




# SUMMARY REPORT

on international public accreditation of the cluster of  
educational programmes

- «Chemistry» (04.04.01),
- «Biology» (06.04.01)

delivered by Immanuel Kant Baltic Federal University



2020

While preparing this Summary Report we used information from the Self-Evaluation Report and the Report on the External Review of the cluster of educational programmes «Chemistry» (04.04.01), «Biology» (06.04.01) delivered by Immanuel Kant Baltic Federal University.

The presentation document for the use by the National Accreditation Board.

## CONTENTS

---

General information on the educational institution .....	4
Information on the study programmes undergoing accreditation	5
Achievements of the educational programme .....	7
External review panel .....	10
Compliance of the external review outcomes with the standards	13
Distribution digram of the external review outcomes.....	19
Conclusion of the external review panel .....	20
Schedule of the site visit of the external review panel .....	21

## GENERAL INFORMATION ON THE EDUCATIONAL INSTITUTION

Full name of the educational institution	<i>Federal State Autonomous Educational Institution of Higher Education «Immanuel Kant Baltic Federal University»</i>
Founders	<i>Ministry of Science and Higher Education of the Russian Federation</i>
Year of foundation	<i>1947 – Kaliningrad Pedagogical Institute 1966 – Kaliningrad State University 2005 – Immanuel Kant Russian State University 2010 – Immanuel Kant Baltic Federal University</i>
Address	<i>14, A. Nevskogo Str., Kaliningrad, 236016</i>
Rector	<i>Aleksandr Fedorov, Doctor of Philology, Professor</i>
License	<i>Series 90Л01 №8823 reg. № 1797 of 03.12.2015 permanent</i>
State accreditation	<i>Certificate of State Accreditation Series 90A01 № 2118, reg. №2019 of 16.06.2016 valid till 15.05.2020</i>
Number of students	<i>10569 of whom: 9403 are full-time students 1166 study in absentia</i>

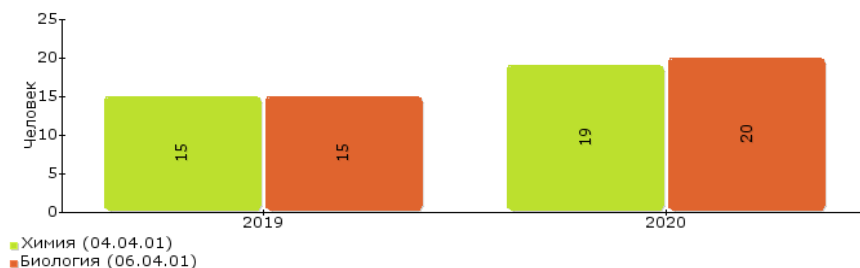
## INFORMATION ON THE STUDY PROGRAMMES UNDERGOING ACCREDITATION

Educational programmes	«Chemistry» (04.04.01) «Biology» (06.04.01)
Level of training / Standard period of training	<i>Master's Degree Programme / 2 years</i>
Structural subdivision (Head)	<i>The Institute of Institute of Living Systems (Olga Babich, Doctor of Technical Sciences)</i>
Dates of Review	<i>10-12 November 2020</i>
Person responsible for accreditation	<i>Viktoria Balabina, leading expert of the Educational Project Office</i>

## SAMPLING RESULTS OF THE PROJECT "BEST EDUCATIONAL PROGRAMMES OF INNOVATIVE RUSSIA"

Indicators	2020
<b>Cluster of educational programmes «Chemistry» (04.04.01), «Biology» (06.04.01)</b>	
Number of such programmes in the Russian Federation	179
Number of higher educational institutions offering such programmes	119
Number of programmes – winners of the project (% of the total number of these programmes offered in the RF)	39 (22%)
<b>Kaliningrad Region</b>	
Number of such programmes offered in the region	2
Number of programmes – winners of the project (% from total number of these programmes offered in the region)	1 (50%)
Number of higher educational institutions and branches in the region	15
Total number of programmes offered in the region	262
Total number of programmes – winners of the project (% from total number of these programmes offered in the region)	59 (22,5%)

### REFERENCE DATA ON STUDENT ENROLLMENT FOR PROGRAMME



## **ACHIEVEMENTS OF THE EDUCATIONAL PROGRAMME**

### **Quality of implementing the educational programme**

The quality of the implementation of educational programmes is ensured by timely revision of the content of programmes in order to meet the requirements of the Federal State Educational Standard and to take into account the latest scientific achievements and update the information and methodological support. In order to monitor the quality of teaching academic disciplines, the Institute conducts a survey "Teacher through the eyes of students", which makes it possible to identify the best pedagogical practices and approaches, as well as shortcomings and analyze the wishes, comments and suggestions of the students to the administration of the Institute of Living Systems.

