International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM 2017 vol.17 N54, pages 81-88

Interdisciplinary role of the course of soil study in realization of environment education in higher education

Smirnova E., Urazmetov I., Valeeva A. Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© SGEM2017. All Rights Reserved. Currently, the system of higher education is based on interdisciplinary relations established between the scientific disciplines of the natural sciences. The article covers issues related to improving the quality of environmental learning through the study of disciplines associated with pedology, ecology and geography of soils. The article justifies the significance of the courses dealing with pedology in teaching students to creative professional activities for solution of global and regional ecological problem which are in some way connected with land management and the state of soil cover. Besides, the availability of interdisciplinary research, the significance of soils in providing stable biosphere, and the awareness of its role in the development of society and a man from the educational point of view is considered to be an important aspect of modern pedology. The article presents the analysis of inderdisciplinary role of courses of pedology in shaping ecological competences of students of Kazan (Volga region) federal university studying the following aspects of science as ecology, biology, geography, pedology, meteorology, land management and cadaster, pedagogics (in the field of geography and in the field of biology). The types of cognitive activities of students-bachelors and the organization of educational process, contributing to the development and implementation of environmental education are covered in the following article.

http://dx.doi.org/10.5593/sgem2017/54/S22.011

Keywords

Biosphere functions of soils, Ecological education, Interdisciplinary competences, Soil study

References

- [1] KJ Esler, L Downsborough, DJ Roux, J Blignaut, S Milton, D le Maitre and MP de Wit, Interdisciplinary and multiinstitutional higher learning: reflecting on a South African case study investigating complex and dynamic environmental challenges, Current Opinion in Environmental Sustainability 2016, 19:76–86
- [2] MIU Florentina, MIU Barbu, An Inter-disciplinary Approach in Teaching Geography, Chemistry and Environmental Education, 6th International Conference EDU-WORLD 2014 Education Facing Contemporary World Issues, Procedia Social and Behavioral Sciences 180 (2015), pp. 660 665
- [3] The portal of the Federal state educational standards http://fgosvo.ru/fgosvo/92/91/4/5
- [4] J. Bouma, C. Kwakernaak, A. Bonfante, J.J. Stoorvogel, L.W. Dekker, Soil science input in transdisciplinary projects in the Netherlands and Italy, Geoderma Regional, 5 (2015) pp. 96–105

- [5] Chebyshev N., Kagan V. The Higher school of the XXI century: quality problems// Higher education in Russia. 2000. No. 1. P. 19-26.
- [6] Elena V. Kallas, Tatiana P. Solovjevaa, Ludmila Yu. Minakova, Implementation of Ecological Education in a Higher School, THE XXVI ANNUAL INTERNATIONAL ACADEMIC CONFERENCE, LANGUAGE AND CULTURE, 27–30 October 2015, Russia, vol.200, pp. 453 459, 2015.
- [7] Dobrovolsky G. V., Nikinen E. D. Soil Ecology. The doctrine about ecological functions of soils. M.: Izd-vo MGU, 2012, 413 p.
- [8] Elena Vasil'evna Smirnova, Rezeda Gabdullovna Kadyrova, and Il'dar Anvarovich Urazmetov. Chemical and Biological Features of Soils of Urban Territories/Elena Vasil'evna Smirnova, Rezeda Gabdullovna Kadyrova, and Il'dar Anvarovich Urazmetov//International Journal of Advanced Biotechnology and Research (IJBR),-Vol-7, Issue-2, 2016, pp784-790.
- [9] Melania Feszterova, Klaudia Jomova, Character of Innovations in Environmental Education, 7th World Conference on Educational Sciences, (WCES-2015), 05-07 February 2015, Novotel Athens Convention Center, Athens, Greece, Vol.197, pp. 1697-1702, 2015.
- [10] S. Mujdem Vural, Interdisciplinary studies in higher education; Student centered summer schools of "YTU BEST", CY-ICER2012, Procedia Social and Behavioral Sciences 47 (2012), pp. 485 489