

UDC 378

NETWORK FORM OF IMPLEMENTATION OF MASTER'S DEGREE PROGRAMS

V.M. Pukhova ¹, M.O. Kah ²

¹*Saint Petersburg Electrotechnical University «LETI»*

²*National University of Science and Technology «MISIS»*

E-mail: vmpukhova@etu.ru

The network form of implementation of educational programs is aimed to ensure continuous improvement of a quality of education. It allows expanding students' access to modern educational technologies and facilities, provides opportunities to select various training directions and specializations, and helps to obtain in-depth knowledge of relevant professional disciplines, and efficient use of all available educational resources. This article considers advantages of developing network educational Master's degree program in Solar Energy Technology taught in English medium implemented by leading universities of Russian Federation: Saint Petersburg Electrotechnical University «LETI», National University of Science and Technology «MISIS», National Research University «Moscow Power Engineering Institute» and People's Friendship University of Russia. Three universities of the group, LETI, MISIS and PFUR, are participants of the project 5-100, which aims to maximize the competitive position of a group of leading Russian universities in the global research and education market.

Key words: network form of the education programs implementation, Master's degree programs in English, project 5–100, photovoltaics, solar energy technology

The network form of implementation of educational programs is most often understood as an organization of training using combined resources of several organizations engaged in educational activities [1, 2]. The network form is optional and can be used as and when it is required to provide the necessary level of graduates' training at convenience.

The project 5–100 was launched in 2013 as a competition between leading Russian universities with the aim to elevate 5 Russian universities into top 100 world universities by the year 2020. One of the requirements for the competition is a certain percentage of international students present at the university. A possible way to achieve this goal is to create joint educational programs (e.g. network programs) between leading Russian universities for the purpose of internationalization of education. This in general is a promising area of cooperation between higher educational institutions, since it stimulates strive for academic excellence within internal and external

educational markets. In 2016 participants of the project 5-100: Saint Petersburg Electrotechnical University «LETI», National University of Science and Technology «MISIS» and Peoples' Friendship University of Russia «RUDN» as well as National Research University «MPEI» began developing the network form of English medium Master's degree program in Solar Energy Technology. The program is designed in the following way: each university contributes a module from its internal Master's degree programs in solar energy taught in English, into a joined network program according to one of the relevant fields of solar energy technology. The Solar Energy Technology network Master's degree program modules cover the following aspects of the subject: materials science (MISIS), manufacturing (LETI), application (MPEI) and economics (PFUR). The modular structure of such network program implies using the European Credit Transfer and Accumulation System (ECTS). The network program combines the most relevant and practice-oriented courses from the internal Master's degree programs in English of the partner-universities, which makes it highly relevant educational experience after which the students can pursue one of the solar energy aspects in more depth in employment or PhD study. This allows students to learn material science, manufacturing processes, application and economics of solar energy technology within the frame of one educational program having the expertise of each partner university at hand, thus providing a fully comprehensive, exhaustive multilateral knowledge in the field of solar energy technology.

This network program is an example of applied quality of education improvement for future graduates, and allows combining the best educational practices of leading specialist universities, undoubtedly activating the process of experience exchange in personnel training between universities, thus creating conditions for raising the level of professional and pedagogical skills of teaching staff, broadening the scope of joint research activities and strengthening the academic base for national and international projects. In addition, it is worth to notice that the experience of study in partner-university contributes to the development of students' personal qualities, oral and written communication competences, and develops their ability to adapt to different educational and professional environments, traditions and pedagogical approaches, allowing them to make an informed choice of their own educational trajectory. Such approach increases motivation to study and leads to the awareness of responsibility for achieving results.

Educational programs implemented in the network form have a number of advantages, and therefore such form of implementation is one of the priority directions of the development of global education. Based on

international experience and in order to address the challenges of increasing the competitiveness of Russian higher education worldwide, the Ministry of Education and Science of the Russian Federation is considering the issue of state support for the development of the network form of implementation of the Master's degree programs, as they strengthen cooperation between universities and encourage academic excellence.

References

1. Federal Law of December 29, 2012 No. 273-FL «On Education in the Russian Federation» (Федеральный закон от 29 декабря 2012 г. № 273-ФЗ «Об образовании в Российской Федерации») [Electronic resource]. URL: <https://rg.ru/2012/12/30/obrazovanie-dok.html> (retrieved: 15.05.2017).
2. Letter of the Ministry of Education and Science of the Russian Federation of August 28, 2015 No. АК-2563/05 «On methodical recommendations» (Письмо Минобрнауки России от 28 августа 2015 г. № АК-2563/05 «О методических рекомендациях») [Electronic resource]. URL: <http://минобрнауки.рф/documents/9365> (retrieved: 15.05.2017).