

Course Syllabus

Title of the course	Innovations in the Management of the Urban Environment				
Title of the Academic Programme	Urban Development and Local Administration				
Type of the course	Elective				
Prerequisites	There are no formal prerequisites for this course. Students should have fluent English and be acquainted with conceptual and terminological features of the main frameworks in public administration and urban governance.				
ECTS workload	4				
Total indicative study hours	Directed Study	Self-directed study	Total		
	44	108	152		
Course Overview	This course explores issues in the development and application of innovative technologies and approaches in the contemporary urban environment. The aim of the course is to provide students with an understanding of what public innovation is, who makes it in the city and for whom and how. The course includes analysis and class discussions of case examples of the development and implementation of public sector innovations. Students learn to argue the possibility for applying the best international practices in Russia. At the end of the course students write a group project proposal targeting public sector innovation on the example of Saint-Petersburg and worldwide cities.				
Intended Learning Outcomes (ILO)	Students acquire knowledge concerning the opportunities for the introduction of the new technologies and approaches to managing innovative processes in the public sector of the contemporary city. Students are encouraged to explain the peculiarities of innovations in public administration and city management; to compare innovations in different countries; to project the frames of innovations for a contemporary city.				
Teaching and Learning Methods	Lecturers, workshops, class discussions, student reports and presentations, reading assignments, projects.				
Content and Structure of the Course					
№	Topic	Total	Directed Study		Self-directed Study
			Lectures	Tutorials	
I. Theoretical framework of the contemporary urban management					
1	Urban management and innovations	6	4	2	-
2	The innovation in the urban environment: key theories and management models	11	4	2	5
3	Tools and goals of innovations in the management of the urban environment	9	2	2	5

II. The innovative ways to manage the key areas of the urban environment				
Effective urban energy planning and governance	18	2	4	12
Urban design and planning and housing innovations	18	2	4	12
Public transport and urban mobility	16	2	2	12
III. Prospective skills of urban managers				
Urban analytics for management of the urban environment	14	2	2	10
Concluding workshop	44	-	4	40
Total study hours	152	20	24	108
Indicative Assessment Methods and Strategy	In-class Participation, course assignments (group projects), written examination.			
Readings / Indicative Learning Resources *	<p><u>Mandatory</u></p> <p>Song, H., & edited by Houbing Song, R. S. T. S. and S. J. (2017). <i>Smart cities : foundations, principles, and applications</i>. Hoboken, NJ: John Wiley & Sons, Inc.</p> <p>Valkama, P., Bailey, S. J., Anttiroiko, A.-V., & IOS Press. (2011). <i>Innovations in Public Governance</i>. Amsterdam: IOS Press.</p> <p><u>Optional</u></p> <p>Almirall , E., Wareham, J., Ratti, C., Conesa, P., Bria, F., & Gaviria, A. (2016). Smart Cities at the crossroads: New tensions in city transformations. <i>California Management Review</i>, 59 (1), 141-152.</p> <p>Bakici, T., Almirall , E., & Wareham, J. (2013). A Smart City initiative: The case of Barcelona. <i>Journal of the Knowledge Economy</i>, 4 (2), 135-148.</p> <p>Kammen, D. M., & Sunter, D. A. (2016). City-integrated renewable energy for urban sustainability. <i>Science</i> 352(6288), 922–28.</p> <p>Kramer, R. (2016). From skillset to mindset: A new paradigm for leader development. <i>Public Administration Issues</i> 5, 26–45.</p> <p>Weber, K., Heller-Schuh, B., Godoe, H., & Roeste, K. (2014). ICT-enabled system innovations in public services: Experiences from intelligent transport systems. <i>Telecommunications Policy</i> 38 (5–6), 539–57.</p>			
Indicative Self- Study Strategies	Type		+/-	Hours
	Reading for seminars / tutorials (lecture materials, mandatory and optional resources)		+	40
	Assignments for seminars / tutorials / labs		-	
	E-learning / distance learning (MOOC / LMS)		-	
	Fieldwork		-	
	Project work		+	60

