STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

# PRODUCTION and MANUFACTURING ENGINEERING FIELD OF STUDY

# ŠIAULIŲ VALSTYBINĖ KOLEGIJA

## EXTERNAL EVALUATION REPORT

**Expert panel:**

1. Panel chair: Prof. dr. Jasmina Casals-Terré …….. (signature)
2. Academic member: Associate professor dr. Tadej Petric;
3. Academic member: Prof. dr. Tavo Kangru;
4. Social partner representative: Dr. Vaidas Liesionis;
5. Student representative: Mr Matas Žalandauskas

**SKVC coordinator**: Dr. Ona Šakalienė

Report prepared in 2025
Report language: English

# CONTENTS

# I. INTRODUCTION

## 1.1. OUTLINE OF THE EVALUATION PROCESS

The field of study 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 field of study.

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 an HEI; 2) A site visit by the review panel to the HEI; 3) The external evaluation report (EER) production by the review panel; 4) EER review by the HEI; 5) EER review by the Study Evaluation Committee; 6) Accreditation decision taken by SKVC; 7) Appeal procedure (if initiated by the HEI); 8) Follow-up activities, which include the production of a Progress Report on Recommendations Implementation by the HEI.

The main outcome of the evaluation process is the EER prepared by the review panel. The HEI is forwarded the draft EER for feedback 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 an HEI disagrees with the outcome of the evaluation, it 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).

If the field of study and cycle were **previously accredited for 3 years**, the re-evaluation of the field of study and cycle is initiated no earlier than after 2 years. After the re-evaluation of the field of study and cycle, SKVC takes one of the following decisions regarding the accreditation of the field of study and cycle:

- To be accredited for the remaining term until the next evaluation of the field of study and cycle, but no longer than 4 years, if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points).
- To not be accredited, if at least one evaluation area is evaluated as satisfactory (2 points) or 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. Jasmina Casals-Terré, Professor at Technical University of Catalonia-BarcelonaTech Mechanical Engineering Department, Spain;
2. Academic member: Associate professor dr. Tadej Petri, Associate professor at Jožef Stefan International Postgraduate School (MPŠ) and senior research associate in the Department of Automation, Biocybernetics and Robotics, Ljubljana, Slovenia;
3. Academic member: Prof. dr. Tavo Kangru, Professor at Tallinn University of Applied Sciences TTK, Institute of Technology, Estonia;
4. Social partner representative: Dr. Vaidas Liesionis General director of the Closed Limited Company (UAB) Machinery Plant, Lithuania;
5. Student representative: Mr Matas Žalandauskas, second year student in the Renewable energy engineering study programme at Vilnius College, Lithuania.

## 1.3. SITE VISIT

The site visit was organised on 13th November 2024 onsite.

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

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

The majority of the meetings were conducted in English; however, translations were required for some discussions with specific individuals.

## 1.4. BACKGROUND OF THE REVIEW

### Overview of the HEI

Šiaulių Valstybinė Kolegija (ŠVK) is a state higher education institution in Lithuania, established in 2002 through the reorganization of higher technical and medical schools. It provides first-cycle college studies and operates under its Statute, guided by the ŠVK Council, Academic Council, and the Director. The organizational structure, updated in 2021, facilitates efficient planning, resource allocation, and quality assurance for study program management.

The institution comprises two academic faculties: **Faculty of Health Care** (with 3 departments) and the **Faculty of Business and Technologies** (with 5 departments).

Support units include the **Study and Science Coordination Unit**, which integrates research and studies, and the **Activities Planning and Management Unit**, which oversees administrative tasks.

### Overview of the study field

In the 2023–2024 academic year, ŠVK enrolled 1,631 students, with 1,055 in the Faculty of Business and Technologies, 24 percent (387 persons) of all ŠVK students are students of the Engineering Sciences fields group, 14 percent of which (54 persons) of students study in the field of Production Engineering.

### Previous external evaluations

The Production Engineering study program underwent external evaluation in 2018 under the Production Engineering study field. Initially accredited as Mechatronics for four years, its accreditation was extended until further evaluation alongside similar programs in Lithuania.

On January 25, 2021, the program was renamed Production Engineering, reflecting labour market insights from a 2020 survey by PI "Invest Lithuania." The update was informed by feedback from local high school students, Šiauliai region businesses, social partners, and the Study Field Committee.

On February 2, 2024, the program's description was revised to align with the updated Engineering Sciences Study Field Group descriptor (2023), as approved by the Academic Council.

### Documents and information used in the review

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

- Self-evaluation report and its annexes
- Final theses

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

The following additional sources of information have been used by the review panel:

- Website

# II. STUDY PROGRAMMES IN THE FIELD

## First cycle/LTQF 6

| | |
|---|---|
| Title of the study programme | **Production Engineering** |
| State code | 6531EX062 |
| Type of study (college/university) | College |
| Mode of study (full time/part time) and nominal duration (in years) | Full-time (3 years)<br>Part-time studies (4 years) |
| Workload in ECTS | 180 |
| Award (degree and/or professional qualification) | Professional Bachelor in Engineering Sciences |
| Language of instruction | Lithuanian |
| Admission requirements | Secondary education |
| First registration date | 12 June 2018 |
| Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision) | |

# III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The **first cycle** of the Production and Manufacturing Engineering field of study is given a **positive** evaluation.

| No. | Evaluation Area | Evaluation points[1*] |
|---|---|---|
| 1. | Study aims, learning outcomes and curriculum | 3 |
| 2. | Links between scientific (or artistic) research and higher education | 4 |
| 3. | Student admission and support | 3 |
| 4. | Teaching and learning, student assessment, and graduate employment | 3 |
| 5. | Teaching staff | 3 |
| 6. | Learning facilities and resources | 3 |
| 7. | Quality assurance and public information | 3 |
| | **Total:** | 22 |

# IV. 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

According to the SER, the programme has undergone several updates according to surveys and studies to analyze the society's needs. Collaborating with stakeholders like MOSTA (STRATA from 2021), LINPRA, Lithuanian plastics clusters, and local manufacturing companies, the College analyzed labour market trends, industry strategies, and employer demands. Surveys with managers from the Šiauliai and Radviliškis metal processing industries highlighted a critical shortage of

1*

**1 (unsatisfactory)** - the area does not meet the minimum requirements, there are substantial shortcomings that hinder the implementation of the programmes in the field.
**2 (satisfactory)** - the area meets the minimum requirements, but there are substantial shortcomings that need to be eliminated.
**3 (good)** - the area is being developed systematically, without any substantial shortcomings.
**4 (very good)** - the area is evaluated very well in the national context and internationally, without any shortcomings.
**5 (exceptional)** - the area is evaluated exceptionally well in the national context and internationally.

specialists skilled in managing and modernizing production facilities using advanced technologies (e.g., mechanical drives, sensors, automation).

