MODULE SPECIFICATION

<table>
<tr><td colspan="3">Module title: Sustainable real estate market development</td><td colspan="2">University module code</td></tr>
<tr><td>Level:MSc</td><td>Credit value</td><td>ECTS value: 4 (in Belarus 1 credit is equivalent to 35 academic hours, in Lithuania – to 26.67 academic hours)</td><td>Length (in semesters): 1</td><td>Semester in which to be offered</td></tr>
<tr><td>New module</td><td colspan="2">Title of Module being replaced (if any):</td><td colspan="2">With effect from</td></tr>
<tr><td colspan="2">Originating School: BSTU</td><td colspan="3">Module Coordinator: VGTU</td></tr>
<tr><td colspan="5">Programme in which to be offered: Management</td></tr>
<tr><td colspan="3">Pre-requisites:</td><td colspan="2">Co-requisites:</td></tr>
<tr><td colspan="2">Indicative learning hours:</td><td colspan="3">Percentage taught by School(s) other than originating School (%)</td></tr>
<tr><td colspan="5">Aims of Module:
- to get knowledge about the range of concepts, theories and perspectives of sustainable development of real estate markets;
- to familiarize students with the micro, meso and macroenvironment, which impacts the conditions and change of real estate markets.
- to familiarize students with recommendations from international organizations (UN, UNECE, FAO UNECE, WPLA UNECE, World Bank, FIABSI, ELRA etc.) concerning sustainable development in general and sustainable real estate market development in particular;
- to get knowledge about principles and best practices of land policy in European countries that determine sustainability and efficiency of real estate market development (legal relations, formal and actual real estate markets, common land and property complexes, protection of land users' rights, paid use of real estate, restriction of environmental protection rights, publicity and public opinion, types of transaction, real estate expropriation and compensations, foreign agents in the real estate market, public-private partnership, unauthorized construction and seizure of land, indices of the market quality and real estate management, etc.)
- to provide students with knowledge about modern infrastructure of the European real estate markets (developer and construction companies, land management and spatial planning companies, national registration of real estate, banks and financial companies, consulting and realtor companies, insurance companies and trust companies, etc.), the structure of infrastructure services to support real estate market
- to provide students with knowledge about innovative tools of high technologies for sustainable development of real estate market (E-government, monitoring of land and property complexes using data of remote sensing from space, CRM-, ERM-, SaaS-systems for real estate management, information models of building areas (BIM), 3D property and 3D real estate cadaster, GIS and national infrastructure of spatial data SDI according to INSPIRE EU directive, etc.)
- to get knowledge about business processes in the European real estate markets as compared to the business processes in Belarus together with the allocation of government services (administrative procedures) and commercial services (specification of business processes and services, universal simulation languages of business processes, description of business processes in the simulation languages, speed, cost and number of procedures, re-engineering due to smart tools use, etc.)
- to get knowledge about modern techniques of evaluating the real estate market indices, systems of real estate management which affect the real estate market and reflect the sustainability of its development (evaluating transparency indices, corruption, ease of doing business, quality of protection of rights, land administration, openness and freedom of</td></tr>
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information, etc.)
Course engagement by way of group discussions through the Internet/Skype discussions (50% mark attributed to soft skills).

Intended Learning Outcomes

Knowledge and Understanding

On successful completion of this module, a student will be able to:

- explain and apply the concepts, theories and perspectives of sustainable real estate market development
- explore and review the complex micro, meso and macroenvironment, which impacts changes of actual and formal real estate markets including recommendations from reputable international organisations
- discriminate between different issues of the land policy and relate them to real estate market and its efficiency
- interact with elements of the modern infrastructure of the real estate markets
- apply knowledge about business process models and real estate market services as well as about innovative smart support tools
- explore and review information about sustainability indicators of real estate markets in macro- (city), meso- (neighbourhood) and micro (building) (accessibility, efficiency) levels
- apply theoretical knowledge to solve practical problems.

Transferable/Key Skills and other attributes

On completion of the module a student will have had the opportunity to:

- Participate in group discussions and presentations via the internet
- Use Computer Learning Systems
- Exercise of initiative and personal responsibility

Module mark calculation:

Assessment components (in chronological order of submission/examination date)

Type of assessment	Weighting%	Duration *(if exam)*	Word count *(if essay/dissertation):*	Component pass required
Assessment of the degree of interaction and participation of the students (50% mark attributed to soft skills)	30%		-	yes **x** no
Final assessment component Written Group Essay	70%		6000	yes no **x**

Learning and teaching strategies:

The core of the module material is a substantial body of tutors written notes and exercises located on Moodle. These incorporate interactive self- and tutor assisted formative assessment exercises. Students are directed to additional resources available online, for example in legal

databases, including ScienceDirect, Scopus, the e-library, etc.
Teaching and learning will occur through moderation of forum discussion for the preparation of papers. In addition, in order to foster cohort cohesion, counteract the isolation of distance learning, and provide opportunities to reflect, practise reasoning skills and obtain further formative feedback, students will be encouraged to participate in on-line discussions, peer reviews and group work. (compulsory participation in forum discussion).
Self-assessment of students will occur by training tests via special on-line platform.
Summative assessment involves students applying their knowledge of principles and mechanisms of sustainable real estate market development to a practical situation and producing a piece of coursework of 6,000 words, applying critical analysis of the smart built environment from different perspectives (see Aims of Module). Formative group sessions will be held online.
FIG and Moodle Virtual Learning Environment (VLE):
All students will be supported by extensive use of the Moodle virtual environment. The programmes utilise an e-based learning strategy to support delivery. The method adopts the following principles:
1. High quality integrated module content that combines a variety of types of information supporting the learning objectives of the module
2. Internet-based communication and submission of assessed work
3. On-line tutorial support during module delivery

