

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN
FEDERATION

Federal State Autonomous Educational Institution for Higher Education
«Ural Federal University named after the first President of Russia B.N. Yeltsin»



APPROVED BY
Vice rector for science
A.V. Germanenko



2022

INTERNSHIP PROGRAM

List of information about the educational program	Credentials
Educational program ECONOMICS	OP code 38.06.01
Direction of training Economy	Direction and training level code. 38.06.01
Level of education - training of personnel of higher qualifications	
Qualification awarded to a graduate Researcher. Teacher - researcher	Details of the order of the Ministry of Education and Science of the Russian Federation on the approval of the Federal State Educational Standard of Higher Education: from 30.07.2014 N 898
FGOS VO 38.06.01 "Economics"	

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Discipline working program is compiled by the authors:

№	First name, Surname	Academic degree, academic title	Position	Department	Signature
1	Turgel Irina D.	Doctor of Economics, Professor	Director	School of Economics and Management	
2	Yadrennikova Elena V.	PhD in Economics, Associate Professor	Associate professor	Department of tax and financial management	

Recommended by the Methodical council of UrFU

Deputy Director for Educational Activities
for the organization of admission
and pre-university education



E.S. Avramenko

Agreed:

Head of the DTSP



E.A. Butrina

THE INTERNSHIP

1 GENERAL CHARACTERISTICS OF THE INTERNSHIP

1. Prerequisites	History of science Methodology of research
2. Corequisites	-
3. Postrequisites	Final state attestation
4. Work input of the discipline module, credits	3

1.1. Key objectives of the Ph.D. students' internship

1.1. The main objectives of pedagogical practice of graduate students,

- to study the framework of the teaching and educational work in higher educational institutions,
- to develop practical skills in the professional and teaching activities,
- to enhance the motivation for teaching in higher education,
- to familiarise Ph.D. students with the specifics of the teacher's activities in computational mathematics,
- to generate skills in the performance of pedagogical functions,
- to consolidate the psychological and pedagogical knowledge in teaching the disciplines in computational mathematics,
- to acquire a creative approach to solving scientific and teaching problems.

The internship is aimed at generating the competencies for Ph.D. students: as follows,

- the ability to critically analyse and evaluate current scientific achievements, generate new ideas in solving research and practical problems, also in inter-disciplinary areas (Universal Competence-1);
- readiness to participate in the work of Russian and international research teams in solving research and academic problems (Universal Competence-3);
- readiness to apply contemporary scientific communication methods and technologies in the state and foreign languages (Universal Competence-4);
- the ability to follow ethical standards in professional activities (Universal Competence-5);
- the ability to plan and solve their own professional and personal development problems (Universal Competence-6);
- the ability to formulate research objectives in the field of information security, apply the theoretical and experimental research methodology to solve them, and apply the results to practical activities (General Professional Competence-1);
- the ability to publicly present their own new research outcomes (Professional Competence-5);
- independent construction of a holistic picture of the discipline (Professional Competence-6);
- the ability to diversely present and adapt mathematical knowledge taking into account the audience level (Professional Competence-11);
- the ability to formulate in the problem-specific form non-mathematical types of knowledge (also in the humanities) (Professional Competence-13);

- the ability to use the basic natural science laws, apply the mathematical apparatus in professional activities, identify the essence of problems arising in the course of professional activities (Professional Competence-18);
- the ability to understand the essence and importance of information in the modern society development, apply the achievements of computer science and computer technology, process large amounts of information to conduct a targeted search in various sources of information on the activity profile including global computer systems (Professional Competence-19);
- the ability and readiness for the teaching activities in the field of vocational training in institutions of higher education, additional vocational education and professional educational organisations (Professional Competence-20);
- the ability to implement educational programmes and educational materials (Professional Competence-21).

1.2. Practice outcome requirements

As a result of the internship , Ph.D. students should receive:

- the pedagogical experience in a higher educational institution,
- a holistic view of the teaching activities, pedagogical systems and the higher education structure;
- the sustainable skills of practical application of professional and pedagogical knowledge obtained in the course of the theoretical education;
- the professional pedagogical orientation;
- the information about real problems and problems solved in the educational process of the institutions of higher professional education;
- the personal and professional qualities of the teacher.

As a result of the internship , Ph.D. students should **know**

- teaching methods, techniques and technologies in higher education;
- the main achievements and trends in the development of the relevant subject and research field and its relationship with other sciences;
- the legal and regulatory framework for the education system's functioning;
- the procedure for implementation of the main provisions and requirements of the documents regulating the activities of the university, department and teaching staff for the improvement of educational, methodological and scientific work to meet the Federal State Education Standards;
- modern approaches to modelling the research and teaching activities;
- the basics of teaching and methodological work in higher education;
- the procedure for organising, planning, delivering and providing the educational process using the latest teaching technologies;
- the fundamentals of the pedagogical culture and skills;
- the basic principles, methods and forms of organization of the research and teaching at the university;
- methods of control and evaluation of the professionally significant qualities for students;

be able

- to apply methods and techniques for drawing up plans for lectures, assignments, exercises, tests on various topics, the systematics of teaching and educational tasks;
- to use educational technologies, methods and techniques for conducting lectures and practical classes;
- to use in the presentation of the subject material inter-relationships of the disciplines presented in the curriculum mastered by students;

- to use in the presentation of the subject material the relationship between research and educational processes in higher education including the possibility of attracting own research as a means of improving the educational process;
- the basics of using computer technology and information technology in learning;
- to carry out methodical work on the design and organisation of the educational process;
- speak in front of the audience and promote a creative atmosphere in the classroom;
- analyse the difficulties arising in the teaching activities and develop an action plan for resolving them;

have the skills of:

- the techniques for the use of technical teaching aids in conducting classes for educational disciplines;
- the speech techniques, rules of conduct in holding training sessions;
- the methodology and technology of the training session (lectures, seminars, practical classes, laboratory classes, consultations on discipline, course design, checking various kinds of homework assignments and conducting intermediate appraisal by points);
- the methodology of self-evaluation and self-analysis of the results and effectiveness of conducting in-class learning of various kinds.

