



KAZAN NATIONAL RESEARCH TECHNOLOGICAL UNIVERSITY

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



EU 3rd Generation Universities as an Integrated Innovative Environment for Young Future Makers

course description

developed by Artem Bezrukov

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1. Course description

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| Course provider (institution) | Kazan National Research Technological University |
| Title | EU 3rd Generation Universities as an Integrated Innovative Environment for Young Future Makers |
| 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) | Artem Bezrukov, PhD in Chemistry, Associate Professor at Department of Physical and Colloid Chemistry and at Department of Innovations in Chemical Technology |
| Mode of delivery (face-to-face/distance learning etc.); number of contact hours | face-to-face, 21 contact hours |
| Language of instruction | Russian |
| Course aims | To give students an understanding of an innovative ecosystem in entrepreneurial EU universities |
| Learning outcomes (LO) | <p>Students will be able</p> <p>LO1: Describe the processes used in European entrepreneurial universities when preparing an innovative project.</p> <p>LO2: Recognize the innovative activities implemented in European universities.</p> <p>LO3: Apply principles of European innovative ecosystem to developing new solutions for local innovative ecosystem.</p> <p>LO4: Categorize and compare innovative practices in European entrepreneurial universities and local innovative activities.</p> |
| Prerequisites and co-requisites (if applicable) | Intermediate level of the English language proficiency |
| Course content | 1. What are 3.0 universities in Europe and how the |

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| | <p>change their surrounding societies and incorporate students into a world-class research.</p> <p>2. The history of EU university transformation into 3.0 universities.</p> <p>3. Business incubators at EU universities and the opportunities they offer for young innovators.</p> <p>5. Summary of an innovative ecosystem at European universities: from a student idea to a new disruptive technology</p> <p>6. Young future makers from EU universities: success stories and approaches to copy.</p> |
| Recommended or required reading and other learning resources/tools | <p>1. Entrepreneurial universities in the European Union https://link.springer.com/article/10.1007/s13132-018-0579-0</p> <p>2. Towards the Third Generation University: Managing the University in Transition – By J. G. Wissema https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-2273.2010.00453.x</p> <p>3. Entrepreneurial education in Europe https://www.oecd.org/site/innovationstrategy/42961567.pdf</p> <p>4. European innovation ecosystems https://eua.eu/issues/23:european-innovation-ecosystems.html</p> |
| Planned learning activities and teaching methods | <p>Teaching: arranging seminars, practicums and trainings, 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</p> <p>Learning active: interactions between professor and students including participation in discussions, team/group exercises, collaborative teamwork, sharing experiences with peers, self-evaluation</p> <p>Learning passive: attending seminars, listening, watching and reading learning materials,</p> |

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| | remembering/ memorizing, repeating |
| Assessment methods and criteria | <p>LO1: a test on innovative processes in European entrepreneurial universities</p> <p>LO2: a group presentation on innovative activities in European universities</p> <p>LO3: 4. preparation of a grant application for an innovative product developed by a group of students based on a EU university demands.</p> <p>LO4: innovative brainstorming to satisfy the local industrial and societal needs based on the best practices student learn from EU universities.</p> |
| Prepared by | Artem Bezrukov |
| 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 |
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| Lectures (6 hours) | Introduction to the entrepreneurial ecosystem of European universities |
| Seminars (15 hours) | General information on course content presented by professor and discussed in groups with students. |
| Independent group work home/online for presentations (21 hours) | <p>Students revise the seminar materials to prepare for the test.</p> <p>Students analyse and compare online resources and work together in groups to develop and give their presentations in class.</p> |
| Assessment | Summative assessment based on results of the test and quality of presentations given in class. |

3. Course Evaluation

| Item | Score (0-5) | Comments and suggestions of reviewer(s) |
|------------------------------------|-------------|---|
| 1. Course aims | 4 | What about a potential transition to Russian Universities? |
| 2. Course content | 5 | Try to get an impression how spin-offs are working in order to see not only the university side. |
| 3. Target groups and prerequisites | 4 | Target group could be broader and the general aim of the course could also be used for further master degree programmes related to technology and business. |
| 4. Learning outcomes | 4 | Regarding the strong fragmentation in innovation ecosystems of Universities in EU there should be a stronger emphasis on "categorizing and comparing (LO4)". Thus, providing methodical tools (comparative innovation systems analysis) could be a fruitful contribution. |

Reviewer:

Susanne Jakobs

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