COURSE OUTLINE

1. GENERAL

FACULTY	Faculty of Applied Economics and Social Sciences		
DEPARTMENT	Regional and Economic Development		
EDUCATION LEVEL	Undergraduate		
CODE NU.	POA1211	**SEMESTER**	B' (SPRING)
SUBJECT TITLE	Introduction to Regional Science		
TEACHER			
OFFICE HOURS			
email			

SELF-ENDED TEACHING ACTIVITIES in case the credits are awarded in separate parts of the course e.g. Lectures, Laboratory Exercises, etc. If the credits are awarded uniformly for the entire course, enter the weekly teaching hours and total credits	**WEEKLY TEACHING HOURS**	**TEACHING/ CREDIT UNITS**
Lectures	5	5
Add rows if necessary. The teaching organization and the teaching methods used are described in detail in 4.		

COURSE TYPE Background, General Knowledge, Scientific Area, Skill Development	General knowledge and scientific area course
PREREQUISITE	-
TEACHING and EXAMINATION LANGUAGE	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
ELECTRONIC COURSE WEBSITE (URL)	The course will be presented together with notes and other supporting material in the eclass of the GRA (www.aua.gr)

LEARNING OUTCOMES

Learning results

The learning outcomes of the course are described, the specific knowledge, skills and abilities of an appropriate level that the students will acquire after the successful completion of the course.

Knowledge

- To understand the fundamental concepts of regional science, of regional economic and development and spatial analysis.
- To know the basic economic forces that interact in the area, yes understand the causes that cause regional disparities and their spatial relationships, to understand how space affects strategy business competition and how it affects the distribution of businesses in the area.
- To get to know how regional development is created and strengthened level, the role of investment and infrastructure, of the different regional development policies and incentives, of regional institutions and how economic growth is distributed across regions.
- To know how the availability of natural resources, labour, potential, technology and information affects the economic activity in the area and how it creates under conditions, business clusters and concentration or dispersion of economic activity.

Abilities

- To present the basic principles of the main models
- To distinguish between the various position-production models,
- To present the basic principles of concentration theories: Marshall's, of growth poles, incubator, life cycle, Porter, and new industrial areas,
- To distinguish between the various concentration theories above,
- To present the basic principles of the central place models of Christaller and Lösch,
- To use the above examples to calculate the formation of central places through specific examples,
- To determine the specialization of a region using the indicators local expertise,

Skills

- To calculate the market area of businesses through examples,
- To use the location-production models and the median principle location to determine the optimal installation location through specific examples
- To articulate the reasons and conditions for concentration and dispersion of the activities.

General Skills

Taking into account the general competences that the graduate must have acquired (as listed in Diploma Appendix and are listed below) to which / which of them is the course aimed at?

Data retrieval, analysis and synthesis and information, using and necessary technologies
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Work in an international environment
Work in an interdisciplinary environment
Generating new research ideas
Project planning and management
Respect for diversity and multiculturalism
Respect for the natural environment
Demonstration of social, professional and ethical responsibility and gender sensitivity
Exercise criticism and self-criticism
Promotion of free, creative and inductive thinking

After completing the course:

Students will be able to understand, have opinions and really analyze economic phenomena related to space, region, cities, development and inequality at the regional level.
They will have developed their critical ability to analyze regional policies development and convergence and to recognize the policies and mechanisms that they create regional competitiveness and regional resilience.
They will have the ability to apply regional assessment methods policies, institutions, creation and attraction of businesses and investments.
They will be able to refer to reliable sources of statistical data and study quantitatively interregional relations, inequalities, economic and social convergence/divergence of regions with different criteria.

2. COURSE CONTENT

• 1) THE FRAMEWORK OF REGIONAL SCIENCE:
Economic Geography, Regional Finance and Regional Finance (Regional Science, definition of periphery and development, the peripheral problem, causes of regional inequalities, the economic activity and geography, natural resources as its factor production, the three sectors of production, urban development concentrations).
2) THE FRAMEWORK OF REGIONAL SCIENCE:
Basic concepts of Regional Science (regional accounts data, gross and net regional product, regional and regional disposable income, GDP per capita, h productivity of the regional economy, level of well-being region, real and nominal GDP, production functions).
3) THE FRAMEWORK OF REGIONAL SCIENCE:
Basic concepts of Regional Science (returns to scale of production, the law of diminishing marginal productivity, efficiency factors business, economies of scale and concentration, other regional sizes and macroeconomic characteristics, its specialization regional economy, public and private investment, degree urbanization and population density, quality of work, demographic changes, environmental factors, regional competitiveness).
4) QUANTITATIVE ANALYSIS OF REGIONAL AND VILLAGE INEQUALITIES
RELATIONSHIPS: measures of spatial and regional statistics (space as mathematical concept, metric functions, statistical measures of position and dispersion, measurement of spatial concentrations and variations).
5) QUANTITATIVE ANALYSIS OF REGIONAL AND VILLAGE INEQUALITIES RELATIONSHIPS: Measures of spatial and regional statistics (statistical measures spatial location and dispersion, indicators of local specialization, indicators spatial concentration or establishment of activity).
6) QUANTITATIVE ANALYSIS OF REGIONAL INEQUALITIES AND SPATIAL RELATIONS:
Measures and models of spatial econometrics (Theil index, curve Lorenz, Gini coefficient, concentration coefficient, coefficient Florence, Gini – Hirschman coefficient, analysis of variance - participation, Reilly's law of market areas, spatial interdependence models).
7) QUANTITATIVE ANALYSIS OF REGIONAL INEQUALITIES AND SPATIAL RELATIONS:
Spatial networks (modeling spatial interaction systems in graphs, epistemological approach to spatial networks, spatial networks and application fields, conceptual definitions in the study of spatial networks, flatness, spatial modeling tools networks,