In 2021, the Šiauliai Chamber of Commerce, Industry, and Crafts, along with municipalities and PI Invest Lithuania, surveyed 111 companies in the Šiauliai and Telšiai regions, representing 8–10% of the region's workforce. The study revealed a significant shortage of engineering and IT professionals, identified as the region's biggest challenge for the next three years. Employers anticipate hiring 1,274 engineers across various fields during this period, with the most in-demand roles being in technology and manufacturing, mechanics, and mechatronics.

Invest Lithuania also reviews higher education programs to align with foreign investor needs, further emphasizing the critical demand for skilled engineers.

The rise of **Industry 4.0** further emphasized the need for professionals with expertise in **mechatronics and production engineering**. Industry leaders strongly supported the program, expressing an urgent demand for specialists and confirming they could employ dozens immediately.

The aims and learning outcomes are defined in terms of both the academic content and professional requirements for Professional Bachelor level studies, which conforms with the high-level manpower needs of the labour market in the country and specifically in the Šiauliai region.

Employers who participated in the review group meeting with alumni and stakeholders emphasized the need for this profile of specialists.

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

According to the SER, the aim and intended learning outcomes of the production engineering programme align with the qualifications and competencies outlined for production engineers in the professional standard for the **Production of Machinery and Equipment, Vehicle Production, Maintenance, and Repair** sector. The programme addresses societal needs according to **Lithuania's Progress Strategy "Lithuania 2030"** and the **Šiauliai City Strategic Development Plan 2015–2024, which** prioritizes the training professionals capable of producing competitive outputs.

Table 1 and Table 1. 2 of the SER reflect the program aims and the ŠVK mission being both in line and also aligned with the labour market needs, as well as Lithuania's progress strategy.

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

It is noted the high demand of Production Engineers specialists in Šiauliai region. Hence this program can contribute to meeting the needs of the industry.

The overall study field aim is perfectly in line with the vision and mission of Šiaulių Valstybinė Kolegija (ŠVK).

| | |
|---|---|
| 1.2. | Programmes comply with legal requirements, while curriculum design, curriculum, 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 corresponds to the formal requirements for College study programs requirements ( Order No. V-1168 of the Minister of Education and Science of December 30, 2016 "On approval of the descriptor of general study requirements"). The duration of full-time studies is 3 years (6 semesters), in part-time - 4 years (8 semesters). The scope of the program is 180 national (including ECTS) credits - is sufficient, it corresponds to those set for this type of programme requirements. The volume of one year of full-time studies is 60 credits, the volume of one semester is 30 credits, duration - 20 weeks. No more than 7 subjects are studied per semester, including practitioner.

Legal requirements

- The credits related to the study field must be at least 120 ECTS being 150 in the programme.
- The credits specified by the HEI or chosen by the students should be not more than 120 ECTS and are 30 ECTS.
- The graduation project must be at least 9 ECTS and it is 12 ECTS.
- The practical training should be at least 60 ECTS and it is 73 ECTS.
- Contact hours are 50% in the programme, being higher than 20% established.
- Self-study hours are 50% in the programme, being higher than 30% established.

All of these comply with the legal requirements for the field and cycle of study.

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

In the document attached to the SER entitled “Šiauliu College link to the subject descriptions,” there is an appropriate mapping of the knowledge requirements and study subjects. In SER (The aim of the programme reflects the main functions of professional activity). Twenty learning outcomes of the field and cycle study programme are expressed in terms of the knowledge, skills and abilities, which the graduate of the programme should acquire, and are summarized in Table 1.1 of the SER. The Learning outcomes (LO) should be more expressed in terms of what the students are able to do after graduation. Avoid formulations like; knowledge, understands, awareness etcetera such as LO 1 to 5. The Study Programme (SP) subjects are arranged in such a way that the content of the study subjects fulfils the SP learning outcomes and the study subjects are arranged in a sequence such that the competences are developed in a logical manner and subsequent study subjects are based on the learning outcomes achieved in the previous study subjects. The matrix of relations between the SP outcomes and subject outcomes is presented in “Šiauliu College link to the subject descriptions,” (SER) and it shows how the envisaged competences are developed in individual subjects.

LO 12 is listed for Engineering materials and it is not clear how this subject can contribute to this LO. LO 9 is listed for Engineering mechanics and again the use of computer programs is not fully supported by the study methods or the assessment methods. LO 4 is listed in Technological Equipment for Materials Processing and the achievement of this LO is not supported by the study methods nor assessment methods. Some learning outcomes are too wide for instance LO 19 combines Lithuanian communication and English or foreign language communication and this LO is not fully addressed according to the study methods presented. LO 17 related to artificial intelligence use is covered in Exploitations of technological equipment of 3 ECTS which also covers LO 5 and

LO 15, therefore the level of expertise reached can not be enough for Bachelor level studies and in Economy of companies and management of 6 ECTS, however the experts consider that in this subject the LO 17 is no achieved through the study methods In general, there is a clear correspondence on how the individual subject learning outcomes contribute/map into the SP learning outcomes (SER).

In the other LOs, there is a good mix of teaching and learning methods that are used to deliver the courses, which are appropriate for achieving the desired learning outcomes such as lectures, practice, laboratory work and projects (individual and group). Assessment is also based on a mixture of coursework, presentations and examinations, which is appropriate.
The LO are regularly updated. In 2021, a survey was conducted with companies, demonstrating alignment between the program's learning outcomes and the needs of the study field. Additionally, in line with the ŠVK Description of Study Subjects Attestation Procedure (2020), the topics of the subjects, assessment methods, and other aspects are reviewed every three years.

According to the SER the subjects are delivered through a mixture of lectures, laboratory work and self-study (accounting for no less than 40-50%) which is appropriate for achieving the intended program aims. Assessment is also based on a mixture of coursework, presentations and examinations which is appropriate. However, during the review meeting, students highlighted that the coexistence of a part-time program alongside the full-time program, combined with the small number of students enrolled in the full-time program, has led to an imbalance in the number of contact hours provided to full-time students. During the visit, full-time students expressed a clear need for additional contact hours.