### **Provision of up-to-date education**

The relevance of the content of education is ensured at all stages of the development and implementation of the main professional educational programmes. The relevance of the study programmes is based on the need for such specialists in the chemical, pharmaceutical, microbiological and food industry, as well as in the departments of enterprises of any industry in solving problems of the biotechnological profile in the position of: biotechnological engineer, production technologist, technologist for new developments, laboratory manager, bacteriologist, quality engineer, and microbiologist.

### **Teaching staff**

The teaching staff covers all the areas and disciplines in the curricula. The structure of the teaching staff makes it easy to adapt to new professional requirements. The teachers of the Institute of Living Systems have the opportunity to constantly improve their skills, to contact colleagues from leading universities in Russia and abroad. The teachers work on modern laboratory and scientific equipment, have the opportunity to use the information resources of leading scientific publications.

### **Independent assessment of student learning outcomes**

The use of independent assessment of learning outcomes is confirmed by the prizes and high places given to students by external experts at Russian, regional and international conferences, forums, competitions and Olympiads: "I am a professional", "Chembioseasops", "Student of the Year", Scale Up BIOCAD, "Baltic Sea Forum", "Environmental aspects of global interaction of living systems", "Current problems of modern science: theory and practice", etc. and employer reviews of graduates of the Institute of Living Systems.

### **Learning Resources**

At the Institute of Living Systems, there are classrooms for conducting lecture-type classes, seminar-type classes, laboratory work,

formative and summative assessment, course work and preparation of graduation qualification papers, whose capacity is widely used in the implementation of the educational programmes. The laboratories are equipped with modern research equipment for conducting a wide range of fundamental and applied research in various areas of natural science and technology. The ILS uses educational technologies that are focused on the individual needs of students, aimed at the formation of professional and personal competencies necessary for the formation of a graduate as a full-fledged and unique specialist.

## Research

The research work of students is organized by the teachers of the Institute and the Student Scientific Society in accordance with the Charter of the BFU. The annual conferences of students and postgraduates of the Institute within the framework of the "Days of Science" of the BFU and the fairs of youth projects are aimed at developing the research culture of students. Every year, the Institute of Living Systems of the BFU holds the forum "Chembioseasops" in various formats. With the assistance of the All-Russian Public Organization "Russian Geographical Society", the conference "Ecological Aspects of the Global Interaction of Living Systems" was organized and held at the Institute of Living Systems on February 22, 2020.

Members of the teaching staff are also actively involved in research. The BFU policy in general, and the ILS in particular, is aimed at supporting the scientific achievements of the faculty through grants and participation in international programmes, conferences, joint research projects and other events.

## Academic mobility of students

Currently, there are 102 cooperation agreements between the I. Kant BFU and various foreign universities in Poland, Germany, Lithuania, Latvia, Belarus, Finland, Denmark, Austria, France, Sweden, Italy, the United States, and Estonia.

Within the framework of the agreements, the mobility of students, teachers and researchers is developed, scientific conferences and seminars are held, the educational process at individual faculties is optimized, and joint research and development is conducted.

Within the framework of academic mobility the students of the Institute of Living Systems are trained at universities in Russia and Europe. 3 foreign students study in the programme "Applied Biotechnology", 2 foreign students study in the programme "Cellular and Molecular Technologies".

## International projects

The international contacts of the Institute of Living Systems are constantly developing. Joint research is carried out and scientific seminars are held with colleagues from foreign organizations and universities:



- International Agro-Industrial Group "Sodruzhestvo»;
- International innovative biotechnology company "BIOCAD";
- Danone;
- Qiqihar University (China);
- Almaty Technological University;
- Karolinska Institute, Sweden;
- Institute of Materials and Engineering Studies, Singapore;
- Institute of Bioengineering of Catalonia in Barcelona (Spain).

The students and teachers of the Institute actively participate in international research and practical conferences, symposiums, seminars.

