ASIIN Seal

Accreditation Report

Bachelor's Degree Programmes
Ecological Engineering
Instrumentation Engineering
Mechanical Engineering

Provided by
Azerbaijan State Oil and Industry University

Version: 26 September 2025

Table of Content

A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Bakalavr ekologiya mühəndisliyi	Bachelor Ecological Engineering	ASIIN	-	09, 11
Alətlər üzrə bakalavr mühəndisliyi	Bachelor Instrumentation Engineering	ASIIN	-	02
Bakalavr Maşın Mühəndisliyi	Bachelor Mechanical Engineering	ASIIN	-	01
Date of the contract: 17.12.2024 **Submission of the final version of the self-assessment report:** 27.04.2025 **Date of the audit:** 3.6. – 5.6.2025				
Expert panel: Prof. Dr. Carmen Genning, Ostfalia University of Applied Sciences Prof. Dr.-Ing. Prof. h.c. Jens Schuster, University of Applied Sciences Kaiserslautern Dr. Florian Particke, Siemens Mobility GmbH Aysel Rzayeva M.A., Lecturer, Baku Higher Oil School Mehriban Bagirova, Baku Higher Oil School, student				
Representative of the ASIIN headquarter: Rainer Arnold				
Responsible decision-making committee: Accreditation Commission				

[1] ASIIN Seal for degree programmes;

[2] TC: Technical Committee for the following subject areas: TC 01 Mechanical Engineering/Process Engineering, TC 02 – Electrical Engineering/Information Technology, TC 09 – Chemistry, Pharmacy, TC 11 - Geosciences

Criteria used: European Standards and Guidelines as of 15.05.2015 ASIIN General Criteria as of 28.03.2014 Subject-Specific Criteria of Technical Committee 01 – Mechanical Engineering/Process Engineering as of 16.03.2021 Subject-Specific Criteria of Technical Committee 02 – Electrical Engineering/Information Technology as of 23.09.2022 Subject-Specific Criteria of Technical Committee 09 – Chemistry, Pharmacy as of March 29, 2019	

B Characteristics of the Degree Programmes

a) Name	Final degree (original)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double / Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Bachelor Ecological Engineering	Bachelor of Science in Ecological Engineering	-	6	Full-time	no	8 semesters	240 ECTS	annually / Fall Semester 2020
Bachelor Instrumentation Engineering	Bachelor of Science in Instrumentation Engineering	-	6	Full-time	no	8 semesters	240 ECTS	annually / Spring Semester 2019
Bachelor Mechanical Engineering	Bachelor of Science in Mechanical Engineering	-	6	Full-time	no	8 semesters	240 ECTS	annually / Fall Semester 2018

[3] EQF = The European Qualifications Framework for lifelong learning

Introduction

Being the pioneer oil and gas educational school across Europe and Asia, the Azerbaijan State Oil Academy (now Azerbaijan State Oil and Industry University (ASOIU)) was founded in November 1920. During the period of its activities, ASOIU played a special role in developing national education. Many other higher educational institutions have been established indeed based on the ASOIU. Covering several scientific institutes and 18 scientific research labs, ASOIU provides education for both local and international students. ASOIU offer undergraduate, masters and postgraduate level degrees. This higher educational school acted under different names in various periods. Founded as the Azerbaijan Polytechnic Institute, it continued its life under the name of Azerbaijan Oil Institute, then Azerbaijan Industrial Institute, Azerbaijani Oil and Chemistry Institute, Azerbaijan State Oil Academy and quite recently (2015) was renamed into Azerbaijan State Oil and Industry University. Today the graduates of the Academy work in over 70 countries in high-level positions.

Now there are seven faculties in the ASOIU that train highly qualified specialists for the oil industry. A multistage educational system is put in place: at the bachelor stage students are trained on 53 specialties and at the masters 50 specialties.

Summary

The experts positively notice the following aspects:

- Students are very satisfied with the degree programmes.
- Dedicated teaching staff and good communication between students and teachers.
- Comprehensive tutorial and support system for students, small classes.
- Financial incentives for teachers who are successful researchers.
- Employers are satisfied with the qualification profile of the graduates.
- Comprehensive internship programme.
- Good cooperation between stakeholders (employers, alumni) and the university.

In the following areas, the experts see room for improvement:

- Students' academic mobility is rather low and should be better promoted. The number of international cooperations and scholarships should be increased and students should be encouraged to spend some time abroad.

