illustrated on the Moodle platform of the course in e-l.unifi.it.
Module B Mario Biggeri
This module covers three parts. A) Local and industrial development in developing countries: theoretical approaches and research methods. B) Human development at the local level and international cooperation and in particular the Sustainable Territorial Evolution for Human Development Interpretative Framework with case studies. C) Clusters of SMEs and informal sector in BRICS countries and in Italy with case studies.

Mathematical methods for economic analysis

CFU: 6
Year: I
Instructor: Domenico Colucci
This course covers the mathematical tools required for intermediate level courses in economics (applied and theory). In particular we shall end up dealing with static optimization (with equality and inequality constraints). To get there we shall cover some topology of R^n, matrices, functions of several variables, differential calculus.
R. K. Sundaram A first course in optimization theory (Cambridge University Press)

Measurement and Causes of Poverty

CFU: 6

Year I

Instructor: Filomena Maggino

The course deals with the theory and methodology aimed at developing indicators and with their main applications (social indicators, subjective indicators, progress and wellbeing indicators).

Particular attention is devoted to the methodological issues related to the procedure of synthesizing indicators.

F. Maggino (ed.) Complexity in Society – From Indicators Construction to their Synthesis, Springer (in print).

Microeconometrics

CFU: 6

Year II

Instructor: Giorgio Calzolari

Elements of linear algebra. Vectors and matrices, linear dependence, rank, square matrices, inverse matrix, equation systems, idempotent matrices, projection matrices, trace. Linear regression model. Algebraic assumptions and statistical assumptions, ordinary least squares estimation, coefficients and residuals, R-square, unbiasedness of estimated coefficients, estimation of the errors variance, variance-covariance matrix of estimated coefficients, Gauss-Markov theorem, standard errors, linear restrictions, t-test, F-test, specification tests, structural break, heteroskedasticity, autocorrelation. Discrete choice, logit model. Linear panel data model (with "fixed" effects).

Computer laboratory. Use of GRETL (free software, open source).

Calzolari, G., 2012, Econometric Notes, MPRA Paper 64415, University Library of Munich, Germany (revised May 2015; pages 1-14).

Stock, J. H., and M. W. Watson, 2007, Introduction to Econometrics, (2nd edition), Reading, MA: Addison-Wesley Publishing Company, Inc.

Politics of Globalization and human rights

CFU: 6

Year: II

Instructor: Lucia Re

Introduction; "politics of globalisation...and human rights"; the HR doctrine: theory, norms and implementation; "globalization": origin of the word and possible interpretations; the liberal standpoint and its critics; the "great globalization debate"; the nation-state and national legal order in the global era; global order, war and HR; HR: an hegemonic project?; the "new rights"; HR and global migrations; HR and gender.

A selected bibliography will be given and presented to students in the first part of the course.

Spanish
CFU: 6
Year: I
Instructor: Jacopo Caucci
The advanced semestral course in Spanish aims at teaching students some fundamental aspects of the Spanish language and of the Hispanic culture. Students will be examined by the CLA (B2 level; written and oral comprehension, general knowledge of the language). A special attention will be devoted to the problems of separating walls in the Hispanic context: "las vallas", real barriers separating Morocco from the Spanish enclaves of Ceuta and Melilla, and the frontier that cuts in two parts North America, the US on one side and Mexico on the other.
The reading list will be composed by essays, articles in journals, magazines and newspapers, and other materials like movies, documentaries and songs available on the web.
Course notes are available at Centro stampa Il Prato, via Carlo del Prete 38r, Firenze (since the beginning of the II semester).

Statistical data elaboration lab
CFU: 6
Year: I
Instructor: Margherita Velucchi and TBA
This course provides the basics of a widely-used package like Stata with a continuous reminding to the statistical theory behind. The aim of the course is twofold: a) provide students with a basic knowledge of a statistical software (Stata), b) develop skills needed to conduct standard analyses, and adequately interpret the results. The course is divided in two parts: the first focuses on a refresh of the statistical theory, while the second deals with the basics of Stata software. On the theoretical side, the course will revise basic topics in statistics (linear and multiple regression models, estimation, diagnostics and test the best specification of the model, analysis of variance, panel data and GLS).
Lectures, group activities and computer tutorials are interconnected so that students can link the theoretical knowledge with the practical skills of performing statistical analyses using a computer. The second part will make the student at ease with Stata software.
Getting Started with Stata for Windows, Publisher: Stata Press - ISBN-13: 978-1-59718-084-9
McClave, J.T., P.G. Benson, T.Sincich, Statistics for Business and Economics

