Licence 3 Économie Gestion

L3 PLUS PROGRAM

Bachelor's degree International Economics & Management

2018-2019

Objectives:

This Bachelor degree provides students with a strong background in economics and management.

This selective program offers the possibility to apply for any Economics master and most Management masters curricula.

Depending on the Master targeted, students from UPEC have the opportunity to enrich their studies by performing the second semester (spring semester) at a partner university (lectures will be taught in English), in Europe or worldwide.

Prerequisites and requirements:

This selective program is designed for good students who have completed two years of studies in Economics, able to attending lectures in English, and open minded to international exchanges.

These students will participate in small classes specially dedicated to this program. These classes will be a mix of French and international students, coming from our partner universities or elsewhere. Lectures will be taught exclusively in English, and foreign students will have the option to learn French as a foreign language.

Evaluation and Compensation scheme:

Students must attend all lectures.

More than two absences in one lecture results in a mark of 0/20 to the corresponding mid-term and final exam.

Not attending a final exam invalidates the corresponding course block and semester.

Students must have an average mark of at least 10/20 to complete the year.

All lectures in a given course block (U.E.) compensate each other, and all course blocks also compensate during a semester.

The two semesters compensate before the retake session (June).

Academic staff:

University Paris Est staff

Philippe ADAIR - (UPEC - Economics)
Vincent BOUVATIER - (UPEC - Economics)
Amélie GUILLIN - (UPEC - Economics)
Éric HERTZLER - (UPEC - Management)
Sandrine KABLAN - (UPEC - Economics)
Khaled LABIDI - (UPEC - Economics)
Sophie LARUELLE - (UPEC - Economics)
François LEGENDRE - (UPEC - Economics)
Julie LOCHARD - (UPEC - Economics)
Ferhat MIHOUBI - (UPEC - Economics)
Juliette REY – (UPEC - Economics)
Odile SOLNIK - (UPEC - Management)
Arnold VIALFONT – (UPEC - Economics)

Other Universities staff (visiting)

Johannes STEFAN - (TU Bergakademie Freiberg - Economics)

Experts & consultant teaching in the Master

Gael RABALLAND – (Senior Public Sector Specialist - World Bank)

Administrative staff

L3 Coordinator
Stephanie GOURER
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Contact for foreign students:

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Teaching organisation:

FIRST SEMESTER (fall semester)

ETCS	Lectures	Hours	Teachers	ERASMUS
	U.E.1. Quantitative Analysis & Game Theory (Q&G)			
5	ECUE 1 : Econométrie (Econometrics)	33	J.LOCHARD	E
4	ECUE 2 : Microeconomie (Microeconomics, intermediate level)	24	F.MIHOUBI	E
4	ECUE 3 : Theorie des jeux et Economie Publique (Game Theory and Public Economics)	24	A.VIALFONT	E
	U.E.2 : Monetary Issues, Governance and Organisations (MIGO)			
3	ECUE 1 : Théories des organisations (Organization Theory)	20	P.ADAIR	E
3	ECUE 2 : Problèmes monétaires internationaux (International Monetary Problems)	20	J.REY J.STEFAN	
3	ECUE 3 : Gouvernance et Institutions (Governance and Institutions)	20	G.RABALLAND	
2	ECUE 4 : History of globalization	12	A.GUILLIN	E
	U.E.3 Tools for International Economics (TIE)			
2	ECUE 1 : STATA Software	20	V.BOUVATIER	
2	ECUE 2 : Mathematical techniques used in economics	12	S.LARUELLE	
2	ECUE 3 : Elective course • English Skills (TOEIC/TOEFL) • French class (only for non-French speakers)	20 20	K.LABIDI I.RAMBI	

Note:
TOTAL SEMESTER 1 : 30 ECTS
(E): Lectures available for ERASMUS students

SECOND SEMESTER (spring semester)

ETCS	Lectures	Hours	Teachers	ERASMUS
	U.E.1. Growth & Globalization (G&G)			
5	ECUE 1 : Commerce International et IDE (International Trade & FDI)	33	A.GUILLIN	E
4	ECUE 2 : Macroeconomie ouverte (Macroeconomics, intermediate level)	24	P.ADAIR	E
4	ECUE 3 : Economie du Développement (Development economics)	24	J.LOCHARD G.RABALLAND	
	U.E.2. Business, Strategy and Finance (BSF)			
3	ECUE 1 : Corporate Strategy	20	E.HERTZLER	E
3	ECUE 2 : Marchés Boursiers (Financial Market)	20	S.KABLAN	E
3	ECUE 3 : Marketing	20		
2	ECUE 4 : Doing business in an international context	12	O.SOLNIK	E
	U.E.3. Professional Tools & Skills (PTS)			
2	ECUE 1 : Big Data: An Introduction with Python Programming Language	20	F.LEGENDRE	E
2	ECUE 2 : Introduction to General Algebraic Modeling System	12	A.GUILLIN	
2	ECUE 3 : Project Based learning or internship			

