



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Klaipėdos universiteto  
**STUDIJŲ PROGRAMOS**  
*CHEMIJOS INŽINERIJA (612H81002)*  
**VERTINIMO IŠVADOS**

---

**EVALUATION REPORT**  
**OF CHEMICAL ENGINEERING (612H81002)**  
**STUDY PROGRAMME**  
at Klaipėdos University

- 1. Prof. Dr. Laurent Counillon (team leader)** *academic*
- 2. Prof. Dr. Domingo Cantero Moreno,** *academic*
- 3. Dr. Elizabeth Briggs,** *academic*
- 4. Prof. Dr. Jan Lundell,** *academic*
- 5. Dr. Šarūnas Zigmantas,** *representative of social partners*
- 6. Mr. Benas Balandis,** *students' representative*

**Evaluation coordinator - Mr. Pranas Stankus**

Išvados parengtos anglų kalba  
Report language - English

## DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	Chemijos inžinerija
Valstybinis kodas	612H81002
Studijų sritis	Technologiniai mokslai
Studijų kryptis	Chemijos ir procesų inžinerija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Pirma
Studijų forma (trukmė metais)	Nuolatinė (4)
Studijų programos apimtis kreditais	240
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Chemijos inžinerijos bakalauro laipsnis
Studijų programos įregistravimo data	1997-05-19 Nr. 565

---

## INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	<i>Chemical Engineering</i>
State code	612H81002
Study area	Technological sciences
Study field	Chemistry engineering
Type of the study programme	University studies
Study cycle	First
Study mode (length in years)	Full time (4)
Volume of the study programme in credits	240
Degree and (or) professional qualifications awarded	Bachelor's Degree in Chemical Engineering
Date of registration of the study programme	19/05/1997 Order No. 565

## CONTENTS

<b>I. INTRODUCTION.....</b>	<b>4</b>
1.1. Background of the evaluation process.....	4
1.2. General.....	4
1.3. Background of the HEI/Faculty/Study field/ Additional information.....	5
1.4. The Review Team.....	6
<b>II. PROGRAMME ANALYSIS .....</b>	<b>6</b>
2.1. Programme aims and learning outcomes.....	6
2.2. Curriculum design .....	7
2.3. Teaching staff .....	9
2.4. Facilities and learning resources .....	10
2.5. Study process and students' performance assessment.....	11
2.6. Programme management .....	13
2.7. Examples of excellence * .....	<b>Klaida! Žymelė neapibrėžta.</b>
<b>III. RECOMMENDATIONS.....</b>	<b>15</b>
<b>IV. SUMMARY .....</b>	<b>16</b>
<b>V. GENERAL ASSESSMENT .....</b>	<b>18</b>

## I. INTRODUCTION

### 1.1. Background of the evaluation process

The evaluation of on-going study programmes is based on the **Methodology for evaluation of Higher Education study programmes**, approved by Order No 1-01-162 of 20 December 2010 of the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC).

The evaluation is intended to help higher education institutions to constantly improve their study programmes and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: *1) self-evaluation and self-evaluation report prepared by Higher Education Institution (hereafter – HEI); 2) visit of the review team at the higher education institution; 3) production of the evaluation report by the review team and its publication; 4) follow-up activities.*

On the basis of external evaluation report of the study programme SKVC takes a decision to accredit study programme either for 6 years or for 3 years. If the programme evaluation is negative such a programme is not accredited.

The programme is **accredited for 6 years** if all evaluation areas are evaluated as “very good” (4 points) or “good” (3 points).

The programme is **accredited for 3 years** if none of the areas was evaluated as “unsatisfactory” (1 point) and at least one evaluation area was evaluated as “satisfactory” (2 points).

The programme **is not accredited** if at least one of evaluation areas was evaluated as "unsatisfactory" (1 point).