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

The order of the study subjects is logical, starting with general science and engineering subjects in the first year, necessary for the student to develop basic knowledge and cognitive skills in mathematics, physical sciences, informatics, mechanics, material science, technical drawing and Professional communication. In the second and third years, the subjects of production engineering are taught in a logical sequence to enable the competences to be developed in a gradual manner, also providing the necessary knowledge and skills for the final thesis work.

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

Students have the opportunities to personalise the structure of their field of study programme by free choice of 6 (Cr) (between English, German or Russian), 3 Cr of general and digital competences (Sociology/philosophy/Basics of Law) and 15 ECTS of deepening knowledge in the field. The students can also decide on their final works and graduation practice. Students may also choose full-time or part-time studies to suit their particular circumstances. Students have the opportunity to participate in the academic mobility program and study some subjects in foreign higher education institutions. The student can participate in a minimum of 10 ECTS credits Eramus+ practice for 2 months.

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

According to the SER, the graduation project has been regulated since 2023 by the Programme Description of Procedure for Graduation Project Development, Defense, and Assessment at ŠVK.

Only one student has graduated from the program, and the topic presented was relevant to the study field and suitable for the level of the studies.

### ANALYSIS AND CONCLUSION (regarding 1.2.)

The teaching, learning, and assessment methods are generally well-aligned with the aims and learning outcomes of the field and the study program cycle. However, careful attention should be given to the full-time study program to ensure that an appropriate number of contact hours is included in the schedule and that lectures are delivered consistently, even when student enrolment is low.

The structure and sequence of study subjects, including internships and the final thesis, effectively enable students to develop the competencies required for graduates of the respective field and study cycle. Furthermore, the study programs fully comply with the legal requirements.

The selection of electives, language options, graduation practice, and final project provides students with reasonable opportunities to personalize their study program to meet their individual needs and interests.

## AREA 1: CONCLUSIONS

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

### COMMENDATIONS

None

### RECOMMENDATIONS

To address shortcomings

1. **Ensure that the schedule and the number of classes** established in the **full-time program** are fulfilled: Revision of the lecture schedule for full-time students to ensure the planned contact hours.

For further improvement

1. **Check the Mapping of LO to subjects.** A revision of the individual subject LOs and the matrix is recommended to harmonize the SP learning outcomes with the subject-specific LOs. Special attention should be given to ensuring adequate coverage of artificial intelligence topics.
2. **Increase knowledge on plagiarism and collective intelligence tools:** especially during the elaboration of the final thesis report.

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

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|---|---|
| 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 program's research activities are well-integrated into the academic framework, as demonstrated by faculty contributions to peer-reviewed publications and presentations at national and international conferences. Faculty research supports the program's objectives by addressing topics relevant to production engineering, such as gear control systems, modernization of technological equipment, and automation. Events like the annual "Business, New Technologies and Smart Society" conference and the "KNOW" project foster collaboration with local industries and provide students with practical exposure to real-world challenges. Research initiatives are bolstered by municipal funding and partnerships through programs like INOSTART and STEAM, ensuring the financial viability of applied research efforts.

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

The curriculum at ŠVK is designed to closely align with the latest advancements in science, technology, and engineering practices. Reflecting Industry 4.0 principles, it emphasizes automation, robotics, CNC programming, and digital manufacturing to equip students with essential skills for modern industrial environments. Courses such as "Programming of Industrial Robots" and "Computer Aided Material Processing Design" utilize advanced software tools like AutoCAD, SolidWorks, and CNC simulation platforms, providing practical, industry-relevant training. Regular updates, informed by faculty research and industry feedback, integrate emerging technologies, including artificial intelligence, advanced electromechanical systems, and sustainability practices. For instance, the "Image Processing in Automated Production" course incorporates VISOR Vision Sensor programming and SensoPart software, ensuring the curriculum remains dynamic, innovative, and aligned with current industry needs.

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

The program provides meaningful opportunities for students to engage in applied research, aligning with first-cycle academic requirements. Students participate in hands-on, practice-oriented projects and collaborate with faculty and industry partners on research activities. For instance, during the analyzed period, four students were involved in a research project with JSC EICautomation, contributing to a study on mobile logistics robots. Students also present their research at national and international conferences, such as the "Business, New Technologies, and Smart Society" conference, highlighting their findings and gaining valuable academic exposure. Workshops, seminars, and company visits further enhance their research skills and practical understanding of industry needs. While Erasmus+ opportunities are available, participation in mobility programs remains limited, reflecting the smaller student pool.

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

**The Production Engineering program at ŠVK integrates scientific research and higher education to a good degree, with faculty research directly incorporated into the curriculum and partnerships with local industries providing students with exposure to practical applications.** The program focuses on applied research, equipping students with skills relevant to industry needs, particularly in areas like automation, robotics, and digital manufacturing**. Student involvement in research is facilitated through national conferences and collaborative projects; however, the scale of these activities and international engagement could be further strengthen.**

**The number of students participating in applied research projects, such as the four involved in the EICautomation mobile logistics robot study, is modest to the program's potential. Furthermore, while opportunities exist through the Erasmus+ program, participation in international mobility programs is still infrequent. Faculty research output, while contributing to the academic environment, is primarily shared at local and national levels, with some presence in the international forums. Expanding global visibility would further strengthen the program's ability to fully integrate cutting-edge global research trends into its teaching and research practices.**

**The program successfully integrates research into education and meets professional bachelor requirements. However, expanding student participation in international scientific activities, broadening the scope of applied research, and increasing the visibility of faculty research in global contexts would further enhance its overall effectiveness.**

## AREA 2: CONCLUSIONS

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

### COMMENDATIONS

None

### RECOMMENDATIONS

To address shortcomings

None

For further improvement

1. **Increase research opportunities for students:** particularly for part-time students and across all study years.
2. **Pursue additional partnerships with international institutions** and increase participation in international research projects.

3. **Improve Quality and Number of International Publications:** Encourage faculty to publish more frequently in internationally recognized journals.