## EXTERNAL REVIEW PANEL



**Ivan Leban** (Ljubljana, Slovenia)

Review Chair, Foreign Expert

*Doctor of Science, Professor in the field of Inorganic Chemistry, Structural Chemistry, Crystallography, Vice-Rector of the University of Ljubljana (2001-2005), Director of the Slovenian Agency for Quality Assurance of Education SQAA (2013-2018), member of the expert group of the European Association of Universities*



**Nikolai Makarov** (Moscow, Russia)

Deputy Review Chair, Russian expert

*Doctor of Technical Sciences, Professor, Acting Vice-Rector for Educational and Methodological Work, Head of the Educational Department, Head of the Department of Chemical Technology of Ceramics and Refractories, D. I. Mendeleev Russian University of Chemical Technology, member of the Guild of Experts in the Field of Professional Education, corresponding member of the A. M. Prokhorov Academy of Engineering Sciences*

Nominated by the Guild of Experts in Higher Education



**Natalia Useinova** (Kaliningrad, Russia)

Panel member, employer representative

*Deputy Director for Personnel of the Management Company "Sodruzhestvo" LLC*

Nominated by the Management Company "Sodruzhestvo"



**Viktor Golubenko** (Kaliningrad, Russia)

Panel member, student representative

*1st year post-graduate student of the Faculty of Bioresources and Environmental Management of the Kaliningrad State Technical University*

Nominated by the Kaliningrad State Technical University

## **INFORMATION ON THE LEADING TEACHERS OF THE EDUCATIONAL PROGRAMME**

### **Olga Babich**

*Doctor of Technical Sciences, Director of the Institute of Living Systems, expert of the Russian Academy of Sciences, Skolkovo Foundation, Foundation for the Promotion of Small Forms of Enterprises in the Scientific and Technical Sphere*

### **Irina Vakolyuk**

*Candidate of Biological Sciences, Deputy Director for Academic Affairs of the Institute of Living Systems, research interests: neurophysiology, neurochemistry of behavior, neurotransmitter systems, neuropsychology, animal behavior*

### **Valery Zhukov**

*Candidate of Biological Sciences, associate Professor, specialist-biologist, teacher of biology and chemistry, qualified specialist in the program "The use of electronic information and educational environment and information and communication technologies in the educational process of the BFU*

### **Lyudmila Matskova**

*Doctor of Medical Sciences, research professor, specialist-biologist, teacher of biology and chemistry, qualified specialist in the program "Use of electronic information and educational environment of information and communication technologies in the educational process of the I. Kant BFU»*

### **Artem Pungin**

*Candidate of Geographical Sciences, Deputy Director for research work of the Institute of Living Systems, a qualified biologist, bio-ecologist.*

### **Stanislav Sukhikh**

*Candidate of Technical Sciences, Associate Professor, Head of the research group for the implementation of research projects*

### **Oksana Tuchina**

*Candidate of Biological Sciences, Associate Professor, specialist-biologist, qualified specialist in the program "The use of electronic information and educational environment and information and communication technologies in the educational process of the I. Kant BFU*

### **Evgeny Chupakhin**

*Candidate of Chemical Sciences, Associate Professor, Master of Biochemistry, qualified specialist in the programme «Application of information and communication technologies (ICT) in the educational process»*

### **Masyutin Yakov**

*Candidate of Chemical Sciences, Associate Professor, qualified specialist in the program "Online training in the structure of modern education" of the BFU*



## **Olga Krieger**

*Doctor of Technical Sciences, Professor, head of the Master's program "Applied Biotechnology", engineer-technologist, qualified specialist in the program "New methods of biotechnology in the processing of agricultural raw materials"*

## **COMPLIANCE OF THE EXTERNAL REVIEW OUTCOMES WITH THE STANDARDS**

### **STANDARD 1. Policy (goals, development strategy) and quality assurance procedures of the educational programme**

Compliance with the standard: **full compliance**

#### **Good practice:**

The educational organization has a documented quality assurance system, which is fixed in the local regulatory legal acts.

The Development Strategy of the University for the period up to 2030, corresponding to the main directions of the development of the Kaliningrad region and the Russian Federation, has been developed.

Coordination and control over the organization of the educational process at the I. Kant BFU is carried out by the Educational Process Support Service, the University Career Center, and the Educational Project Office.

