

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION  
 Federal state autonomous educational institution  
 higher education  
 "Ural Federal University named after the first President of Russia B.N. Yeltsin"



APPROVED BY

Deputy vice-rector for academic affairs

E.S. Avramenko

2020

*E.S. Avramenko*

**PROGRAM OF MAGISTRACY ADMISSION EXAMINATIONS**

<b>The types of data on the program of magistracy admission examinations</b>	<b>The data</b>
<b>Educational direction</b> <b>Public Administration</b>	Code of the educational direction and the degree 38.04.04
<b>Educational program</b> Sustainable Solid Waste Management	<b>All EP's codes</b> 38.04.04/33.03
<b>Degree</b> Master	
<b>SEES UrFU in the educational area "Social sciences"</b>	<b>Approved by rector of UrFU, order № 1069/03 от 28.12.2018</b>

**Ekaterinburg, 2020**

**The program of magistracy admission examinations was prepared by the authors:**

<b>№ п/п</b>	<b>Name</b>	<b>Scientific degree, academic title</b>	<b>Position</b>	<b>Department</b>
1	Yashin A.A.	PhD (Economics)	Associate Professor	Regional economics, innovative entrepreneurship and security

**The program is approved by:**

**Educational and methodical council of GSEM**

Protocol № 1 from 14.04.2020

Chairman of EMC of GSEM

E.S. Avramenko

**SUMMARY:**

The program is designed in accordance with the requirements of the independently established educational standard of the Ural Federal University in the field of knowledge "Social sciences" for the level of preparation of the applicants to the magistracy within the framework of the educational direction 38.04.04 Public Administration.

**The purpose of entrance examinations** – to provide persons applying for admission to the UrFU to the educational program of magistracy, equal conditions, regardless of the previous document on higher education.

**The objective of entrance examinations** is to assess the preparedness of the applicants to study in the magistracy in terms of their information and communication competence that should not be lower than the basic level as well as their knowledge of the basics of the subjects of specialization.

**THE CONTENT OF THE PROGRAM OF MAGISTRACY ADMISSION  
EXAMINATIONS FOR THE EDUCATIONAL DIRECTION  
38.04.04 PUBLIC ADMINISTRATION**

**1. The structure of content of the examination is represented by 4 sections**

	Section	Format, time	Points
1.	Identification of the level of development of communicative competence in English. <b>The tasks of the basic level of complexity</b> (Threshold level on the scale of the Council of Europe) are offered for the solution. <b>The basic level</b> provides language proficiency allowing to solve a minimum number of communicative tasks sufficient for limited professional communication in standard situations. <b>Type of tasks:</b> answers to questions about the scientific text (answers in the form of words//phrases//sentences//numbers are should be copied from the scientific text of 1-2 pages A-4).	Computer testing  15 minutes	0 - 20
2.	Identification of the level of development of communicative competence in a foreign language. <b>The tasks of the basic level of complexity</b> (basic A2 level according to the common European CEFR scale) are offered for the solution. Tasks are aimed at assessing the ability to capture the main ideas, details, relationships, storylines in the written text.  <b>Type of tasks:</b> answers to questions to the text of general cultural content (tasks with the choice of one correct answer from the three proposed).	Computer testing  15 minutes	0 - 10
3.	English language test of the level B1 (20 questions).	Computer testing  30 minutes	0 - 20
4.	Multidisciplinary test in the subjects of specialization.  Up to 50 tasks for assessment of knowledge of fundamental concepts, laws, solution of standard tasks in the area of sustainable solid waste management. Tasks with the choice of the answer, the tasks for compliance identification.	Computer testing  60 minutes	0 - 50
	<b>Maximal total score</b>		<b>100</b>

**2. CONTENT of test for identification of the developed communicative competence in English**

What is communication? [*From MOOC Introduction to Communication Science by Rutger de Graaf (University of Amsterdam)*].