# 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 student selection and admission criteria and procedures are transparent. Students are admitted in two ways, which are either through joint admission which is organised by Lithuanian higher institutions association (Lama BPO), or through direct institutional admission. The information about student admission is available via ŠVK website and is accessible to all. Consultations about admission are available through phone or e-mail as well. All study programs that ŠVK offers have two profiles: full and part time studies. As stated in the self-evaluation report, the numbers of students that are admitted to the programme is quite low, because of low popularity of studies in the engineering field, which in many cases depends on basics that students acquire in secondary school. The number of applied students in 2021 part-time - State funded 10; Non-state funded - 2 with the average score in SF - 6.4; in NSF - 7.51; in 2022 part-time - State funded 9; Non-state funded - 13 with the average score in SF - 5.81; in NSF - 3.78; full time - State funded 4; Non-state funded 5 with the average score in SF 5.7; in NSF - 3.52; in 2023 part-time - State funded 6; Non-state funded - 8 with the average score in SF - 5.28; in NSF - 4.11; Full time - State funded 4; Non-state funded 3 with the average score in SF 5.28; in NSF - 3.72; The dropout rates are not included in the SER. After finishing school graduates do not always have the necessary skills and knowledge for studies in the engineering field. To attract more students, ŠVK promotes engineering studies via various events, by using social networks and social partners are getting involved to further help College attract more students, which is confirmed after the visit, by presenting the activities of companies and job prospects. Furthermore, ŠVK organizes open days to get to know study programmes that are offered in a College. Various international events as well as events taking place at the ŠVK, in Lithuania and abroad are used to publicise the information even further. Part-time students are not dropping out as much as full-time students, and the main drop-out reasons are: not enough lessons, barely any support from teachers, common cancelling of classes, inability to use machines. First semester is the most difficult in terms of drop-outs.

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

ŠVK recognizes competences gained through non-formal and informal adult education, as long as these can be substantiated and proven as learning outcomes. These competences are credited towards the study Programme and its subjects without limitation, provided they correspond to the learning outcomes of similar subjects in the Programme, or if at least 50 percent of the subject's scope hours were dedicated to acquiring these competences. Competences gained through work, qualification improvement, organizational activities, volunteering, community service, non-formal education, informal studies, or self-education can also be recognized by ŠVK, provided they are substantiated and proven equivalent to the learning outcomes of subjects. Based on both reconciled and non-reconciled content of professional education and studies, this is applicable to individuals with a level IV qualification (or higher) recognized in Lithuania or abroad, who have been admitted to ŠVK's first cycle studies. During the analyzed period, 28 students' competences acquired through formal education were recognized.

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

ŠVK maintains transparent admissions processes, allowing entry through both joint admission organized by the Lithuanian higher institutions association (Lama BPO) and direct institutional admission. Information and consultations about admissions are readily available through various channels, including the ŠVK website, phone, and email. Despite these efforts, engineering programme face low enrolment due to inadequate preparation from secondary education, which impacts the popularity of these studies. To attract more students, ŠVK promotes engineering studies via events, social networks, and partnerships with social partners who present the activities of companies and job prospects. They also organize open days and participate in international events. Dropout rates are higher among full-time students, with reasons including insufficient lessons, lack of teacher support, class cancellations, and inability to use machines. The first semester is particularly challenging in terms of dropouts. ŠVK recognizes competences gained through non-formal and informal education if they align with the learning outcomes of similar subjects in the study program. This includes competences from work, qualification improvement, volunteering, and other activities. During the analyzed period, the College recognized competences acquired through formal education for 28 students. Improving preparation and support for students in the engineering field, especially during the first semester, can help reduce dropout rates and attract more candidates. Efforts to promote these programs and recognize prior learning outcomes further enhance the college's appeal.

| | |
|---|---|
| 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

Opportunities for student academic mobility are ensured by coordinating the Erasmus+ selection contest for students twice a year, in accordance with the 2022 guidelines. Information on mobility programme opportunities is disseminated via the ŠVK website, open spaces, informational stands, social networks, and email. Each incoming and outgoing student is assigned a coordinator at both ŠVK and the partnering foreign organization. According to the SER, students which study abroad have an excellent opportunity to improve foreign professional language as well as acquire new academic experience and getting to know foreign culture, although in reality, rate of students going abroad is low, because students don‘t want or are unable to travel. ŠVK has an extensive list of higher education institutions in which students can learn new things, for example Kaunas University of Technology, where students attend study trainings(practices). It is recommended to motivate students going abroad as it is beneficial to get new study knowledge and material which is taught at foreign higher education institutions.

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

ŠVK ensures that the support provided to students is relevant, adequate, and effective through several key measures. Detailed information about Programmes is made available, and students benefit from a flexible study schedule and the option to study according to individual schedules. Faculty and departmental consultations are offered on study and career issues. Incentive

scholarships are granted based on semester performance, while one-off scholarships recognize outstanding achievements in academics, scientific endeavours, cultural activities, sports, and social contributions. State-subsidized loans are available to cover tuition, partial study costs, and living expenses. The Programme students received financial assistance 3 times. Accommodation is provided in two newly renovated and modernized dormitories with a total of 393 places. According to the SER, during the analyzed period the Programme students received 25 incentive scholarships, 60 targeted incentive scholarships, 22 one-off scholarships, 2 social scholarships and 6 nominal scholarships Students have the opportunity to engage in various sporting, social, and scientific activities and are encouraged to participate in ŠVK and Faculty events, as well as in the activities of the Students' Representative Body. Student meetings 2-3 times a year in order to assess and solve problems. Formal meetings are also taking part in order to help students with their academic journey, students are taking surveys about their well-being as well. Students are able to try out professions that are given by social partners in order to help students choose their future profession. Student drop-out minimizing actions are taken: Students have curators, which organize site-visits and encourage students to stay in a study programme, in order to motivate and keep students, drop out rates are rather small according to the SER although the specific number is not mentioned, but it is hard to attract students rather than keep then. Also, part-time students get more support than full-time students. It is strongly recommended to help full-time students more on their academic journey and give them support that they need.

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

ŠVK provides Group curators that introduce first year students with the study system and support possibilities. Also, introductory days are organised in order to help first year students familiarize with ŠVK and its departments. According to the report, A sense of autonomy in the learner is encouraged, while ensuring adequate guidance. Various means and forms are used to inform students about information students may need. Students who, for certain reasons, are unable to attend the ŠVK are consulted remotely: via e-mail, telephone, distance learning platforms. Students also have an option to get help from specialists in administration. The ŠVK Student Admission and Career Center offers consultations and information on career management, organizes seminars and events on career advancement, and provides guidance on preparing for the labor market, lifelong learning, and further studies at universities in Lithuania and abroad. The Library and Self-study Centre offer personal consultations and various training on library resources and information search systems, such as introductory training for first-year students. Students also participate in introductory visits to production companies and business exhibitions to boost their motivation to study. It is recommended to Encourage teachers to give greater attention to students' individual needs, because students were displeased with the lack of attention from teachers, as well as consultations and lack of laboratory equipment that is accessible by students.