1.3. Internship base

The internship base is the Federal State Institution of Higher Professional Education Ural Federal University named after the first President of Russia B. N. Yeltsin. The organiser of the Industrial R&D Internship is the Department of Computational Mathematics which is in charge of Ph.D. student training as per 02.06.01 of Computational Mathematics.

If necessary, a Ph.D. student can do the internship in other departments focusing on similar subjects, especially in the case of the coincidence of the scientific interests of the department and the subjects of the research work of the Ph.D. student.

During the internship, a post-graduate student follows all the internal regulations and safety rules established at the departments and other departments of the university in relation to the educational process.

The general guidance for the internship and methodological advice are provided by the research advisor and/or practice leader.

1.4. Duties of the Internship Leader

The duties of the **internship leader** include:

- ensuring that all arrangements are carried out before a Ph.D. student is sent to practice;
- drawing up an individual practice plan for the graduate student and coordinating it with the internship leader from the entity;
- organisation of work of the Ph.D. student according to the pedagogical practice programme;
- preparation of individual tasks for the practice;
- providing the Ph.D. student with the necessary regulatory documents, blank material, reference literature etc.;
- conducting consultations at a set time;
- hearing the Ph.D. student's practice report;
- presentation to the head of the department of the practice review including proposals and comments on improving the practical training to Ph.D. students.

2. TEACHING INTERNSHIP CONTENTS

Section code	Practice section	Contents
P1	Organisational and methodological aspects of the internship	<p>Attending and reviewing the classes of leading professors and associate professors of departments.</p> <p>Attending scientific and methodological consultations.</p> <p>Drawing up an individual internship plan.</p> <p>Development of a work programme for the academic discipline (the choice of discipline is coordinated with the research supervisor).</p> <p>Materials are chosen for lectures, construction of seminars, practical and laboratory exercises.</p> <p>Self-studying the pedagogical literature of higher education; studying methods of preparing and conducting lectures, laboratory and practical exercises, seminars, consultations, tests, examinations, term and diploma design; mastering innovative educational technologies;</p> <p>Studying the existing computer training programmes, the possibilities of technical teaching aids etc.</p>
P2	Active internship	<p>Conducting training sessions in students groups included in the load grid of the UrFU departments.</p>
P3	Teaching research work	<p>Design and conduct of lectures, practical and laboratory classes by using innovative educational technologies.</p> <p>Development of multimedia systems for information security disciplines.</p> <p>Design of inter-disciplinary modules for studying the most complex and professionally significant concepts.</p> <p>Development of tests, exam tasks, subjects of the term and diploma projects.</p> <p>Design of didactic materials on selected topics of the training courses and a presentation of them.</p> <p>Development of scenarios for conducting business games, teleconferences and other innovative forms of classes.</p> <p>A comparative analysis of various methods for assessing the quality of educational and cognitive activities of students in the study of academic disciplines.</p> <p>Optimisation of educational and cognitive activities and improving the training quality.</p> <p>Carrying out psychological and pedagogical researches to diagnose professionally and personally significant qualities of a student (teacher) and the analysis of his/her results.</p> <p>Analysis of the domestic and foreign practices of higher education specialist training in the field of information security.</p>

The content of the internship of a Ph.D. student is determined taking into account the interests and possibilities of the department where it is conducted, and is completely determined by the individual task. The individual task is developed taking into account the area of the postgraduate training programme and taking into account the subjects of the research work of the Ph.D. student.

4. Self-guided work of Ph.D. students

List of tasks for the self-study	Work intensity	
	hours	credits
Drawing up a internship plan	4	
Development of the draft work programme for the academic discipline in respect of a certain term	4	
Selection of the educational, scientific, journalistic literature for drawing up a compendium of lectures	4	
Study of the educational and scientific pedagogical literature	4	
Studying innovative educational technologies	4	
Total	20	0.5
Compilation of compendium of lectures	6	
Development of methodological recommendations for conducting seminars, practical or laboratory classes. The selection of methods for assessing the knowledge of students	6	
Execution of a handout or presentation to a lecture	6	
Development of test assignments, tasks, exercises and business game scenarios for conducting seminars	6	
Preparation for the report on the internship	6	
Total	30	1.0

5. Reporting on the internship outcomes

A Ph.D. student based on the internship is assessed by the department at which he/she did the practice based on the presentation of the feedback from the practice leader. The main basis for attestation is the successful conduct of the postgraduate study sessions in the groups of students included in the load grid of the UrFU departments.

5.1. Databases, information and reference systems and search systems

1. The official Internet portal of legal information. – Available at <http://pravo.gov.ru/>, free. - Title from the screen.
2. The portal of information and educational resources of the UrFU. - Available at <http://study.urfti.ru/info/>, free. - Title from the screen.
3. The electronic base of regulatory documents GOSTEKSPERT. - Available at <http://gostexpert.ru/>, free. - Title from the screen.
4. Search engines; www.yandex.ru, google.ru www.rambler.ru,