- For facilitating the recognition of credits acquired abroad, it would be useful to sign a learning agreement with each students that wants to study abroad. Additionally, it would be possible to recognise courses attended abroad as electives.
- The instruments in several laboratories are quite old and should be replaced. Additionally, more advanced devices should be purchased so that students can get hands-on experience with current scientific methods.
- Safety standards must be strictly followed in all laboratories, especially the Ecology Laboratory is lacking in this respect.
- Offer more excursions/site-visits to companies so that students get a better impression where to do the internship and what the focus of the different companies is.
- It is necessary to verify the students' workload and to award the ECTS point accordingly. Students should be familiar with workload and ECTS calculation.
- It would be useful to issue an official AI guideline for all students at ASOIU and to teach all students on correctly using AI.
- Mid-term exams should be real exams and not just writing a small essay about a given topic. Currently, mid-term exams in all three programmes are not on an adequate level for a Bachelor's degree programme.
- The information about the programmes on the university's homepage is incomplete and is hard to find.
- The module handbook needs to include module descriptions for all modules.
- Close the feedback cycles and inform the students directly about the results of the course questionnaires.

C Expert Report for the ASIIN Seal

1. The Degree Programme: Concept, content & implementation

Criterion 1.1 Objectives and learning outcomes of a degree programme (intended qualifications profile)

Evidence:

- Self-Assessment Reports
- Study plans of the degree programmes
- Module descriptions
- Homepage ASOIU: https://asoiu.edu.az/
- Homepage Ba Ecological Engineering: https://asoiu.edu.az/chemical_technology_faculty/specialization_detail/13
- Homepage Ba Instrumentation Engineering: https://asoiu.edu.az/information_technologies_and_control/department/6
- Homepage Ba Mechanical Engineering: https://asoiu.edu.az/oil_mechanical_engineering/specialization_detail/1
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The experts base their assessment of the learning outcomes on the information provided in the module descriptions and in the Self-Assessment Reports of all three degree programmes under review. For all programmes, Azerbaijan State Oil and Industry University (ASOIU) has described Learning Outcomes (LO), which cover a number of specific competences students should acquire in their respective degree programme.

The Bachelor's degree programme Ecological Engineering is designed to integrate engineering principles with ecological stewardship, focusing on solutions for environmental challenges. Graduates should be with a comprehensive skills set that addresses both environmental challenges and chemical technologies. Students should gain expertise in using natural processes for environmental restoration and pollution control, learn to design and implement ecological systems. In addition, students are trained to apply ecological engi-

neering concepts in practical settings, preparing them for careers in environmental protection agencies, water management organizations, and related sectors. To this end, students should gain hands-on experience in executing and coordinating laboratory experiments, synthesizing chemical compounds, and utilizing standard methods for environmental monitoring and analysis. Moreover, students should develop the ability to apply engineering fundamentals—such as mathematics, physics, and chemistry—to ecological systems, this includes proficiency in using modern engineering tools and statistical methods for data analysis and process control. Finally, student should gain strong communication skills, enabling them to effectively convey technical information and collaborate within multidisciplinary teams to address complex environmental issues.

The programme prepares graduates for careers in environmental protection agencies, water management organizations, and industries focused on sustainable chemical processes.

The Bachelor's degree programme Instrumentation Engineering is designed to prepare the graduates for working in the field of instrumentation engineering in sectors like oil & gas, manufacturing, energy, and healthcare. To this end, students should acquire basic knowledge in the fields of mathematics, natural sciences, and engineering sciences. Additionally, they should acquire the ability to conduct experiments according to specified methods with the processing and analysis of results, to analyse and apply physical systems using differential equations, control theory, and signal processing models. Moreover, they should be able to design and implement measurement systems for various physical parameters (temperature, pressure, flow, level, etc.), to understand sensor technologies, transducers, and their integration into control systems, to use software tools, to apply electronic circuit design principles in analog and digital instrumentation, as well as analyze and filter signals using appropriate signal processing techniques. Finally, they should be proficient in identifying engineering problems and developing appropriate solutions using analytical and experimental methods, and be able to work effectively in a team.

Graduates of the Bachelor's degree programme Instrumentation Engineering can find employment in governmental and private organizations such as the energy sector, manufacturing companies, building and infrastructure projects, research institutes and universities, technology industries, consulting and management companies, and in healthcare and biomedical engineering institutions.