Statistical inference
CFU: 9
Year: I
Instructor: Fabrizio Cipollini
Special r.v.'s: Bernoulli, Binomial, Poisson, Continuous Uniform, Normal, Gamma, Chi-squared, Student-T, Fisher-F, Beta. Transformation of r.v.'s. Transformations. Introduction to Statistical Inference: Concepts of population, sample, parameter, statistics and estimator, statistics value and estimate, sample distribution of a statistic and related synthetic indices. Point Estimation: The Maximum Likelihood (ML) method. Properties of estimators. The Cramer Rao bound. Asymptotic properties. Asymptotic properties of ML estimators. Interval Estimation: Definition of interval estimate (confidence interval), confidence level, size of the interval. The Pivot method for

finding confidence intervals. Hypothesis testing: Motivations, framework, definitions of statistical hypothesis and of statistical test. Table of decisions, type I and type II errors, significance level and power of a test. The Neyman-Person lemma and ensuing remarks. Power of the test. The p-value. The likelihood ratio test. Linear Regression Model: Model definition and corresponding properties; the Least Squares (LS) and the ML methods for estimating the parameters. Deviance decomposition and R2 index; predictions of the conditional mean and of the dependent variable for a given value of the independent variable. Complementary Topics.
Wasserman, L., 2004. All of Statistics: A Concise Course in Statistical Inference, Springer. ISBN: 978-0-387-21736-9.

Topics in Mathematics for economics 1

CFU: 6
Year: II
Instructors: Antonio Villanacci and Salvatore Federico
First half of the course: Introduction to dynamic programming in discrete time with certainty.
Review of some basic results from elementary mathematical analysis: the set of extended real number, sup and inf in R , sequences in R, series in R, limsup and liminf for sequences.
Principle of optimality, the value function.
Properties of solutions and value function, necessary conditions for solutions, Euler equations with applications. Euler dynamics.
Second half of the course. Introduction to the theory of stochastic control in discrete time with some applications to economic and financial basic problems. The second half is divided in three parts, each one consisting (approximately) of four lectures. Part I) Introduction to the basic concepts of probability theory. Part II) Formulation of stochastic control problems and description of the dynamic programming method in discrete time. Part III) Solution of specific examples.
References:
Bertsekas, D., (2016), Dynamic Programming and Stochastic Control, Academic Press, 1976.
Federico S., (2016) Introduction to dynamic programming in discrete time under uncertainty, Class Notes.
Villanacci, A., (2016), Introduction to dynamic programming in discrete time with certainty, Class Notes.

Topics in Mathematics for economics 2

CFU: 6
Year: II
Instructor: Antonio Villanacci
The course is an independent study and it has "Mathematics for economics" as an indispensable prerequisites. The content of the exam has to be discussed and agreed upon with the instructors. Possible topics are listed below. General topology: Cardinality of sets; definition of topological space and examples; basis and subbasis; sequences; Continuity and different characterizations; topologies generated by functions; metric spaces; first and second countable spaces; separation axioms; compact spaces and characterization in Euclidean, metric and topological space; product spaces, box and product topology; connected spaces; function spaces; pointwise and uniform convergence; the space of continuous functions; compact open topology.

Measure theory: Lebesgue measure theory in R^n; Lebesgue measurable functions; differentiation and integration; Lebesgue integrals and Lp spaces. Functional analysis: normed spaces; Banach space; separable spaces; quotient spaces; equivalent norms; linear continuous functions; images of complete spaces and isometries; finite dimensional space; dual spaces;basic differential calculus in Banach spaces; basic notions of Calculus of Variations and Optimal Control.
Villanacci, A., (2016). Mathematics for Economics 3, Class notes .

8) Curriculum in *Economics*

8.1) Introduction

The Economics curriculum of the two-year Master of Science program in Economics and Development aims at providing students with the capacity to conduct theoretical and applied research in the fields of economics. Graduates will be able to collect and analyse quantitative and qualitative information from local, national and international datasets. Their knowledge of economic phenomena will enable them to relate micro and macro phenomena, to use theoretical and applied (including econometric) tools in order to analyse economic systems, and to evaluate and formulate economic policies. Courses aim at providing a sound background in economics and quantitative methods, but also allow a multidisciplinary approach (historical, legal etc).
The Master of Science in Economics and Development provides an ideal background for pursuing a PhD program in Italy or abroad (in Economics and related topics) or for a medium-high level entry into research or professional jobs in the field of economics and economic policy. Notable careers include academic teaching and research, civil service appointments and posts in national and international organisations or in private economic consultancy agencies

The application form can be downloaded at:
http://www.unifi.it/upload/sub/studenti/1415/modulistica/domanda_valutazione_accesso_magistrali_english.pdf

Contact person:
- Prof. Annalisa Luporini (annalisa.luporini@unifi.it)