## ANALYSIS AND CONCLUSION (regarding 3.2.)

Šiauliai College (ŠVK) provides transparent opportunities for student academic mobility through Erasmus+ and other exchange programs, with information disseminated via various channels. Despite low student participation in study abroad programs, these opportunities are beneficial for gaining new knowledge and cultural experiences.

ŠVK ensures relevant and effective support for students, including detailed programme information, flexible study schedules, faculty consultations, scholarships, and state-subsidized loans. Accommodation is available in modernized dormitories, and students can engage in a variety of

activities and events. Regular student meetings and surveys help address issues and improve the academic experience.

Efforts are made to minimize student dropouts through curators, site-visits, and additional support for part-time students. First-year students receive guidance and support through introductory days and group curators. Remote consultations and various informational resources are available to students. The Student Admission and Career Center provides career guidance and organizes relevant events.

Improving motivation for long-term studies abroad and enhancing support for full-time students can further strengthen the College's commitment to student success.

## AREA 3: CONCLUSIONS

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

### COMMENDATIONS

1. **Student Satisfaction with the Study program:** Students are generally satisfied with their studies in this field, with part-time students expressing particular contentment.

### RECOMMENDATIONS

To address shortcomings

1. **Increase opportunities to go abroad:** Students should have more opportunities to study abroad, especially long-term.
2. **Increase Individual Student Assessments:** Encourage teachers to give greater attention to students' individual needs.

For further improvement

1. **Improve Access to Laboratories**. Ensure students have access to the equipment provided by ŠVK.
2. **Promote Full-time Study Program.** Implement strategies to attract more students to the full-time program.

## 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

The structure and content of the ŠVK Production Engineering study program are sufficient to acquire the desired learning outcomes successfully. The study programme covers all the important areas/subjects to provide the necessary knowledge and its application. The programme is organised in semesters according to full-time and part-time study plans. When the reasons arise, a temporary Individual Study Plan is possible.

Various learning methods are used, including traditional ones such as lectures, practices, seminars, discussions, and group learning, and the latest interactive methods using virtual communication tools: Google Meet, Zoom, Classroom, Moodle, etc. The broad scope of the methods is sufficient to achieve the learning outcomes. However, the importance of field-specific laboratories and their purposeful use in engineering programmes should be emphasised here. To effectively acquire learning outcomes, the laboratories must be systematically updated, the tools, equipment, and technological cells used must be sufficient, and they must cover the selection of essential technologies in the field. Discussions with the parties involved and tours of the laboratories highlighted the need to review the laboratories' development plans and, if possible, diversify the scope of use of technical materials.

A feedback system has been implemented for the study programmes, considering the students, alumni, and regional entrepreneurs to ensure a systematic and realistic update of the programme. It would be sensible to review the student feedback loop, emphasising the need to ensure wider involvement and that student suggestions reach the curriculum commission or subject lecturers. Collecting feedback on-time lectures/workshops, cancellations, and consultations is also important and helps hold the student's study motivation. A well-functioning and transparent feedback system has several important aspects, such as students' broader understanding of the study programme and the field of study and the opportunity and obligation to design and follow the programme.

Students who complete the Production Engineering study can continue their education to the next level. An agreement has been signed with Kaunas University of Technology to ensure a smooth student progression to the next level of study. Students are aware of this opportunity, and some students continue their studies each year.

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

Šiaulių Valstybinė Kolegija is dedicated to promoting social integration, human rights, and equality for all, ensuring that no individual group faces discriminatory segregation. The institution tailors its educational methods to accommodate the individual abilities of students with special needs, such as by increasing font sizes, speaking at a slower pace, and extending assessment times. Physical resources, including libraries, study tools, and IT infrastructure, are adapted to support field studies for students with special needs. Additionally, financial assistance is available for socially vulnerable students and individuals with disabilities.

## ANALYSIS AND CONCLUSION (regarding 4.1.)

ŠVK has created sufficient prerequisites and opportunities for students to acquire the necessary learning outcomes. The study programs are balanced, covering theoretical topics and practical skills necessary to fulfil the learning outcomes. The minimum proportion of elective subjects in the curriculum could be highlighted, which is not a direct threat but may inhibit learning motivation for

some students and thereby affect the achievement of their learning outcomes and academic progress.

Different learning methods are used in the study courses, varying them based on the needs of the lecturer and the subjects. The existing laboratories are in use and equipped with the necessary technological capabilities. However, the availability of laboratories to students could be significantly increased, and if possible, the technological capabilities of the laboratories could be expanded, considering the needs of local companies. The assessment system is clear and reasonable, and no shortcomings in its functioning were identified.

| | |
|---|---|
| 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

The student's progress and feedback are systematically monitored, ensuring sufficient feedback to promote self-assessment. At the beginning of each course, a description, assessment system, and criteria are introduced. The lecturer provides continuous feedback throughout the course. The interim assessment results are systematically entered into the electronic exam sheets system. Students who fail the exam have the opportunity to repeat the subject, retake the exam, postpone a session, take a break from studies or take academic leave. The progress of students based on the curriculum is analysed on a semester-by-semester basis at the Department and Deanery and presented in the Faculty reports. Although feedback from lecturers to students is well organised, feedback from students to lecturers and to the Study Programme Committee (SPK) should definitely be promoted, thereby ensuring the development of lecturers and study programmes from the student's perspective. Although ŠVK implemented such a system, the extent of its use has not been fully clarified.

### 4.2.2. Graduate employability and career are monitored

ŠVK graduates of Production Engineering are well employed but this fact is well proofed only during meetings with students (some students are working), alumni and employers. Teaching staff mentioned the alumni club but it looks like it’s not formalized yet. However in SER data about employability and career monitoring is really very basic and looks not informative. There is no data from ŠVK career monitoring and there is just a link to the Education Management Information System which is collecting employability across the country.

Expert group recommends establishing a formal, written institutional career monitoring system and implementing it on a regular basis, with the collected data made accessible to prospective students. Such a system could support the marketing of the study field to future students while also demonstrating transparency regarding ŠVK alumni career achievements. There is significant potential for improvement in the area of career monitoring.