Note:
TOTAL SEMESTER 1 : 30 ECTS
(E): Lectures available for ERASMUS students

S1.U.E.1: ECUE 1: Econometrics

Teacher: J.LOCHARD
Volume: 33 hours
Credits: 5 ECTS
Assessment scheme: Homework/ Mid-Term/ Exam

Objectives:

This course aims at familiarizing students with econometric methods and designs used in economics, management and finance.

Expected learning outcomes:

The students will acquire analytical and technical skills, which are necessary to understand research articles and write technical reports on economic policy issues.

Course outline:

I. Introduction: Econometrics and data
II. The simple linear regression model
III. Hypothesis testing
IV. The multiple regression model
V. Multicollinearity, heteroscedasticity and autocorrelation
VI. More on regression

Indicative bibliography:

Carter, H., Griffiths, W., and G. Lim (2012). *Principle of Econometrics, John Wiley and Sons.*
Wooldridge, J. (2006). *Introductory Econometrics: A Modern Approach, South Western.*
Gujarati, D. (2003). *Basic Econometrics,* McGraw.
Angrist, J.D. and J.S. Pischke (2009). *Mostly Harmless Econometrics: An Empiricist's* Companion, Princeton University Press

S1.U.E.1: ECUE 2: Microeconomics, intermediate level

Teacher: F.MIHOUBI
Volume: 24 hours
Credits: 4 ECTS
Assessment scheme: Written mid-Term/ Final exam

Course outline:

   I.   Some reminders on consumer, producer and partial equilibrium
   II.   An exchange economy: the Edgeworth box

III.   Existence, uniqueness and stability of equilibrium in an exchange economy
IV.   The welfare theorems in an exchange economy
V.   General equilibrium with production
VI.   Externalities and public goods

Indicative bibliography:
Varian H. : « Analyse Microéconomique ».
Tallon J.-M. : « Introduction à la théorie de l'équilibre général ».

S1.U.E.1: ECUE 3: Game theory and Public economics

Teacher: A.VIALFONT
Volume: 24 hours
Credits: 4 ECTS
Assessment scheme: Written mid-Term/ Final exam

Objectives:

This lecture aims at linking the methodology of Game Theory and the main content of Public Economics. The former consists in the analysis of interactions between rational individuals or firms and mainly relies on the different forms of the Nash equilibrium concept (depending on the timing and information structure of a game). The latter mainly includes collective considerations such as defining total surplus or social welfare. We will see that individual preferences and informational imperfections may prevent collective efficiency.

Expected learning outcomes:

At the end of the course, the students should be able to assess the nature of a game and to solve it. The students should also be able to interpret welfare implications of the equilibrium.

Course outline:

0. Introduction
0.1. Definitions of a game and the information structure
0.2. Preferences and rationality
0.3. Pareto efficiency and welfare functions
1. Static games of perfect and complete information
1.1. Strategic or Normal form and Nash equilibrium
1.2. Prisoners' dilemma and public good provision
1.3 Cournot and Bertrand models
1.4 Final-offer arbitration
1.5 The problem of the commons
2. Dynamic games of perfect and complete information
2.1. Extensive form, backward induction and repeated games

2.2. Stackelberg model and the commitment assumption
2.3. Sequential bargaining
2.4. The collusion game finitely or infinitely repeated
2.5. Efficiency wages
3. Elements on games of imperfect and incomplete information
3.1. Bayesian games and Bayesian Nash equilibrium
3.1.1. Cournot Competition under asymmetric information
3.1.2. A simple auction
3.2. Dynamic games and Perfect Bayesian equilibrium
3.2.1. one-sided offers from an uninformed agent (screening)
3.2.1. one-sided offers from an informed agent (signaling)
3.3. Asymmetric information: antiselection and moral hazard

Indicative bibliography:

Gibbons (1992), "Game Theory for Applied Economists", Princeton University Press.
Rassmussen (2006), "Games and Information: An Introduction to Game Theory", Wiley-Blackwell (available at: www.rasmusen.org/GI*).*
Fudenberg and Tirole (1991), "Game Theory", MIT Press.

