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ФИО: Ястребов Олег Александрович
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PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
NAMED AFTER PATRICE LUMUMBA
Institute of Environmental Engineering

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with international environmental requirements

(наименование дисциплины/модуля)

Recommended by the Methodological Council for the Education Field:

05.04.06 Ecology and nature management

(код и наименование направления подготовки/специальности)

The discipline is mastered within the framework of the main professional higher education program:

УПРАВЛЕНИЕ ПРИРОДОПОЛЬЗОВАНИЕМ / NATURE MANAGEMENT

(наименование (профиль/специализация) ОП ВО)

1. COURSE GOALS

The course goal is to develop students' understanding of the legislative basics, instrumental methods and standard procedures of certification of products and processes according to modern environmental requirements.

2. LEARNING OUTCOMES

The mastering of the discipline "Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with international environmental requirements" is aimed at the formation of the following competencies (parts of competencies) in students:

Table 2.1. List of competencies formed by students during the development of the discipline (LEARNING OUTCOMES)

| Code | Competence | Indicators of competence achievement (within the framework of this discipline) |
|-------|---|--|
| SPC-2 | Способность творчески использовать в производственно-технологической деятельности знания фундаментальных и прикладных разделов специальных дисциплин The ability to creatively use knowledge of fundamental and applied sections of special disciplines in production and technological activities | ПК-2.1 Владеет навыками применения передовых достижений науки для выбора и внедрения наилучших доступных технологий (НДТ) SPC-2.1 Has the skills of applying advanced scientific achievements to select and implement the best available technologies (BAT) |
| SPC-5 | Способен разрабатывать типовые природоохранные мероприятия и проводить оценку воздействия планируемых сооружений или иных форм хозяйственной деятельности на окружающую среду Is able to develop standard environmental protection measures and assess the impact of planned structures or other forms of economic activity on the environment | ПК-5.1 Способен разрабатывать и планировать внедрение типовых природоохранных мероприятий с учетом международной практики и требований национального законодательства SPC-5.1 Is able to develop and plan the implementation of standard environmental measures taking into account international practice and the requirements of national legislation |

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The discipline "Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with international environmental requirements" refers to Compulsory Disciplines of the Higher Education Program.

Within the framework of the higher education program, students also master other disciplines and/or practices that contribute to expected learning outcomes of the discipline "Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with international environmental requirements".

Table 3.1. List of Higher Education Program components that contribute to expected learning outcomes

| Code | Competence | Previous Disciplines (Modules) | Subsequent Disciplines (Modules) |
|--------------|---|---|---|
| SPC-2 | Способность творчески использовать в производственно-технологической деятельности знания фундаментальных и прикладных разделов специальных дисциплин The ability to creatively use knowledge of fundamental and applied sections of special disciplines in production and technological activities | Радиоэкологическая безопасность территорий / Radioecological safety of territories Экологическое проектирование промышленных объектов / Environmental design of industrial facilities Комплексная оценка природных и производственных потенциалов территорий / Comprehensive assessment of natural and industrial potentials of territories Хранение, переработка и утилизация отходов / Storage, processing and disposal of waste Экология и здоровье населения / Ecology and public health Геохимические методы оценки окружающей среды / Geochemical methods of environmental assessment Ландшафтное планирование / Landscape planning Управление минерально-сырьевым комплексом / Management of the mineral resource complex | Pre-graduate practice |
| SPC-5 | Способен разрабатывать типовые природоохранные мероприятия и проводить оценку воздействия планируемых сооружений или иных форм хозяйственной | Радиоэкологическая безопасность территорий / Radioecological safety of territories HSE менеджмент / HSE-management Экологическое проектирование | Pre-graduate practice |

| Code | Competence | Previous Disciplines (Modules) | Subsequent Disciplines (Modules) |
|------|--|---|----------------------------------|
| | деятельности на окружающую среду Is able to develop standard environmental protection measures and assess the impact of planned structures or other forms of economic activity on the environment | промышленных объектов / Environmental design of industrial facilities Современные методы и технологии защиты окружающей среды / Modern methods and technologies of environmental protection Хранение, переработка и утилизация отходов / Storage, processing and disposal of waste Международные стандарты управления качеством окружающей среды / International Environmental Quality Management Standards Управление минерально-сырьевым комплексом / Management of the mineral resource complex | |

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

Workload of the course «Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with international environmental requirements» is 2 ECTS.