The goal of the Bachelor's degree programme Mechanical Engineering is to equip students with a comprehensive skill set that combines traditional mechanical engineering principles with modern technological advancements. To this end, students should gain a solid foundation in Students acquire competencies in mathematics, mechanics, thermodynamics, materials sciences, automation, and control systems., enabling them to analyse and design

mechanical systems effectively. Mechanical engineering students study the working principles of machines, devices, and mechanical systems in order to be able to develop more efficient and safer technical solutions. In addition, students should gain practical skills in core subjects such as strength of materials, thermodynamics, fluid mechanics, and theory of machines, along with experience in software tools focused on CAD, CAM and CAE. Moreover, students should be familiar with the principles of thermodynamics and fluid mechanics to evaluate systems such as pumps, compressors, and pipelines that are essential in oil and gas operations, be able to explain the working mechanisms and functions of mechanical equipment used in oil extraction, transport, and processing, and to apply basic knowledge of automation and control theory to describe how mechanical systems in the oil industry operate with electrical and control components. Finally, graduates should be able to communicate technical information clearly and effectively in written and verbal form, both in Azerbaijani and English and to understand and follow professional, ethical, and safety standards in solving engineering problems and proposing mechanical solutions in industrial environments.

Graduates of the Bachelor's degree programme Mechanical Engineering are usually employed in various industrial sectors, including oil and gas, energy, manufacturing, construction, automation, medical technologies, and research institutions.

Supplementing the subject-related qualification objectives, Bachelor's students should have adequate competences in oral and written communication skills, be capable of working autonomously as well as in a team-oriented manner, and be able to conduct research activities. Furthermore, they should have trained their analytical and logical abilities, be able to apply information and communication technology, and show a social and academic attitude. Finally, students should acquire language skills and should develop a strategy for life-long learning.

In summary, the experts are convinced that the intended qualification profiles of all programmes under review allow graduates to take up an occupation, which corresponds to their qualification. The degree programmes are designed in such a way that they meet the goals set for them. The objectives and intended learning outcomes of all degree programmes under review are reasonable and well founded.

The experts conclude that the objectives and intended learning outcomes of the Bachelor's degree programme Ecological Engineering, the Bachelor's degree programme Instrumentation Engineering, and the Bachelor's degree programme Mechanical Engineering adequately reflect the intended level of academic qualification (EQF 6).

Criterion 1.2 Name of the degree programme

Evidence:

- Self-Assessment Reports

Preliminary assessment and analysis of the experts:
ASOIU awards a Bachelor of Science to the graduates of the three undergraduate programmes.

The experts confirm that the names of all three Bachelor's degree programmes appropriately reflect the focus and content of the respective programme. Moreover, the English translation and the original Azerbaijani names of the programmes correspond with the intended aims and learning outcomes.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Reports
- Study plans of the degree programmes
- Module descriptions
- Homepage ASOIU: https://asoiu.edu.az/
- Homepage Ba Ecological Engineering: https://asoiu.edu.az/chemical_technology_faculty/specialization_detail/13
- Homepage Ba Instrumentation Engineering: https://asoiu.edu.az/information_technologies_and_control/department/6
- Homepage Ba Mechanical Engineering: https://asoiu.edu.az/oil_mechanical_engineering/specialization_detail/1
- Discussions during the audit

Preliminary assessment and analysis of the experts:
All three Bachelor's degree programmes under review are designed for four years with 240 ECTS points and are offered as a full-time programmes. Each semester is equivalent to 15 weeks of learning activities. Besides these learning activities, there is usually one week for midterm exams and two weeks for final exams. The academic year is divided into two semesters: fall and spring.

The structure of the curricula is similar for all three programmes. It includes general studies of mathematics, natural sciences, English, and social sciences. In addition students have to cover compulsory and elective course in the specific area of the programme and have to

conduct a Bachelor's thesis and practical training. In the general studies, students acquire mathematical and scientific skills that are required in the compulsory and elective courses. The general studies include mathematics, physics, chemistry, and computer science modules. English Composition and Social Science studies include English language and communication modules, social and economic modules. In the compulsory and elective courses, students deepen their knowledge within their specific field engineering.

The curriculum of the Bachelor's degree programme Ecological Engineering follows the ASOIU Academic Regulation for Undergraduate Studies and is organised by the Faculty of Chemical Technology. It becomes effective upon the decision of the Faculty Board and approval of the ASOIU Scientific Council.

The programme integrates scientific, technical, and practical approaches to address current ecological challenges and is structured to meet the needs of industry, government, and research sectors. The curriculum begins with a solid foundation in advanced mathematics, physics, and chemistry, providing students with the analytical skills necessary for engineering problem-solving. Students then progress to computational and numerical methods, mathematical statistics, and statistical analysis, which are essential for modelling and analysing environmental processes.

Core ecological engineering content includes the study of interactions between living organisms and their environment, understanding environmental factors, and the principles and regulations governing ecological protection. The programme covers the identification and neutralization of pollution sources, integrated water resources management, and the analysis of the harmful effects of industrial activity on both human health and the environment.