### 1.2. General

The Application documentation submitted by the HEI follows the outline recommended by the SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site-visit:

No.	Name of the document
1	New study programme (3,5 years)
2	Student Survey questionnaires
3	Guidelines for Thesis preparation

### ***1.3. Background of the HEI/Faculty/Study field/ Additional information***

The evaluation process consisted of a complete analysis of the study programme, following a well-established procedure, and finalizing with several recommendations to improve the study programme.

The external committee maintained a very good relation with the members of the self-evaluation report and, in general, with all the staff interviewed and particularly with the Evaluation coordinator - Mr Pranas Stankus. In the entire interviews the review team found full collaboration, good disposition, and honesty in answers. The facilities encountered during the visit that made the work easier.

The University of Klaipeda is located in one of the regions, with around 360.000 inhabitants (Klaipeda city and Western Lithuania Region), which have experienced the third largest development in Lithuania, after the capital Vilnius.

In the region are located a significant number of companies of great importance and size related to the maritime sector, among others the largest oil refinery in the Baltic Sea. The region has very good sea, air, and land communications.

Its Klaipeda Free Economic Zone is one of the most proactive in the region, taking into account the number of investments attracted and the creation of jobs. Among the activities of the companies that settle in the area are: production of plastic packaging and plastic pellets (PET), manufacturing of electronic devices, manufacturing of steel structures, metal processing, manufacturing of architectural glass, processing of fish and its products, biodiesel production, electricity production from renewable sources. Important international companies, such as Philip Morris, Master Food, Siemens, and others with high-tech and well equipped laboratories have build their plants either in the region.

The University of Klaipeda is a young university founded in 1991, at the moment it has 5 faculties: Marine Technologies and Natural Sciences, the Humanities and Education Sciences, the Academic of Arts, Social Sciences, and Health Sciences.

The Faculty of Marine Technologies and Natural Sciences was founded in 2015 by the merger of the Faculty of Marine Technologies and the Faculty of Natural Sciences. It is structured in 4 departments: Natural Sciences, Informatics and Statistics, Engineering and Marine Engineering, it has also 2 Research Centres, of Marine Sciences and Engineering, and Energy Efficiency.

The Engineering Department has most of the responsibility in undergraduate study programmes of Mechanical Engineering, Chemical Engineering, Environmental Engineering,

Electric Engineering, and graduate programmes of Production Engineering, Marine Environment Engineering, Petroleum Technological Processes and Innovative Electric and Automation Systems.

The Chemical Engineering Bachelor Study Programme was evaluated and accredited in 2012, the self-assessment process and experts' recommendations suggested at that time has been used to improve the quality of studies. The Self-evaluation Report shows a summary of concerns and recommendations together with the measures that were implemented

The SER is serious, rigorous and honest. This opinion is shared with the staff, which have read the report, and agreed with members elected to elaborate the report.

#### ***1.4. The Review Team***

The review team was completed according *Description of experts' recruitment*, approved by order No. 1-01-151 of Acting Director of the Centre for Quality Assessment in Higher Education. The Review Visit to HEI was conducted by the team on 07/11/2016.

- 1. Prof. Laurent Counillon (team leader)** Professor in University Nice Sophia Antipolis (France);
- 2. Prof. Dr. Domingo Cantero Moreno**, Professor in University of Cadiz, Science Faculty (Spain);
- 3. Dr. Elizabeth Briggs**, Retired Head of the School of Chemical and Life Sciences, University of Greenwich (United Kingdom);
- 4. Prof. Jan Lundell**, Professor, Head of the Department of Chemistry, Director of the Central Finland LUMA (STEM) Center (Finland);
- 5. Dr. Šarūnas Zigmantas**, Head of QC Sector, Quality control in *Teva pharmaceuticals* (Lithuania);
- 6. Mr. Benas Balandis**, Student of Master programme in Chemistry at Lithuanian University

## **II. PROGRAMME ANALYSIS**

### ***2.1. Programme aims and learning outcomes***

The aims and learning outcome are well defined and clear in the Self-evaluation Report (SER). The information can be consulted, in Lithuanian, in the web of the Faculty. It was not possible to find the same information in English.