Table 4.1. Types of academic activities during the period of the HE program mastering

| Вид учебной работы | TOTAL | Semesters | | | |
|----------------------------------|----------|------------|---|------------|---|
| | | 1 | 2 | 3 | 4 |
| <i>Contact academic hours</i> | 34 | | | 34 | |
| Incl.: | | | | | |
| Lectures | | | | | |
| Lab work | | | | | |
| Seminars | 34 | | | 34 | |
| <i>Self-study</i> | 55 | | | 55 | |
| <i>Evaluation and assessment</i> | 19 | | | 19 | |
| Total workload | Ac.hours | 108 | | 108 | |
| | ECTS | 3 | | 3 | |

5. COURSE CONTENTS

Table 5.1. The content of the discipline (module) by type of academic work

| Name of the discipline section | Content of the section (topics) | Type of academic activity* |
|--------------------------------|---------------------------------|----------------------------|
| | | |

| | | |
|--|--|----------|
| Introduction | Product quality management and instruments of its organization. Factors of product quality. | Seminars |
| International standards and procedures of product quality management | International standards and procedures of product quality management. Best practices of implementation | Seminars |
| Certification procedures | Procedures for the certification of product quality. Systems of certification. International practice. Russian experience. | Seminars |
| Environmental certification | Requirements to the product quality. Laboratories. Analytical procedures. | Seminars |

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

| Classroom for Academic Activity Type | CLASSROOM EQUIPMENT | Specialized learning, laboratory equipment, software and materials for the mastering the course |
|---|--|--|
| Lecture | - | - |
| Seminars | Classroom, equipped with a set of specialized furniture; whiteboard; a set of devices includes portable multimedia projector, laptop, projection screen, Stable wireless Internet connection. Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), Skype | - |
| Self-studies | An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to an electronic information and educational environment. | - |

7. RECOMMENDED SOURCES FOR COURSE STUDIES

- *Main reading:*

1. Khaustov A. P., Redina M. M. Environmental standards and norms. – 2020. URL: <https://izd-mn.com/PDF/47MNNPU20.pdf>

- *Additional sources:*

1. DEVELOPMENT AND INTERNATIONAL ECONOMIC CO-OPERATION: ENVIRONMENT. Report of the World Commission on Environment and Development. URL: <http://upload.wikimedia.org/wikisource/en/d/d7/Our-common-future.pdf>

2. REPORT OF THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT (Rio de Janeiro, 3-14 June 1992). URL: <https://www.un.org/documents/ga/conf151/aconf15126-3annex3.htm>

3. Shaker, R.R. (2015). The spatial distribution of development in Europe and its underlying sustainability correlations. Applied Geography, 63, 304-314.

4. SUSTAINABLE DEVELOPMENT KNOWLEDGE PLATFORM. URL: <https://sustainabledevelopment.un.org>

Internet-sources:

1. Electronic library system of the RUDN and third-party electronic library systems, to which university students have access on the basis of concluded contracts:

- electronic library system of the RUDN University <http://lib.rudn.ru/MegaPro/Web>
- electronic library system «Университетская библиотека онлайн» <http://www.biblioclub.ru>
- electronic library system Юрайт <http://www.biblio-online.ru>
- electronic library system «Консультант студента» www.studentlibrary.ru
- electronic library system «Лань» <http://e.lanbook.com/>
- electronic library system «Троицкий мост»

2. Databases and search engines:

- electronic fund of legal and regulatory and technical documentation <http://docs.cntd.ru/>
- Yandex search engine <https://www.yandex.ru/>
- Google search engine <https://www.google.ru/>
- abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>
-

*Educational and methodological materials for independent work of students during the development of the discipline/ module *:*

1. A course of lectures on the discipline "Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with international environmental requirements".

* - all educational and methodological materials for independent work of students are placed in accordance with the current procedure on the discipline page in the Telecommunication educational and Information System!

8. MID-TERM ASSESSMENT AND EVALUATION TOOLKIT

Evaluation materials and a point-rating system* for assessing the level of competence formation (part of competencies) based on the results of mastering the discipline "Сертификация сырья, производственных процессов и продукции по международным экологическим требованиям / Certification of raw materials, production processes and products in accordance with international environmental requirements" are presented in the Appendix to this Work Program of the discipline.

* - evaluation toolkit and ranking system are formed on the basis of the requirements of the relevant local regulatory act of the RUDN (regulations / order).

DEVELOPER:

Professor of the Department of
Environmental Safety and
Product Quality Management

Redina M.M.

| | | |
|----------------------|-----------|------|
| Position, Department | Signature | Name |
|----------------------|-----------|------|

HEAD OF THE DEPARTMENT:

Head of the Department of
Environmental Safety and
Product Quality Management

Savenkova E.V.

| | | |
|------------|-----------|------|
| Department | Signature | Name |
|------------|-----------|------|

**HAED OF THE HIGHER
EDUCATION PROGRAM:**

Professor of the Department of
Environmental Safety and
Product Quality Management

Redina M.M.

| | | |
|----------------------|-----------|------|
| Position, Department | Signature | Name |
|----------------------|-----------|------|