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

ŠVK has implemented various policies and measures for students and academic staff, the principles and standards outlined in the ŠVK Statue, to ensure academic honesty, tolerance, and non-discrimination in both directions. Although measures have been implemented, students, faculty, and

support staff may need to be more aware of, recognise, and implement them. To create a stronger non-discrimination culture, it would be wise to integrate the Code of Academic Ethics even more into the study program subject. Although ŠVK pays great attention to preventing plagiarism (eLABa system) and inappropriate use of information sources, technology has rapidly developed in this area in recent years, sometimes making it difficult for both academic staff and the student body to make the correct decision. Consequently, it is necessary to review this topic and constantly implement new measures when necessary.

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

ŠVK has developed a transparent and objective process for receiving and handling appeals and complaints within the study course and the thesis framework. The process has been introduced to both the student body and academic staff.

Currently, it is difficult to assess the effectiveness of this process because no cases have been registered. The lack of cases may be due to good cooperation between parties, distrust of the process from the sender's point of view, or some other unknown factor. At this point, it would be reasonable and useful to explain the necessity of the process's principles in more detail so that the parties' distrust of the process is excluded or unknown factors are detected, if any.

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

ŠVK has implemented a system to monitor student learning progress and provide feedback. The principles and scope of the system have been communicated to all relevant parties, who have been instructed on its usage. Data is analyzed at multiple levels, informing mitigation proposals.

Providing feedback is an integral part of the teaching staff's daily work and is carried out on an ongoing basis. However, the feedback provided by students is generally minimal. At this stage, it would be beneficial to increase student feedback by explaining its importance and encouraging greater participation.

ŠVK has introduced various activities and measures aimed at ensuring academic integrity, tolerance, and non-discrimination for both the student body and academic staff. A clear and transparent process is in place for receiving and addressing appeals and complaints, including those related to courses and final theses. However, since no cases have been registered so far, it is challenging to evaluate the overall effectiveness of the implemented system. Moving forward, continued efforts to educate and raise awareness among community members on these issues would help foster an inclusive and respectful environment for all.

## AREA 4: CONCLUSIONS

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

**COMMENDATIONS**

1. **Increase Number of Elective Subjects:** The curriculum provides a minimum proportion of elective subjects, which ensures a structured learning path. However, highlighting this aspect further could enhance students' motivation and engagement, thereby positively impacting their learning outcomes and academic progress.

**RECOMMENDATIONS**

To address shortcomings

1. **Review laboratory development plans:** to fully achieve LO, promote self-aware learners and allow students to use all laboratory capabilities comprehensively and, also, if possible, diversify the area of use of technical materials.

For further improvement

1. **Explain Feedback Systems**: It would be sensible to explain the various principles of the feedback system in more detail so that the system would find wider use and the information collected would contribute to the creation of improvement activities.

# 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

Currently, the academic staff of the Production Engineering study programme consists of 13 members, most of whom teach study field subjects. The academic staff of the study field subjects consists of five associate professors and seven lecturers. The workload coefficient varies from below 0.7 for one member to above 0.7 for twelve members. One member of the academic staff has a workload coefficient above 1.0. The age distribution of the teaching staff is six members aged between 31–45 years, three members 46–60 years and aged over 60 years 4 members, ensuring the sustainability of the study programme.

More than half of the academic staff have a master's degree, and over 37 per cent have a doctorate degree in this engineering study field or an equivalent higher education qualification. 75 percent of teachers have three years of practical work experience in the field of the taught subject. Teaching staff who are appointed as associate professors conduct applied research in the field of expertise.

Academic staff's employment contracts are for five years. After each five-year cycle, an attestation is carried out to determine the compliance of the staff's research and pedagogical qualifications. The attestation process and criteria are public and described in the *Description of Evaluation of the ŠVK Applied Scientific Activities of the Teaching Staff* and *Description of Practical Activity Internship Procedure of the ŠVK Teacher*. The main criteria for the assessment are compiling methodological material, participation in conferences, the number of published scientific articles, conducting research projects, supervising research, and other related research.

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

ŠVK has sufficient qualified lecturers and associate professors to teach the study programme successfully. In addition to academic competence, lecturers have practical experience in their study field. Applied research is conducted, and there is reason to believe that the results will be used to illustrate study course materials. An academic staff attestation system has been implemented, and it is sustainable. One risk of practising teachers who also have high workloads outside of ŠVK is a loss of focus together with poor planning, and as a result, daily communication with students may suffer. Professional communication between teachers and students is one of the most important motivational factors.

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|---|---|
| 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

ŠVK academic staff have the opportunity to participate in international mobility programmes such as ERASMUS+. The opportunity to participate and confirmed participants are announced once a year by the Department of International Relations and Project Management

The main objectives of mobility programmes are to teach, participate in training, and improve the teaching staff's professional and pedagogical competencies. Several such foreign visits have taken place in recent years. During the self-evaluation period, the ŠVK teaching staff took part in 15 exchange visits to 8 foreign institutions, and 16 teachers from 8 countries came by mobility programs to ŠVK. However, outgoing lecturers' involvement could be broader.

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

Academic staff have several opportunities for professional development, such as taking part in courses, seminars, applied research, internships, and participating in scientific conferences, international projects, and expert groups. ŠVK has implemented the staff development and training system, including strategic directions, planning, monitoring and evaluation, described in the *Quality Manual Human Resources Management Procedure.* The teaching staff's workload and development plans are annually planned together with the Head of the Department. Study field teaching staff must improve their practical competencies by participating in internship programmes at least once every seven years.

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

Sufficient opportunities have been created for teaching staff to develop their competencies further. Opportunities have been created to participate in international programs and projects. A period with support measures has been created for young or starting teaching staff. One possibility could be to involve more academic staff in international projects, which in turn would also contribute to the innovation of teaching techniques.

## AREA 5: CONCLUSIONS

| AREA 5 | Unsatisfactory - 1 | Satisfactory - 2 | Good - 3 | Very good - 4 | Exceptional - 5 |
|---|---|---|---|---|---|

| | Does not meet the requirements | Meets the requirements, but there are substantial shortcomings to be eliminated | Meets the requirements, but there are shortcomings to be eliminated | Very well nationally and internationally without any shortcomings | Exceptionally well nationally and internationally without any shortcomings |
|---|---|---|---|---|---|
| **First cycle** | | | x | | |

**COMMENDATIONS**

None

**RECOMMENDATIONS**

To address shortcomings

**Improve Feedback Methodologies**: Professional communication between teachers and students is one of the most important factors in motivating students to learn. Greater attention should be paid to ensuring that some students do not feel left out.

