

Approved at the meeting of the Academic Council
Doctoral School of Technical Sciences

Agreed
Academic Director of the Doctoral School of
Technical Sciences__Pavel Korolev

**The program of the portfolio composition
of the main educational program of higher education – programs for the training of scientific and
scientific-pedagogical personnel at the Doctoral programme
Electronics, Radiotechnics and Communication Systems**

Scientific specialties:

- 2.2.2. Electronic Component Base of Micro- and Nanoelectronics, Quantum Devices
- 2.2.13 Radio engineering, including TV devices and systems
- 2.2.14 Antennas and microwave devices and technologies
- 2.2.15 Systems, Networks and Devices for Telecommunications

1. The portfolio consideration

The main purpose of reviewing the portfolio of the main educational program of higher education – programs for the training of scientific and scientific-pedagogical personnel at the Doctoral School of Technical Sciences programme "Electronics, Radiotechnics and Communication Systems" in scientific specialties 2.2.2. Electronic Component Base of Micro-and Nanoelectronics, Quantum Devices, 2.2.13 Radio engineering, including TV devices and systems, 2.2.14 Antennas and microwave devices and technologies, 2.2.15 Systems, Networks and Devices for Telecommunications is to identify the applicant's readiness to prepare and defend dissertation research.

The consideration for the portfolio of the main educational program of higher education – programs for the training of scientific and scientific-pedagogical personnel at the Doctoral School of Technical Sciences programme "Electronics, Radiotechnics and Communication Systems" in scientific specialties 2.2.2. Electronic Component Base of Micro-and Nanoelectronics, Quantum Devices, 2.2.13 Radio engineering, including TV devices and systems, 2.2.14 Antennas and microwave devices and technologies, 2.2.15 Systems, Networks and Devices for Telecommunications consists of reviewing documents confirming the results of the applicant's scientific, academic and/or professional activities.

2. Portfolio structure

To participate in the individual achievement competition (portfolio) The applicant can provide the following documents in Russian or English:

1) Documents confirming the applicant's research experience.

a) ***Presentations at international and Russian scientific and technical conferences, symposiums, and All-Russian schools-seminars*** (hereinafter referred to as scientific events) on the educational program and scientific specialty of future dissertation research.

The following documents must be provided as proof of the achievement: the program of the scientific event and, if available, the proceedings of the scientific event with a unique ISBN identifier. Additionally, if available, a winner's diploma may be provided.

All documents are provided in full in the form of an electronic copy of the original in the ".pdf" format, together with an active electronic link to an open source confirming the fact of scientific events. Any other form of representation is unacceptable.

b) ***Published high-level scientific papers*** (scientific articles, conference reports) on the educational program and scientific specialty of future dissertation research.

It is confirmed by the presentation of the issue / volume / issue of a scientific or scientific-technical journal, a collection of conference reports with a unique identifier ISSN. All documents are provided in full in the form of an electronic copy of the original in the ".pdf" format, together with an active electronic link to an open source (additionally confirming the fact of scientific events), as well as the number of the unique identifier of the digital object DOI. Any other form of representation is unacceptable.

Scientific papers should relate to the same educational program and scientific specialty as the topic of future dissertation research. Only scientific papers published by the publishing house are considered.

c) ***Certificates of state registration of computer programs and databases***, patents for inventions, patents for utility models, works, etc. according to the educational program and scientific specialty of the future dissertation research.

It is confirmed by providing an electronic copy of the original in the ".pdf" format, which contains the registration number, date of state registration, name of the program, database, invention, work, etc., the authors (co-authors) and the copyright holder/ patent holder (all documents are submitted in the original as an electronic copy of the original in the electronic format ".pdf" together with an indication of an active electronic link to an open source confirming the existence of the document). Any other form of representation is unacceptable.

d) ***Participation in research projects, academic grants funded by*** the Russian Foundation for Basic Research, Russian National Science Foundation, Russian Science Foundation, HSE, etc. organizations / scientific foundations for the educational program and scientific specialty of future dissertation research.

It is confirmed in the form of an electronic copy of the original in .pdf format: project data (name, grant number, fund), contact details of the project manager / grant and a short abstract (no more than 300 words) explaining the role, position, period of work and the essence of the applicant's work. The document must be signed by the project/grant supervisor. An official document confirming participation in research projects and academic grants with the seal of the scientific foundation must also be attached. Any other form of representation is unacceptable.

2) **A letter of recommendation from the potential supervisor of the planned dissertation research**, which clearly reflects his consent to be the supervisor of the applicant at the Doctoral school. Also, the letter of recommendation should reflect the current characteristics of the applicant, mentioning specific achievements and the foundation for future research in the chosen scientific specialty and educational program. A letter of recommendation is reviewed only if the potential supervisor is an employee of the Higher School of Economics. It is confirmed as an electronic copy of the original in the ".pdf" format. The document must be signed by the potential supervisor of the applicant, indicating the date of signature. Any other form of representation is unacceptable.

Note: only letters of recommendation issued no earlier than 2 months before the application for participation in the competitive selection in the specialty are accepted.

3) **Research proposal** (no more than 15 thousand characters, including spaces), which the applicant expects to implement during his studies at graduate school. For the design, you must use the Times New Roman font, 14 pt in size, with one and a half line spacing. Alignment is by width. The paragraph indentation is 1.25 cm. Margins: left – 20 mm, top and bottom – 20 mm, right - 10 mm. Headings should be highlighted in bold.

The Research proposal must contain:

- a) relevance - a brief introduction to the field of proposed research, the current state of the chosen field;
- b) the purpose of the research;
- c) the main idea of the research;
- d) the formulation of the scientific task;
- e) scientific novelty (planned);
- f) justification of practical significance;
- g) compliance with the passport of the scientific specialty;
- h) stages, research methods and tasks;
- d) a list of key literature.

The Research proposal drawn up according to the specified requirements is submitted electronically in the ".pdf" format.

3. Components included in the portfolio documents

The selection procedures for applicants to the quota places are held in the portfolio consideration format

The portfolio is not evaluated according to criteria and scores.

Components
Reports at scientific events, the works of which are indexed in the RSCI and in the Web of Science/Scopus, including the list of HSE journals (A-D)*
with the publication of the report
with the publication of the abstracts of the report
without publishing the report
winner's diploma at a scientific event
Publications of high-level scientific papers
publication in a journal or in a collection of reports indexed in the Web of Science, RSCI and Scopus, including the list of HSE journals (A-D) (check https://scientometrics.hse.ru/en/lists/)
publication in the scientific edition of the quartiles Q1, Q2, Q3, Q4
publication in a scientific publication without a quartile
publication in a journal indexed in the RSCI from the list of the Higher Attestation Commission:
publication in the journal from the list of the Higher Attestation Commission of the quartile K1, K2, K3, K4
Certificates of state registration of computer programs and databases, patents for inventions, patents for utility models, works, etc.
Participation in research projects, academic grants
Letter of recommendation from a potential supervisor
other recommendations
Research proposal
The research proposal is a key element of the portfolio. In the absence of a research proposal, a high-quality review of the portfolio is not possible.
<ul style="list-style-type: none"> • relevance • the purpose of the research • the main idea of the research • formulation of the scientific task • scientific novelty (planned); • justification of practical significance; • compliance with the passport of the scientific specialty; • stages, research methods and tasks; • a list of key literature.

*The list of HSE journals (A-D) is available by link https://www.hse.ru/science/scifund/an/spiski_all/.