

# STUDIJŲ KOKYBĖS VERTINIMO CENTRAS CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

\_\_\_\_\_

## **INFORMATICS FIELD OF STUDY**

## **Klaipeda University**

## **EXTERNAL EVALUATION REPORT**

## **Expert panel:**

1. Panel chair: Prof. dr. Philippe Bonnet

2. Academic member: Prof. dr. Claus Pahl

3. Academic member: dr. Lukas Daniel Klausner

4. Social partner: Juozas Breivė

5. Student representative: Tautvydas Kvietkauskas

**SKVC coordinator**: Aleksandras Kačanauskas

Report prepared in 2024 Report language: English

## **CONTENTS**

I. INTRODUCTION	3
1.1. OUTLINE OF THE EVALUATION PROCESS	3
1.2. REVIEW PANEL	4
1.3. SITE VISIT	4
1.4. BACKGROUND OF THE REVIEW	5
II. STUDY PROGRAMMES IN THE FIELD	6
III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS	7
III. STUDY FIELD ANALYSIS	8
AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM	8
AREA 1: CONCLUSIONS	10
AREA 2: LINKS BETWEEN SCIENTIFIC (OR ARTISTIC) RESEARCH AND HIGHER EDUCATION	11
AREA 2: CONCLUSIONS	11
AREA 3: STUDENT ADMISSION AND SUPPORT	13
AREA 3: CONCLUSIONS	16
AREA 4: TEACHING AND LEARNING, STUDENT ASSESSMENT, AND GRADUATE EMPLOYMENT	17
AREA 4: CONCLUSIONS	19
AREA 5: TEACHING STAFF	20
AREA 5: CONCLUSIONS	22
AREA 6: LEARNING FACILITIES AND RESOURCES	24
AREA 6: CONCLUSIONS	25
AREA 7: QUALITY ASSURANCE AND PUBLIC INFORMATION	27
AREA 7: CONCLUSIONS	29
IV. SUMMARY	30

## I. INTRODUCTION

#### 1.1. OUTLINE OF THE EVALUATION PROCESS

The study field evaluations in Lithuanian higher education institutions (HEIs) are based on the following:

- Procedure for the External Evaluation and Accreditation of Studies, Evaluation Areas and Indicators, approved by the Minister of Education, Science, and Sport;
- Methodology of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (SKVC);
- Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

The evaluation is intended to support HEIs in continuous enhancement of their study process and to inform the public about the quality of programmes within the study field.

The object of the evaluation is all programmes within a specific field of study. A separate assessment is given for each study cycle.

The evaluation process consists of the following main steps: 1) self-evaluation and production of a self-evaluation report (SER) prepared by a HEI; 2) a site visit of the review panel to the HEI; 3) the external evaluation report (EER) prepared by the review panel 4) accreditation decision taken by SKVC and its publication; 4) follow-up activities.

The main outcome of the evaluation process is the EER prepared by the review panel. The HEI is forwarded the draft EER to report on any factual mistakes. The draft report is then subject to approval by the external Study Evaluation Committee operating under SKVC. Once approved the EER serves as the basis for an accreditation decision. If a HEI is not happy with the outcome of the evaluation, HEI can file an appeal.

On the basis of the approved EER, SKVC takes one of the following accreditation decisions:

- Accreditation granted for 7 years if all evaluation areas are evaluated as exceptional (5 points), very good (4 points), or good (3 points).
- Accreditation granted for 3 years if at least one evaluation area is evaluated as satisfactory (2 points).
- Not accredited if at least one evaluation area is evaluated as unsatisfactory (1 point).

### 1.2. REVIEW PANEL

The review panel was appointed in accordance with the Reviewer Selection Procedure as approved by the Director of SKVC.

The composition of the review panel was as follows:

1. Panel chair: Prof. dr. Philippe Bonnet

2. Academic member: Prof. dr. Claus Pahl

3. Academic member: dr. Lukas Daniel Klausner

4. Social partner: Juozas Breivė

5. Student representative: Tautvydas Kvietkauskas

## 1.3. SITE VISIT

The site visit was organised on 07 of May 2024 in hybrid.

Meetings with the following members of the staff and stakeholders took place during the site visit:

- Senior management and administrative staff of the faculty(ies)
- Team responsible for preparation of the SER
- Teaching staff
- Students
- Alumni and social stakeholders including employers.

There was a need for translation during the meeting.

#### 1.4. BACKGROUND OF THE REVIEW

#### Overview of the HEI

Klaipeda University was established in 1990 and the department of Informatics and Statistics in 1995. Klaipeda University is a state university composed of three faculties including the faculty of Marine Technology and Natural Sciences where the department of Informatics and Statistics is placed.

#### Overview of the study field

As a whole, the university positions itself as a multidisciplinary centre of maritime sciences and studies. The Informatics programme contributes to this strategic positioning, to Klaipeda city's economic development strategy "Klaipeda 2030", and to the priorities of the larger region of countries surrounding the Baltic sea.

#### Previous external evaluations

The University was accredited for a period of 7 years in 2021. The Informatics study programme was evaluated in 2006, 2010 and 2016.

#### Documents and information used in the review

The following documents and/or information have been requested / provided by the HEI before or during the site visit:

- Self-evaluation report and its annexes
- Final theses
- Additional contents to Annexes 1, 2,3, 4 and 5.
- Report of the internal analysis of the study programs carried out in 2022-2023 (in the Faculty of Marine Technology and Natural Sciences).
- Course Description for Artificial Intelligence and Introduction to Specialty and Programming Languages

#### Additional sources of information used by the review panel:

The following additional sources of information have been used by the review panel: Study program descriptions from KU website.