	Other (please specify)	-	
	Preparation for the exam	+	28
Academic Support for the Course	Academic support for the course is provided via LMS, where students can find: guidelines and recommendations for doing the course; guidelines and recommendations for self-study; samples of assessment materials.		
Facilities, Equipment and Software	Classrooms should be equipped with PC / laptop with Internet access, and a slide / overhead projector.		
Course Instructor	Dr. Anna Sanina asanina@hse.ru		

Annex 1

Course Content

Part I. Theoretical framework of the contemporary urban management

Class 1: Urban management and innovations

- a. Urban management as a reform of city administration in the age of Digital Economy;
- b. The “inevitable” technological developments: “technium”, artificial intelligence (AI), data flowing, screening, accessing, sharing, filtering, remixing, interacting, tracking, questioning, “holos” (collective mind);
- c. Technological change and society. The concept of innovation;
- d. Smart governance, smart communities and citizen engagement.

Class 2: The innovation in the urban environment: key theories and management models

- a. The taxonomy of contemporary models of urban development. Best urban practices in innovation, sustainability, equity and connectedness;
- b. Smart City;
- c. Sustainable City;
- d. Livable City;
- e. Creative City;
- f. Data-rich City.
- g. Future Cities and the symbiotic relationship between the smart governance and citizen engagement.

Class 3: Tools and goals of innovations in the management of the urban environment

- a. The role of public management in urban innovation development;
- b. New city standards and indicators: sustainability, quality of life, and digitalization;
- c. Innovating through regulation;
- d. The infrastructure of innovations in the management of the urban environment: mobile networks, Big Data, the Internet of things;

- e. Key stakeholders of innovation implementation, and strategies of collaboration;
- f. Challenges and barriers for urban innovations.

Part II. The innovative ways to manage the key areas of the urban environment

Class 4: Effective urban energy planning and governance

- a. Climate change, renewable energy and energy efficiency in the urban environment;
- b. Renewable, carbon neutral energy as a basis for the sustainable energy economy;
- c. Innovative instruments for planning and managing energy systems in urban areas;
- d. Zero carbon cities. Eco Cities;
- e. Electrical grid and urban energy transition;
- f. Energy storage and community energy planning.

Class 5: Urban design and planning and housing innovations

- a. Land, property and the urban environment in a contemporary city;
- b. Priorities of the contemporary urban design and the “place making”;
- c. Innovation districts in modern city;
- d. The mechanisms of managing the built environment: policies, planning, and placemaking;
- e. How to evaluate the design quality in the contemporary urban environment;
- f. Plan-making as a task of urban management and collaborative city planning strategies.
- g. Goals and tools of managing the housing innovations;
- h. New directions in urban public housing;
- i. Alternatives in public housing and future perspectives: the concepts of affordable housing, shared housing, social housing;
- j. Internal (bureaucratic) and external (environmental) factors of housing policy development in contemporary cities;
- k. Resilient housing and its future perspectives.

Class 6: Public transport and urban mobility

- a. Green urban transport policies and sustainable transportation in the City of the Future;
- b. Urban governance and the transportation demand management;
- c. Key objects for the innovative urban management: streets, pedestrians, bicycles, motor vehicles, parking, car sharing;
- d. Smart technologies, infrastructures and management tools for Smart Mobility Cities.

Part III. Prospective skills of urban managers

Class 7: Urban analytics for management of the urban environment

- a. Smart Cities as cyber-physical systems;
- b. Big Data analytics processes and platforms for urban analytics;
- c. Design thinking, data-driven modeling and collaborative data-driven innovation;
- d. The examples of data-driven solutions for urgent urban issues;
- e. Challenges and problems of the open data initiatives;
- f. The “mindset” of city managers;
- g. Funding and financing for Smart Cities.

