

RP 532 METHODS OF REGIONAL ANALYSIS AND SPATIAL ORGANISATION

Course Code:	8520532
METU Credit (Theoretical-Laboratory hours/week):	3(3-0)
ECTS Credit:	5.0
Department:	City and Regional Planning
Language of Instruction:	English
Level of Study:	Graduate Regional Planning
Course Coordinator:	Prof. Dr. Ayda Eraydın
Offered Semester:	Fall Semester

Course Objective

The course is designed to provide basic methods of analysis and planning for Regional Planning students and the ones interested in these methods. The methods introduced in the course are the ones that are widely used and important in analysis of both regions and urban areas.

Course Content

In the first part of the course mainly analytical techniques are introduced, while the second part of the course is devoted to mainly planning techniques. Each semester there are some limited changes in the course content depending on the techniques needed in Regional Planning Studio research themes.

Weekly Program

Week 1: Why to Study Regions

Part 1: Classical Models

Week 2: Von Thünen Rings, Weber's triangle, Christaller's hexagons

Week 3: Location theory

Part 2: Regional Analysis

Week 4: Economic Base

Week 5: Shift and Share Analysis

Week 6: Indices: index of dissimilarity-Lorenz curve/Gini coefficient, localization, specialization, diversification

Week 7: Factors and indicators of competitiveness

Week 8: Measures of concentration: gravity, spatial interaction models

Week 9: Spatial autocorrelation: Moran's I

Part 3: Regional Analysis and Planning

Week 10: Economic Growth Models

Week 11: Convergence and Divergence

Week 12: Economic Accounting and Input-Output

Week 13: Cluster Analysis

Week 14: Export and knowledge spillovers

Grading

Students who did not participate less than 30 percent of the classes will be graded NA.

% 40 Assignments

% 30 mid-term exam

% 30 Final exam

Learning Outcomes

This course is introductory course for the students who want to specialise in analysis and planning at different spatial scales. It provides the basic knowledge and a wide spectrum of the contemporary techniques.

Reference Material

(All references are available as a hard copy)

Week 1: Why to Study Regions

Karlsson, C. and Stough, R (2002) 'Regional Policy Evaluation in the New Economic Geography', in *Regional Policies and Comparative Advantage*, (Eds. Johansson, B, Karlsson, C., and Stough R.R), Edward Elgar: Cheltenham, 1-24.

Week 2: Von Thünen Rings, Weber's triangle, Christaller's hexagons

Wilson, A. (2000) 'Classical Models', in *Complex Spatial Systems: The modelling Foundations of Urban and Regional analysis*, Pearson Education: Harlow, 50-57.

Wilson, A. (2000) 'Rewriting of Classical Theory', in *Complex Spatial Systems: The modelling Foundations of Urban and Regional analysis*, Pearson Education: Harlow, 80-93.

Week 3: Location theory

Alonso, W., (1964) 'Location Theory', in *Regional Development and Planning* (J: Friedman and W. Alonso (Eds.), MIT Press: Cambridge- Massachusetts, 78-106.

Hayter, R., 1997, *The Dynamics of Industrial Location*, John Wiley and sons. Chister, New York

Part II Location of Factories, pp. 79-110

Factory Location as a Cost- Minimizing Exercise, pages 111-136

Week 4: Economic Base

Armstrong, H. and Taylor, J. (2000) 'Regional Income and Employment Determination', in *Regional Economics and Policy*, Blackwell Publishers: Oxford, 5-34.

Treytz, G.I. (1993) 'Economic Base Models', in *Regional Economic Modelling: A systematic Approach to Economic Forecasting and Policy Analysis*, Kluwer Ac. Boston, 7-88.

Week 5: Shift and Share Analysis

Traistrau, I. And G. B. Wolff (2002) *Industrial Mix and Regional Employment Growth in Transition Countries*, ZEI- Center for European Integration Studies, Bonn

Week 6: Indices: index of dissimilarity- Lorenz curve/Gini coefficient, localization, specialization, diversification

Isard, W. (1960) 'Coefficients of Localization, Localization Curves and Ratios, and Related Concepts', in *Methods of Regional Analysis: An Introduction to Regional Science*, MIT Press, Cambridge, 249-270

Isard, W. (1960) 'Coefficients of Specialization, Index of Diversification, and Related Concepts', in *Methods of Regional Analysis: An Introduction to Regional Science*, MIT Press, Cambridge, 270-279

Langer, L. (1999) 'Measuring Income Distribution Across Space and Time in the American States', *Social Science Quarterly*, 80(1), 55-67.