measures of space and topology, measures of centrality).
8) REGIONAL DEVELOPMENT: the regional disparities in Greece (Demographic and population inequalities, regional urbanization, regional and sectoral distribution of production, regional inequalities in welfare, productive dynamism).
9) REGIONAL DEVELOPMENT: regional disparities in Europe (Generally about the European Union, European Union and regional inequalities, population and social characteristics, level welfare and standard of living, employment - unemployment, research and technological development, geographical distribution of development in Europe).
10) REGIONAL DEVELOPMENT: theories of regional development (first theories 1930-60, 2nd generation theories 1960-84, neo-Marxist theories, recent theories 1984 onwards).
11) REGIONAL DEVELOPMENT: Regional multipliers and regional analysis (the concept of multiplier, graph multiplier, the multiplier in a multi-regional system, o multiplier in the economic base model, the general model inputs – outputs).
12) REGIONAL DEVELOPMENT: Regional multipliers and regional analysis (the multiplier in the input model – outputs, the multi-regional input-output model, o multiplier in the multi-regional input-output model, construction of the peripheral model, secondary peripherals models, mixed or hybrid regional models, analysis of multiregional econometric model).
13) REGIONAL DEVELOPMENT: Interregional labor market and capital mobility (The labor supply and demand curve, labor market model, regional labor markets, interregional labor movement, labor and interregional capital mobility).

3. TEACHING AND LEARNING METHODS - ASSESSMENT

<table>
<tr><td>TEACHING METHODS
Face to face, Distance learning etc.</td><td>In person Lectures and meetings with students</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES
Use of T.P.E. in Teaching, in Laboratory Education, in Communication with students</td><td>- For the needs, on the one hand, of the enriched presentations of the Thematic Units & on the other hand, of the active experiential participatory methods & techniques, modern audio-visual material is used (power-point, slides, educational videos, etc.).
- In addition, modern & innovative methods & techniques of teaching & learning, including new technologies, are used where appropriate, emphasizing active participation.
- Communication with students is carried out in the following ways: (a) in person, on a personal level, (b) using e-mail & (c) using direct telecommunication (e.g. MS Tools, skype) etc.)</td></tr>
<tr><td>TEACHING ORGANIZATION
The way and methods of teaching are described in detail.
Lectures, Seminars, Laboratory Exercise, Field Exercise, Literature Study & Analysis, Tutorial, Internship (Placement), Clinical Exercise, Art Workshop, Interactive Teaching, Educational Visits, Study Preparation (Project), Writing Paper / Assignments, Artistic Creation, etc.</td><td>
<table>
<tr><th>Activity</th><th>Semester Workload</th></tr>
<tr><td>Lectures</td><td>65 hours</td></tr>
<tr><td>Study of taught material</td><td>33 hours</td></tr>
<tr><td>Exercises and practice</td><td>27 hours</td></tr>
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etc. The student's study hours for each learning activity as well as the hours of unguided study are listed so that the total workload at semester level corresponds to the ECTS standards	<table><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td>Total</td><td>125 hours</td></tr></table>
STUDENT EVALUATION Description of the evaluation process Assessment Language, Assessment Methods, Formative or Deductive, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Report / Report, Oral Examination, Public Presentation, Laboratory Work, Clinical Patient Examination, Artistic Interpretation, Other / Others Explicitly defined evaluation criteria are mentioned and if and where they are accessible by students.	Written exams at the end of the semester (60%), Assignments during the semester (40%)

4. RECOMMENDED-BIBLIOGRAPHY

The basic bibliography to be used is:
Greek-language Bibliography

1. Polyzos, S., (2011) Regional Development, Athens, Kritiki Publications.
2. Polyzos, S., (2015) Urban Development, Athens, Kritiki Publications.
3. Ioti - Papadaki, O., (2011) Introduction to Economic Geography, Athens, Publications
Review.
4. Konsolas, N., (1997) Contemporary Regional Economic Policy, Papazisi Publications,
Athena.

Foreign Language Bibliography

1. Armstrong H. W. and Taylor J. (2000), Regional Economics and Policy, Oxford: Blackwell
2. Pike A., Rodriguez-Pose A. and Tomaney J. (2006), Local and Regional Development, New
York: Routledge.
3. Pike A., Rodriguez-Pose A. and Tomaney J. (2010), Handbook of Local and Regional
Development, New York: Routledge.
4. Rodrigue, J. P., Comtois, C., Slack, B., (2013) The Geography of Transport Systems, New York,
Routledge Publications.