The aim of the programme is to educate students with interdisciplinary academic education which can able them for further development of their intellectual capacity and scientific approach to the solution of problems arising in contemporary chemical engineering and the related engineering fields. The objectives for the programme are that graduates will obtain

employment or attend graduate school, will advance in their chosen careers and will be productive and fulfilled professionals throughout their careers

The study programme contains 21 learning outcomes, they have been classified in six types of skill and competence development: Knowledge, Engineering analysis, Engineering design, Investigations, Engineering practice, and Personal and social skills. These learning outcomes are well formulated, achievable, and are linked with the aims of the programme.

The elaboration of the Chemical programme has been elaborated taking account the employers' need, following international indicators as the European Federation of Chemical Engineering (EFCE) and Bologna recommendations as well as the recommendations of the previous evaluation realized in 2012.

During the visit it was possible to verify a high level of the satisfaction of the alumni and employers with the study programme. The results of the employability of the graduates demonstrate the companies have no problem with the levels of knowledge and skills acquired during their studies.

After revision in 2015 of the learning outcomes, in order to comply with the new descriptors for engineering approved by the Minister of Education and Science of Republic of Lithuania, the aims and the learning outcomes match requirements of profession sub-group 2145 Chemical Engineering of the Lithuanian Professions Classifier and is oriented towards the aims of Level 6 of the learning outcomes–base reference levels of the European Qualifications Framework.

From the information obtained in the SER and during the visit, the aims and learning outcome of the study programme evaluated can be considered coherent and compatible with the name of the programme – Chemical engineering, further more the learning outcomes are analysed every year to maintain them close to market needs. Those responsible for the degree are aware that the title of Chemical Engineering requires continuous improvements to attend to the constant changes that the discipline undergoes.

## ***2.2. Curriculum design***

The duration of Chemical Engineering Bachelor degree study programme has been reduced from 4 years to 3.5 academic years, although the SER describe the study programme of 4 years. During the visit an updated study plan was provided to review team. The reduction from 240 to 210 credits has been developed modifying slightly the credits of some courses and distributing all of them in 7 semesters.

The programme complies with the requirements of the legal study regulation acts, the Law of Science and Studies and the Descriptor of General Requirements to Bachelor Degree Study Programmes, EFCE and Bologna Recommendations (2010).

This year, because of the reduction to 3,5 years, the study scope is distributed in 7 semesters. The courses along the semester are spread evenly and the themes are not repetitive, and the courses sequence follows a logical connection. This was also confirmed by the students during the visit. The student workload per week is from 20 to 24 contact hours, except the last (7th) semester, where the majority of credits are devoted to the Practice-2 (12 credits) and the preparation of the Final Thesis (15 credits). The total scope of Practices is 16 credits. One semester consist of 15 weeks of the study, one week of self-study and 4 weeks of examination session.

The new study programme structure (3,5 year) is slightly different to the one included in the SER and consist of the following 2 modules: Common Academic study courses 15 ETCS. The University Senate defines these courses. This credits including 2 elective courses of 3 ECTS each one. The aims of theses courses are related with the development of student's cognitive and transferred abilities and skills and improve communication capability in national and international contexts. Study Field Courses (157 ETCS). These credits are defined by the Department of Engineering. The students need to select 7 ECTS more as Alternative for study field courses. These courses develop the core of the fundamental knowledge of the Chemical Engineering.

Students choose a topic for their Bachelor's Thesis in the sixth semester. The department assigns them a supervisor. The list of topics is based on three sources: 1) topics that are offered by teachers; 2) topics offered by companies or partners and 3) topics offered by the student.

Study course content and study methods allow achieving learning outcomes. The applied teaching, learning and assessment methods of studies are indicated in the SER. The list of subjects is developed providing many details.; including the prerequisite to attend the course, the learning outcomes to be achievable, the teaching learning and assessment methods, main aim, syllabus, bibliography and the complete academic plan.