8.2) Prerequisites

8.2.1) Formal prerequisite

Applicants should have a final undergraduate grade with pass proceed (i.e. permit to proceed to graduate studies). Applicants who graduated in Italy should have a final grade of at least 99/110 (for foreign students: if the pass proceed is not indicated it will be calculated and should be equivalent to 99/110). Students who do not fulfil this requirement but are motivated to apply can do so but may be asked to sit for an interview (if necessary also via internet) or a test (admission decisions are taken by the Admission Committee).
As far as credits (CFU) are concerned, the current academic entry requirements from a BA degree course are to have earned at least 18 credits in Economics, 6 credits in Statistics and 6 credits in Mathematics. It is compulsory to have a very good working knowledge (written and oral) of the English Language (at least a B2 level of the Common European Framework, i.e., equivalent to a Cambridge First Certificate). Students who do not meet these academic requirements (in terms of credits or English knowledge), need to earn the missing credit points before being formally admitted either at the University of Florence (as individual exams) or at the University of origin of the potential candidate. To satisfy the English language proficiency requirements students need to:

- give evidence that their undergraduate degree course was taught entirely in English;
- certify their knowledge at a European B2 level (Cambridge First certifcate, TOEFL, IELTS etc.);
- pass a B2 English language test organised by Dr. Ilona V. Cziraky (ilona.cziraky@uni..it), who is in charge of the degree course' language admission test;
- have passed the English language test/exam of the degree courses in Economia Aziendale, Economia Commercio, SECI-OP and Statistica at the University of Florence.

8.2.2) Background

It is important that the student is well acquainted with the topics listed below. Preliminary courses in Mathematics and Statistics will be offered, starting on the 7th of September. Attendance is vital for the understanding of all core courses. See http://www.development-lm.uni..it/vp-
121-courses.html

Mathematics

Basic Point Set Theory, Real Numbers, Linear Algebra, Differential and Integral Calculus for Functions of one Real Variable.

Statistics and Econometrics

Types of variables. Ratios. Statistical distributions. Graphics. Mode, median and analytical means. Variability. Heterogeneity. Skewness and kurtosis. Chebyshev inequality. Bivariate distributions.

Indexes of association. Variance decomposition and dependence in mean. Covariance and correlation. Simple linear regression.
The basic notions of probability: random experiment; sample space; events; probability and its properties; conditional probability and its properties. The basic notions of random variables: definition; domain of a random variable; discrete and continuous random variables; distribution of a random variable in terms of its probability density function or cumulative distribution function; expectation of random variables (mean, variance, standard deviation); linear transformations of random variables; multiple random variables.

Economics

Microeconomics. Consumption: budget constraint, preferences, utility, demand functions. Production: technology, cost curves, pro.t maximization, firm supply. Competitive market equilibrium, monopoly, oligopoly, elements of game theory. Pareto efficiency, externalities, public goods.
Macroeconomics. National accounting in an open economy: income, balance of payments, price indexes, interest rates, real and nominal exchange rates. IS-LM Model in an open economy, monetary and fiscal policy, exchange rate regimes (fix and flexible rates). AD-AS Model, prices, wages and employment.

8.2.3) Further information

- A detailed list of textbook covering all listed topics is available at http://www.economia.uni..it/upload/sub/scuola-varie/syllabus-economics.pdf

- All the needed prerequisites are covered in standard courses at the Undergraduate (First Level) Programs in Economics (Corsi di Laurea "Economia e Commercio" and "Economia Aziendale") at the University of Florence (Università degli Studi di Firenze), as summarized in the table below.

Prerequisites	**Courses**
Macroeconomics	Macroeconomia
Microeconomics	Microeconomia
Statistics and Econometrics	Statistica 1 Introduzione alla Econometria
Mathematics	Matematica per le applicazioni Economiche 1 Matematica Finanziaria (only Integral calculus) Matematica per le applicazioni Economiche 2 is also highly recommended

8.3) Course Plans

Below we present a suggested course plan which does not require Teaching Committee approval.

First year - First semester

Course number	Course Name	Number of Credits
B020829	Microeconomics 1	9
B020835	Statistical Inference	6
B020834	Mathematics for Economics	9
	One out of the following two courses	
B020838	History of Economic Thought*	6
B019470	Economic History of Globalization**	6
		30 total credits

* In the academic year 2015/16, History of Economic Thought will be taught in the Second Semester.
** Economic History of Globalization starts on September 8, 2015. Classes are held at the Syracuse University, Piazza Savonarola 15.

First year - Second semester

Course number	Course Name	Number of Credits
B020830	Microeconomics 2	9
B020831	Macroeconomics 1	9
B019219	Corporate Governance and Financial Institutions	12 (6 + 6)
		30 total credits

Second year - First semester

Course number	Course Name	Number of Credits
B020832	Macroeconomics 2	9
B020839	Econometrics (Microecon.+ Macroecon.)	12 (6 + 6)
	One course in the "List of optional courses"	6
		27 total credits

Second year - Second semester

Course number	Course Name	Number of Credits
	One course in the "List of optional courses"	6
	One out of the following two courses	
B020836	Law and Economics	6
B019207	Financial Services and Markets Law	6

	One out of the following two courses	
B020842	Econometric Lab	6
B020843	Economic Lab	6
B024225	Thesis	15
		33 total credits