The most simple definition is that communication is each act of transmitting information. Information in the broadest sense of the word: including thoughts, ideas and emotions. Giving someone a bouquet of flowers is communicating a certain message. Adding to that gift a verbal compliment (you're pretty) is another separate act of communication. Blushing because you have just received flowers and a compliment is again another form of communication. As social animals we communicate day in day out with spoken words, nonverbal gestures, signs and symbols. Sometimes we use media to communicate a message. Media are the channels that we use to communicate. Scholars don't really agree on the definition of the word media. Television, Internet, Radio, Mobile Phones, the soapbox we stand on to give a speech. They are all technical media in a way. Things we constructed to amplify our communication. In the more broader definitions, we can include our hands, voice and eyes, that we all use to communicate somehow, in the list of communication channels, of media. In general however, whenever we discuss mediated communication, or THE mass media, we only mean the first category. Over the years scientists from different scientific disciplines have studied these channels for communication and all these different forms of communication. The results of their studies have formed the basis of the relatively new science of communication. Even today, many scholars in other disciplines study the exact same communication phenomena as we do. We share theories and models and often use the same methods to analyze and describe our field. It is therefore useful to be aware of how these other disciplines are connected with ours. To get an idea of the different levels of communication and how they are connected to other scientific disciplines, we can look at the so-called pyramid of communication. On the highest level of this pyramid we find societal communication, which is by its very nature aimed at a large mass audience. Therefore mainly historians, political scientists and sociologists studied this perspective. Under that is the level of institutional communication that is performed by political parties, organized religions, large corporations and such. Then comes the level of group communication. Groups are audiences that feel a high level of group identification, for instance a family or a fan club. Both institutional and group communication are in the field sociologists and cultural anthropologists. We have now arrived to the level of interpersonal communication, basically the communication between two or more people. Both sociologists and psychologists investigate this level. Finally there is the level of intrapersonal communication. This would be the communication you have with yourself. With this we mean all information processing, thinking, internalizing information and the process of giving meaning to the world around us. Of course this approach leans heavily on the discipline of psychology.

Questions:

1. According the text common definition of communication is ... information.
2. What example does author give to show difference between communication acts?.
3. What level of "pyramid of communications" goes beyond communication in a family or a fan club? It is ... communication.
4. In what order are the levels of the "pyramid of communications"?
5. In intrapersonal communication person communicates with ....

**3. CONTENT of test for identification of the level of development of communicative competence in a foreign language (test of the level A2).**

Read the article about a man who opened a restaurant, and choose the best variant in each gap.

## OPENING A RESTAURANT

Twelve months ago Robin Parker left his job at an insurance company. He now runs a restaurant which is doing very well since it opened four months ago.

Opening a restaurant was a big change for Robin. He loves travelling and all his favourite television programmes are about cooking. One day, he read in a newspaper about a doctor who left her job and moved to Italy to start a restaurant. He thought, "I can do that!" His wife wasn't very happy about the idea, and neither was his father. But his brother, a bank manager, gave him lots of good ideas.

Robin lived in Oxford and had a job in London. He thought both places would be difficult to open a restaurant in, so he chose Manchester because he knew the city from his years at university. He found an empty building in a beautiful old street. It was old and needed a lot of repairs, but all the other buildings were expensive and he didn't have much money.

Robin loves his new work. It's difficult being the boss, but he has found an excellent chef. He says he enjoys talking to customers and some of them have become his good friends. He gets up at 6pm and often goes to bed after midnight. It's a long day but he only starts to feel really tired when he takes time off at the weekends.

Robin's restaurant is doing so well that he could take a long holiday. But he's busy with his new idea to open a supermarket selling food from around the world. He's already found a building near his restaurant.