There are automated systems for managing the educational process, both for the student and for the teacher.

#### **Areas for improvement:**

It is recommended to involve student associations in expressing opinions on strategic issues of the University's development, as well as to involve them in the approval of regulatory legal acts related to the policy of quality assurance of education.

### **STANDARD 2. Design and approval of programmes**

Compliance with the standard: **full compliance**

#### **Good practice:**

The educational programmes under accreditation have clearly defined goals and expected learning outcomes that correspond to the mission, goals and objectives of the educational organization.

The programmes are practice-oriented, ensuring the demand for graduates in the labor market. The planned results of the development of educational programmes are consistent with the requests and prospects for the development of the Kaliningrad Region and the Baltic region of the Russian Federation.

#### **Areas for improvement:**

It is recommended that students be more involved in the procedures for developing, approving and adjusting educational programmes through student councils. The members of the student councils of the University

must agree on the developed educational and methodological documentation.

The educational programme "Cellular and Molecular Technologies" in the direction of training 06.04.01 "Biology" is recommended to be improved not only taking into account the needs of the labor market, but also taking into account the necessary knowledge and skills to carry out labor activities in accordance with the existing professional standards.

### **STANDARD 3. Student-centered learning and assessment**

Compliance with the standard: **full compliance**

#### **Good practice:**

The University has fully and sufficiently implemented the possibility of forming an individual learning path of students. The individual curriculum is formed taking into account the opinions of students; their suggestions and wishes are taken into account when developing. The document is regularly updated.

A point-rating system provides objective assessment of learning outcomes.

The procedures of independent evaluation of learning outcomes are actively used in competitions for research grants, at Russian, regional and international conferences, forums, competitions and Olympiads "I am a professional", "Chembioseasops", "Student of the Year", Scale Up BIOCAD, "Baltic Sea Forum", etc.

There are successfully operating student self-government organizations - the Student Council, the VK group, the Social Support Center, which take into account the needs of different groups of students and allow them to actively interact with teachers.

#### **Areas for improvement:**

It is recommended to introduce the technology of taking exams by a commission consisting of representatives of employers, as well as teachers of the same department working in the same profile, but not teaching this group of students.

It is recommended to introduce an appeal mechanism in the current control procedure. Currently, the appeal procedures are only used for state final examinations.

### **STANDARD 4. Student admission, support of academic achievements and graduation**

Compliance with the standard: **substantial compliance**

#### **Good practice:**

Systematic career guidance work is being implemented. It is aimed at training and attracting applicants. For applicants and students

consultations, scientific competitions, and preparatory courses are organized. The University has a specialized department responsible for career guidance - the Career Center of the BFU.

Active participation of the students of the cluster of programmes in the areas of training 04.04.01 "Chemistry", 06.04.01 "Biology" in research work and academic mobility programmes. Currently, there are 102 cooperation agreements between the I. Kant BFU and various foreign universities. Special attention is paid to the development of cross-border cooperation with Polish and Lithuanian universities.

### **Areas for improvement:**

It is recommended to develop a system ("road map") of targeted admission and targeted training in accordance with modern requirements, to establish a system of targeted contract training of specialists for employers in the Kaliningrad region.

It is recommended to develop local regulations on the procedure for issuing a Diploma Supplement to all students, to develop a technology for issuing a European Diploma Supplement and a system for informing students, teachers, applicants, employers and employers' associations about the issuance of such a document by the University.

In order to improve the support of students' academic performance, the LMS Moodle system recommends organizing full-fledged online courses for students with educational and methodological support, including a tutor, as well as an automated system for evaluating and pointing out students' shortcomings.

## **STANDARD 5. Teaching staff**

Compliance with the standard: **full compliance**

### **Good practice:**

The teaching staff of the master's degree programs is characterized by a high level of qualification; 77% of the teachers are academic degree holders.

The University has developed a system of motivating teachers to publish articles in the journals with a high impact factor, to develop new courses, in particular online courses, as well as to participate in active career guidance.

The teachers of the Institute regularly undergo advanced training in their profile disciplines, information and computer technologies, first aid, work with special needs persons. The professional development of the teaching staff on the use of the organization's LMS system and on the development of online courses was organized.

The procedure for competitive selection of teachers is clearly regulated. The indicators of competitive selection of the teaching staff have quite high values – 3-5 articles in 3 years, participation in conferences, online courses in the LMS.