List of optional courses

Course number	Course name	Number of Credits	Semester
B019121	Economia Pubblica (taught in English)	6	First
B016453	Economics of Innovation	6	First
B020847	Health and Education Economics	6	First
B020837	International and Financial Economics	6	Second
B016435	International Economics II	6	First
B020853	Labour Economics	6	First
B020844	Topics in Mathematical Economics 1	6	First
B020845	Topics in Mathematical Economics 2	6	Second
B020842	Econometrics Lab	6	Second
B020843	Economics Lab	6	Second
B019470	Economic History of globalization	6	First
B020838	History of Economic Thought	6	Second

8.4) Courses and Instructors

Corporate Governance and Financial Institutions

CFU: 12

Year: I

Instructors: Sara De Masi and Federica Ielasi

Corporate Governance - Sara De Masi

The recent financial crisis and corporate scandals have put the light on how companies are managed.

Corporate governance deals with the set of policies, process and customs by which an organization is directed. This course aims to provide a deep understanding of the fundamentals of corporate governance from a variety of angles - the board of directors, senior management, investors, media, regulators and society ñ and from an international perspective. After a highlight on the main corporate governance systems (Anglo-American, German and Italian), relevant theories and issues of corporate governance practices will be analyzed (e.g. ownership and control, conflict of interests, board of directors, institutional environments). Students will gain skills required for understanding corporate behaviors. They will be introduced to issues in corporate governance through lectures, class discussions and cases study.

Course overview:

Definitions of corporate governance; main theories; corporate governance systems around the world (outsider systems versus insider systems); Boards of directors: roles and functions, composition and gender diversity, CEO compensation and stock options, Corporate governance codes, Corporate governance in banks.

Tricker B., 2009, *Corporate Governance. Principle, Policies and Practices*, Oxford University Press.

Goergen M., 2012, *International Corporate Governance*, Pearson ed.

Financial Insitutions - Federica Ielasi

The course aims to give a complete view of the Önancial system and the recent innovations in the national and international regulation concerning the Önancial institutions. The first part of the course aims at analyzing several issues relating to fundamentals of financial markets and institutions, analyzing the main financial intermediaries: commercial banks, pension funds, investment companies. The second part of the course concerns the analysis of the main risks faced by financial institutions: credit risk, liquidity risk, interest rate risk, and insolvency risk. The last part of the course deepens the main methodologies for managing risks of the balance sheet with derivative securities, loan sales and securitization. The objectives of the course are to strengthen the knowledge about financial markets and institutions, to strenghten the skills associated with the comprehension of the function of financial markets and their recent evolution, both in the national and international field, and to strenghten the knowledge about models for measuring and managing financial risks.

Saunders, Cornett, 2015, *Financial Markets and Institutions,* 6th edition, McGraw-Hill

Econometrics

Microeconometrics

CFU: 6
Year II
Instructor: Giorgio Calzolari
Elements of linear algebra. Vectors and matrices, linear dependence, rank, square matrices, inverse matrix, equation systems, idempotent matrices, projection matrices, trace. Linear regression model. Algebraic assumptions and statistical assumptions, ordinary least squares estimation, coefficients and residuals, R-square, unbiasedness of estimated coefficients, estimation of the errors variance, variance-covariance matrix of estimated coefficients, Gauss-Markov theorem, standard errors, linear restrictions, t-test, F-test, specification tests, structural break, heteroskedasticity, autocorrelation. Discrete choice, logit model. Linear panel data model (with "fixed" effects).
Computer laboratory. Use of GRETL (free software, open source).
Calzolari, G., 2012, Econometric Notes, MPRA Paper 64415, University Library of Munich, Germany (revised May 2015; pages 1-14).
Stock, J. H., and M. W. Watson, 2007, Introduction to Econometrics, (2nd edition), Reading, MA: Addison-Wesley Publishing Company, Inc.

Macroeconometrics

CFU: 6
Year II
Instructor: Giampiero Gallo
Time-Series Models, Difference Equations and Their Solutions, Lag Operators. Stochastic Difference Equation Models, ARMA Models, Stationarity, Stationarity Restrictions for an ARMA (p,q) Model , The Autocorrelation Function, The Partial Autocorrelation Function, Sample Autocorrelations of Stationary Series, Box-Jenkins Model Selection, Properties of Forecasts, Seasonality, Structural Change, Combining Forecasts. Deterministic and Stochastic Trends, Removing the Trend, Unit Roots and Regression Residuals, The Monte Carlo Method, Dickey-Fuller Tests and extensions, Power and the Deterministic Regressors, Panel Unit Root Tests, Trends and Univariate Decompositions, Intervention Analysis, ADLs and Transfer Functions, Limits to Structural Multivariate Estimation, Introduction to VAR Analysis, Estimation and Identifcation, The Impulse Response Function, Structural VARs, Examples of Structural Decompositions, Overidentifed Systems, The Blanchard-Quah Decomposition. Linear Combinations of Integrated Variables, Cointegration and Common Trends, Cointegration and Error Correction, Testing for Cointegration: The Engle-Granger Methodology, Cointegration and Purchasing Power Parity, Characteristic Roots, Rank, and Cointegration.
W. Enders, 2014, *Applied Econometric Time Series*, 4th Edition, Wiley.