1. Robin decided to open a restaurant after he
2. Who helped Robin open his restaurant?
3. Where is Robin's restaurant?
4. Robin chose the building his restaurant is in because
5. Robin likes
6. Robin feels most tired
7. Next, Robin wants to

## 4. CONTENT of English language test of the level B1

### Grammar

1. Present simple, present continuous and present perfect simple
2. State verbs
3. Narrative forms
4. Time linkers: *as soon as/while, meanwhile/by the time (that), during/until*
5. Ability: *can, could, be able to, manage to, succeed to*
6. Obligation, permission and possibility: *must, have to, need to, can, could*
7. Predictions and decisions: *will/be going to*
8. Probability: *will/may/might*
9. *-ing* form and infinitive with *to*

10. Time expressions with present perfect and past simple
11. Defining and non-defining relative clauses
12. Present perfect simple and continuous
13. Used to and would for past habits and states
14. Questions: object and subject questions, indirect questions
15. Real conditions
16. Unreal conditions
17. Comparatives and superlatives
18. Modals of deduction and speculation: *must* and *can't*, *might* and *could*
19. Active and passive forms
20. *A/an, the* and no article
21. Unreal past conditional
22. *Should/shouldn't have*
23. Reported speech
24. Reported questions

#### Topics

1. Greeting. Personal information. Weather.
2. Shopping. Money. Requests.
3. Food. At the restaurant. Appreciation.
4. Entertainment: TV and cinema. Entertainment: sports and hobbies.
5. English as the means of cross-cultural communication. Learning English. Speech etiquette.
6. Cross-cultural Differences.
7. Health and fitness. Healthy eating.
8. War and peace, conflict. Ecology. Poverty.
9. Looking for a job. Applying for a job. Job interview. Writing a CV.
10. Company structure. Presenting a company. Presentation techniques.
11. Company culture. Management styles. Ethics and responsibility.
12. Academic writing. Formal Style. Clichés and Vocabulary.
13. Telephoning in Business English. Making a call. Answering a call. E-mail beginnings and endings.
14. Academic Writing: Formal Style. Academic vocabulary.
15. Signposting. Introduction Strategy. Strategy of effective discussion. Strategy for building a persuasive argument.

#### Sources for preparation to the test:

1. Brook-Hart, Guy. *Business Benchmark : Advanced. Student's Book* / G. Brook-Hart. — Cambridge : Cambridge University Press, 2007. — 192 p.
2. Brook-Hart, Guy. *Business Benchmark : Advanced. Teacher's Resource Book* / G. Brook-Hart. — Cambridge : Cambridge University Press, 2007. — 192 p.
3. Brook-Hart, Guy. *Business Benchmark : Upper-Intermediate Vantage* / G. Brook-Hart. — Cambridge ; New York : Cambridge UP, 2006. — 80 p.
4. Brook-Hart, Guy. *Business Benchmark : Upper-Intermediate. Student's Book* / G. Brook-Hart. — Cambridge : Cambridge University Press, 2006. — 192 p. — (BEC Vantage).
5. Brook-Hart, Guy. *Business Benchmark [Soundtape] : Upper-Intermediate Audio CDs* / G. Brook-Hart. — Electronic edition — Cambridge: Cambridge University Press, 2006. — 2 CD-ROM (126 min.) : stereo ; in the container. — Title from the label in the disk.
6. Coe, Norman. *Oxford living grammar. Intermediate* / Norman Coe. — Oxford : Oxford university press, 2009. — 156 p.
7. Greenall, Simon. *Reward. Upper Intermediate*. MacMillan. 2013.

