### Inhoudsopgave

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Land Use Change

Doel vak
The interactions between earth and economics that steer changes in land use are central to this course. Socio-economic processes, spatial policy and bio-physical conditions determine the way humans use the surface of the earth. These driving forces are active at various scale levels and they are often interrelated, making the analysis of land-use change a complex issue. Moreover, changes in land use (in)directly affect the social and physical environment in which humans live, creating feedback loops in the dynamics of land-use change. In order to understand the mechanisms of change and the impact of policies, researchers and practitioners have turned their attention to formulating models that simulate land-use dynamics. These land-use change models help us to understand the characteristics and interdependencies of the components that constitute spatial systems. Moreover, they can provide valuable insights into possible land-use configurations in the future.

This course aims to provide insight in the most important forces that influence land-use dynamics and allows students to independently apply this knowledge to analyse actual changes, explain these and simulate potential future land-use patterns. Ample attention will be paid to the societal application of this knowledge in current spatial planning issues related to, for example, climate change, open space preservation and biodiversity.

Inhoud vak
Studies of land-use change incorporate concepts and knowledge from a wide range of disciplines. Geography, as a spatial science, contributes significantly to the understanding of land-use change whilst demography and economics help explain underlying trends. Model building relies heavily on mathematics and (geographical) information science, but also includes many elements from the softer sciences, such as management studies and environmental science. This course offers a cross-sectional overview of methods, tools and current research progress in the analysis of land-use change. See the course pages on Canvas for more information.

Onderwijsvorm
The course consists of 8*2 hours of lecturing, 8*2 hours supervised practical sessions and a final 4 hour interactive session in which the analysis and simulation of land-use change will be explained, practised and discussed. Outside these scheduled hours students will need additional time to finalise the assignments and independently read scientific literature. As the course only takes four weeks, students are
expected to be busy with it full time. Past experiences have taught that combinations with other activities often lead to the missing of deadlines and insufficient results.

**Toetsvorm**
Written examination and active participation in the practical sessions. The assessment will be based on a written final examination (65%) and the marks for the practical assignments (35%). For each of these components students should obtain a mark of 5.5 or higher.

**Literatuur**
Book: Modelling land-use change, Springer, ISBN 9781402064845 (paperback) digitally available through Canvas. In addition various scientific papers have to be read that will also be made available through Canvas.

**Aanbevolen voorkennis**
Some practical experience in using GIS-software is required, as is an interest in understanding land-use change processes.

**Doelgroep**
The course stresses the importance of a multidisciplinary approach in analysing land use change and introduces concepts, methods and tools that can be relevant to a wide range of students. This course is intended for students in the third year of the Earth and Economics Bachelor programme and is part of several minor programmes. In addition it is also open to others interested in the topic that meet the entry requirements.

**Public Economics**

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**Doel vak**
This course has two central goals. It elaborates on the fundamental economic principles that were discussed in the first and second year (Introduction to Economics I and II and Environmental and Transport Economics). The focus is on the microeconomic principles that can economically legitimize governments to intervene and that are needed to understand the behavior of the government as an actor in the economic process. Ample attention will be given to issues in the area of sustainable development, infrastructure policies, the functioning of (regional) labor markets.
and spatial planning. Furthermore, the course provides insights in the way in which fundamental theoretical and empirical economic results can be used in day to day policy making.

The attainment goals of this course are:

• You have a good understanding of situations in which markets can yield economically optimal outcomes and those in which markets can fail.
• You know the core tasks of the government and you know under which conditions there is a role for the government to correct market failures. You are also aware of the reasons behind government failure.
• You know the policy instruments that the government has at their disposal to influence the outcome of market processes and you are familiar with the pros and cons of the various instruments.
• You are familiar with the concept of fiscal federalism and can use it to determine what the optimal spatial level of policy making is.
• You know the key building blocks of (social) cost-benefit analysis and you can provide a high-quality evaluation of existing cost-benefit analyses using standards for good practice.
• You know the valuation techniques used by economists to perform a cost-benefit analysis.
• You know the alternatives for cost-benefit analysis to evaluate policies such as multi-criteria analysis and cost-effectiveness analysis and you are aware of the pros and cons of such alternative tools.