During the course only teaching methods could be changed, but not the content of the course. After the course, based on student feedback, changes may be made to the programme. Evidences of pedagogical courses starting this year and the use of e-learning based on Moodle platform was found in the comments obtained in meetings during the visit.

The study plan is balanced; the number of contact hours, independent work, final thesis and total scope of practical training complies with General Requirements of the first cycle study programme and ensure the achievement of the learning outcomes.

The courses dealing with the core of the fundamental knowledge of the Chemical Engineering represent around the 75 % of the total credits, and enable a chemical engineer to perform professional functions. During the visit the alumni and employers commented that they are satisfied with the general achievement obtained in the study programme. They also stressed the need for such specialist in the Klaipėda region.

The Faculty maintains a close relation with the companies that hire the students through surveys, personal contacts, forums of exchanges of ideas, etc. The social partners suggest courses as “Introduction to liquefied Natural Gas”. During the visit, social partners suggested, that there should be more fundamental chemistry knowledge included in the study programme. Also, “AutoCAD” (or similar) courses should be integrated in the curriculum so the students could gain project-drawing skills.

### ***2.3. Teaching staff***

From the analyses of the curricula vitae of the academic staff involved in the study programme, it can be deduced that they comply with requirements of the legal acts, the aims of the study programme of Chemical Engineering, and the intended outcomes. Since the previous evaluation in year 2013, there has been a significant increase in the number of publications in internationally renowned journals, research international projects, and research project with private companies by teachers involved in the degree., as an example, in the period 2010-15 the staff published 129 publications (approximately 70 % in the last three years), 55 of them were articles published in ISI Web of Science database, and are assessed with a citation index journals and they were involved 16 projects (10 in the last three years) three of them were EU projects, almost all the projects are related with the marine research. These figures can be considered quite good.

Each teacher establishes autonomously the teaching methods and techniques to be applied. There is no evidence or systematized programs of teaching experiences and their implementation in the study programme. In the interviews with the students, some of them commented that some teachers should improve their pedagogical techniques.

It can be concluded from the documentation provided that the academic staffs involved in the study programme has experience and qualification to successfully manage their duties with a quality required to achieve programme aims and objectives. In a general way, it can be

considered that their recent research, related among others with: environmental engineering, simulation, heavy oil products, fuel transport engineering and renewable energies, is very close to the study programme. Altogether 35 teachers are involved in the compulsory courses of the Chemical Engineering Field and the elective special training courses; (17 from the Engineering Department and 18 from others Department); 4 for them are professors, 9 assistant professors, 4 lectures (Doctors), 12 lectures and 5 assistants. The number of teachers can be considered adequate to ensure learning outcomes of the compulsory courses of the Chemical Engineering field. The average ratio is 9 students per one teacher.

Following the Staff Development Plan, young promising teachers are gradually replacing the formerly overloaded staff members, during the assessment period 5 young teachers have entered doctoral studies and so are showing increasing academic achievements. Experiences with the figure of mentor, where an older staff member “mentor” helps new staff in particular subjects, has been carried out. The measures taken allow distributing academic workload in a much more effective way compared with the previous assessment period allowing staff members to spend more time for research activities. In any case, the teachers still have too many contact hours. The average of contact hours taking account professors, associate professors and lectures (only Doctors) is around 340 hours, an average of 240 hours could be consider as normal in Europe.

The institution offers courses for professional development of teachers, but the teaching load can prevent them from using such courses. It may be necessary to control and diminish the teaching load. An important aspect is the incentives in salary and teaching load depending on their scientific activities, work on project and publications.