Class 8: Concluding workshop

Final in-class presentations

Annex 2

Assessment Methods and Criteria

Course evaluation will be based on two assignments (see the table below), seminar participation, and the final exam. The overall **grading structure** of the course will consist of:

- Class participation 25%
- Assignment#1 (case description) 20%
- Assignment#2 (project) 25%
- Final examination 30%

Course assignments:

Assignment	Subject	Mode	Format of presentation
1. Case description	Students should explore and present the case of any smart / sustainable city mentioned in the class. They should stress the strengths and weakness of the management model and make some links to the Russian (potential) experience.	Team work (5 to 7 people in a team) The grade is equal for all of the members of the group, unless someone is suspected in an inappropriate academic behavior.	Oral, 8-10 slides + interactive materials (videos, maps, forum discussions etc.)
2. Project	As a final project, students build and present an innovative city initiative with its corresponding sources of funding. The purpose of this task is to place students in the role of decision-makers in a contemporary city, asking them to formulate a problem, to outline the	Small Group Project (2 to 3 people). The grade is equal for all of the members of the group, unless someone is suspected in an inappropriate	Written, 1000-2000 words Oral, 10-15 slides

	<p>innovative management strategies, and to develop reasonable policy recommendations. This task is cumulative in its nature, it addresses all the materials that have been learned in the class, as well as through the individual assignment. The detailed steps to complete the project will be distributed in class.</p> <p>The structure of the project should be the following:</p> <p>Background</p> <p>Study Questions</p> <p>Literature Review</p> <p>Empirical Data</p> <p>Budget Evaluation</p>	<p>academic behavior.</p>	
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Final examination consists of 10 short-answer questions. The questions should be answered in approximately 20-30 words each.

The exam will reflect lectures, required reading content, class discussions, and cases and projects presented by the students.

Each correct answer gets 1 point. Partially correct answer gets 0.5 points. The maximum grade for the examination is 10.

Assessment Methods

Types of Assessment	Forms of Assessment	Modules			
		1	2	3	4
Formative Assessment	Test				
	Essay				
	Report/Presentation				
	Project		*		
	In-class Participation		*		
	Other (write appropriate control forms for the course)				
Interim Assessment (if required)	Assignment (e.g. written assignment)				
Summative Assessment	Exam		*		

Assessment Criteria

In-class Participation

Grades	Assessment Criteria
«Excellent» (8-10)	Demonstrates original thinking and shows strong evidence of innovation in the management of the urban environment and urban governance and broad background knowledge. Excellent oral expression.
«Good» (6-7)	Shows strong evidence of innovation in the management of the urban environment and urban governance, as well as broad background knowledge.
«Satisfactory» (4-5)	Satisfactory overall, showing a fair knowledge of innovation in the management of the urban environment and urban governance, a reasonable standard of expression. Some hesitation in answering follow-up questions and/or gives incomplete or partly irrelevant answers.
«Fail» (0-2)	Limited evidence of relevant knowledge and an attempt to address the topic of innovation in the management of the urban environment and urban governance. Unable to offer relevant information or opinion in answer to follow-up questions.

Project Work

Grades	Assessment Criteria
«Excellent» (8-10)	A well-structured, analytical presentation of project work. Shows strong evidence and broad background knowledge about innovation in the management of the urban environment and urban governance. In a group presentation all members contribute equally and each contribution builds on the previous one clearly. Answers to follow-up questions reveal a good range and depth of knowledge beyond that covered in the presentation and show confidence in discussion.
«Good» (6-7)	Clearly organized analysis, showing evidence of a good overall knowledge of the topic. The presenter of the project work highlights key points and responds to follow up questions appropriately. Group presentations demonstrates that the group has met to discuss the topic and is presenting the results of that discussion, in an order previously agreed.
«Satisfactory» (4-5)	Takes a very basic approach to the topic, using broadly appropriate material but lacking focus. The presentation of project work is largely unstructured, and some points are irrelevant to the topic. Knowledge of the topic is limited and there may be evidence of basic misunderstanding. In a group presentation, most of the work is done by one or two students and the individual contributions do not add up.
«Fail» (0-2)	Fails to demonstrate any appropriate knowledge.