8. Harrison, Mark. Oxford living grammar. Pre-intermediate / Mark Harrison. — Oxford : Oxford university press, 2009. — 156 с. : ил., цв. ил. + 1 электрон. опт. диск (CD-ROM). — Указ.: с. 153-156.
9. Shephard, Kerry. Presenting at Conferences, Seminars and Meetings. University of Southampton. 2010.
10. Trappe, Tonya, Tullis, Graham. Intelligent Business (with audio video and CD-ROM) — Pearson Longman. 2010.
11. Vince, Michael. Macmillan English Grammar in Context. Intermediate/Michael Vince.- Oxford: Macmillan, 2009. — 232p.:ill.
12. Whitby, Norman. Business Benchmark : Pre-Intermediate to Intermediate. Student's Book / N. Whitby. — Cambridge : Cambridge University Press, 2006. — 184 p.
13. Whitby, Norman. Business benchmark. Pre-intermediate to intermediate. Preliminary : personal study book / Norman Whitby. — Cambridge : Cambridge university press, 2006. — 80 с. : ил. — (For BEC and BULATS).
14. Wilson, J. J. Total English. Advanced : student's book / J. J. Wilson, Antonia Clare. — Harlow: Pearson education Ltd., 2010. — 175, [1] p.

## **5. CONTENT of multidisciplinary test on the subjects of specialization**

### **MODULE 1. MANAGEMENT OF ENVIRONMENTAL ASPECTS IN SUSTAINABLE WASTE MANAGEMENT**

#### **Topic 1. Methods and technologies of waste processing production and consumption**

The content of the problem and the rationale for its solution by software, industrial, experimental methods. The main goals and objectives in the field of waste management.

Issues of stabilization, and further reduction and elimination of OS waste pollution, saving of natural resources due to the maximum involvement of waste in the economic turnover.

Classification of solid waste. Aging of organic and inorganic waste. OS pollution by production and consumption waste. Spatio-temporal characteristics of the impact of waste on the environment. Impact of waste on the aquatic environment, atmosphere, soil and the biosphere as a whole. Problems of elimination of TP and TKO. Effective control and monitoring of influence waste on the state of the OS. Basic concepts in the field of low-waste, waste-free and clean technologies

#### **Topic 2. Principles of municipal waste and recycling management**

Creation of perspective, resource-saving and low-waste technologies. Methods of disposal and neutralization of SOFTWARE: solid industrial waste (TPO) agribusiness and options for their disposal; TPO metal production and processing; TPO metallurgical production and processing; TPO glass and ceramics production and processing; TPO at production of polymeric materials, synthetic chemistry and their processing; TPO radioactive drugs, their disposal and possible recycling options.

Classification of municipal solid waste. Consumption wastes and their resource potential. Technological processes of preparation of solid waste for processing and disposal. Options for recycling of MSW and their integration: waste reduction; recycling; composting; incineration; burial.

#### **Topic 3. Lifecycle management in sustainable solid waste management**

What is Life Cycle Analysis? Life Cycle Assessment. LCA Framework. LCA: an environmental decision-making tool. LCA conceptual model. Life Cycle Assessment methodology.

LCA goals and scoping. LCA - components. Steps of a LCA.

Life Cycle Impact Assessment. Impact Assessment Stressors. Linkage between Stressors and Impact. Shared financing - operator models. LCA Improvement - Environmental Responsibility Matrix.

