KAZAN NATIONAL RESEARCH TECHNOLOGICAL UNIVERSITY

With the support of the
Erasmus+ Programme
of the European Union

EU Quality Standards and Environmental Policy

course description

developed by Anna Starodubova

The research was co-funded by the Erasmus+ Programme of the European Union under the grant for Jean Monnet Module "The European Union Entrepreneurial Environment at HEIs: Changing the World by Technology Ventures" 610758-EPP-1-2019-1-RU-EPPJMO-MODULE.

1. Course description

Course provider (institution)	Kazan National Research Technological University
Title	EU Practices to Support Innovative Engineering Entrepreneurship
Target group	students in Master's degree programme "Innovations in Chemical Technology: Project Management" at Faculty of Chemistry and Technology of Polymers in Medicine and Cosmetics
type (compulsory/optional)	compulsory
cycle (short/first/second/third)	
year of study when the component is delivered, semester/trimester when the component is delivered (if applicable)	1st year, autumn semester.
number of ECTS credits allocated (if applicable); estimated workload	2 ECTS credits
Name of lecturer(s)	Anna Starodubova, PhD in Economics, Associate Professor of Department of Innovations in Chemical Technology
Mode of delivery (face-to-face/ distance learning etc.); number of contact hours	face-to-face, 17 contact hours
Language of instruction	Russian
Course aims	To make students familiar with the EU standardization for environmental protection procedures.
Learning outcomes (LO)	Students will be able **LO1:** to outline the sustainable development principles; **LO2:** to describe the EU conventions and regulations for chemical and polymer products; **LO3:** to name the examples of EU innovations based on sustainable development principles; **LO4:** to identify the documents regulating import of polymer products to EU; **LO5:** to propose environmentally friendly innovations to improve global competitiveness.
Prerequisites and co-requisites (if applicable)	Intermediate level of the English language proficiency

Course content	1. The EU as a global environmental actor. EU environmental institutions and bodies. 2. The issues of the EU environmental policies. 3. Certification procedures for the EU producers, new trends in environmentally friendly green chemistry and power engineering. 4. EU tariff and non-tariff restrictions for export and import of chemical and polymer products. 5. EU research and innovation for building a resource-efficient and climate-resilient society and economy in sync with the natural environment. 6. Summaries of EU legislation on environment 7. Free trade challenges to EU environmental policy.
Recommended or required reading and other learning resources/tools	1. Porter, M., Van der Linde, C. Toward a new conception of the environment-competitiveness relationship. Journal of Economic Perspectives. 1995. №4 (Vol.9.). pp. 97 - 118. 2. Porter, M., Kramer, M.R. Creating shared value: How to reinvent capitalism and unleash a wave of innovation and growth. Harvard Business Review. 2011. pp. 62 - 77. 3. Schwab, K., Sala-i-Martin, X., Samans, R. The global competitiveness report 2017 - 2018. World Economic forum, Geneva. [Electronic resource] /. - Access mode: https://www.weforum.org/reports/how-to-end-a-decade-of-lost-productivity-growth 4. Association "Plastics Europe" Electron. text messages. - Access mode: https://www.plasticseurope.org/en
Planned learning activities and teaching methods	**Teaching:** arranging lectures and seminars, receiving feedback on course from students, giving practical assignments or exercises (class/home) – individual and for groups/ teams, promoting critical thinking, constructive critics and self-criticism, stimulating students to formulate own opinions, supporting personal responsibility and promoting ethical principles **Learning active:** interactions between professor and students including participation in discussions, team/group exercises, collaborative teamwork, sharing experiences with peers, self-evaluation

	Learning passive: attending lectures and seminars, listening, watching and reading learning materials, remembering/ memorizing, repeating
Assessment methods and criteria	**LO1:** a test on sustainable development principles; **LO2:** oral answers to the questions about the EU conventions and regulations for chemical and polymer products during seminars; **LO3:** an oral presentation of a successful EU innovation based on sustainability principles; **LO4:** a case study on limitations for the import of polymer products to EU; **LO5:** a case study on presenting environmentally friendly innovations.
Prepared by	Anna Starodubova
Approved by	Commission on Teaching and Learning of Faculty of Chemistry and Technology of Polymers in Medicine and Cosmetics
Date of approval	July 14, 2020, protocol #10

2. Course Structure

Course blocks	Description
Lectures (6 hours)	Presentations given by professor on course content materials
Seminars (11 hours)	General information on course content presented by professor and discussed in groups with students.
Independent group work home/online for presentations (25 hours)	Students revise the lecture materials to prepare for oral answers, reports, and tests during seminars. Students analyse and compare online resources to develop and give their presentations in class. Students present an environmentally friendly innovation.
Assessment	Summative assessment based on results of oral reports, and tests during the seminars, presentation of a case study results, and evaluation of the proposed innovation.

3. Course Evaluation

Item	Score (0-5)	Comments and suggestions of reviewer(s)
1. Course aims	**5**	**Environmental protection is one of the key drivers for technological progress, thus a crucial sphere for assessing innovation systematics**
2. Course content	**4**	**Taking EU into focus, the EU green deal and the Circular Economy approaches would be important contents to add.** **Also business opportunities with environmental protection innovations could be addressed, incl. invitation of practitioners as speakers (Best Practice).**
3. Target groups and prerequisites	**5**	**Addressing environmental protection issues and related political agenda and mechanisms in the beginning of the Masters studies will give a good base for further innovation system studies.**
4. Learning outcomes	**5**	**The targeted outcomes are consistent with the content, incl. the challenging aim of proposing own innovation ideas for young students.**

Reviewer:

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07.10.2020, Muelheim a.d.R