

Ministry of Education and Science of Russian Federation
Federal State Autonomous Educational
Institution of Higher Education «Southern Federal University»
(SOUTHERN FEDERAL UNIVERSITY)

The program is approved at the
Academic Council meeting of ICTIS
Protocol No. 1 of January 12, 2024

APPROVED
ICTIS Director

Gennady.E.Veselov



Admission guide for the Master's degree program
«IT management»

Code and Title of the subject area
09.04.01 Informatics and computation

Program level
Master's Degree Program

Study mode
Full-time

Rostov-on-Don – Taganrog

I. General terms

The admission for the master's program "IT management" of the 09.04.01 subject area "Informatics and computation" is carried out in the form of an oral exam (interview).

The entrance test is carried out in accordance with the approved schedule. At the beginning of the entrance test questions are issued to the applicant in accordance with this entrance test program. To prepare the answers the applicant does have up to 30 minutes. In the preparation of answers, the applicant has the right to summarize the basic provisions of his answers, however, only the student's answers, given to him orally, directly during the interview, are subject to evaluation. The duration of the interview is up to 15 minutes per applicant.

The results of the introductory test are evaluated on a 100-point scale. The minimum number of points required to participate in the competition are established by local regulations.

II. Questions for the entrance test

When conducting an entrance test, each applicant is suggested to answer three questions:

Question No. 1. Explain the reasons for the choice of this master's program of the Southern Federal University and the goals that you set yourself when training in this master's program (with explanation, you can rely on existing learning outcomes, scientific activities, experience of professional activity, etc.).

Questions No. 2-3. The questions are selected by the examination committee (or by automatic electronic service of the entrance test) corresponding to the subject area of the master's program from the following list:

1. What are the most important skills in IT and why?
2. How can you track technical performance in your department?
3. What do you believe is the most important role of an IT manager?
4. How would you manage your time during a fast-changing IT project?
5. What is the most challenging IT project you have worked on, and how did you accomplish it?
6. Based on what we have told you so far, what changes would you make to improve any IT department?
7. How do you prevent security breaches and ensure that company data is secure?

8. How do you ensure that a project is delivered on time and to our specifications?
9. What is the IT project life cycle?
10. Global data handling
11. Dark data
12. DevOps for software and hardware
13. Green IT
14. Artificial intelligence in Business
15. When attempting to identify technology and product directions for evaluating and forecasting vendor and technology trends in IT, what are two factors that can influence the direction of technological evolution?
16. Identify and describe how methods of analysis and planning approaches, such as cost-benefit analysis, and SWOT analysis, can be applied to technical problems and management requirements
17. What Qualities Does an Effective IT Manager Possess?
18. How would you keep your team motivated during a difficult IT project or task?
19. In your opinion and experience, which aspect of managing an IT project is the most difficult to manage?
20. Why is IT management important for businesses?
21. Autocratic Management Styles
22. Democratic Management Styles
23. Laissez-faire Management Styles
24. How do you keep the team motivated?
25. How do you track technical performance in your department?

III. Structure and evaluation criteria

The results of the entrance test are evaluated on a 100-point scale. The answer to the first question of the entrance test gives 40 points and the answers to questions 2 and 3 (chosen by the examination committee or an automatic service) of the entrance test allows to get up to 30 points for each of the questions.

The structure and criteria for evaluating the answer to question No. 1 of the entrance test:

- the rationale for the choice of the Southern Federal University and this master's program, the connection of the subject area of the master's program with real or future professional activities - up to 20 points;

- justification of goals and expected learning outcomes in the master program, as well as the results of scientific and/or project activities planned for execution during training - up to 10 points;

-justification of readiness for the effective development of the master's program, taking into account the existing educational results, achievements in research and innovative activities, and the experience of professional activity-up to 10 points.