Econometrics Lab

CFU: 6

Year II

Instructor: Giampiero Gallo

Introduction to a matrix based programming language (MATLAB). Basics: importing data, the command line, review of matrix algebra, storing the results. The Classical Linear Econometric Model in matrix form. OLS estimators and covariance matrix. Robust forms under heteroskedasticity and serial correlation. Testing linear and nonlinear restrictions. Residual diagnostics, auxiliary regressions. Simulation based analysis of estimators properties and departures from ideal conditions. The second half of the course will be devoted to the replication of the results from some published papers, both in macro and in micro applications.

Greene W, 2008, *Econometric Analysis* Sixth Ed., Pearson.

Class notes, online videos, help manuals

Public Economics

CFU: 6

Year II

Instructor: Lapo Filistrucchi

The course will cover some important topics in the field of modern public economics. In particular, the course will deal with: a) the so-called *Political Economy*, i.e. the study of the interaction between institutions, political organizations and the working of the economic system; b) the *Economics of media markets*, i.e. the study of how media markets function; c) the so-called *Political Economy of the Media*, i.e. how media markets affect the political process (and hence economic policies) and vice versa; d) the *Regulation of Media Markets*. To explore the functioning of media markets the basics of standard oligopolistic models of product differentiation will need to be recalled. Depending on the number of students taking the course, some students may be allowed to opt for assessment on a class presentation in addition to the final written exam. In that case, the class presentation and the written exam will count each for 50% of the grade. A precise reading list will be available on http://e-l.unifi.it/ at the beginning of the course. It will contain some chapters from:

Belleflamme e Peitz, 2010*, Industrial Organization: Markets and Structure*, CUP.Feldstein M. and A.J. Auerbach (eds.), 2002, *Handbook of Public Economics*, Elsevier.

Anderson S., D. Stromberg, and J. Waldfogel (eds.), 2015, *Handbook of Media Economics*, Elsevier.

Economic History of Globalization

CFU: 6

Year: I

Instructor: Luciano Segreto

The course aims to offer a general overview of the new international economic order following the end of Cold War. This period is frequently associated with the concept of globalization. The mainstream affirms that this process has been possible because of liberalization, deregulation and in general thanks to a massive reduction of the state intervention. This course will challenge this vision, offering a completely different image of the reasons and the instruments that

permitted the transformation of the world economy in the last 25 years. Globalization is asking for more but also for a different state intervention. Emerging economies are building their future both on very old economic policies such as trade tariffs and on the support of the state in implementing the most advanced technologies in their economic structure. Transnational companies are sometimes bigger than the countries where they invest in but international or transnational institutions try to limit their power. China economic reforms and modernization appears to some extent a new form of state (authoritarian) capitalism. Russia more controversial transition to market economy did create a very similar model. Capital markets are more and more powerful, but national and supranational institutions work every day to increase levels of regulations and to make more efficient those already existing. Producers, consumers and traders of raw materials and commodities are acting as a sort of "hidden" power that states are trying to counterbalance and to regulate in order to keep a balance in this framework, where economic and financial aspects are continuously interfering and sometimes conflicting with the social dimension of the market.

Ravenhill J., 2011, *Global Political Economy,* Oxford UP. Gilpin R., 2011, The Challenge of Global Capitalism: *The World Economy in the 21st Century*, Princeton UP. Bhagwati J.N., 2007, In Defense of Globalization, Oxford UP

Economics Lab

CFU: 6

Year: II

Instructor: Lapo Filistrucchi

In this course, students obtain hands-on experience with the application economics to real world cases. The course will focus on the application of industrial organization to real world competition policy and regulatory cases. By the end of the course students will have acquired some skills that are of value in jobs such as economic consultancies, independent authorities, research institutes or policy organizations.

In the first half of the course the lecturer will introduce the students to competition policy. In the second half of the course, the students will take over. In each class two students get a case, say, for concreteness, the EU vs Microsoft case. As part of the decision, the Commission forced Microsoft to sell a version of Windows without its Mediaplayer. One student has to defend this decision, the other has to make the case that the decision was wrong. The jury consists of the other students in the class.

Motta, M., 2004. *Competition Policy; Theory and Practice*, Cambridge University Press.

Economics of Innovation

CFU: 6

Year: I

Instructor: Mauro Lombardi

The digital age we are living in: the second economy (Arthur), ubicomp (ubiquitous computing), "calm technology" (Weiser, 1991, 1993). The age of the spiritual machine (Kurzweil): what technology is. The starting point: the invention of invention (Landes, 1998). Technology and the Economy: some stylized facts. Taxonomy of innovations: radical, incremental, modular, architectural. Technological paradigms, technological trajectories, techno-economic landscapes.