## **II. STUDY PROGRAMMES IN THE FIELD**

Title of the study programme	Informatics
State code	6121BX028
Type of study (college/university)	University
Mode of study (full time/part	Full time – 4 years
time) and nominal duration (in	
years)	
Workload in ECTS	240
Award (degree and/or	Bachelor of Computing
professional qualification)	
Language of instruction	Lithuanian, English
Admission requirements	Secondary education.
First registration date	1997

## III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The first cycle of the Informatics study field at Klaipeda University is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points <sup>1*</sup>		
1.	Study aims, learning outcomes and curriculum	3		
2.	Links between scientific (or artistic) research and higher education	3		
3.	3. Student admission and support			
4.	4. Teaching and learning, student assessment and graduate employment			
5.	Teaching staff	4		
6.	Learning facilities and resources	4		
7.	7. Quality assurance and public information			
	Total:	25		

<sup>&</sup>lt;sup>1</sup>1 (unsatisfactory) - the area does not meet the minimum requirements, there are substantial shortcomings that hinder the implementation of the programmes in the field.

**<sup>2</sup>** (satisfactory) - the area meets the minimum requirements, but there are substantial shortcomings that need to be eliminated.

**<sup>3</sup>** (good) - the area is being developed systematically, without any substantial shortcomings.

<sup>4 (</sup>very good) - the area is evaluated very well in the national context and internationally, without any shortcomings.

<sup>5 (</sup>exceptional) - the area is evaluated exceptionally well in the national context and internationally.

## **III. STUDY FIELD ANALYSIS**

## AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM

1.1. Programmes are aligned with the country's economic and societal needs and the strategy of the HEI

#### **FACTUAL SITUATION**

## 1.1.1. Programme aims and learning outcomes are aligned with the needs of the society and/or the labour market

There is a need for skilled IT professionals and informatics specialists in Lithuania in general and in the Klaipeda region in particular (SER pp. 5–7). The aims and learning outcomes of the Informatics programme are aligned with these needs. The SER stresses the importance of marine technology in the region (SER p. 5–7), and the programme aims to address the needs of this industry. This programme is the only University bachelor in Informatics in the Klaipeda region (SER p. 8).

During the visit, the stakeholders mentioned that there were clear processes for them to engage with the department to revise and improve the study programme. They also mentioned that the study programme was old-fashioned with respect to the topics that are covered and to the teaching practices (see Section 2.2.2). They expressed a need for better teaching of soft skills (presentation, group work, agile management) that are crucial in the workplace. The stakeholders also identified the potential of revising the study programme's aim to focus more on machine learning and data science.

The department of Informatics and Statistics provides two Bachelor studies: Informatics and Informatics engineering.. The visit did not show that courses were shared between the study programmes. However, the visit did not establish that there is any synergy between the two programmes or a clear difference between those two programs. Based on the stakeholder's input, it seems that a combination of a slightly revised Informatics Engineering and a dedicated Machine Learning/Data Science study programme would better fit the needs of the society and of the labour market.

#### 1.1.2. Programme aims and learning outcomes are aligned with the HEI's mission, goals, and strategy

The programme is anchored in the Informatics and Statistics department, which is part of the Faculty of Marine Technology and Natural Sciences. The focus of the programme on the needs of marine technology is thus structurally aligned with the faculty mission and goals.

Section 1.2 (paragraph 32) in the SER states that the programme contributes to several aspects of the mission of the University, but does not provide evidence to back up this claim. In particular, neither the SER nor the visit established that the educational level is in focus.

On the contrary, the Report of the internal analysis of the study programs carried out in 2022-2023 at faculty level (Student Progress p. 36) established that "student achievements are insufficiently differentiated - this is characterised by too easy tasks, insufficient attention to the preparation of settlement tasks, levelling of the evaluation process." (see further comments about educational level in 2.2.2).

#### **ANALYSIS AND CONCLUSION (regarding 1.1.)**

As the only University Bachelor in the region, the study programme has the potential to offer a very clear alternative to the study programmes in Informatics provided in local colleges. However, the aim of the programme and the learning outcomes do not provide a clear differentiation with professional bachelors.

Programmes comply with legal requirements, while curriculum design, curriculum, 1.2. teaching/learning and assessment methods enable students to achieve study aims and learning outcomes

#### **FACTUAL SITUATION**

#### 1.2.1. Programmes comply with legal requirements

The structure of the programme complies with legal requirements (SER pp. 6–7).

#### 1.2.2. Programme aims, learning outcomes, teaching/learning and assessment methods are aligned

Table 2 in the SER report documents the mapping between courses and the programme's learning outcomes. Table 2 in the extra information provided in Annex 1 on Traceability relations between subjects and learning outcomes further specifies this link. The visit established that the learning outcomes described in Table 2 correspond to the bare minimum described by the *Descriptor of the Group of Study Fields of Computing*.

The visit established that monitoring and ensuring alignment between programme aims and the learning outcomes, teaching methods and assessment methods described by teachers in the course descriptions is the responsibility of the study programme responsible.

The visit established that the small classes are an advantage for the students as it provides them with a lot of attention from teachers. It also established that the small classes are advantageous for teachers, as it allows them to manage without much preparation or attention to student evaluation. A teacher mentioned that working with a large class once was a challenge as he had to prepare much more.

### 1.2.3. Curriculum ensures consistent development of student competences

Overall, the curriculum ensures a progression over the duration of the programme (SER pp. 12–13). This progression is ensured for the two specialisations Data Analytics and Informatics.

## 1.2.4. Opportunities for students to personalise curriculum according to their personal learning goals and intended learning outcomes are ensured

The Informatics programme provides two specialisations Informatics and Data Analytics. In addition, the programme follows the study regulations of the University and enables students to take elective subjects, to create individual study plans, to reschedule exams and to spend time abroad (SER p. 13).

#### 1.2.5. Final theses (applied projects) comply with the requirements for the field and cycle

Final theses comply with the requirements of a Bachelor programme (see SER p. 14).