Written Exam

Grades	Assessment Criteria
«Excellent» (8-10)	Has a clear argument, which addresses the topic and responds effectively to all aspects of the task. Fully satisfies all the requirements of the task.
«Good» (6-7)	Responds to most aspects of the topic with a clear, explicit argument. Covers the requirements of the task; may produce occasional errors.
«Satisfactory» (4-5)	Generally addresses the task; the format may be inappropriate in places; display little evidence of (depending on the assignment): independent thought and critical judgment include a partial superficial coverage of the key issues, lack critical analysis, may make frequent errors.

Recommendations for students about organization of self-study

During the course, the students work individually and in teams. The majority of the “self-study” time the students are working on papers describing cases or providing exercises / questions devoted to different aspects of innovations in the management of the urban environment. Each class typically has multiple components: presentation by lecturer on topic area, students presentations, group discussion, video / case analysis, business games, in-class reading.

Teaching is in English.

For successful completion of the course, it is required that students read the assigned chapters and articles. Active participation in classroom discussions is a must, and it is expected that students will come to class prepared with questions and comments. Each week, every student should read and be ready to present / discuss the required paper(s). The preparation to discussion includes: 1) identifying the main argument(s) of the text, 2) setting 3 to 5 questions to the audience based on the central topic of the class; 3) finding two or more key terms to define and discuss in the class. More detailed information will be distributed in class.

Self-study is organized in order to:

- Systemize theoretical knowledge received at lectures;
- Extending theoretical knowledge;
- Learn how to use legal, regulatory, referential information and professional literature;
- Development of cognitive and soft skills: creativity and self-sufficiency;
- Enhancing critical thinking and personal development skills;
- Development of research skills;
- Obtaining skills of efficient independent professional activities.

Self-study, which is not included into a course syllabus, but aimed at extending knowledge about the subject, is up to the student’s own initiative. A teacher recommends relevant resources for self-study, defines relevant methods for self-study and demonstrates students’ past experiences. Tasks for self-study and its content can vary depending on individual characteristics of a student. Self-study can be arranged individually or in groups both offline and online depending on the objectives, topics and difficulty degree. Assessment of self-study is made in the framework of teaching load for seminars.

Sample questions for preparation to final examination:

- What innovation is and why it is important for the management of the urban environment?
- What are the different kinds/locations of innovations in the urban environment?
- What does it mean for the management of the urban environment to become innovative?
- What conditions stimulate the effective innovations in the city?
- List the major models of the “Future City”. Briefly describe their similarities.
- Why the model of the Smart City is so popular?
- How does innovation involve the cross sector levers?

- Describe the innovations in the Singapore / Barcelona / Amsterdam / ... case.
- Please comment on the following statement: “The public sector is less innovative than the private sector”.
- What tools are available for innovations in the management of the urban environment?
- List five key skills of an urban manager in the “Future City”. Why do you think this skill set is so important?
- What is a mindset and how it could help in the innovative development of the management of the urban environment?
- What are the contemporary challenges of the urban innovation? Give an example.
- What is a role of citizen engagement in the innovative development of the contemporary city?
- How should the government innovators find the financial sources for the innovations?
- What is a role of big data in the development of the urban innovations?
- How does the open data and big data change the governmental programs and city management practice?
- What are the opportunities of the urban governance presented by data analytics?
- What limits the implementation of innovations in finding solutions to the urgent city problems?
- Give an example of the collaboration between the city managers, and public and private stakeholders of the urban innovations.

Annex 4

Special conditions for organization of learning process for students with special needs

The following types of comprehension of learning information (including e-learning and distance learning) can be offered to students with disabilities (by their written request) in accordance with their individual psychophysical characteristics:

- 1) *for persons with vision disorders*: a printed text in enlarged font; an electronic document; audios (transferring of learning materials into the audio); an individual advising with an assistance of a sign language interpreter; individual assignments and advising.
- 2) *for persons with hearing disorders*: a printed text; an electronic document; video materials with subtitles; an individual advising with an assistance of a sign language interpreter; individual assignments and advising.
- 3) *for persons with muscle-skeleton disorders*: a printed text; an electronic document; audios; individual assignments and advising.