Inhoud vak
The free market does not always deliver socially optimal outcomes. In such situations where markets fail, there is a potential role for government intervention. At the same time, government intervention can also have (sometimes unintended) side effects. In this course, the many aspects of government intervention are discussed. Topics that are central are: (i) the role for the government in the economic process, (ii) externalities, (iii) public goods, (iv) labor markets and income distribution (interpersonal and interregional), (v) optimal taxation, (vi) fiscal federalism and subsidiarity and (vii) location choice of firms and people. Much attention will be devoted to methods for policy evaluation, with special emphasis on cost-benefit analysis.

Onderwijsvorm
There will be two regular lectures (of two hours each) per week in which the course material is discussed in an interactive way. Furthermore, there is one tutorial per week (also two hours) in which assignments are discussed and students give presentations.

Toetsvorm
Written exam with open questions (60%) to be completed with a minimum score of 5. Paper, presentation, and assignments (40%).

Literatuur
Varian, Intermediate Microeconomics, Norton (8th edition), chapters 14, 33, 34 and 36

Tresch, Public Sector Economics, 2008, chapters 13, 15, 20, 21 and 22 (see also the website www.palgrave.com/economics/tresch)


Information on additional literature (papers) will be announced at the
start of the course.

**Aanbevolen voorkennis**
Inleiding Economie I (year 1), Inleiding Economie II (year 1) and Environmental and Transport Economics (year 2)

**Doelgroep**
Third year bachelor students (following a minor in Economics or Earth and Economics)

**Research Seminar Spatial Economics**

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**Onderwijsvorm**
Seminarreeks met 3 bijeenkomsten van twee uur per week. Elke week zal een docent een thema introduceren en analyseren tijdens twee bijeenkomsten, in de derde bijeenkomst geven studenten een presentatie op basis van een te bestuderen wetenschappelijk artikel. Tijdens alle bijeenkomsten is nadrukkelijk ruimte voor interactie en discussie.

**Toetsvorm**
Studenten schrijven een essay vanuit een keuze over onderwerpen die aan bod zijn geweest in de bijeenkomsten.

**Sociale geografie I**

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**Doel vak**
De wereld om ons heen verandert snel. Verschillende factoren werken verschillend uit in verschillende gebieden. Sociaal-geografen bestuderen ruimtelijke veranderingsprocessen en conflicten.

Eindtermen:
1. Studenten verwerven een geografisch wereldbeeld.
2. Studenten verwerven inzicht in een aantal geografische vraagstukken op verschillende ruimtelijke niveaus en hun oorzaken.
3. Studenten maken kennis met de geografische benaderingswijze.
4. Studenten tonen hun geografische kennis en vaardigheden in een zelf ontwikkelde atlas.

**Inhoud vak**
Het programma bestaat in totaal uit een tiental hoor-werkcolleges waarin aandacht wordt besteed aan geografische thema's op verschillende ruimtelijke niveaus. Belangrijke thema's zijn: conflicten, grenzen en migratie; megasteden en spookdorpen; ontwikkeling en regionale ongelijkheid; globalisering en duurzaamheid.
Tevens staat er een stadsgeografische excursie door een aantal buurten van Amsterdam op het programma.

**Onderwijsvorm**
Hoorcolleges 20 contacturen
Werkcolleges 20 contacturen
Excursie 6 contacturen
Tentamen 2 uur
Literatuurstudie 40 uur
Atlasopdrachten uitwerken ca. 80 uur
Totaal ca. 168 uur (6 EC)

**Toetsvorm**
Schriftelijk tentamen over de literatuur en de colleges (50%) en een zelf ontworpen atlas met analyse over een nader te bepalen geografische thematiek en regio (50%). Proeftentamens zijn beschikbaar en beoordelingscriteria voor de atlas worden in het college uitgedeeld.
Beide onderdelen, toets en atlas, tellen even zwaar en moeten voldoende zijn.

**Literatuur**
1. P. Knox & S. Marston (6e of latere druk) Human Geography, places and regions in global context.
   Boston: Pearson. Hieruit de hoofdstukken: 1, 2, 7, 9, 10 en 11.
2. Een selectie artikelen

**Vereiste voorkennis**
Geen

**Aanbevolen voorkennis**
Geen

**Doelgroep**
Bachelor studenten Aarde & Economie en Aardwetenschappen. Dit studieonderdeel is verplicht voor studenten die eerstegraads docent aardrijkskunde willen worden.