#### **ANALYSIS AND CONCLUSION (regarding 1.2.)**

It is positive that the programme provides students a lot of flexibility to personalise the curriculum. However, a lot of attention is needed to guarantee that the education level is improved. This requires more attention to the teaching and assessment methods specially in the courses that contribute to the learning outcomes at levels 4 and above in the Bloom Taxonomy (i.e., learning outcomes C3, C4, C5.2). Overall, the learning outcomes could be more ambitious than the bare minimum required by the legal framework, with learning outcomes at level 4 and higher in the Bloom taxonomy for each course in the programme (with possibly a few rate exceptions). This will make it possible for the programme to create a clear differentiation with professional bachelor programmes from local colleges.

#### **AREA 1: CONCLUSIONS**

AREA 1	Negative - 1 Does not meet the requirements	Satisfactory - 2  Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3  Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle			3		

#### **COMMENDATIONS**

1. The programme provides students a lot of flexibility to personalise the curriculum.

#### **RECOMMENDATIONS**

#### To address shortcomings

- 1. The teaching and evaluation methods should be revised for all courses that contribute to learning outcomes C3, C4, and C5.2 to ensure an improved educational level.
- 2. The learning outcomes for the programme and individual courses should be revised to be positioned higher in the Bloom taxonomy to define a more ambitious study programme, making the programme more aligned with a University education (as opposed to a college education).

#### For further improvement

1. It should be considered whether the two existing programmes Informatics and Informatics Engineering are still appropriate for the labour market and society and whether the two specialisations of the Informatics programme should evolve in separate study programmes.

# AREA 2: LINKS BETWEEN SCIENTIFIC (OR ARTISTIC) RESEARCH AND HIGHER EDUCATION

2.1. Higher education integrates the latest developments in scientific (or artistic) research and technology and enables students to develop skills for scientific (or artistic) research

#### **FACTUAL SITUATION**

#### 2.1.1. Research within the field of study is at a sufficient level

The SER mentions research results and participation in research projects (pp. 15–16).

The visit showed that the department has access to modern facilities that support research in the field of Informatics. However, the visit revealed that the Informatics and Statistics department does not have a PhD programme. This is a significant limitation to the research that can be conducted at a University. In fact, this limitation restricts the ambition level to applied research at a college level.

#### 2.1.2. Curriculum is linked to the latest developments in science, art, and technology

The SER explains that the teaching material for 20 subjects in Informatics were revised in the context of the project "Improving the Quality of Studies Conducted at Klaipeda University and Improving University Management by Responding to the Needs of the City and Region" (SER p. 18).

During the visit, the stakeholders made the case that the curriculum (Annex 2) is a bit old-fashioned and does not reflect the latest developments in computer science. In particular, the stakeholders emphasised the fact that some courses were being taught now the same way they were taught many years ago. To be fair, other courses are more recent and have been revised to keep up with the latest developments.

### 2.1.3. Opportunities for students to engage in research are consistent with the cycle

As expected for a Bachelor's programme, the final thesis is the opportunity for students to engage in applied research.

#### **ANALYSIS AND CONCLUSION (regarding 2.1.)**

The programme of Informatics is a bit old-fashioned and would benefit from stronger links with research and developments in computer science. The fact that there is no PhD programme at the department of Informatics and Statistics is a strong hindrance to conducting research at the department at a sufficient level.

## **AREA 2: CONCLUSIONS**

AREA 1	Negative - 1 Does not meet the requirements	Satisfactory - 2  Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3  Meets the requirements, but there are shortcomings to be eliminated	Very good - 4  Very well  nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle			3		

#### **COMMENDATIONS**

1. Teachers in the department expressed the will to conduct research during the visit and facilities are of high quality.

#### **RECOMMENDATIONS**

### To address shortcomings

- 1. The department of Informatics and Statistics cannot conduct research at a level which is appropriate. It should either have a PhD programme or set lower expectations in terms of applied research.
- 2. The study programme as a whole should have stronger links with research and the latest developments in the informatics study field.

### For further improvement

1. Conduct an assessment of each course, establishing how the course follows the latest developments in the field.

#### **AREA 3: STUDENT ADMISSION AND SUPPORT**

#### 3.1. Student selection and admission is in line with the learning outcomes

#### **FACTUAL SITUATION**

#### 3.1.1. Student selection and admission criteria and procedures are adequate and transparent

The admission to the Informatics study programmes is carried out in accordance with the general provisions of the Lithuanian Association of Higher Education Institutions for General Admission Organisation (LAMA BPO) and the admission rules of KU.

People are admitted to the University through a competition based on the applicants' compliance with the minimum requirements of the study program and the competition score. The applicant's competitive score consists of the main and additional criteria, the minimum competitive score is 5.4 points. 14 students enrolled in 6121BX028 Informatics first cycle of studies, permanent studies in 2023. All places are financed by the state. In 2022, 15 students enrolled (one 5-state unfunded place). In 2021, there were 10 state-funded places for students. The highest competitive score 8.27 - 9.03, and the lowest 5.51 - 5.53. Thus, the University follows the admission rules set by the state.

The number of students enrolled from abroad is small, from 2021 to 2023, only 24 students were accepted into the computer science program. Due to the shortage of informatics specialists in Lithuania. The University cooperates with gymnasiums, has established engineering classes. Students are encouraged to carry out research work and special courses. In the new premises of KU, students and teachers have access to teaching materials.

# 3.1.2. Recognition of foreign qualifications, periods of study, and prior learning (established provisions and procedures)

Klaipeda University uses the European Credit Transfer System (ECTS). Before leaving for part-time studies, the student signs an Erasmus+ training contract, which confirms that the credits he has successfully acquired will be recognized at the end of the mobility period. Before leaving for part-time studies, the student coordinates the study program abroad with the head of the department and/or the program manager. Upon successful completion of partial studies and submission of an academic certificate, the subjects of partial studies are recognized and transferred to the student's study plan in the KU Academic Information System, and upon graduation - to the diploma supplement. Names of credits are written in the diploma supplement in English and Lithuanian, the state and higher education institution where the credits were earned are indicated.

#### **ANALYSIS AND CONCLUSION (regarding 3.1.)**

Briefly, the number of students in the University is stable. Students dropout is not submitted. The University complies with all admission regulations. The highest and the lowest passing score increased in 2023, compared to 2021-2022.