Different approaches to the analysis of production processes. Innovation processes between path dependence and path creation. Decision making processes: 1) standard mainstream paradigm, 2) evolutionary approach, the agents of techno-economic dynamics: individuals, firms, socio-technical systems. Basic concepts for the current Century (I): systems and complex systems. Basic concepts for the current Century (II): disruptive technologies, big data and data analytics, augmented reality, cloud computing and their consequences for business models.
Brian Arthur, 2009, The Nature of Technology, Free PressChandler.
Hagstrom, Solvell, 1999, The dynamic firm. The role of technology, strategy, organization, and regions, Oxford University.
Files and other material provided by the teacherFiles and other material provided by the teacher

Financial Services and Markets law

CFU: 6
Year: II
Instructor: Filippo Zatti

The course examines the EU's regulation of the capital markets. It considers the harmonized regulatory regime which applies to capital market actors across the Member States and which supports the integrated market. The topics covered include: the foundations of capital markets legislature in Europe focusing on the strategies adopted for market integration and on the role of law; the basics of capital markets law regarding capital markets, financial instruments, market participants and the regulatory authorities, including the role of the European Securities and Markets Authority; the regulation of insider dealing and market manipulation, other than short selling; the prospectus and disclosure regime; market access of investment firms and the passport for investment services; compliance in investment firms; financial analysts; rating agencies.
Veil R. (ed.), 2013, Europan Capital Markets Law, Oxford and Portland, Oregon.

History of Economic Thought

CFU: 6
Year: II
Instructor: Piero Bini

The course provides an overview of the main economic theories from Mercantilism (XVI-XVIII Centuries) and Classical Political Economy (XVIII-XIX Centuries), up to the most recent trends of economic thought. Specific attention will be paid to these economists: F. Quesnay, A. Smith, D. Ricardo. J. S. Mill, K. Marx, W. S. Jevons, C. Menger, L.Walras, A. Marshall, J. A. Schumpeter, J. M. Keynes, M. Friedman. In particular, as far as the contemporary economic thought is concerned, we will point out theories and methodological stances which deal with money, business cycle and economic growth. We will also examine the institutional context of some political economy arguments. The last part of the course will be dedicated to outline the major scientific contributions by some leading Italian economists, since the unification of Italy in 1861 onward. The course will benefit students who want to have a better understanding of contemporary economic theories by looking at their original formulation.
Landreth, H. and D. C. Colander, 2002, *History of Economic Thought,* fourth edition, Houghton Mi- in, Boston, MA.
A collection of texts in pdf placed at students' disposal by the instructor.

International and Financial Economics

CFU: 6

Year: II

Instructor: Giulio Cifarelli

In the course the following topics shall be discussed: the foreign exchange market and the main financial markets; the efficient markets approach and the statistical properties of the financial time series; the monetary approach to the Balance of Payments and the portfolio balance approach; the exchange rate regimes and the "fear of floating" debate; the recent (excess) foreign exchange reserve policy of central banks; the theory of (ir)rational speculative bubbles; the recent financial crises and the literature on contagion; the relevance of speculation and the interaction between fundamentalists and chartists.

MacDonald R., 2007, Exchange Rate Economics. Theories and Evidence, Routledge, London, or McKinnon R.I., 1979, Money in International Exchange. The Convertible Currency System, Oxford University Press, Oxford

International Economics II

CFU: 6

Year: II

Instructor: Giorgia Giovannetti

The main aim of the course is to help understand specific features of the current wave of globalization as well as countries' and firms' reactions to it. The first part of the course, after an introduction on how to measure globalization, also accounting for the value added in each country, analyzes historical trends in integration (trade, capital, people, ideas) on the base of existing models of international trade (from Ricardo to models of heterogeneous firms). It also highlights the role of China and India in the global economy. The second part illustrates new issues raised by the globalization process, such as offshoring, outsourcing, and the theories recently developed to address them ('new new' trade theories). It also emphasises the role of imported inputs for the competitiveness of a country. Key topics include: globalization: useful definitions; statistical and economic indicators of globalization, specialization, imbalances; Ricardo's model of International Trade (brief); Hescker-Olin model; Imperfect competition models; geography models; New theory versus New New theory (Melitz); Movements of capital and workers; Offshoring and outsourcing; FDI and multinational. Other topics: R&D internationalization; Migrations; Trade policies and International agreements (TTIP).

Feenstra, R.C., Taylor, A., 2015, International Economics, 4th Edition.

Feenstra, R.C.,2015. Advanced International Trade: Theory and Evidence, second edition, Princeton University Press.

Labour Economics

CFU: 6

Year: II

Instructor: Gianna Claudia Giannelli

The purpose of the course is to give the theoretical and applied tools to understand the economics of labour markets with a special focus on the relationship with development. The first

part illustrates how economic models are applied to labour market phenomena, such as labour supply and participation, labour demand by firms, and wage determination under different institutional settings. Furthermore, it is shown how alternative theories can be tested empirically and how economic models can be applied to evaluate the employment effects of economic policies, such as reforms of the labour market and of the welfare system. The second part of the course explores key issues of labour markets in developing countries such as the introduction of a minimum wage, the distinction between formal and informal employment, rural and urban labour markets, the role of education and human capital, the determinants of returns to human capital investments, labour migration and remittances, discrimination and ethnicity, gender gaps, health and nutrition effects on labour productivity. The course is intended for both the curricula in economics and development.