## **Areas for improvement:**

It is recommended to develop a system for reducing the contact hours load of the teaching staff in favor of the participation of the teachers in scientific activities, practical training of students without compromising the quality of educational programmes.

It is recommended to increase the mobility of the teaching staff to educational organizations in the Russian Federation and the Baltic States, as well as to invite research and pedagogical personnel from leading foreign and Russian universities.

It is recommended to attract to the University more specialists who are able to maintain high-tech research equipment.

## **STANDARD 6. Learning resources and student support**

Compliance with the standard: **full compliance**

### **Good practice:**

The Institute of Living Systems and the University have high-tech equipment that allows the educational process to be carried out at the highest level.

Library and information resources meet the requirements for modern electronic library support of the organization. Individual access to resources (including electronic ones) is provided for each student from any point, where there is access to the Internet, to modern professional databases, information reference and search engines.

The University has created conditions for students to work independently outside of the school hours.

### **Areas for improvement:**

It is recommended to consider the possibility of increasing the availability of Wi-Fi both in academic buildings and on campus.

It is recommended to strengthen the composition of the research and pedagogical staff of the University, so that the unique and in most cases highly valuable research equipment available in the educational organization does not stand idle due to the lack of qualified personnel who are able to operate this equipment.

## **STANDARD 7. Collection, analysis and use of information for managing the educational institution**

Compliance with the standard: **full compliance**

### **Good practice:**

In order to collect, analyze and use information for the management of educational programmes the University uses the electronic document management system, the automated systems "Curricula", "University Load", "Galaxy", the Moodle distance learning system, and the automated



system "Spectrum" for conducting point-rating evaluation of the results of the educational process, personal accounts of employees and students.

Availability of materials in the electronic educational content system, where both mass open online courses and individual materials on the taught disciplines and practices are located. The presence of a unified information network and a high degree of implementation of information technologies. Many services for the implementation of the educational process.

### **Areas for improvement:**

It is recommended to refine the technology of participation of the students and employees of the educational organization not only in the collection, but also in the analysis of information for the management of the educational programme.

## **STANDARD 8. Public information**

Compliance with the standard: **full compliance**

### **Good practice:**

On the official website of the educational organization and in the media, there is complete and reliable information about the educational programmes and their achievements. There are English and Chinese versions of the site.

There is Career Center of the BFU, which provides information to graduates about employment opportunities and provides advice on employment.

### **Areas for improvement:**

In the course of educational activities, it is recommended to develop cooperation with federal and regional professional associations in the areas of activity of the Institute of Living Systems.

On the official website of the organization it is recommended to post and update information about the interaction of the educational organization with various professional associations and employer organizations, including foreign ones, both in terms of practical training of students and in terms of employment of graduates. This segment of the site should be open and accessible to all participants of the educational process – students, teachers, and employers

## **STANDARD 9. On-going monitoring and periodic assessment of the educational programmes**

Compliance with the standard: **full compliance**

### **Good practice:**

The University has regulated procedures for monitoring, periodic evaluation and revision of educational programmes. Updating of the main professional educational programmes is carried out annually together with the leading employers (for example, JSC UK "Sodruzhestvo").

The indicators of the educational programmes are regularly compared with similar indicators of foreign educational programmes.

### **Areas for improvement:**

It is recommended to continue the work on involving employers and students in the development and implementation of the educational programmes.

## **STANDARD 10. Cyclical external quality assurance of the educational programmes**

Compliance with the standard: **full compliance**

### **Good practice:**

BFU confirmed the high level of quality of training of students during the state accreditation of educational activities in the master's degree programmes 04.04.01 Chemistry and 06.04.01 Biology.