**Overige informatie**
Nadere informatie bij J.B. Penninx. Mail: j.b.penninx@vu.nl

Urban Economics and Real Estate
This course in Urban and Real Estate Economics addresses the relationship between urban space, real estate development and economic development. It links economic theory to urban and real estate development, and it places real estate development in the wider context of the relation between city growth and economic development. Insights are developed both through studying theoretical backgrounds (the first eight lectures) and by considering practical examples of the issues at hand (the last four lectures). After a general introduction on the very nature and existence of cities, the following topics are covered: (1) location theory, (2) agglomeration economies, (3) city size and population distribution, (4) land use and land rents, (5) real estate and government policy, (7) growth and decline of cities, (8) sorting of people across neighborhoods within cities, (7) parking and real estate prices, (8) green buildings, (9) economics of skyscrapers, (10) economics of urban planning.

With respect to each topic you should be able:
(i) to define and describe the topic;
(ii) to understand the economic theory that explains the topic;
(iii) to understand the empirical (econometric) analysis of the topic;
(iv) to understand the (im)possibilities of urban and real estate policies;
(v) use econometric methods to test theoretical predictions of urban economic models.

Particularly over the past decades, technological change caused the cost of connecting across space has declined sharply, which should have made it less attractive for people to cluster together in cities. Yet by many measures, cities are thriving all over the world. Most economic activities such as production, consumption and innovation take place in urban areas, despite the relatively high location costs.

Why is this the case? Why are some cities thriving, while others face serious decline? Why are real estate prices more or less stagnant in some cities or neighborhoods, while they rise sharply in others? Of course, this is a matter of supply demand. Therefore, a central topic in this course is the location behavior of firms and households. Why do they prefer one location of the other? More specifically, why are so many firms interested in expensive locations at, for example, the Amsterdam South Axis? Why do for example computer and fashion shops often cluster in space, while bakers are typically dispersed over a city? Will the advent of e-commerce cause firms to leave crowded and
expensive cities? For households, comparable questions arise. Why do
many higher educated people nowadays prefer to live in Amsterdam rather
than in Almere, and why was the opposite true in the 1980s? Is the
location choice of people merely driven by the composition of the
population or real estate characteristics in a certain area? Why do
certain social and ethnic groups often cluster in space, and to what
extent is this desirable? How do location choices of firms and
households interact?

When thinking about location behavior of firms and households, we touch
upon various topics that have a substantial impact on real estate
markets. For example, the economic backgrounds and consequences of
suburbanization, the rise of urban 'subcentres', and the rise of so-
called 'network cities', as witnessed worldwide (and in The Netherlands
alike). We will also look at interdependencies between cities, in terms
of their economic dynamics and functional development. Why and how do
cities specialize, why does nearly every country has a few big cities
and many smaller towns and villages, and are such arrangements
economically desirable?

At the aggregate level, location choices by firms and households
translate into (changes in) land use and real estate development in
modern cities. In this course you learn, both from a theoretically and
empirically perspective, to analyze land prices as a function of, inter
alia, population and real estate characteristics, location and transport
costs. In addition, we identify the (im)possibilities of influencing the
observed trends through urban and real estate policies. What is the
impact of imposing or relaxing urban planning regulation on real estate
development? Can and should we mix different kind of people in the same
neighborhood? Is mortgage deductibility a good idea? What should we do
with real estate in declining (country side) regions? Finally, we
address some typically urban phenomena in relation to real estate
markets: urban environment and green buildings, parking, and building
height (skyscrapers).

Onderwijsvorm
Twelve plenary lectures of two hours each, plus six tutorials of two
hours each. Students are expected to have read the material in advance;
the plenary lectures cover key elements only. Tutorials introduce the
assignments, econometrics and working with Stata software.

Toetsvorm
Written exam (60%) and two assignments (40%). The overall grade should
be at least a 5.5 to pass.

Literatuur
- Selected scientific papers (see Canvas for details).

Vereiste voorkennis
Introductionary level of microeconomics.

Aanbevolen voorkennis
Basic knowledge of econometrics (regression analysis) is recommended.

Doelgroep
Second or third-year bachelor students who want to get a solid
introduction into the economics of cities and real estate, economic
geography or spatial economics.