Besides students will access FIG Surveyors Reference Library to familiarize themselves with the following issues: real estate market for poor social groups, group property ownership, climate change and real estate market, land markets, public real estate management, policy and procedures of spatial planning, land policy and reforms, 3-D cadaster and modelling of building areas, interacting of urban and rural areas, finance and investment in real estate, teaching strategies, E-governance, mass and individual appraisal, urban development, etc.

Syllabus outline:

- Introduction to the module
- Concept and principles of sustainable real estate market development
- Institutional systems of modern real estate markets
- Organizational and economic mechanisms of sustainable real estate markets
- Smart tools for sustainable real markets
- Spatial planning as a prerequisite for sustainable development
- Ontology of business processes and services of real estate markets
- Behavioral strategies and criteria for real estate market performance

Indicative texts and/or other learning materials/resources:

Core text:

1. Добровольные руководящие принципы ответственного управления владением и пользованием земельными, рыбными и лесными ресурсами в контексте национальной продовольственной безопасности // Продовольственная и сельскохозяйственная организация ООН, 2012 г., - 40 стр.
2. Policy Framework for sustainable Real Estae Markets // UNECE, WPLA, Real Estate Market Advisory Group (REM), Geneva, 2010, p.21
3.

Recommended text:

1. Enemark S, McLaren and P.van Molen, Land Governance in Support of Millennium Development Goals// Fig Publication №45, 2010, 39 p.
2. Enemark S, Facing the Global Agenda – Focus on Land Governance // FIG Article of

the Month, July 2009 / www.fig.net/pub/monthly_articles/July_2009/july_2009_enemark.pdf [Электронный ресурс], дата доступа 25.11.2012

3. Spatially Enabled Society // FIG Publication N58, Edited by D.Steudler and Abbas Rajabifard, April, 2012, -68p.

4. Grover R., Grover C., Modelling Indicators of Land Governance // FIG Working Week 2011, Marakesh, Morocco, 18-22 May, paper 4999/ http://www.fig.net/pub/fig2011/index.htm [Электронный ресурс], дата доступа 25.11.2012.

5. Vickery G., Review of recent studies on PCI re-use and related market developments / http://epsiplatform.eu/content/review-recent-psi-re-use-studies-published [Электронный ресурс], дата доступа 25.11.2012

6. Joseph Salukvadze, Georgia, Improvements in Land Governance and Land Administration in transitional Countries of the Post-Soviet Region: Comparative Analysis // FS 3F – Land Management Projects, FIG Congress 2010
Facing the Challenges – Building the Capacity Sydney, Australia, 11-16 April 2010 / www.fig.net [Электронный ресурс], дата доступа 25.11.2012

7. Hyunil Yoo and Handon Ju, Republic of Korea, An approach to effective land registration based on the satellite photogrammetry: Case study in Baharly, Ahal Velayat, Turkmenistan // FIG Working Week 2012 «Knowing to manage the territory, protect the environment, evaluate the cultural heritage», Rome, Italy, 6-10 May 2012

8.K.C. Bell (WB), Dr. C. Augustinus, M. El-Sioufi (UN-Habitat), J.Kaufmann (Swithzerland), J.Ratia (Finland), D.Rokos (Greece), D. Steudler (FIG Commission 7), , D.Burmanje, M.Salzmann, Paul van der Molen, M. Lemmen (Netherlands), D.Roberge (Canada), Towards Cadastre 2034 / GIM-international, Volume 25, May, 2011, -p.11-23

9. Wim Louwman, President of the European Land Registries Association., Cross Border Electronic Conveyancing // Presentation to the UNECE Working Party on Land Administration 2012, / http://www.landregistry.gov.uk/announcements/2012/unece-conference-2012/technology-to-support-efficient-lending

Journals:

International Journal of Sustainable Built Environment:
http://www.journals.elsevier.com/international-journal-of-sustainable-built-environment/
Sustainable Cities and Society: http://www.journals.elsevier.com/sustainable-cities-and-society/
Cities (The International Journal of Urban Policy and Planning):
http://www.journals.elsevier.com/cities
Automation in Construction: http://www.journals.elsevier.com/automation-in-construction/
International Journal of Strategic Property Management:
http://www.tandfonline.com/toc/tspm20/current

On-line resources:

UNECE: www.unece.org
FIG: www.fig.net

EU Smart Cities Stakeholder Platform: www.eu-smartcities.eu
ESF Smart Cities Initiative: www.esf.org/smartcities
EuroCities: www.eurocities.eu
EU Covenant of Majors: www.eumayors.eu