S1.U.E.2: ECUE 1: Organization Theory

Teacher: P.ADAIR
Volume: 20 hours
Credits: 3 ECTS
Assessment scheme: Oral Presentations/ Final Exam

Objectives:

This eight-session course should help students to understand organisations and their environment.

Expected learning outcomes:

At the end of the course, the students should be able to: i) identify the different structures and dynamics of organisations; i) analyse and diagnose context, issues and outcomes of an organization; iii) take into account the impact structural change on decision making; iv) acquire an overview of an organisation and models of organisations; v) enable to link organisational practices and tools to a conceptual framework

Course outline:

I. Definitions and Overview of approaches to the Organisation
II. Costs, outcomes and risks: Organisational Economics
III. Organisation and Environment: Contingency theory
IV. Dansk Case study: Patterns of structural change and design
V. Organisations as open systems: Evolutionary Theories
VI. Decision-making Theories
VII. Configurations, Strategies and Conflict

Indicative bibliography:

Chandler, A. D. Jr. (1977) *The visible hand: The managerial revolution in American business.* Cambridge, MA: Belknap Press

Nelson, R.R (1995) Recent Evolutionary Theorizing About Economic Change. *Journal of Economic Literature*, Mar., 33, 1, 48-90

Penrose, E. T. (1959) *The Theory of the Growth of the Firm.* New York: John Wiley & Sons.

Williamson, O. E. (2000) The New Insitutional Economics: Taking Stock, Looking Ahead. *Journal of Economic Literature,* Sep., 38, 595–613

All documents (case studies, course slideshow, readings) are available on the EPREL digital platform.
There is no reference textbook. Please refer to the course slideshow (available on the EPREL digital platform).

S1.U.E.2: ECUE 2: International Monetary Problems

Teacher: J.REY & J.STEFAN
Volume: 20 hours
Credits: 3 ECTS
Assessment scheme: Team Work/ Final Exam

Objectives:

The objective is to introduce the current problems of the international monetary system through an historical approach. Students will be also familiarized with the main models of financial crises.

Expected learning outcomes:

At the end of the course, the students should be able to understand rigorously the contemporary debates on international monetary issues, including European monetary challenges.

Course outline:

Chapter 1: Introduction
I.   Exchange rates and preliminary notions
II.   Exchange rates regimes and international monetary system
III.   Balance of Payments and currencies

Chapter 2: Past international monetary system
I.   The gold standard
II.   The interwar period and the gold exchange standard
III.   Bretton Woods

Chapter 3: Post Bretton-Woods International monetary system
I.   Attempts to reform the international monetary system
II.   Floating exchange rates

Indicative bibliography:

Ahamed, Liaquat (2009), *Lords of Finance - The Bankers Who Broke the World*, The Penguin Press, New-York.
Eichengreen, Barry (2015), *Hall of Mirrors: The Great Depression, The Great Recession, and the Uses-and Misuses-of History*, Oxford University Press.
Stein, Ben (2014), *The Battle of Bretton Woods*, Princeton University Press.

S1.U.E.2: ECUE 3: Governance and institutions

Teacher: G.RABALLAND
Volume: 20 hours
Credits: 3 ECTS
Assessment scheme: Written assessment (50%) ; Oral presentations, case studies and participation (50%)

Objectives:

The main objectives are to better understand issues related to institutions, taxation and governance issues, with a focus on developing countries.

Expected learning outcomes:

At the end of the course, the students should be able to:
Understand the importance of domestic resource mobilization for delivering public goods but also institutional benchmarking and the role of state in development.

Course outline:

- Introduction to history of taxation doctrine and public goods,
- Overview of statistics and statistical sources on taxation issues,
- Taxation and development and some lessons of donor-supported reforms,
- Institutional building in fragile and conflict-affected countries,
- Security, informal trade and tax administration,
- Governance indicators and institutional benchmarking,
- The role of state in development,
- Lessons of the fight against corruption,
- Corruption, incentives and behavior of tax agents in low governance countries,
- Corruption risks in public procurement.

Pedagogical approach:

- Readings on relevant documents
- Discussions; Presentations; Case studies

Indicative bibliography:

Musgrave, R. A. (1985). "A brief history of fiscal doctrine". In *Handbook of Public Economics*, ed. A.J. Auerbach and M.Feldstein, Elsevier.