#### 3.2. There is an effective student support system enabling students to maximise their learning progress

#### **FACTUAL SITUATION**

#### 3.2.1. Opportunities for student academic mobility are ensured

The University participates in Erasmus+ activities. Competitions and internships are announced twice a year. Information about selection contests and seminars is provided on social networks (Facebook, Instagram, etc.), KU website, e-mail and information channels of faculties/departments. A tripartite agreement is concluded, in which the University undertakes to credit the studied and passed learning subjects/practice for students and mobility achievements for staff.

Klaipeda University belongs to the ESN - Erasmus student network. However, according to students' feedback during the visit, there was a complaint that ESN almost does not exist. International students do not have much cooperation with local students.

The University is engaged in EU-CONEXUS activities, which allows bachelors to specialise in the topics of green economy sector development. The last three years have been quite limited. 2021-2022 2 students left, and in 2022-2023. – 6. The small number of students causes two problems: students do not have enough time to prepare for the selection and go to study abroad; they fear losing their jobs if they leave for a longer period of time. The mobility of incoming students is also affected by various external reasons, such as the Covid-19 pandemic, the war in Ukraine, and the geopolitical situation in Lithuania.

KU also claims that students are not sufficiently aware of the benefits of this opportunity, but it is not clear how the University spreads the benefits of ERASMUS+.

## 3.2.2. Academic, financial, social, psychological, and personal support provided to students is relevant, adequate, and effective

In the first weeks, students listen to introductory lectures, get to know the teachers, curators, and the dean's office. Meetings with alumni and potential employers are organised.

The head of the department, the head of the program, curators, and teachers advise on the study programs. Administrative staff advises students on various academic and study organisation issues. During the preparation of final theses, students are advised by supervisors.

The KU web page provides information related to events, social partners, careers, seminars.

Information is provided using Moodle and MS Office 365. KU library staff consult on publications, databases, and training.

Students are encouraged to get involved in community activities, events, and promotions. The KU Student Union (KUSS) also takes care of students' social support, represents students' interests, and develops cultural and social activities.

KU students have the opportunity to receive an incentive, social or one-time scholarship. There are three types of KU incentive scholarships: Senate Scholarship, Faculty Council Scholarship, and Incentive Scholarship (for academic performance). In 2023, 9 students received incentive scholarships. Together with social partners, the University awards nominal scholarships (received by 4 students in 2022 - 2023). 4 students received Senate scholarships. No Faculty Council scholarships were awarded. During the reference period of the nominal scholarships of the Ministry of Economy and Innovation of the Republic of Lithuania, these scholarships were awarded 167 times (35 scholarships in 2021, 60 scholarships in 2022, 72 scholarships in

2023) to students studying the KU Informatics bachelor's study program. The municipality of Klaipeda also awards scholarships. One-time scholarships are available for scientific, artistic, sports, social and temporarily difficult material situations. Personal support is also provided through the student representative (implementation of activities in line with the University's strategies may compensate for the expenses incurred or a part of them. For presentations at scientific conferences, first-cycle students are awarded an additional point when enrolling in second-cycle studies, dormitories).

According to students' feedback during the visit, they claimed that information regarding scholarships is not enough, however the Students union claimed that it is enough, in this case better communication should be considered.

KU provides psychological counselling and spiritual guidance services for students. Individual psychological consultations are provided by a University psychologist by pre-registration. Spiritual counselling is conducted by the academic chaplain. Students are provided with individual career counselling (taking self-awareness tests, providing recommendations and assistance in writing CV's and cover letters). The EU-CONEXUS career centre also operates, training on issues relevant to students, offers of internships and jobs are published periodically. In the 2021 and 2022 study years, taking into account the decision of the Klaipeda University Council, the rector has set a 100 percent lower tuition fee for the 2021-2023 study year for a student of the Informatics study program whose competitive score is 9.25.

#### 3.2.3. Higher education information and student counselling are sufficient

During the introductory lecture, new students are introduced to the study program and other information by the Faculty's administration. Introductory lectures are organised on the first days of studies, during which students are introduced to the department's employees, the dean, vice-deans, study specialists, administrators, heads of departments, program managers and group curators. Students are explained the procedure for conducting studies, the principles of assessment, the ethics of academic activities of students and listeners, and academic integrity.

Students of the II - IV year are assigned to perform the role of curator.

On the first days of studying at the University, students meet with the head of the program and the head of the department, who presents the course of study, the process of organising student internships, the participation of program students in Erasmus+ exchange and other international exchange programs, and other issues related to the study program.

During each semester, students are provided with the consultation schedules of the teachers teaching the subjects.

#### **ANALYSIS AND CONCLUSION (regarding 3.2.)**

Admission of students takes place in accordance with the laws established by the state of Lithuania. Student enrollment remains stable for the second consecutive year. The highest and lowest knock-on scores are high enough to meet the minimum entry bar.

During the evaluation meeting 2 foreign students participated who are studying full-time. KU has established and cooperates with several gymnasiums and provides University facilities for students from gymnasiums.

ESN activities according to students are almost non-existent, it is necessary to revive this activity and encourage students to get more involved in cooperation with foreigners.

Ukrainian students are given benefits. Student support, counselling and first-year integration events are carried out in an orderly manner, but several students missed more information about scholarships, how to get them, and what grades are required.

The students did not complain about psychological health or discrimination.

The University's career counsellor provides recommendations and advice on writing CVs and cover letters. The EU-CONEXUS career centre also operates, training on issues relevant to students, offers of internships and jobs are published periodically.

The integration of the introductory lecture is carried out in an orderly manner, the students did not complain. Students are satisfied with curators' activities and initiatives.