#### ***2.4. Facilities and learning resources***

The premises, taking account the reduced number students, meet the minimum requirements. The University has prepared an investment plan for the construction of a new laboratory block at the University campus. The construction of a new Faculty building is also planned, but there is no information about when it will be built. The planning of new campus is a great input for programme management as it shows strategic planning for future developments. If finalized, will greatly improve the programme. However, as this is not the case yet, the review team can only evaluate the current conditions.

The Faculty has been making an effort to improve the student’s facilities (laboratories, equipment’s) since the last evaluation process in 2012, However, the laboratory equipment especially in engineering subjects does not correspond to the modern techniques and developments of Chemical Engineering. Those need to be improved by introducing new

laboratory techniques, new equipment, especially at pilot scale. This seems to be necessary for engineering subjects, computer facilities and specific software, taking into account, that the students demand more practical work.

One weak point is the Faculty building itself. It needs to be modernised in order to comply with the health and safety regulations. This situation remains practically the same from the last evaluation process in 2012. This is understandable as it was also explained in various group discussions that the decision not to renovate is based on future developments of University campus.

The review team during the visit indicated, that Laboratory safety is a very big issue in the Faculty. Students are working without any glasses or gloves. There are no safety and caution signs in the laboratories. This must have been improved. Additionally, not only signs but also the safety culture should be installed over pinning different courses explaining the real health and safety implications.

The library has been making an effort in the last years in order to improve the quality and accessibility of textbooks, books, periodical publications and databases. However, as was recommended in the previous evaluation, the library still needs to do a major effort to increase supporting places with computers and facilities for the student's independent work. The Faculty has wireless network that allows access to Internet for students with their own computers.

To summarize, in general, the Faculty tries to maintain equipment, acquire textbooks, keep subscriptions to scientific journals and databases, and update software versions, but this maintenance policy has to be more formally established.

### ***2.5. Study process and students' performance assessment***

The admission requirements are well established and publicity available. Applicants have to complete high school education and the rules have not changed since the last assessment. During the visit it was identified by the teachers that the preparation of the new students is very poor.

The Faculty try to motivate and increase the number of student's income in several ways as handing out promotional publications and souvenirs for children school that are interested in studies and during the exhibitions and visits. In this sense, the Faculty should continue with these actions and increase with other new actions, such as going to schools more frequently to spread the degree and its future possibilities.

The organization structure of study process of the degree is rational and appropriate for the implementation of the study programme and ensures an adequate provision of the

achievement of the learning outcomes. The students are enhanced in several ways, as an example they are invited to take part in scientific activities and project work of the Department.

Students have an opportunity to participate in Erasmus+ students' mobility programme. The number of outgoing students is increasing in the last years but is still low; during the assessing period eight students took part in Erasmus mobility programme. The Faculty has as priority to increase these figures. The International Relations Office have initiated and signed new bilateral agreements in order to encourage students to take part in Erasmus exchanges, in the meeting with students the review team corroborated as they prefer to attend classes in English.

Information about academic, financial and other kind of support for students can be found on the Klaipeda University and on the KU Students Union websites, in the University newspapers and in the brochure "Student's ABC" which is annually produced by the KU Students Union. The web of the department publishes employers' requests and job advertisements for Chemical Engineering specialists. The dropout rate in full-time study program is less than of 10 %, this percentage is higher in the first year (up to 50%) and is attributed to poor Mathematics and Physics, in fact the greatest number of dropouts is the students, who entered the university with the lowest score. In order to reduce these figures the Faculty organizes additional consulting hours to support these areas of study, and are developing a strategic plan to use the virtual learning environment to enhance teaching and learning activities.

The assessment of the students' performance is clear from the beginning of their courses. In various meetings this was confirmed explaining that assessment criteria are discussed in the first class. There are discussions where teachers discuss test results, what students have done well or wrongly and may be improved. In a general way, students think that their teachers are well prepared to teach; some of them have criticized the teaching quality of some of their teachers.