## **Recommended sources for the MODULE 1**

1. Bobovich, B. B. waste Management: Textbook [Electronic resource] / B. B. Bobovich. - 2nd ed., ISPR. and additional - M.: Forum: SIC INFRA-M, 2015. - 104 p. - (Higher education: Bachelor) . — Mode of access:  
<http://znanium.com/bookread2.php?book=492711>
2. Ksenofontov, B. S. environmental Protection: biotechnological bases: Educational manual [Electronic resource] / Ksenofontov B. S.-M.: ID FORUM, SIC INFRA-M, 2016. - 200 PP.: (Higher education. ) — Mode of access:  
<http://znanium.com/bookread2.php?book=528520>
3. Yasoveev, M. G. Industrial ecology: Textbook [Electronic resource] / M. G. Yasaveev, E. V. Kakareka etc.; Under the editorship of M. G. Yasaveev. - M.: research center INFRA-M; PL.: New.knowledge, 2013. -292 p: (Higher education: Bachelor's degree). — Access mode:<http://znanium.com/bookread2.php?book=404991>.
4. Glukhovskaya, M. Yu. Assessment of production processes of the enterprise by the degree of low waste and non-waste [Text] / M. Yu. Glukhovskaya, T. N. kholodilina. - Orenburg: go OSU, 2008.- 11C.
5. Glukhovskaya, M. Yu. Calculation of payment for waste disposal [Text]: method.directions / M. Yu. A. Glukhov, T. N. Kholodilin. - Orenburg: go OSU, 2008. - 18 p.
6. Palgunov P. P., Suparokov M. V. Utilization of industrial waste. - Moscow: Stroizdat, 1990. - 352c.
7. Maksimov, V. F. Waste-free technology and processing of solid waste production: lecture notes / V. F. Maksimov. - L. : [B. I.], 1975. - 236 p.
8. Abrosimov, A.V. The use of space images and geoinformation technologies for monitoring places of waste storage / A.V. Abrosimov, D. B. Nikolsky, L. V. Sheshukova // Ecology of urbanized territories, 2014. - No. 1. - Pp. 38-43.
9. Environmental life cycle analysis by David Ciambrone, CRC-Press 1997
10. Why Take A Life Cycle Approach? Report by United Nations Environment Programme (UNEP) Division of Technology, Industry, and Economics 2004  
<http://www.unep.fr/scp/publications/details.asp?id=DTI/0585/PA>
11. Baumann, H., and Tillman, A. (2004) The Hitch Hiker's guide to LCA: an orientation in life cycle assessment methodology and application. Studentlitteratur AB, Lund.
12. Environmental Life Cycle Assessment (Jolliet et al.)  
<https://www.crcpress.com/engineering-environmental/life-cycle-analysis>

## **MODULE 2. ENTREPRENEURSHIP IN SUSTAINABLE WASTE MANAGEMENT**

### **Topic 1. Fundamentals of integrated communications (advertising and public relations)**

Introduction to the entrepreneurship in SWM. The Organization of Entrepreneurship in SWM. The Idea of Entrepreneurship in Sustainable Waste Management. The Business model of Entrepreneurship in Sustainable Waste Management.

### **Topic 2. International Entrepreneurship in Environmental Sphere**

Introduction to the International entrepreneurship in environmental sphere. The Organization of Entrepreneurship in environmental sphere. The Idea of Entrepreneurship in environmental sphere. The Business model of Entrepreneurship in environmental sphere.

## **Recommended sources for the MODULE 2**

1. Andonova, Veneta, Nikolova, Milena S Entrepreneurial Ecosystems in Unexpected Places. - Palgrave Macmillan Springer Nature. 2019
2. Watt, George Lean Entrepreneurship Apress Springer Nature. – 2019
3. Nielsen, C., Lund M. The Basics of Business Models. – Bookboon, 2013
4. Recommended Texts & Other Readings
5. Alam, J., Ibn-Boamah, M., & Johnson, K. (2019). Exploring the entrepreneurial ecosystem: Some local Canadian perspectives. *Strategic Change-Briefings in Entrepreneurial Finance*, 28(4), 249-254. doi:10.1002/jsc.2266
6. Bankins, S., Denness, B., Kriz, A., & Molloy, C. (2017). Innovation Agents in the Public Sector: Applying Champion and Promotor Theory to Explore Innovation in the Australian Public Service. *Australian Journal of Public Administration*, 76(1), 122-137. doi:10.1111/1467-8500.12198
7. Bason, C. (2010). *Leading Public Sector Innovation: Co-Creating for a Better Society*. Leading Public Sector Innovation: Co-Creating for a Better Society, 1-
8. Chen, J. Y., Cai, L., Bruton, G. R. R., & Sheng, N. H. Entrepreneurial ecosystems: what we know and where we move as we build an understanding of China. *Entrepreneurship and Regional Development*, 19. doi:10.1080/08985626.2019.1640438
9. De Vries, H., Bekkers, V., & Tummers, L. (2016). INNOVATION IN THE PUBLIC SECTOR: A SYSTEMATIC REVIEW AND FUTURE RESEARCH AGENDA. *Public Administration*, 94(1), 146-166. doi:10.1111/padm.12209.