#### **AREA 3: CONCLUSIONS**

AREA 1	Negative - 1 Does not meet the requirements	Satisfactory - 2  Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3  Meets the requirements, but there are shortcomings to be eliminated	Very good - 4  Very well  nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle				4	

#### **COMMENDATIONS**

1. Participating in European University for Smart Urban Coastal Sustainability is commendable.

#### **RECOMMENDATIONS**

#### For further improvement

- 1. Recommend to Improve cooperation of local students with foreign students.
- 2. Recommend to improve advertisements and opportunities for foreign students to come for one semester, not just a full year.
- 3. Recommend to expand the ESN office and encourage students to get involved in organising activities and events for foreigners.
- 4. Recommend to improve the possibility to give feedback after each semester about study facilities.
- 5. Recommend to improve learning environment for students with disabilities: reconstruct and renovate old premises having in mind implementing all required infrastructure and ensure laboratory passages are sufficient.

# AREA 4: TEACHING AND LEARNING, STUDENT ASSESSMENT, AND GRADUATE EMPLOYMENT

#### 4.1. Students are prepared for independent professional activity

#### **FACTUAL SITUATION**

## 4.1.1. Teaching and learning address the needs of students and enable them to achieve intended learning outcomes

There are 1 study programme in the field of Informatics. Study forms and modes comply with the specified in SER. Study material is available on a distance learning platform also, as students prefer to attend distance theoretical lectures and this gives ability to enable students resources independently with possibility to plan their study time.

The study programme covers a wide range of topics related to informatics, including computer hardware and software, programming, algorithms, data structures, software development methodologies, and more.

Used teaching methods, like traditional theoretical lectures and practical work which are combined within individual or team projects, applied exercises, presentations and conferences, case studies, work in groups, etc., allowing students to experience a variety of learning approaches.

On meeting with students it was stated that they are not involved in research activities, but the SER preparation group acknowledged that sometimes students even do not understand the involvement.

In meetings with employers it was stated that most alumni lack communication, entrepreneurship, public speaking and working in group skills.

## 4.1.2. Access to higher education for socially vulnerable groups and students with individual needs is ensured.

It was stated that there are no students with special needs at this moment in the evaluated study program, however, all new and some old building premises are adopted to the students with special needs and in a future it will be accomplished fully as old premises will be renovated and additional new buildings will be built.

Being open for students with special needs creates a success story for business organisations in which such students could work.

#### **ANALYSIS AND CONCLUSION (regarding 4.1.)**

Allowance to use of AI tools in the study process to complete a task or get to the goal significantly enhance the educational experience by providing personalised learning, improving efficiency, supporting teachers, and making education more accessible and engaging for students.

Despite the majority of teaching methods used, the expert panel observed that there is no clear balance between oral and written assessment of students. Use of more oral presentations as key assessment helps to improve transferable skills.

4.2. There is an effective and transparent system for student assessment, progress monitoring, and assuring academic integrity

#### **FACTUAL SITUATION**

# 4.2.1. Monitoring of learning progress and feedback to students to promote self-assessment and learning progress planning is systematic

Monitoring is conducted by providing feedback on completed tasks, studying progress individually and offering guidance for improvement. It was observed that students have the opportunity to schedule individual consultations with their teachers, ask questions, seek clarification and receive personalised feedback. At the end of each course students are often given the opportunity to evaluate the subject and provide feedback on their learning experience.

However, as per student meeting stated, information is taken into account, but not always, in general, changes occur based on provided students feedback.

#### 4.2.2. Graduate employability and career are monitored

Monitoring is implemented by surveying graduates to get information about their employment status, career paths, and satisfaction with their education. Surveys take place shortly after graduation or at regular intervals to track long-term career progression. The University maintains alumni networks where additional feedback is collected. The University collaborates with employees and industry partners to establish strong connections between academia and the job market. This helps to ensure that curricula are aligned with the needs and demands of the industry by increasing the employability of graduates.

#### 4.2.3. Policies to ensure academic integrity, tolerance, and non-discrimination are implemented

Klaipeda University has policies in place to ensure academic integrity, tolerance, and non-discrimination. These policies include Code of Academic Ethics, guidelines for independent written papers, study regulations, and a non-discrimination policy.

#### 4.2.4. Procedures for submitting and processing appeals and complaints are effective

Klaipeda University has procedures in place for submitting and processing appeals and complaints. The rights and responsibilities of students are publicly available on the University website, which includes the right to appeal.

It is stated during the visit that there were no cases of violation of Code of Ethics and discrimination over the past years.

#### **ANALYSIS AND CONCLUSION (regarding 4.2.)**

According to expert panel observations, learning progress planning is systematic and aims to support students' learning progress, provide timely feedback by creating an environment that promotes continuous improvement and academic success.

Policies of academic ethics, a non-discrimination, etc., demonstrated the University's commitment to maintaining academic integrity, fostering tolerance, and ensuring a discrimination-free learning environment for all students.

Proper regulation in place on use of disruptive technologies (like AI tools) during the study process helps students to optimise the use of educational resources, reducing costs associated with textbooks, materials, and traditional teaching methods.

### **AREA 4: CONCLUSIONS**

AREA 1	Negative - 1 Does not meet the requirements	Satisfactory - 2  Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3  Meets the requirements, but there are shortcomings to be eliminated	Very good - 4  Very well  nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle			3		

#### COMMENDATIONS

 Integrating the latest technologies (such as AI) into the learning process makes good use of available resources and students' time, and gives them the responsibility and competences they need for their future careers.

#### **RECOMMENDATIONS**

#### To address shortcomings

- 1. Opportunities should be found to systematically analyse the various forms of feedback received from students on the quality of their studies, improvements or individual evaluations on study subjects, and to provide formal explanations on the impact of the feedback on improving the quality of the studies, on the status of the implementation of the improvement, or to provide additional consultation on the validity of the evaluation in case of uncertainties. For process or other curriculum improvements, the Kaizen methodology of the LEAN principles can be used as an example, where all stakeholders are involved in the process of major improvements, while maintaining transparency in the analysis and implementation of proposals.
- 2. Communication to students needs to be improved when they are involved in research/project activities providing them information on problems solved, expected final results, and their input for the goal more frequently and in a transparent manner.
- 3. Transferable skills need to be enhanced by finding additional methods for study process and evaluation improvement professional way of working, like frequent oral exams (skills public speaking), project working tasks (skills negotiation, task planning), etc.