The information obtained through the SER and the interviews with Alumni and Employers revealed a high grade of satisfaction with the student's training received during the studies in Chemical Engineering programme. Graduates are successfully employed at industrial enterprises in the Klaipeda region. About 35 % of graduates continue their studies in Master degree studies.

Students, alumni were happy about the study programme. There are surveys where students can express their opinion about the studies/teachers/courses. Nearly 100 % of the students participate in these surveys, which is a very good response rate.

Students can have academic consultations with the teachers. The study programme provides opportunities for students to participate in scientific activities and project work of the Department.

## ***2.6. Programme management***

The decisions are taken following a protocol at three levels (University, Faculty and Department), which is well described in the SER. During the different meeting it was possible to ascertain that the whole process is well known and works effectively. The staff and administration very clearly explained the process even though it is presented quite complicated in SER document. However, the review team found evidence that the Quality assurance system is working.

The Academic Information System (AIS) supporting the process of study programme administration and quality assurance was completely implemented at the university in the 2013/2014 academic year. The AIS stores the information of study programmes, study subjects and the operative information of programme implementation, including information on student progress along the courses. The normative acts, such as Senate's decisions, Rector's orders, and others, describing the sequence of decision-making and a procedure for consideration and approval of the program's quality assurance are also available on the AIS.

Information about the study quality improvement results is given to all interested persons and can be consulted in the web of the Department. Evidences about changes in the study programme from the feedback of students and social partners were found. The influence of the student is very important, as an example, it is not possible to make any change of renaming the programme title without student agreement.

As a result of the previous evaluation in 2012 and the accreditation of the Chemical Engineering Program in 2013 a plan of actions was addressed to resolve the suggestions in the external evaluation report. This plan is presented in the Introduction of the SER.

The SER describes a strong collaboration with employers. Relationship with stakeholders is formalized through the questionnaire for employers prepared by the Department. This strong collaboration was corroborated during the visit. The social partners suggest courses, present research areas of interest, and often request assistance in problem solving.

The procedure of quality assurance is well specified in the Regulations of Studies of the University and complies with quality assurance regulations and guidelines of the EU and the Republic of Lithuania. The process is supported by the Academic Information System (AIS). During the meetings, the review team confirmed the effectiveness and efficiency of the quality

assurance process.

The Review Team acknowledges the Faculty and the Department of Engineering for their study programme, which provides a strategic vision and action plan of study programme development with respect to the needs and requirements of industry and employment of graduates in the region. The Chemical Engineering study programme was essentially modernised, to reflect the brisk market demands and recommendations of social partners. However, the review team has the impression that the actions being carried out to respond in the short term to the needs of constantly changing technologies in this area of chemical engineering.

### **III. RECOMMENDATIONS**

1. The Faculty building shows important security deficiencies, and there have been no substantial changes since the previous evaluation. The future building in KU campus could solve these problems but there is a need for modernising security in the existing building including architectural security, alarm systems, and information security.
2. During the visit the review team observed a lack of culture in personal security in laboratories. It is recommended that mandatory courses of safety and hygiene should be implemented from the beginning of practices in laboratories.
3. Systematic courses of pedagogical techniques should be developed to improve these skills among teachers and to raise the quality of teaching in the subjects of the degree.
4. It is recommended to establish formal mechanisms for maintenance of equipment, textbooks, subscriptions to database and journals and software versions.
5. Student mobility is still low and a continuous and major effort needs to be done to increase international mobility.
6. The number of students in the study program has decreased continuously from 2009. A continuous monitoring of this trend, and the possibility of increasing the motivation of students is strongly recommended.
7. It is important to further strengthen relations with schools to encourage students into science subjects. The Faculty should also improve its visibility and all the programme information available on the website International courses taught in English could also be of great help. .
8. The Faculty must establish mechanisms not only to respond in the short term to the needs of constantly changing technologies in this area of chemical engineering, but also to establish longer-term actions taking into account the international evolution of the sector.

