

Course description

Tempus project EcoBRU

| Course name |
|---|
| 1 Aspects of teaching environmental natural science |

| Lecturer | Educational institution |
|--|---|
| Course Director: Galkina G.A. Other team members: Shatalova E.E., Myronyuk V.P., Meshcheryakov S.V. | RSUCE, Chair of the Transportation and Road Traffic |

| Deficit definition |
|--|
| The relevance of understanding the environmental component of the natural sciences, as well as the formation of ecological culture |

| Required space in the training | Course level | Course type |
|--------------------------------|--------------|-------------|
| Advanced training | | MOODLE |

| Target group | Duration | Languages |
|-----------------|----------|-----------|
| school teachers | 60 | Russian |

| Conditions | |
|-----------------------------|---|
| Conditions: Internet | Other requirements (if applicable) |

| Ladder Points (1 un.=30 h) | Total hours | Class work | Independent work (h) |
|-------------------------------|-------------|------------|----------------------|
| 2 | 60 | 30 | 30 |

| Topicality for EcoBRU** |
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| Special vocational-science education: Raising environmental awareness among teachers, and through them among students of comprehensive schools, with revealing linkage of ecology and natural science, as well as the formation of ecological culture. |

| Themes / Content | MOODLE | Hours and tasks for independent work |
|---|--------|--------------------------------------|
| 1. Methodological aspects of teaching environmental natural sciences, the relationship of teaching methods with other Sciences and disciplines. | 4 | 2 |

| | | |
|---|-----------|---|
| 2. Principles of content selection for environmental focus of natural science education. | 2 | 2 |
| 3. Forms of organization of learning environmental natural Science in comprehensive school and assessment of learning outcomes. | 2 | 4 |
| 4. The place and role of nature in the relationship between the person and society during human history. | 6 | 6 |
| 5. Development and impact of engineering and technology as a result of human activity on the environment, human. | 8 | 8 |
| 6. Innovative technologies and mechanisms for sustainable development of society in the context of environmental safety. | 8 | 8 |
| TOTAL | 60 | |

| Forms of control and assessment | | | |
|--|-------------------------|---|--|
| Control form | Percentage ratio | Dates | Criteria of assessment |
| Test`s question (MOODLE) | 30 | within the framework of learning course | more than 59 % |
| Lecture on-line (MOODLE) | 20 | | more than 59 % |
| Credit | 50 | | «Credit» - student shows good knowledge of educational material on the topics of the course. While logical and consistent presented material, reveals the meaning of the question, gives the right answers to additional questions. «Fail» - listener is difficult respond to questions raised, give partial answers to the questions from the basic literature recommended for the course. |

| Terms and conditions of access to monitoring and assessment of knowledge (exam) |
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| Test`s question (MOODLE) & Lecture on-line (MOODLE) more than 59 |

| Document type certifying the successful course visiting (Certificate?) |
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| Certificate of professional development |

| Organizational guidelines |
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| <p>Place: RSUCE</p> <p>The recommended number of participants: no regulate</p> |

| Literature and educational materials | | | | |
|--------------------------------------|--------------------|-------|--------------|---|
| Author | Year of publishing | Title | Pages number | Place of publication, publisher or an online link |

Basic literature

1. Environment and Sustainable Development. Edited by Maris Klavins, Walter Leal Filho and Janis Zaloksnis. Riga: Academic Press of University of Latvia, 2010.
2. Аргунова М.В. Экологическое образование в интересах устойчивого развития для школьников и учителей: монография / М.В. Аргунова, Д.С. Ермаков, Т.А. Плюснина. – М.: ГАОУ ВО МИОО, 2015.
3. Опыт преподавания естествознания в России и за рубежом: Сборник научных статей - М.: НИЦ ИНФРА-М, 2015. - 167 с.: 60x90 1/16 (Обложка) ISBN 978-5-16-010974-9
4. Основные результаты международного исследования PISA-2012. – <http://www.centeroko.ru>.
5. Экологическая энциклопедия. В 6-и т./ Ред. коллегия В.И. Данилов-Данильян, К.С. Лосев. - М.: Энциклопедия, 2010. ISBN 978-5-94802-039-6.

Additional resources

1. Концепция экологического образования для устойчивого развития в общеобразовательной школе. – <http://www.raop.ru/content/Prezidium.2010.09.29.Spravka.1.pdf>.
2. От звезды до росинки. 120 удивительных явлений природы [Электронный ресурс] / Й. Зентген; пер. с нем. О. Теремковой.-Эл. изд.-Электрон. текстовые дан. (1 файл pdf : 338 с.).- М. : БИНОМ. Лаборатория знаний, 2015.