## **AREA 5: TEACHING STAFF**

#### 5.1. Teaching staff is adequate to achieve learning outcomes

#### **FACTUAL SITUATION**

5.1.1. The number, qualification, and competence (scientific, didactic, professional) of teaching staff is sufficient to achieve learning outcomes

The staff workload consists of teaching hours, preparation for teaching and in some cases administrative duties as the key activities.

Staff recruitment is in line with legal requirements considering the past experience in order to ensure the competent delivery of course subjects and allowing the achievement of the defined learning objectives.

One study programme is offered, which is also taught in an English language variant. The subject-specific expertise to support the programme is present among the teaching staff.

From 26 teachers teaching informatics subjects, 15 (or 58%) have a teaching load of more than 0.5 FTE (full-time equivalents). 19 (or 73%) teachers have extensive practical experience. 97% of them have at least a B2 qualification in English. The majority of these have at least a C1 qualification.

Almost all except 3 teachers hold a doctoral degree. Of the listed teachers, only 2 have only published one paper. All others provide the required number of 3 publications each.

Pedagogical experience among the teachers ranges from beginners to 40 years. Professional experience ranges up to 45 years.

The ratio between teachers and students is 1:15.

#### **ANALYSIS AND CONCLUSION (regarding 5.1.)**

The number of staff members is sufficient to teach the subjects in the programme. The teachers satisfy the formal requirements. Their competence is sufficient to teach INF subjects in the Bachelor's programme.

Most of the teachers are full-time teachers (60%), and some more have contracts with more than 0.5 FTE (an additional 16%). Many staff members teach at the University for many years, resulting in a low teaching staff turnover and good stability.

The teaching staff is balanced in terms of qualifications and expertise. The different subject areas in the informatics domain are well represented. Professional experience exists as required. Sufficient didactic expertise exists. Both practical and didactic experience varies in terms of number of years. However, this reflects a healthy balance between younger and more senior staff members.

The number of teachers with good English language capabilities is very good and sufficient to teach the English language variant of the offered study programme.

Some teaching staff are also involved in administrative duties. This appears to be done in consensus with the respective staff members and no concerns regarding unjust allocation or lack of sufficient compensation was made.

The student/teacher ratio is very good, which results in a great satisfaction of the teachers with this as it allows personal and targeted interaction with students.

The degree of involvement in research varies is generally good. The teaching staff's scientific activity and production is generally acceptable. However, the focus on publication as the only measure of scientific output is not sufficient to evaluate research and does not sufficiently encourage various forms of activities including contract research or stakeholder engagement in this respect.

In conclusion, the competences are sufficient to achieve the learning outcomes. An improvement of scientific concerns is desirable though through measures that incentivize research income and stakeholder engagement more clearly.

5.2. Teaching staff is ensured opportunities to develop competences, and they are periodically evaluated

#### **FACTUAL SITUATION**

### 5.2.1. Opportunities for academic mobility of teaching staff are ensured

The administration provides sufficient information on mobility possibilities. Applications for mobility are examined and approved by management under certain criteria as long as teaching continuity is maintained. A defined procedure for this exists that describes the procedure and criteria for mobility support.

The ERASMUS programme has been used by 8 of the staff members. This amounts to less than 25% in the evaluation period. However, most of those listed have used the opportunity several times. Opportunities for mobility are generally provided as long as circumstances allow this. The teachers feel very well supported in this regard.

Beyond ERASMUS, also the EU-CONEXUS SMART CAMPUS has been implemented. This project and other internal and external sources have provided mobility and internationalisation funding.

#### 5.2.2. Opportunities for the development of the teaching staff are ensured

The University provides personal development activities, allowing the planning and implementation of each teacher's professional development, including participation in mobility programs, professional development courses and scientific conferences.

The University provides measures to allow the development of teaching staff. This covers pedagogical, subject-specific, scientific and managerial activities. The University has implemented a targeted quality procedure framework (updated in 2022/23) for all competences, which combines courses on pedagogical as well as managerial concerns. 10 courses were organised each year by the University.

Activities and developments are discussed in the context of salary negotiations and the legal recertification process (i.e. every five years).

Development opportunities in terms of course and other formats can be requested and are generally approved.

The University allows students to participate in the teachers' evaluation. The teachers confirm formal and informal feedback procedures as sufficient and beneficial for their improvement of competences.

Support in strategically relevant areas today such as English, digitalisation, leadership as well as gender-related and anti-discrimination competencies are currently offered to teachers.

#### **ANALYSIS AND CONCLUSION (regarding 5.2.)**

Staff mobility is currently at a limited level. The support is good for interested teachers and only limited to ensure ongoing teaching activities. However, the uptake of the offer can be improved.

Mobility programmes have been used to enrich teaching as well as establish and enhance research collaborations. The numbers of incoming and outgoing teaching staff are sufficiently balanced.

The University has defined teacher assessment methods based on a range of criteria.

Pedagogical and language competencies are sufficient to ensure support for ongoing teaching commitments.

The staff development measures are very well received by the staff members. Staff members feel presented well in decision procedures around these concerns. A well-defined plan for enhancing teacher competences across pedagogy, research, management and subject aspects exists.

There is good evidence of the University's adjustment of these development activities to address topical concerns that meet current needs as the current activity list including for example gender and anti-discrimination shows.

In conclusion, staff mobility is at a low level. Opportunities to improve competences exist and are up-to-date. These are taken up at a sufficient level.

#### **AREA 5: CONCLUSIONS**

AREA 1	Negative - 1 Does not meet the requirements	Satisfactory - 2  Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3  Meets the requirements, but there are shortcomings to be eliminated	Very good - 4  Very well  nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle				4	

#### **COMMENDATIONS**

1. Highly motivated and enthusiastic teachers.

- 2. Staff-to-student ratio is beneficial for study quality.
- 3. English language capabilities are generally at a good level.