Mancusi, M. L. (2003) Geographical Concentration and the Dynamics of Countries' Specialization in Technologies, *Economics of Innovation and New Technology*, 12(3), 269-291.

Week 7: Factors and indicators of competitiveness

Martin, R. A Study on the Factors of Regional Competitiveness, A draft final report for The European Commission Directorate-General Regional Policy, CAMBRIDGE ECONOMETRICS

Week 8: Measures of concentration: gravity, spatial interaction models

Shen, G. (1999) 'Estimating Nodal Attractions With Exogenous Spatial Interaction and Impedance Data Using the Gravity Model', *Papers in Regional Science*, 78, 213-220

Tekeli, İ. (1979) 'Nüfus Dağılımlarının Makro Değişken Olarak Kullanılmasındaki İstatistiksel Yöntemler', in *Mekan Organizasyonlarına Makro Yaklaşım: Türkiye Üzerinde Bir Deneme*, ODTÜ, Ankara, 73-114.

Week 9: Spatial autocorrelation: Moran's I

van Oort, F. G. (2004) 'Exploratory Spatial Data Analysis', in *Urban Growth and Innovation: Spatially Bounded Externalities in the Netherlands*, Ashgate, Aldershot, 107-140.

Chapter 4: Exploratory Spatial Data Analysis pages 107-140

Week 10: Economic Growth Models

Keilbach, M. (2000) 'Why and how Does Economic Activity Grow?', in *Spatial Knowledge Spillovers and the Dynamics of Agglomeration and Regional Growth*, Physical Verlag, Heidelberg, 5-27.

Leven, C.L. (1964) 'Establishing Goals for Economic Development', in *Regional Development and Planning*, (Eds. J. Friedman and W. Alonso), MIT Press, Cambridge-Massachusetts, 78-106.

Stough, R.R. (2000) 'Endogenous Growth Theory and the Role of Institutions in Regional Economic Development' in *Theories of Endogenous Regional Growth*, (Eds. Johansson, B, Karlsson, C., and Stough R.R., Springer-Verlag, Berlin, 17-48.

Week 11: Convergence and Divergence

Armstrong, H. and Taylor, J. (2000) 'Regional Growth Disparities: Neoclassical perspectives', in *Regional Economics and Policy*, Blackwell Publishers, Oxford, 64-89.

Martin, R., (1999) 'Regional Convergence and Divergence in the European Union', in *Regional Convergence and Divergence in The European Union*, St. Martin's Press, New York and London, 5-18.

Week 12: Economic Accounting and Input-Output

Armstrong, H. and Taylor, J. (2000) 'The Input-Output Approach to Modelling the Regional Economy', in *Regional Economics and Policy*, Blackwell Publishers, Oxford, 35-63.

Wilson, A.G. (1975) 'Models of Urban and Regional Economics', in *Urban and Regional Models in Geography and Planning*, John Wiley and Sons, 112-115.

Week 13: Cluster Analysis

Feser E. J. and Bergman E. M. (2000) 'National Industry Cluster Templates: A Framework for Applied Regional Cluster Analysis', *Regional Studies*, 34(1), 1-19.

Steiner, M. (2000) 'Clustering and Economic Change: New Policy Orientations-The Case of Stryria', in *Theories of Endogenous Regional Growth* (Eds. Johansson, B, Karlsson, C., and Stough R.R., Springer-Verlag, Berlin, 278-298.

Öz, Ö. (2004) 'Industrial Clusters in Turkey', in *Clusters and Competitive Advantage*, Palgrave, Basingstoke, 37-59.

Week 14: Export and knowledge spillovers

Armstrong, H. and Taylor, J. (2000) 'Export Demand Models, Agglomeration and Cumulative Growth Process', in *Regional Economics and Policy*, Blackwell Publishers, Oxford, 90-118.

Armstrong, H. and Taylor, J. (2000) 'Interregional Trade', in *Regional Economics and Policy*, Blackwell Publishers, Oxford, 119-139.