MINISTRY OF EDUCATION AND SCIENCE
OF THE RUSSIAN FEDERATION ST. PETERSBURG STATE
ELECTROTECHNICAL UNIVERSITY «LETI»
OF V. I. ULYANOV (LENIN)»

Approved by:
Vice Rector for Academic Affairs
_____ Pavlov V.N.
«__22_» __марта_____ 2016 г.

WORKING PROGRAM

PRE-DIPLOMA PRACTICAL TRAINING

of master training

field of Study:

09.04.01 – «Computer Science and Engineering»

program:

«Computer Science and Knowledge Discovery»

Saint-Petersburg
2016

TRAINING STRUCTURE

№№ of the curriculum:	500
Provided by:	Faculty of Computer Science and Technology
Department:	Computer Science and Engineering
Total workload (Credits)	9
Year	2
Semester	4
Types of occupation	
Independent work (academic hours)	756
Total (academic hours)	756
Type of intermediate validation	
Differential credit (Semester)	4

Methods of practice: stationary, outbound.

Format of practice: discrete.

The working program is reviewed and approved on the meeting of chair Computer Engineering department 22.03.2016, protocol № 2.

The working program is reviewed and approved by educational and methodical commission of Computer Science and Technology Faculty 24.03.2016, protocol № 3.

SUBJECT SUMMARY

« EDUCATIONAL PRACTICE »

As a result of the passage of externship student must bring the final result of the study on his final qualifying work. During the passage of pre-diploma practice students learn to formulate a production problem, review and comparison of the methods of its solution. One result of the practice should be well-designed report on the results of research and solving production problems.

TARGETS AND GOALS OF PRACTICE

1. Learning the basics in such fields as modern mathematical methods, computing systems, programming tools and software for problems solving of science, technology, economics and management and using information in engineering design, management and financial activities. Knowledge acquisition, which is necessary for solving scientific and applied problems stated by topic of graduate qualifying work.

2. Work skill building with different software and computing systems, including distributed and high performing ones, choice of solution methods of production problems in specific situations.

3. Mastering of solution methods in different types of production problems, by applying parallel computing and distributed tools. Ability to take part in different types of development of information systems especially distributed and intellectual, for various purposes.

The list of competencies, which involves practice as an organization is provided with competency matrix, attached to basic educational program (BEP).

POSITION OF PRACTICE IN BEP STRUCTURE

Pre-Diploma Practical Training is provided with applying of knowledge and skills, that were got earlier with mastering the curriculum disciplines:

1. «Computing Systems»;
2. «Mathematical Modeling of Linear and Nonlinear Systems»;
3. «Algorithms Construction and Optimization»;
4. «Intellectual Systems»;
5. «Distributed Systems and Technologies»;
6. «Software Development Technologies».

and ensures preparation of graduate qualifying work,

and also has a goal to confirm professional knowledge and professional skills of doing independent research, production and technology, organizational and managerial work, which were received by students in the process of studying.

PRACTICE CONTENT

The purpose of pre-diploma practice is an expansion of professional knowledge, received by students in the process of studying and practical skill building in doing independent research, organizational and managerial.

Pre-diploma practice is aimed to acquirement of working skills with different software and computing systems, choice of solution methods of production problems in specific situations; students acquaintance with different programming languages; formation skills and abilities of independent research and different types of production problem solutions by applying programming tools and together with another types of software; deepening and consolidation of students theoretical knowledge in computing technology basics; formation and mana; development of professional culture; elaboration of creative thinking, growth of need for self-education and continuous improvement of professional activities in applied mathematics and computer science field; studying the current state information technologies in in various institutions and enterprises, advanced experience and innovative approaches.

Practice is conducted on a contractual basis in third party organizations (enterprises, firms) by major profile, or in graduate departments and other scientific departments of the university. In the units where the practice takes place, allocated jobs to perform individual tasks on the program of practice.

Content of practice determined by graduate departments based on Portal of Federal State Educational Standards for Higher Education with considering interests and opportunities of department (departments, laboratories, scientific groups, etc.), where it takes place. Detailed content of students work during practice period is planned by department management, in which it is performed, and is reflected in the individual assignment of the practice.

Date and duration of practice are set in accordance with syllabus and annual calendar training schedule. During the period of practice students obey all internal regulations and safety techniques, which are established in the department and at workplace.

PRACTICE REPORTING FORM

Written report, presentation and performance are basic reporting forms of practice.

Written report in accordance with template approved by Saint-Petersburg Electrotechnical University is prepared by student by the end of the practice. Report shall include individual assignment results with description of used technical solutions, representation of revealed experimental and calculated data.

Practice supervisor gives review about students work and vise the report, then report will be handed to graduate department practice supervisor.

Certification of practice result is held by departments head assigned commission. Commission shall include department practice supervisor and at least two teachers of the department.

Certification is carried out based on students performance, practice result, practice supervisors review and report.

According to the results of certification student gets score on a five-point scale (differential credit).

TRAINING AND METODOLOGY PRACTICE SUPPORT

List of main and additional academic literature, required for practice

№	Title, bibliographic description	Term	Copy number in library (department)
Main literature			
1	Perfomance and execution of final qualifying works [Electronic resource]: St. Petersburg State Electrotechnical University "LETI"; auth.: V.B. Viktorov, A.A. Lyamkin. - 2nd ed., revised — Spb.: Publ. St. Petersburg State Electrotechnical University "LETI", 2013 (CD-ROM).	3	The e-Learning Resource Base of Electronic Informational and Educational Environment of St. Petersburg Electrotechnical University "LETI"
2	Y.N. Novikov Preparation and defence of master`s theses and undergraduate works [textbook]. 3d ed. Spb; M.; Krasnodar: Lan`, 2015.-29 p.	3	48
Additional literature			
1	A.L. Foote Oral Exams: Preparing For and Passing Candidacy, Qualifying, and Graduate Defenses. Academic Press;2015.-204 p.	3	Нет(1)

Head of academic literature department T.V.Kiseleva
05.12.18.

ENDORSEMENT LIST

Developer

PhD, Ass. Prof. D.M. Klionskiy

Reviewer

PhD, Ass. Prof. V.A. Mihalkov

Head of department

Dr. of Sci., Prof. M.S. Kupriyanov

Dean of the faculty

Dr. of Sci., Prof. M.S. Kupriyanov

Approved

Head of the Academic department

PhD, Ass. Prof. V.A. Mihalkov

Head of methodical department

Dr. of Sci., Prof. A.Y. Gryaznov

LIST OF REGISTRATION CHANGES

№	Date	Change	Meeting date TMC, protocol №	Author	Chief of Methodical Assosiation
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