#### **RECOMMENDATIONS**

### For further improvement

- 1. Stronger encouragement of teachers to participate in mobility programmes is recommended.
- 2. The involvement of all teachers in research should be improved in order to better infuse research into teaching and strengthen scientific understanding and skills.
- 3. It is suggested to implement a research strategy that values income and stakeholder needs in order to increase scientific activities of more than just a limited number of highly active staff members.

#### **AREA 6: LEARNING FACILITIES AND RESOURCES**

6.1. Facilities, informational and financial resources are sufficient and enable achieving learning outcomes

#### **FACTUAL SITUATION**

## 6.1.1. Facilities, informational and financial resources are adequate and sufficient for an effective learning process

The study program is conducted through several buildings in different parts of the city - specifically H. Manto str. and Bijunu str. in Klaipeda. Lectures are planned according to days to be on one premise and avoid travelling during the study day. General subjects class building in H. Manto str. are considered part of the national heritage and cannot be easily renovated or easily equipped for disabled people. However, there is a plan to do so in the near future. Premises on the other part of the city (Bijunu str., Klaipeda) are not in good condition. Some classes in old premises do not have proper electricity supply for students to bring their personal computers and are mostly used for basic classes with exercises to do on paper.

Teachers have their own offices to conduct research and deal with other activities on the university campus.

All study laboratories and some classes are situated in newly built premises on H. Manto str. and are fully accessible for people with movement disabilities as there are suitable lifts, parking slots, etc. Also, they are modernly equipped with research equipment relevant to the study program and some of the equipment are funded by social partners and project stakeholders from business. These are also generally available to students for projects.

The library is equipped with many local and worldwide e-resources (e.g., Science direct, etc.).

The University has achieved a modern digital organisation maturity for both educational activity (utilising tools such as Moodle) and administrative processes (internal portals for teachers).

Students have the possibility to choose the organisation where they will conduct their internship with the help of a local internship manager.

There is a canteen on the University campus and places for students to interact or relax after or between study times.

The University owns dormitories situated in other parts of the city outside the campus. We did not have the opportunity to visit those premises.

#### 6.1.2. There is continuous planning for and upgrading of resources.

There is a plan (architectural design phase is ongoing) to build another premises on H. Manto str. nearby laboratories to move all study classes conducted at Bijunu str. to the University campus within the next 2 years.

The renewal and upgrading of the resources of the University is held annually according to certain rules and procedures and participating in local and international projects and initiatives throughout Europe. Great attention is paid to the renewal of the laboratories and acquisition of updated equipment and software.

#### **ANALYSIS AND CONCLUSION (regarding 6.1.)**

The classrooms are fully equipped and spacious, while the University's common areas are sunny and pleasant. The computer rooms and laboratories are spacious and the number of workplaces is adequate.

Despite many computerised classes, it is observable that those are used for general subjects and even new projects of upgrading resources are implemented to have many computer workplaces not related to laboratory or research purposes.

The number of electronic resources offered by the library is sufficient. The University cares about the environment and moves towards sustainable publishing methods - most articles and research papers are published in electronic format only and are available to the students and the public.

The laboratories are equipped with frontend equipment for research in the fields of robotics, microprocessor programming and industrial control systems management. Software needs for all laboratories are collected in line with the preparation of upcoming new semesters.

The University developed good cooperation with social partners, employers and business stakeholders who partly financed the renewal of the equipment and furniture of laboratories.

Despite the many e-resources within the library, there are limited options to buy additional commercial materials without upfront planning because of applicable public procurement requirements.

Currently, the University still provides all laboratories and practical classrooms with PCs and installed software. In a time of increasing student laptop ownership, the University could adopt a model based on providing laptops (e.g. Chromebooks) for those that do own one. This would allow them to remove fixed PCs from labs, resulting in lower costs and also the opportunity to create more flexible learning spaces.

In the same direction, the University should also consider changing student behaviour towards more access to digital resources than printed material (for the library) and also more remote access from outside the University. This again would reduce costs, allow easier updating and enable the flexible usage of space (e.g. in the library).

## **AREA 6: CONCLUSIONS**

AREA 1	Negative - 1 Does not meet the requirements	Satisfactory - 2  Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3  Meets the requirements, but there are shortcomings to be eliminated	Very good - 4  Very well  nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle				4	

#### **COMMENDATIONS**

- 1. Close relations with social partners helps the institution to develop its material facilities.
- 2. Efforts for renewal and building up new premises.
- 3. The laboratory equipment meets high standards for research performance and evaluating applicability.

#### **RECOMMENDATIONS**

#### For further improvement

- 1. Efficiency of the management should be improved for computerised teaching spaces by encouraging students to use personal computers if available. This would allow reducing the cost of upgrading computers classrooms for general IT lectures (example, using Microsoft Office software, etc.), leaving a few workstations available, and redirecting the cost savings by considering renting or buying cheaper (example, Chromebooks) hardware equipment and being flexible regarding strengthening the laboratories' training base, teachers competences growth and improving teachers condition.
- 2. Access to all digital resources should be monitored in order to determine the ratio between oncampus and remote access and to derive preferences in terms of formats and languages in order to adapt the procurement procedures accordingly.

## **AREA 7: QUALITY ASSURANCE AND PUBLIC INFORMATION**

7.1. The development of the field of study is based on an internal quality assurance system involving all stakeholders and continuous monitoring, transparency and public information

#### **FACTUAL SITUATION**

#### 7.1.1. Internal quality assurance system for the programmes is effective

According to the SER, KU applies an internal quality assurance system that adheres to ISO 9001 and is certified as such. A defined process covering internal evaluation, the incorporation of external feedback from students and other stakeholders, the management of admission and study organisation exists.

Additionally, the SER highlights that KU follows both Lithuanian and EU higher education policy document w.r.t. internal quality assurance.

Improvement of study programme quality is one of the key goals of the KU's current (2023–2024) activity plan. On an annual basis, evaluation results are taken into account in the quality improvement process.