The structure and criteria for evaluating the answer to questions No. 2-3 of the entrance test:

- understanding the subject of the question, the completeness of the answer to the question posed, proving the presence of quite extensive knowledge about the subject of the question - up to 15 points;

- free and correct operation with terms and concepts related to the subject of the issue - up to 5 points;

- answers to additional clarifying questions on the answer to the main question - up to 5 points;

- The level of general scientific culture and analytical abilities - up to 5 points.

IV. Recommended sources of information

1. Grekul V. I., Korovkina N. L., Kupriyanov Yu. V. Methodological foundations of IT project management: textbook.- Moscow: Internet University of Information Technologies, 2010. - 392s. URL: https://biblioclub.ru/index.php?page=book_red&id=233070
2. Yehlakov Yu. P. Managing software projects: tutorial.– Tomsk: Tomsk State University of Control Systems and Radioelectronics, 2015. - 217p. URL: https://biblioclub.ru/index.php?page=book_red&id=480634
3. Kalentyev A. A., Garais D. V., Goryainov A. E. New technologies in programming: a textbook.– Tomsk: Tomsk State University of Control Systems and Radioelectronics, 2014. - 176 p. URL: https://biblioclub.ru/index.php?page=book_red&id=480503
4. Preobrazhenskaya T. V., Murtazina M. Sh., Aletdinova A. A. Project management: a textbook. Novosibirsk: Novosibirsk State Technical University, 2018, 123 p. (in Russian) URL: https://biblioclub.ru/index.php?page=book_red&id=574957
5. Financial Management: Study book. / T.R. Rakhimov; Tomsk polytechnic university. – Tomsk: Tomsk polytechnic university Press, 2012. – 112 p. http://portal.tpu.ru/SHARED/r/RTR/eng/Education/FinManEng/Tab/FinMan_Textbook_2012.pdf
6. Fundamentals of Financial Management: Concise Edition by Eugene F. Brigham, Joel F. Houston, South-Western College Pub; 12th edition, 752 p.

<https://www.pdfdrive.com/fundamentals-of-financial-management-concise-sixth-edition-d20229517.html>

7. 4. Preobrazhenskaya T. V., Murtazina M. Sh., Aletdinova A. A. Project management: a textbook. - Novosibirsk: Novosibirsk State Technical University, 2018. - 123 p. URL: https://biblioclub.ru/index.php?page=book_red&id=574957
8. 5. Appelo Jurgen. Agile management: Leadership and Team Management: A practical guide / Appelo Yu. Moscow: AlpinapAblisher, 2018. - 534 p. - Access mode: <https://znanium.com/bookread2.php?book=1003506>
- 10.7. The City Of Sofija ImpactMapping. How to improve the efficiency of software products and projects for their development: A practical guide / Adjich G.-M.: AlpinapAblisher, 2017. - 86 p. - Access mode: <https://znanium.com/bookread2.php?book=1003514>
- Schwaber K., Sutherland J. The Scrum Guide. The Definitive Guide to Scrum: The Rules of the Game – 2017 2.
- 11.8. Agile Practice Guide - Project Management Institute, Inc., 2018 – 115p
12. Schwaber K. Agile Project Management With Scrum - Microsoft Press, 2004 7.
- 13.9. Plattner H., Meinel C., Leifer L., Design Thinking Research: Making Design Thinking Foundational (Understanding Innovation). — Springer, 2016
14. Oleynik, A. I. IT-infrastructure / A. I. Oleynik. - Moscow: Publishing House of the Higher School of Economics, 2012. - 136 p. - ISBN 978-5-7598-0958-6; The same [Electronic resource]. - URL: <http://biblioclub.ru/index.php?page=book&id=136798>
15. Savelyev, A. O. Microsoft solutions for enterprise IT infrastructure virtualization: course / A. O. Savelyev; National Open University "INTUIT". - Moscow: Internet University of Information Technologies, 2011. - 277 p.: table., schematics.; The same [Electronic resource]. - URL: <http://biblioclub.ru/index.php?page=book&id=234661>

Author of the admission test program:

Head of the educational program

phD, Associate Professor

Yuri Zachinyaev