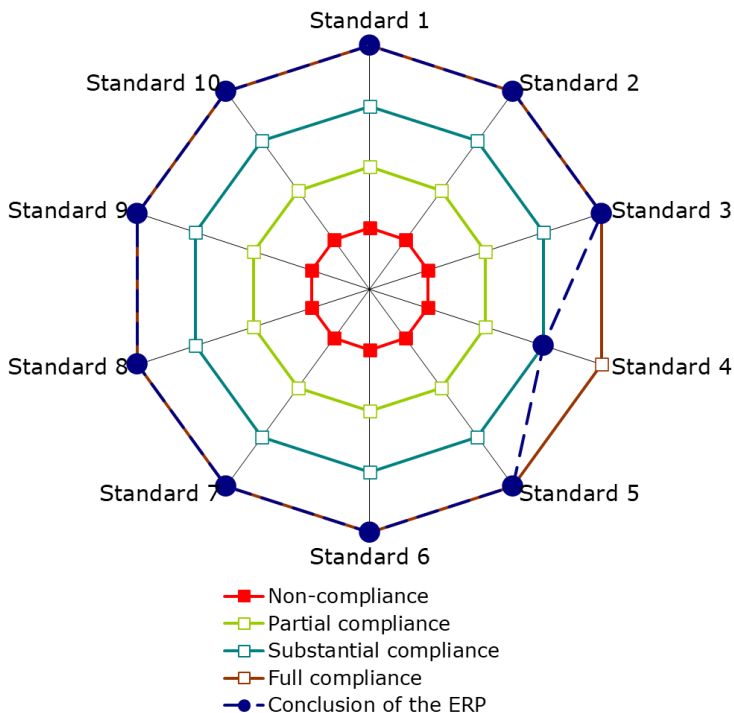
The effectiveness of the University was confirmed based on the results of monitoring the effectiveness of universities in the Russian Federation over the past three years.

The University regularly uses external forms of quality assurance: professional and public accreditation procedures and international accreditation.

### **Areas for improvement:**

It is recommended to continue working to improve the University's position in Russian and international subject rankings and to participate in independent procedures for evaluating the quality of educational programs.

## DISTRIBUTION DIGRAM OF THE EXTERNAL REVIEW OUTCOMES



- Standard 1. Policy (goals, development strategy) and quality assurance procedures of a study programme
- Standard 2. Design and approval of programmes
- Standard 3. Student-centered learning and assessment
- Standard 4. Student admission, support of academic achievements and graduation
- Standard 5. Teaching staff
- Standard 6. Learning resources and student support
- Standard 7. Collection, analysis and use of information for managing the study programme
- Standard 8. Public information
- Standard 9. On-going monitoring and periodic review of programmes
- Standard 10. Cyclical external quality assurance of study programmes

## CONCLUSION OF THE EXTERNAL REVIEW PANEL

Based on the self-evaluation report analysis, documents and the submitted data the External Review Panel has come to the conclusion that the cluster of educational programmes «Chemistry» (04.04.01), «Biology» (06.04.01) delivered by Immanuel Kant Baltic Federal University **fully comply** with the standards and criteria of public accreditation of the National Centre for Public Accreditation.

The Panel recommends that the National Accreditation Board accredit the cluster of educational programmes «Chemistry» (04.04.01), «Biology» (06.04.01) delivered by Immanuel Kant Baltic Federal University for the period of **6 years**.

## SCHEDULE OF THE SITE VISIT OF THE EXTERNAL REVIEW PANEL

Time	Event
<b>10 November, Tuesday</b>	
10.30 – 10.50	On-line meeting of the ERP and NCPA coordinator
Break 10 min.	
11.00-12.30	On-line meeting with the HEI's administration
Break 15 min.	
12.40-14.00	Presentation of the material and technical resources, library. Meeting with the responsible persons
14.00-14.50	Lunch
Linking to the Zoom meeting	
15.00-16.00	Meeting with the Institute Directors
Linking to the Zoom meeting	
16.10 – 17.10	Online meeting with graduate students
17.10 – 18.00	Internal online meeting of the ERP
<b>11 November, Wednesday</b>	
	Link to the Zoom meeting
10.30 – 10.50	Internal online meeting of the ERP
Break 15 min	
11.00 – 12.00	Online meeting with teachers
Break 15 min	
12.10 – 13.10	Online meeting with students
13.10-14.00 Lunch	
14.10 – 15.10	Online meeting with representatives of employers
15.10 – 17.00	Internal online meeting of the ERP. Work with the website, self-evaluation report, filling in individual assessment forms

Time	Event
<b>12 November, Thursday</b>	
	Link to the Zoom meeting
0.00 – 12.30	– Internal online meeting of the ERP: discussion of preliminary results of the site visit, preparation of the oral report of the Panel
12.30- 13.00	Link to the Zoom meeting
13.00- 14.00	Closing meeting of ERP with the representatives of the University