Internal quality assurance is the competence of the Informatics Study Field Committee at KU.

Study programme content is reviewed annually based on evaluation and needs and courses are recertified every one to three years by the Study Field Committee. Internal feedback is discussed up to twice per semester.

The description of internal quality assurance procedures in the SER is highly detailed and clearly conveys that a wide set of mechanisms to assure study programme quality is in place.

#### 7.1.2. Involvement of stakeholders (students and others) in internal quality assurance is effective

There are dedicated regular feedback cycles involving students, graduates, lecturers, practitioners and employers, which are described in detail in the SER.

The SER further lays out in detail in which ways students, lecturers and employers participate in committees and institutional feedback forums.

However, there is no structured information on the results, response rates etc. of any of these surveys in the SER, with the exception of a description of the most recent students' surveys (cf. paragraph 179 and 192), according to which students had a reasonably high opinion of study programme quality (averaging at 4.375 and 4.77 out of 5), and graduates' survey (cf. paragraph 129), which ranks overall graduates' satisfaction at 4.4 out of 5.

The SER lays out the employment rate of recent graduating classes, which range from 83% to 89%, and conveys that KU stays in contact with graduates after they have finished their studies and takes an active interest in their employability.

Moreover, the SER describes in detail a dedicated stakeholder involvement procedure involving employers in Western Lithuania, which resulted in KU being awarded a "Investors' Spotlight" quality certificate.

This process involved the drafting of a set of recommendations, whose execution was evaluated in 2021. Nearly all of the changes suggested by employers in this process were implemented according to documentation.

In the site visit, an overall positive impression was confirmed when speaking with graduates and employers; however, employers criticised KU graduates' perceived lack of communications, entrepreneurship, public speaking and teamwork skills.

# 7.1.3. Information on the programmes, their external evaluation, improvement processes, and outcomes is collected, used and made publicly available

The SER describes in detail in what ways the feedback and opinion of students, graduates and lecturers is sought and with which explicitly laid out goals and objectives.

Furthermore, the SER explicitly stresses that critical feedback from students and graduates as well as those who discontinue their studies is carefully evaluated, in particular w.r.t. lecturers who are perceived as needing to improve or modernise their didactic approach or update their course contents.

#### 7.1.4. Student feedback is collected and analysed

The SER states that KU does not make use of the National Student Survey, but states that student feedback is sought through internal opinion surveys once a semester, clearly describing which topics student feedback is asked on.

In the site visit meeting with current KU students and recent graduates, the prevailing impression was that students are aware of student feedback mechanisms, but had no clear understanding of its regularity, somewhat contrasting the descriptive detail in the SER.

Critical feedback was perceived to sometimes result in changes, but the overall sentiment seemed to be that clearer and more perceptible changes to criticism and negative evaluations were necessary.

#### **ANALYSIS AND CONCLUSION (regarding 7.1.)**

The description of internal quality assurance mechanisms, stakeholder involvement, etc. is very detailed, suggesting very tight control over course content and quality and a team dedicated to carrying out these quality assurance processes.

While the practical skills of graduates generally meet market demand (also according to employment statistics), transferable skills were considered somewhat lacking by employers, and feedback to this effect does not (yet) seem to have been taken into account adequately.

Compared to the very detailed and formalised processes involving students, graduates and lecturers, the involvement of employers and social partners is comparatively more informal.

Overall, internal quality assurance is highly structured and processes involving students, graduates and lecturers are also clearly organised, but employers' involvement would benefit from a similarly structural approach.

### **AREA 7: CONCLUSIONS**

AREA 1	Negative - 1 Does not meet the requirements	Satisfactory - 2  Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3  Meets the requirements, but there are shortcomings to be eliminated	Very good - 4  Very well  nationally and internationally  without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
First cycle				4	

#### **COMMENDATIONS**

- 1. There is a highly structured internal quality assurance system.
- 2. The various feedback mechanisms seem to be well organised.
- 3. The involvement of employers through the process leading to the "Investors' Spotlight" certificate appears to be a particularly strong point.

#### **RECOMMENDATIONS**

#### For further improvement

- 1. Despite the "Investors' Spotlight" certificate, there was some criticism from employers w.r.t. to graduates' transferable skills. Perhaps a more regular involvement of external stakeholders would help to get more timely feedback on such inadequacies and help improve study quality more quickly.
- 2. Employer feedback w.r.t. the lack of transferable skills of graduates (i.e. teamwork, project lifecycle management, risk management, ...) should be taken into account and reflected in the study programme.
- 3. The results of the various feedback processes/opinion surveys should be given more attention, both in internal practices and in reporting, with an eye towards changes over time and reactions to points of criticism. This would increase measurability and reliability and thus help strengthen claims made in the SER w.r.t. to continuous improvement of the study programme.
- 4. Student and graduate involvement in feedback processes could be incentivised more strongly.

## IV. SUMMARY

We would like to thank the HEI for a good quality SER and a well-structured visit. Klaipeda University offers the only University-based bachelor programme in Informatics in the Klaipeda region.

While facilities, teaching staff and quality are very good, the learning objectives of the study programme are not ambitious enough for a University. Learning outcomes for the programme and individual courses should be revised to be positioned higher in the Bloom taxonomy. Focus on improving educational levels should be increased.

Most significantly, the lack of a PhD programme in Informatics does not enable the department of Informatics and Statistics to conduct research at a level which is sufficient for a University programme.

It is noteworthy that the University strives to be at the forefront of the latest technologies and scientific trends, and encouraging students to use AI tools gives them an advantage in the curriculum and regulation on proper usage of AI based technologies helps students to optimise their individual study process.

However, during meetings with the university community, the evaluation committee pointed out that there is not a proper balance between the written and oral assessments and competences developed in the study process.

It should be noted that the University's close cooperation with social partners and various business sectors helps to develop not only students' competences during internships or to be at the forefront of preparing the right specialists for the labour market, but also helps the institution to keep the laboratory equipment to meet high standards for research performance and evaluating applicability.