## **MODULE 3. FINANCIAL AND BUDGETARY POLICY IN SUSTAINABLE WASTE MANAGEMENT**

### **Topic 1. Financial and Budgetary Policy in Sustainable Solid Waste Management**

Key messages for financially sustainable and resource-efficient waste management. Why are economic instruments important for SWM? Different examples of economic instruments for SWM. Use of economic instruments in the resource/ product/ waste life cycle.

Landfill taxes. Advanced recycling fees, product taxes and other instruments supporting extended producer responsibility. Deposit-refund systems. Funds and subsidies. Tax exemptions or rebates. Waste management financing and options for cost recovery. Suitable components for the design of a waste charge.

Financing of public services. Service-related fee(s) or Pay-as-you-throw. Rental fee.

Options for financing of investments. Loan financing. Shared financing - participation of public bodies (municipal associations). Shared financing - third party participation. Shared financing - operator models.

Principles to improve solid waste collection and transport. General issues in collection and transport. Types of economic instruments

### **Topic 2. Regulatory Economic Mechanisms of Sustainable Solid Waste Management**

Environmentalism: a historical perspective. Sustainability as the new paradigm. Business ethics and environmental values.

Business' environmental responsibility: the market approach. Inadequacy of the market approach: externalities. Inadequacy of the market approach: no exchange value. Inadequacy of the market approach: individual vs. group decisions. The market vs. regulation. The market approach –

defenses and counters. The regulatory approach: impact of the laws. Principles for a sustainable business.

Defining sustainability. Why is Sustainability a Business Issue? Sustainability in the marketplace: the new equation. Environmental & social issues: business perspectives. Change in mindset: sustainability is more complex than any other market trend. Framework for an effective sustainability strategy.

Key messages for financially sustainable and resource-efficient waste management. Why are economic instruments important for SWM?

### **Recommended sources for the MODULE 3**

1. Economic instruments in solid waste management. Applying economic instruments for sustainable solid waste management in low and middle-income countries. Published by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. 2016 <https://www.giz.de/en/downloads/giz2015-en-waste-management-economic-instruments.pdf>
2. Results-based financing for municipal solid waste. World Bank, 2014 <http://www.gprba.org/sites/www.gprba.org/files/publication/downloads/RBFforMSW.pdf>
3. Jonathan Harris & Brian Roach (2014): Greening the Economy Ch.17 in: Environmental and Natural Resource Economics:
4. A Contemporary Approach Global Development And Environment Institute Tufts University, Medford, MA 02155 USA [http://ase.tufts.edu/gdae/Pubs/te/ENRE/3/Ch17\\_Greening\\_Economy.pdf](http://ase.tufts.edu/gdae/Pubs/te/ENRE/3/Ch17_Greening_Economy.pdf)
5. European Commission, DG Environment (2000): A Study on the Economic Valuation of Environmental Externalities from Landfill Disposal and Incineration of Waste Final Main Report [http://ec.europa.eu/environment/waste/studies/.../econ\\_eva\\_landfill\\_report.pdf](http://ec.europa.eu/environment/waste/studies/.../econ_eva_landfill_report.pdf)
6. Lionel Nesta, Francesco Vona, Francesco Nicolli (2014): Environmental policies, competition and innovation in renewable energy Journal of Environmental Economics and Management Volume 67, Issue 3, May 2014, Pages 396–411. <http://www.sciencedirect.com/science/article/pii/S0095069614000060>

**Demo version of the complex test is places at the website:  
<https://magister.urfu.ru/ru/programs/>**