For further improvement

1. **Consider Limiting Teachers Workload:** One risk for practicing teachers, who also have a high workload outside of the ŠVK, combined with poor planning, is a loss of focus, and as a result, teaching and communication with students may suffer.

2. **Improve Teachers International Exposure:** Involving a larger number of academic staff in international projects, which in turn would contribute to greater internationalization of students.

# 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 Production Engineering program at ŠVK offers facilities and resources that comprehensively support both theoretical and practical learning. Teaching spaces, including classrooms, laboratories, and computer rooms, are equipped with modern tools such as CAD/CAM software, SolidWorks, CNC machines, and other equipment essential for Industry 4.0-oriented training. Laboratories are regularly updated to reflect technological advancements, providing students with hands-on experience in robotics, automation, and digital manufacturing. The library supports academic needs with a robust collection of books, journals, and access to online databases like Springer and ScienceDirect, facilitating coursework, research, and project preparation. Facilities are adapted for students with disabilities, featuring accessible entrances, elevators, and designated study areas to ensure inclusivity. The program benefits from strong ties with local industries, offering internships at companies, where students engage in applied research and gain real-world experience. Financial resources are strategically allocated to maintain and upgrade facilities, ensuring alignment with industry standards.

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

ŠVK plans and upgrades resources systematically to meet current educational and industrial standards. Annual budgets of € 2,000 are allocated for software updates and laboratory equipment renewal. Specialized facilities, such as the Robotics Laboratory with ABB robots and the Prototyping Laboratory, were established with EU Structural Funds and industry partnership. These partnerships provide advanced equipment like robotic stations and electric drive control stands. The library is updated regularly with access to international databases such as EBSCO and Taylor & Francis, with electronic resources making up 26% of its collection. Updates are based on faculty input and industry recommendations, integrating tools like SolidWorks, AutoCAD, and TIA Portal to ensure the program meets practical training needs.

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

The facilities and resources for the Production Engineering program at ŠVK are adequate to support its educational objectives, offering a solid foundation for both theoretical and practical learning. Specialized facilities, such as the Robotics Laboratory and Prototyping Laboratory, enhance hands-on training, while regular updates to equipment and software ensure alignment with technological advancements. The library provides essential academic resources, including online databases, effectively supporting student research and coursework. Partnerships with local industries further enrich the learning experience by offering internship opportunities and exposure to real-world applications.

Despite these strengths, certain limitations hinder the program's sustained growth. Facilities for students with disabilities, while present, require further improvements to achieve full inclusivity. The reliance on a limited annual budget for updates and external funding sources, such as EU Structural Funds, highlights a need for more robust financial planning to ensure regular and independent resource upgrades. Additionally, expanding partnerships with a broader range of companies and research facilities could strengthen industry connections and provide students with more diverse opportunities.

The program’s resources largely meet its objectives, creating an effective learning environment with room for ongoing improvement. However, addressing limitations in accessibility, financial planning for upgrades, and the breadth of external partnerships is necessary for long-term development and excellence.

## AREA 6: CONCLUSIONS

| AREA 6 | Unsatisfactory - 1<br>Does not meet the requirements | Satisfactory - 2<br>Meets the requirements, but there are substantial shortcomings to be eliminated | Good - 3<br>Meets the requirements, but there are shortcomings to be eliminated | Very good - 4<br>Very well nationally and internationally without any shortcomings | Exceptional - 5<br>Exceptionally well nationally and internationally without any shortcomings |
|---|---|---|---|---|---|
| First cycle | | | x | | |

**COMMENDATIONS**

None

**RECOMMENDATIONS**

To address shortcomings

1. **Broaden industry and research partnerships** by engaging with a wider range of companies and research institutions to enhance students' practical exposure and access to diverse learning opportunities.
2. **Strengthen financial independence for upgrades** by developing a sustainable internal funding strategy to reduce reliance on external sources, such as EU Structural Funds, ensuring consistent and strategic resource improvements.

For further improvement

1. **Increase industry feedback** by regularly consulting with industry partners regarding the resources and facilities used in production engineering.

## 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

Quality assurance at ŠVK aligns with the *Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG)*, following the PDCA (plan-do-check-act) cycle and guided by the *Quality Manual* (10th edition, 2023). The governance of studies is defined by the ŠVK Statute and related regulations. The College Council, Academic Council, and Director establish strategies, oversee study implementation, and monitor activities. At the faculty level, the Faculty Council approves updates to programs and progress reports, while the Dean's Office manages study organization.

The Engineering Sciences Department implements the programme, conducting research, liaising with stakeholders, forming academic staff, and approving tasks like course and Graduation Projects. The department also submits annual reports and proposes quality improvements.

A dedicated Committee ensures program quality by evaluating subjects, assessing methodological tools, monitoring innovations, and conducting self-evaluations. This Committee, comprising teachers, a student, a social partner, and the department head, meets 2–3 times annually to update and refine the program.

Program updates follow the *Description of Procedure for Development, Update, Assessment of Study Programmes* (2023). Recommendations from external assessments, such as those in 2018 and 2020, have been implemented, with the latest update approved in February 2024.

The self-evaluation report, prepared by a working group of teachers, a student, and a social partner, adheres to CQAHE methodologies. The report's findings were discussed in meetings across multiple levels and are documented in ŠVK's internal systems and published on its website.

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

ŠVK's management involves representatives from all stakeholders, including social partners, who actively participate in program implementation. Responsibilities are distributed based on expertise, experience, and alignment with program goals.

Key areas of collaboration with external stakeholders include program development, professional practice organization, Graduation Project topic proposals and reviews, Qualification Commission participation, self-evaluation, joint projects, career events, and research initiatives. Businesses also provide material support through the ŠVK Study Fund, established in 2022, offering scholarships for academic excellence, projects, and training. Recent sponsors include JSC Bodesa, JSC Kalvis, and Alvydas Stulpinas.

Students' interests are represented through the Students' Representative Body, which participates in decision-making processes, including the ŠVK Council, Faculty Council, and committees. Students contribute to program development, self-evaluation, and updates, addressing study-related issues and proposing improvements.

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

ŠVK ensures study quality by continuously monitoring data on teachers' qualifications, project activities, and student outcomes, such as admissions, attrition, graduation results, publications, and participation in scientific events.

The Department conducts internal evaluations, gathers feedback from social stakeholders and employers through events like career days and guest lectures, and collects student feedback through surveys after courses, practices, and graduation.

Results are analyzed in Department, Faculty, and Council meetings to plan improvements.