Borjas G.J., 2013, Labor Economics, Mc Graw Hill

Cazes S. and Verick S.(Ed.), Perspectives on Labour Economics for Development, ILO, 2013

Law and Economics

CFU: 6

Year: II

Instructor: Filippo Zatti

The Law and Economics course aims to give an overview of the principles of European Economic Law in order to deepen the EU economic constitution and the founding principles of the Internal Market. As a consequence, class deals with the four basic freedoms of movement of goods, capital, persons and services as well as EU competition law.

Macroeconomics 1

CFU: 9

Year: I

Instructors: Marco Dardi and Vinicio Guidi

Intertemporal equilibrium of consumption and production plans in a macroeconomic deterministic environment. Saddle properties of dynamics in the vicinity of a steady state. Comparison with OLG models. Uncertainty, Bayesian expectations in general and rational expectations. Dynamics under rational expectations compared to adaptive expectations. Financial markets. Intertemporal portfolio choice according to utility-based and consumption-based CAPM. The contingent claims approach to financial markets. Completeness and efficiency in risk allocation.

Models of growth from Harrod-Domar to Solow and Swan; prices and markets during transition, technical progress, conditional convergence. Derivation of the propensity to save from intertemporal optimization in the Ramsey model. Endogenous growth. Proof of existence of an optimal growth path.

Wickens M., 2012, *Macroeconomic Theory: A Dynamic General Equilibrium Approach*, Princeton Univ. Press;

Barro and Sala-I-Martin, 2004, *Economic Growth*, Mc Graw-Hill;

Acemoglu D., 2009, *Introduction to Modern Economic Growth*, Princeton Univ. Press

Macroeconomics 2

CFU: 9
Year: II
Instructors: Vinicio Guidi and Leonardo Boncinelli

Theory of Money (3 credits - Prof. Guidi)

A] This module aims at introducing students to the main issues about money and monetary policy. First, the main functions of money are discussed: money as a medium of exchange, money as a store of value, the optimal quantity of money. Then, monetary policy issues are taken into consideration, with a specific concern for the euro area.

B]

- "*Foundations of Modern Macroeconomics*", Ben J. Heijdra, Oxford University Press, 2009 [ch. 11]
- "*Macroeconomic Theory: A Dynamic General Equilibrium Approach*", Michael Wickens, 2012 [ch. 8,13]

Topics in Macroeconomics (6 credits - Prof. Boncinelli)

A] Contents:

- a basic new Keynesian DSGE model;
- some reasons for price/wage stickiness: implicit/explicit labor contracts, efficiency wages, menu costs, rational inattention;
- coordination failures;
- communication policy: social value of public information, time inconsistency;
- equilibrium unemployment theory.

B]

- "*Monetary Theory and Policy*", Carl E. Walsh, The MIT Press, 2010 [ch.1, 8];
- papers and lecture slides.

Mathematics for Economics

CFU: 9
Year: I
Instructor: Franco Gori

Complements of Linear Algebra, Complements of Real Numbers Theory, Metric Spaces, Linear Normed Spaces, Differentiable Curves in Rn, Real Functions of Several Real Variables, Vector Valued Functions of n Real Variables, Ordinary Differential Equations, Systems of Ordinary Differential Equations, Systems of Linear Differential Equations, Nonlinear Dynamical Systems: Local Analysis.

Apostol T., 1991, *Calculus, volume 1 and 2*, Wiley.
Arnold V., 1992, *Ordinary Differential Equations*, Springer.
M. Hirsch, S. Smale, 1974, *Differential Equations, Dynamical Systems and Linear Algebra*, Academic Press.

Microeconomics 1

CFU: 9
Year: I
Instructor: Domenico Menicucci
Consumer Theory: preference relations, utility functions, representation of preferences via utility functions, budget set and consumer problem, demand functions.
Production Theory: production sets, profit maximization and cost minimization.
Choice under Uncertainty: expected utility theory, money lotteries and risk aversion, first order stochastic dominance between payoff distributions.
General Equilibrium Theory: competitive equilibrium in pure exchange economies, existence of equilibria, Pareto optimality and welfare theorems.
Game Theory: basic elements of non-cooperative games, simultaneous-move games, dominant and dominated strategies, Nash equilibrium in pure and mixed strategies.
Market Power: monopoly pricing and price discrimination, oligopoly models.
Mas-Colell, A., Whinston, M.D., Green, J.R., 1995. *Microeconomic Theory*, Oxford University Press.
Lecture notes provided by the instructors.