Crandall, William (2010), Revenue Administration: Performance Measurement in Tax Administration", IMF Technical Note.
Bird, R. 2012. "Taxation and Development: What Have We Learned from Fifty Years of Research?", *ICTD Working Paper 1.*
Keen, M. and Mansour, M. 2010. "Revenue Mobilisation in Sub-Saharan Africa: Challenges from Globalisation I – Trade Reform", *Development Policy Review*, 28 (5): 553-571.

S1.U.E.2: ECUE 4: History of Globalization

Teacher: A.GUILLIN
Volume: 12 hours
Credits: 2 ECTS
Assessment scheme: Presentation/ Homework/ Exam

Objectives:

This course provides an historical perspective of economic globalization. Each lecture will be focused on a specific topic (not necessarily presented chronologically).

Expected learning outcomes:

At the end of the course, students will be able to understand and analyze articles on global economic history.

Course outline:

I. The beginning of the globalization
II. Historical specializations
III. Movements of factors
IV. Trade slowdown: recession versus depression episodes
V. Trade and unequalities

Indicative bibliography:

O'Rourke, K. (2009). *Power and Plenty: Trade, War, and the World Economy in the Second Millennium*. Princeton University Press, 2009.
Antunes, C., & Fatah-Black, K. (2016). *Explorations in history and globalization.* Routledge.

S1.U.E.3: ECUE 1: STATA Software

Teacher: V.BOUVATIER
Volume: 20 hours
Credits: 2 ECTS
Assessment scheme: Homework/ Project

Objectives:

The main objectives are to provide an overview of some basic and useful econometrics methods as well as some analytical basis.

Expected learning outcomes:

At the end of the course, the students should be able to perform basic econometrics regressions. The students will be also able to interpret statistical results.

Course outline:

I. Introduction to STATA
II. Descriptive Statistics
III. Advanced Descriptive Statistics
IV. Regression Models and Post Estimation Tests

Indicative bibliography:

Colin Cameron and Pravin K. Trivedi, (2010), *"Microeconometrics Using Stata, Revised Edition"* Stata Press.

S1.U.E.3: ECUE 2: Mathematical techniques used in economics

Teacher: Sophie LARUELLE
Volume: 12 hours
Credits: ECTS
Assessment scheme: Homework/ Exam

Objectives:

This course aims to remind the students of some basic tools in mathematics (analysis, algebra, probability and statistics) they will use in economics.

Expected learning outcomes:

The students will acquire technical mathematical skills, which are necessary to solve problems in economics.

Course outline:

I. Analysis
a. Real-valued functions: continuity, derivability, integration, examples.
b. Function of several real variables: continuity, derivability, integration, examples.

II. Optimization
a. Solving linear systems of equations.
b. Solving polynomial equations.
c. Introduction of matrices in solving linear systems.

III. Probability and Statistics
a. Random variables: discrete and continuous (definition, probability distribution, density).
b. Introduction to sampling and estimation: empirical mean and variance with their asymptotic properties.

S1.U.E.3: ECUE 3: English skills

Teacher: K.LABIDI
Volume: 20 hours
Credits: 3 ECTS
Assessment scheme: Mini-tests/ Oral Presentations/ Homework/ Mid-Term/ Final Exam

Objectives:

This will be a discussion-intensive course. Languages need theory but they also need to be spoken, a lot. A good discussion is a community effort, each of you helps create an enjoyable class. Most of the time, we will discuss texts from the textbook, which is why it's important that you read them and do your homework. I will grade your participation every single time. We need to make sure we all stand on the same page regarding grammar and vocabulary. We will do listening exercises and will watch videos in class. You are encouraged to stop watching dubbed TV series and movies and to start the awesome experience that is original version (with English subtitles if necessary). The purpose of this presentation is to allow you to speak in English in front of your peers. I expect all of you to get involved seriously and prepare a great presentation (it's so important that there is a separate document about it).

Expected learning outcomes:

English fluency including specific vocabulary related to economics and management as well as the ability to make a detailed presentation in front of an audience and critical writing.

Indicative bibliography:

You must own a copy of *Business Intelligent Upper Intermediate.* ISBN: 1408256010

S2.U.E.1: ECUE 1: International Trade & FDI

Teacher: A.GUILLIN
Volume: 33 hours
Credits: 5 ECTS
Assessment scheme: Presentations/ Mid-Term/ Final Exam

Objectives:

In this course, we will describe the global, regional and sectoral patterns in trade and foreign direct investment (FDI). This course presents the main theories and policies in International Trade. Determinants of trade and FDI will be examined through theories and empirics from academic papers and reports.