According to the SER and supported during the review meeting, the students can propose improvements or raise concerns through various channels, due to the size of the group the communication is mostly informal and the Department head communicates actions taken based on their feedback, some actions are publicly available on the website.

### 7.1.4. Student feedback is collected and analysed

ŠVK monitors study quality through periodic student surveys conducted after each semester. These surveys assess subjects, teaching quality, and aspects such as contact work, distance learning, and study schedules. Results are summarized and published on the ŠVK website. In 2023–2024, 81% of program students rated study quality as "good," though only 39% participated in surveys. Feedback results are discussed in the Department and Committee, and actions taken in response are shared under the *Student Proposals – Our Works* section on the website. Additionally, the Student Admission and Career Center annually surveys students on study motivations and tracks graduate careers.

However, during the review panel meeting students pointed out that the students who participate in the committees are often requested to do so by the Department head. Therefore, the student's opinion is not coming from an elected student, being less representative.

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

The management and quality assurance system in place is well-structured. However, it is unclear whether all the information collected, particularly from informal sources such as career days or guest lectures by social partners, is systematically analyzed.

Future students do not fully benefit from the information gathered, as most of the results are not made public (except for student surveys). The information available on the website is limited and should be extensively revised to enhance accessibility and transparency.

According to the review meeting, students and industrial partners have representatives who provide feedback on the study program. However, since these representatives are not elected, their opinions may not always reflect the broader perspective of their respective groups.

## AREA 7: CONCLUSIONS

| AREA 7 | Unsatisfactory - 1<br>Does not meet the requirements | Satisfactory - 2<br>Meets the requirements, but there are substantial shortcomings to be eliminated | Good - 3<br>Meets the requirements, but there are shortcomings to be eliminated | Very good - 4<br>Very well nationally and internationally without any shortcomings | Exceptional - 5<br>Exceptionally well nationally and internationally without any shortcomings |
|---|---|---|---|---|---|
| First cycle | | | x | | |

### COMMENDATIONS

None

### RECOMMENDATIONS

To address shortcomings

1. **Improve Election Process of Students Representatives:** Ensure that student representatives on the management committee are elected by their peers to better reflect the student body's perspective.
2. **Strengthen oversight and quality control of teaching** to ensure consistent and high-quality delivery across all courses.

For further improvement

None

# V. SUMMARY

The program demonstrates strong alignment with labor market needs, having been updated through collaborations with stakeholders like MOSTA (STRATA), LINPRA, and local companies, ensuring its relevance to industry demands. It complies with all legal and academic standards, offering a well-structured curriculum with sufficient credits for practical training (73 ECTS) and the graduation project (12 ECTS). Students benefit from a logical progression of study subjects, starting with foundational courses and gradually advancing to specialized topics, while having the flexibility to personalize their learning through elective subjects, language courses, and graduation projects. Teaching methods include a balanced mix of lectures, laboratory work, and self-study, supported by diverse assessment techniques, such as coursework, presentations, and exams, ensuring effective achievement of learning outcomes. Opportunities for international exposure through Erasmus+ further enhance the program. However, challenges remain, including an imbalance in contact hours for full-time students due to the coexistence of part-time programs, overly broad and sometimes unsupported learning outcomes, and low enrolment in the full-time program, which limits peer interaction. Additionally, with only one graduate to date, the program's long-term impact and alignment with professional requirements are difficult to assess. Addressing these issues by enhancing contact hours, refining learning outcomes, increasing enrolment, and strengthening graduate tracking would further improve the program's quality and impact.

ŠVK has created sufficient opportunities for students to acquire the necessary learning outcomes. The study programs are balanced and have sufficient qualified lecturers and associate professors covering the theoretical topics and practical skills necessary. Student academic performance is monitored, but greater emphasis should also be placed on monitoring the effectiveness of teaching staff. Teaching staff participates in didactic and applied research competencies training and has sufficient opportunities to develop their competencies further.

The Production Engineering program at ŠVK demonstrates a satisfactory integration of scientific research and higher education, with faculty research contributing to curriculum development and addressing industry-relevant topics such as automation, robotics, and digital manufacturing. Students benefit from applied research opportunities through collaborative projects with local companies and participation in national conferences. However, the scale of student involvement in research remains modest, with limited participation in international mobility programs and projects. Increasing international collaboration, broadening applied research initiatives, and enhancing the visibility of faculty research in high-impact forums are essential for strengthening the programme's global relevance and ensuring students are better prepared for contemporary industry demands.

The Production Engineering programme at ŠVK is supported by adequate facilities and resources, including modern laboratories, industry-standard equipment, and a well-stocked library with access to online databases. These resources provide a solid foundation for both theoretical and practical learning. Partnerships with local industries further enhance the learning experience by offering internship opportunities and exposure to real-world applications. However, the programme relies heavily on external funding, such as EU Structural Funds, for resource updates, highlighting the need for a sustainable internal funding strategy. Additionally, improving accessibility for students with disabilities and expanding industry partnerships would further strengthen the programme's infrastructure and alignment with industry needs.

ŠVK excels in providing transparent academic mobility opportunities, effective student support services, and recognizing prior learning. However, improving student motivation for long-term

studies abroad and addressing the concerns of full-time students regarding lesson availability and access to equipment are essential. Students, particularly part-time students, express high satisfaction with the Production Engineering programme. However, full-time students have highlighted concerns about the lack of lessons and limited access to certain machines, affecting their learning experience. It is recommended that these issues should be addressed.

ŠVK's quality assurance system aligns with European Higher Education Area (ESG) standards, employing a structured PDCA (plan-do-check-act) cycle and a comprehensive governance framework. Positive aspects include active involvement of stakeholders—teachers, students, and social partners—in program development, evaluation, and updates. Collaboration with external stakeholders is strong, encompassing programme development, practice organization, project sponsorship, and career events. Financial support through the ŠVK Study Fund, backed by industry sponsors, is another highlight. Students actively contribute to programme updates and self-evaluations, with their feedback analyzed and actions communicated transparently via the "Student Proposals – Our Works" section. Regular surveys and internal evaluations ensure continuous improvement, and a high proportion of students (81%) rate the study quality positively.

However, areas for improvement include the low student participation rate in surveys (39%), which limits the representativeness of feedback. Additionally, students involved in committees are often selected by the Department head rather than being elected, raising concerns about the representativeness of their opinions. Formalizing student participation processes and enhancing engagement with surveys could further strengthen the inclusivity and effectiveness of the quality assurance system.