Microeconomics 2

CFU: 9
Year: I
Instructors: Vittorioemanuele Ferrante and Annalisa Luporini
The first part of the course takes for granted the elements of strategic game theory presented in Microeconomics 1. Dynamic ordinal and cardinal games are introduced, with related equilibrium notions as solutions, starting from Subgame Perfection (SP). Subsequently, refinements of SP are studied: Weak Sequential Equilibrium, Perfect Bayesian Equilibrium, Sequential Equilibrium. Games of incomplete informations and some examples of repeated games are further topics covered. The course is advanced, but will be eminently practical: emphasis will be put on acquiring the ability to solve games, rather than on memorizing mathematical proofs of the theoretical apparatus.
The second part of the course is devoted to the economics of information. Game theoretic methods and models are used to study the consequences of informational asymmetries and in particular the following topics. Adverse selection: effects on market equilibrium and public intervention. Signaling: the education signaling game. Screening in a competitive market. Principal-agent problem with i) hidden actions and ii) hidden information.
Giacomo Bonanno, *Game Theory*, 2015; online free access at: http://www.econ.ucdavis.edu/faculty/bonanno/
Mas-Colell, A., Whinston, M.D., Green, J.R., 1995. *Microeconomic Theory*, Oxford University Press (in particular, Chapters 13 and 14).

Statistical inference

CFU: 9
Year: I
Instructor: Fabrizio Cipollini

Special r.v.'s: Bernoulli, Binomial, Poisson, Continuous Uniform, Normal, Gamma, Chi-squared, Student-T, Fisher-F, Beta. Transformation of r.v.'s. Transformations. Introduction to Statistical Inference: Concepts of population, sample, parameter, statistics and estimator, statistics value and estimate, sample distribution of a statistic and related synthetic indices. Point Estimation: The Maximum Likelihood (ML) method. Properties of estimators. The Cramer Rao bound. Asymptotic properties. Asymptotic properties of ML estimators. Interval Estimation: Definition of interval estimate (confidence interval), confidence level, size of the interval. The Pivot method for finding confidence intervals. Hypothesis testing: Motivations, framework, definitions of statistical hypothesis and of statistical test. Table of decisions, type I and type II errors, significance level and power of a test. The Neyman-Person lemma and ensuing remarks. Power of the test. The p-value. The likelihood ratio test. Linear Regression Model: Model definition and corresponding properties; the Least Squares (LS) and the ML methods for estimating the parameters. Deviance decomposition and R2 index; predictions of the conditional mean and of the dependent variable for a given value of the independent variable. Complementary Topics.

Wasserman, L., 2004. All of Statistics: A Concise Course in Statistical Inference, Springer. ISBN: 978-0-387-21736-9.

Topics in Mathematics for economics 1

CFU: 6
Year: II
Instructors: Antonio Villanacci and Salvatore Federico

First half of the course: Introduction to dynamic programming in discrete time with certainty.

Review of some basic results from elementary mathematical analysis: the set of extended real number, sup and inf in R , sequences in R, series in R, limsup and liminf for sequences.

Principle of optimality, the value function.

Properties of solutions and value function, necessary conditions for solutions, Euler equations with applications. Euler dynamics.

Second half of the course. Introduction to the theory of stochastic control in discrete time with some applications to economic and financial basic problems. The second half is divided in three parts, each one consisting (approximately) of four lectures. Part I) Introduction to the basic concepts of probability theory. Part II) Formulation of stochastic control problems and description of the dynamic programming method in discrete time. Part III) Solution of specific examples.

References:

Bertsekas, D., (2016), Dynamic Programming and Stochastic Control, Academic Press, 1976.

Federico S., (2016) Introduction to dynamic programming in discrete time under uncertainty, Class Notes.

Villanacci, A., (2016), Introduction to dynamic programming in discrete time with certainty, Class Notes.

Topics in Mathematics for economics 2

CFU: 6

Year: II

Instructor: Antonio Villanacci

The course is an independent study and it has "Mathematics for economics" as an indispensable prerequisites. The content of the exam has to be discussed and agreed upon with the instructors. Possible topics are listed below. General topology: Cardinality of sets; definition of topological space and examples; basis and subbasis; sequences; Continuity and different characterizations; topologies generated by functions; metric spaces; first and second countable spaces; separation axioms; compact spaces and characterization in Euclidean, metric and topological space; product spaces, box and product topology; connected spaces; function spaces; pointwise and uniform convergence; the space of continuous functions; compact open topology.

Measure theory: Lebesgue measure theory in R^n; Lebesgue measurable functions; differentiation and integration; Lebesgue integrals and Lp spaces. Functional analysis: normed spaces; Banach space; separable spaces; quotient spaces; equivalent norms; linear continuous functions; images of complete spaces and isometries; finite dimensional space; dual spaces;basic differential calculus in Banach spaces; basic notions of Calculus of Variations and Optimal Control.

Villanacci, A., (2016). Mathematics for Economics 3, Class notes.