Expected learning outcomes:

At the end of the course, the students should be able to understand the fundamental trade theories and policies.

Course outline:

I.   The traditional theory of international trade
II.   International Trade and Imperfect Competition
III. Determinants of foreign direct investment
IV.   Regionalism and multilateralism

Indicative bibliography:

Krugman, P., Obstfeld, M. and M. Melitz, *"International Economics: Theory and Policy"*, 10th edition. Ed Pearson (2014).
Markusen, J.R, *"Multinational Firms and the Theory of International Trade"*, 2004. MIT Press.

S2.U.E.1: ECUE 2: Macroeconomics, intermediate level

Teacher: P.ADAIR
Volume: 24 hours
Credits: 4 ECTS
Assessment scheme: Homework/ Slideshow presentation /Mid-Term/ Final Exam

Objectives:

This eight-session intermediate macroeconomics course includes a refresher. It provides tools for analysing the long-run activity (the Solow growth model), as well as the short-run activity in terms of interaction between the market for goods and services and the monetary and financial market (IS-LM model and AS-AD model), with respect to unemployment and inflation issues as well as related economic policies.

Expected learning outcomes:

At the end of the course, the students should be able to:
Master the macroeconomic framework according to the IS-LM model and AS-AD model,
Understand the relevance of economic policies that are appropriate to the context of economic activity

Course outline:

I. Macroeconomic Quantities, Time Horizon and the Institutional Framework
II. Economic Growth
III. The labour market
IV. The Monetary and Financial Market
V. The IS-LM model
VI. Macroeconomic balance in the medium term and interdependence of markets
VII. The Phillips curve, Okun's law and economic activity

Indicative bibliography:

Blanchard O. & Johnson D. W. (2013) *Macroeconomics*, 6th ed. Prentice Hall, 624 p. (reference textbook)
The course slideshow is available on the digital platform (EPREL).

S2.U.E.1: ECUE 3: Development economics

Teacher: J.LOCHARD & G.RABALLAND
Volume: 24 hours
Credits: 4 ECTS
Assessment scheme: Written assessment/ Oral Presentations/ Case Studies

Objectives:

The main objectives are to better understand issues related to development economics and development.

Expected learning outcomes:

At the end of the course, the students should be able to understand the various issues related development and development economics.

Course outline:

I. Measuring development and the models to achieve development
II. Human capital (education and health)
III. Poverty and inequality
IV. Trade, development and the environment
V. Financial development and financial inclusion
VI. Rural development and Industrial policy
VII. Colonial legacy, institutions and governance
VIII. Conflicts and development

Indicative bibliography:

Todaro, M. and Smith, S. (2012), *Economic Development*, Boston: Addison-Wesley.
World Bank (2016), *Poverty and Shared prosperity – Taking on Inequality*, Washington, DC:
World Bank

S2.U.E.2: ECUE 1: Corporate Strategy

Teacher: E.HERTZLER
Volume: 20 hours
Credits: 3 ECTS
Assessment scheme: Teamwork/ Oral Presentations/ Mid-Term/ Final Exam

Objectives:

Give students a global vision of corporate strategy, through the introduction of key concepts and of the main international trends. These themes are applied to business case studies to foster the analytic skills of students.

Expected learning outcomes:

Students should be able to understand the main issues and trends in corporate strategy in a global environment.

Student will be asked to demonstrate the above outcome through class assignments in English and a final presentation of a Corporate Strategy Case Study.

Course outline:

I. Analysis of the Environment, Analysis of Markets, Competitors and Customers, Analysis of Resources.
II. Development of Strategic Options, Strategy Evaluation.
III. Knowledge, Technology and Innovation, Organization Structure and Strategy.
IV. International Expansion and Globalization Strategies.
V. Change Management.

Indicative bibliography:

De Wit, B. and Meyer, R. *Strategy Synthesis*, Cengage, 2010
Coulter, Robbins, *Management*, Pearson, 2016
Johnson G., Scholes K. and Whittington, R. *Exploring Corporate Strategy*, Prentice Hall, 2008
Mintzberg H. *Crafting Strategy*, Harvard Business Review, July 1987
Porter M. E. *Competitive Advantage*, Free Press, 1985
Rugman A. M., Verbeke A., *Global Corporate Strategy and Trade Policy*, Routledge, 2009

S2.U.E.2: ECUE 2: Financial market

Teacher: S.KABLAN
Volume: 20 hours
Credits: 3 ECTS
Assessment scheme: Oral Presentations/ Final Exam

Objectives:

The objectives aim at: presenting financial markets, their role and function and the interlinkages between the real and financial spheres of the economy.