#### **IV. SUMMARY**

The report of the evaluation of the degree of Chemical Engineering of the University of Klaipeda is based on the self-assessment report (SER 2016) and the visit of the external committee held on November 7, 2016. The SER and the external visit were performed according to the Methodology for evaluation of Higher Education study programmes.

The Academic Information System (AIS) supporting the process of study programme administration and quality assurance was completely implemented at the university in the 2013/2014 academic year. The AIS stores, among others, all the information about the study programmes, the normative acts and the description of the sequence of decision-making.

The University of Klaipeda is located in one of the regions, with around 360.000 inhabitants (Klaipeda city and Western Lithuania Region), which has experienced the third largest development in Lithuania, after the capital Vilnius. In the region is located a significant number of companies of great importance and size related to the maritime sector, among others the largest oil refinery in the Baltic Sea. The region has very good sea, air, and land communications. Its Klaipeda Free Economic Zone is one of the most proactive in the region, taking into account the number of investments attracted and the creation of jobs.

The number of students is decreasing during the last years, one of the most important reasons is the demographic problem of the Republic of Lithuania, this year the number of students was 5, and this fact may jeopardize the viability of the degree.

The Chemical Engineering Bachelor degree study programme has been reduced recently from 4 years to 3.5 years. The reduction from 240 to 210 credits has been developed modifying slightly the credits of some courses and distributing all of them over 7 semesters.

The aims and learning outcomes are well defined and clear. The elaboration of the Chemical Engineering programme has been elaborated taking account the employers' needs, following international indicators such as the European Federation of Chemical Engineering (EFCE) and Bologna recommendations as well as the recommendations of the previous evaluation realized in 2012. The aims and learning outcomes of the study programme evaluated can be considered coherent and compatible with the name of the programme. The Faculty has established mechanism to analyse the learning outcomes every year to maintain them close to market needs.

The courses dealing with the core of the fundamental knowledge of the Chemical Engineering represent around the 75 % of the total credits, and enable a chemical engineer to perform professional functions.

The number of teachers is adequate to cover the docent charge and the ratio teacher-student is quite good. The teachers have an adequate scientific and technologic level to teach in the course.

Since the previous evaluation, there has been a significant increase in the number of publications in internationally renowned journals, research international projects, and research project with private companies by teachers involved in the degree. Their research activities are very close to the subjects they teach.

The alumni and employers revealed a high grade of satisfaction with the student's training received during the Chemical Engineering Programme. The graduates are successfully employed according to the obtained education at industries enterprises of Klaipeda region. About 35 % of graduates continue their studies in Master degree studies.

The premises, taking account the reduced number students, are adequate, including the teaching and learning equipment. The University has prepared an investment for the construction of a new laboratory block at the University campus. The construction of a new Faculty building is also planed, but there is not any information about when the building will be completed. However, this situation remains practically the same from the last evaluation process in 2012. The Faculty needs a substantial reform in order to comply the health and safety regulation. Further more, during the visit a lack of culture of health and safety was observed, this fact need to be corrected in an urgent way.

## V. GENERAL ASSESSMENT

The study programme *Chemical Engineering* (state code – 612H81002) at Klaipėda University is given **positive** evaluation.

*Study programme assessment in points by evaluation areas.*

No.	Evaluation Area	Evaluation of an area in points*
1.	Programme aims and learning outcomes	3
2.	Curriculum design	3
3.	Teaching staff	3
4.	Facilities and learning resources	2
5.	Study process and students' performance assessment	3
6.	Programme management	3
	<b>Total:</b>	<b>17</b>

\*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field develops systematically, has distinctive features;

4 (very good) - the field is exceptionally good.

Grupės vadovas:  
Team leader:

Prof. Dr. Laurent Counillon (team leader)

Grupės nariai:  
Team members:

Prof. Dr. Domingo Cantero Moreno

Dr. Elizabeth Briggs

Prof. Dr. Jan Lundell

Dr. Šarūnas Zigmantas

Mr. Benas Balandis