Expected learning outcomes:

At the end of the course, the students should be able to: know the different financial markets in the economy and their function, as well as the role of key macro-financial variables like exchange rate and interest rate. Students will also be aware of the interlinkages between the financial sphere of the economy and the real sphere of the economy. We will also stress derivatives markets as they have experienced unprecedented developments those last years.

Course outline:

I. Introduction
II. Brief presentation of different financial markets
III. Macroeconomics and financial markets volatility
IV. Interest rates and financial markets
V. Exchange rate
VI. Derivatives
VII The new economic paradigm and financial markets

Indicative bibliography:

Kettel, Brian, 2001, *Economics for financial markets.*
Mishkin Frederic, 2013, *The economics of money, banking and financial markets.*
Quiggin, John, 2011, *Financial markets: masters or servants?*
Krugman, Paul, 2012, *International economics.*

S2.U.E.2: ECUE 3: Marketing

Teacher
Volume: 20 hours
Credits: 3 ECTS
Assessment scheme

Objectives:

The aim of this course is to provide an overview of marketing fundamentals and to introduce basic marketing terms, concepts, principles and theories with their real-world applications based on case studies.

Expected learning outcomes:

At the end of the course, the students should be able to understand basic marketing principles and terminology and use fundamental marketing tools in order to know about the duties of a company's marketing division. Furthermore, they will be able to identify the everyday marketing activity going around them.

Indicative bibliography:

A.Ries & J.Trout, *Positioning: The Battle for Your Mind*, McGraw-Hill Professional
P.Kotler & K.L.Keller, *Marketing Management*, Pearson

S2.U.E.2: ECUE 4: Doing business in an international context

Teacher: O.SOLNIK
Volume: 12 hours
Credits: 2 ECTS
Assessment scheme: Oral presentations/ Case Studies / Final Exam

Objectives:

The objectives aim at: Improving cultural skills

Expected learning outcomes:

At the end of the course, the students should be able to understand and take into account cultural differences when doing business abroad.

Course outline:

I. How to define culture (working on stereotypes)
II. Theories and their models on corporate culture:
III. Case study: One's person experience

Indicative bibliography:

Jean Claude Usunier and Julie Anne Lee, *"Marketing across cultures"*, Pearson.

S2.U.E.3: ECUE 1: Big data: an introduction with Python Programming language

Teacher: F.LEGENDRE
Volume: 20 hours
Credits: 2 ECTS
Assessment scheme: Mini-tests/ Homework/ Mid-term/ Final Exam

Objectives:

The objectives aim at understand the storage and the processing of big data.

Expected learning outcomes:

At the end of the course, the students should be able to identify parallel algorithms, to distribute medium sized data over computer cluster and to get some insights from the data.

Course outline:

I Bring you own device. Open a command box.
II. Python for absolute beginners: built-in types and compound types.
III. Python for absolute beginners: control flow and functions.
IV. Python for absolute beginners: raw data files and flow redirection.
V. Inside computers and data centers.
VI. Big data and distributed file systems.
VII. Embarrassing Parallel Algorithm. Big data and distributed computing.

Indicative bibliography:

Python web site: https://www.python.org/.
Joel Grus, *Data Science from Scratch. First Principles with Python*, O'Reilly, April 2015.
Sebastian Raschka, *Python Machine Learning*, Packt Publishing Ltd., September 2015 (only the first chapter).

S2.U.E.3: ECUE 2: Introduction to General Algebraic Modeling System

Teacher: A.GUILLIN
Volume: 12 hours
Credits: 2 ECTS
Assessment scheme: Homework/ Exam

Objectives:

The objective of this course is to provide an understanding of the logic underlying Computable General Equilibrium (CGE) models, present basic steps for the construction and the implementation of such standard models. The Gams software will be introduced for this purpose.

Expected learning outcomes:

At the end of the course, the students should be able to understand and interpret the results of a single-country CGE model.

Course outline:

  I. What is a CGE model?
 II. The Structure of a basic CGE model
III. Introduction to Gams
 IV. *Auta* & *Auteta* models

Indicative bibliography:

Burfisher, M. E. (2017). *Introduction to computable general equilibrium models.* Cambridge University Press.
Lofgren, H., Harris, R. L., & Robinson, S. (2002). *A standard computable general equilibrium (CGE) model in GAMS* (Vol. 5). Intl Food Policy Res Inst.