Students are trained in environmental expertise, audit, and certification, as well as the assessment of anthropogenic impacts on natural systems. The curriculum emphasises practical solutions such as waste-free production, recycling, industrial waste management, and the design and operation of treatment facilities. Additional topics include climate change, global warming, irrigation, and land restoration.

A significant component of the programme involves the application of modern physical, mathematical, and aerospace methods to environmental monitoring and problem-solving. This includes mathematical modelling of ecological processes, programming, and the use of Geographic Information Systems (GIS). Students gain skills in geodesy, photogrammetry, remote sensing, and the use of satellite data for environmental analysis. They also study the spectral and radiation characteristics of natural objects, radar technology, and the use of aerospace information and telecommunication systems.

Throughout their studies, students have the opportunity to gain practical experience with leading organizations such as the National Aviation Academy, the Ministry of Ecology and Natural Resources, the National Aerospace Agency, and Azerkosmos OJSC. These partnerships provide hands-on training in environmental monitoring, data collection, and the application of advanced technologies.

The general structure of the programme is depicted in the following table:

Category	Notation	Credits	Weight, %
Mathematics	MT	16	6,6
Basic Science	BS	28	11,6
English Composition & Social Science	ECS	30	12,5
Obligatory Ecological Engineering Courses	OCE	76	31,7
Elective Ecological Engineering Courses	ECE	60	25
Bachelor's Thesis	BT	9	3,8
Practical Training	PT	21	8,8
Total		240	100

Table 1: Structure Ba Ecological Engineering, Source: SAR ASOIU

Practical relevance of the programme is achieved by lectures given by professionals from various fields, laboratory lessons, internship, as well as renewing course contents and implementing new courses periodically based on the job market needs.

The curriculum of the Bachelor's degree programme Instrumentation Engineering follows the ASOIU Academic Regulation for Undergraduate Studies and is organised by the Faculty of Information Technologies and Control. It becomes effective upon the decision of the Faculty Board and approval of the ASOIU Scientific Council.

The curriculum begins with foundational courses in mathematics, physics, and general engineering principles, ensuring that students acquire the analytical and technical skills necessary for advanced studies. As students progress, they engage with core subjects such as analytical and industrial instrumentation, detection sensors (including pH sensors), and the principles of measurement and control systems relevant to industrial environments.

Specialized courses cover the design, implementation, and monitoring of control tools and systems for various industrial applications, with a particular emphasis on the oil, gas, and energy sectors, reflecting the university's focus and industry connections. Students also

study computer-based control systems, process automation, and the integration of modern information technologies in instrumentation.

The general structure of the programme is depicted in the following table:

Category	Notation	Credit	Weight, %
Mathematics	MT	16	6.67 %
Basic Science	BS	55	22.92 %
English Composition & Social Science	ECS	27	11.25 %
Obligatory Chemical Engineering Courses	OCE	49	20.41 %
Elective Chemical Engineering Courses	ECE	63	26.25 %
Practical Training	PT	9	3.75 %
Bachelor's Thesis	BT	21	8.75 %
Total		240	100

Table 2: Structure Ba Instrumentation Engineering, Source: SAR ASOIU

Practical training is a significant component of the programme. Students have access to dedicated laboratory facilities, including computer rooms and specialized instrumentation labs, where they gain hands-on experience with real-world equipment and simulation tools. The programme is closely aligned with industry needs, and students benefit from the university's partnerships with leading companies, which provide opportunities for internships and practical projects.

The structure of the programme is designed to meet state educational standards and includes lectures, laboratory work, seminars, and independent research. Students are assessed through coursework, laboratory reports, examinations, and a final exam.

The Bachelor's degree programme Mechanical Engineering is organised by the Department of Mechanics, which operates under the administration of the Faculty of Oil Mechanics.

In the compulsory and elective courses, students deepen their knowledge within the broad field of mechanical engineering. The obligatory studies include a bachelor's thesis, practical training, and core modules that form the foundation for a Bachelor's degree in Mechanical Engineering.

The curriculum begins with fundamental courses in mathematics, physics, and materials science, which establish the analytical and scientific basis necessary for advanced engineering topics. As students progress, they study core mechanical engineering subjects such as mechanics, thermodynamics, fluid mechanics, and machine design. These courses are complemented by training in computer-aided design (CAD), electronics, and control systems, ensuring that students are familiar with modern engineering tools and technologies.

Specialization is possible in later years, allowing students to focus on areas such as automotive engineering, aviation, energy systems, or production technology, depending on their interests and career goals. The programme also emphasizes practical training, with laboratory work and project-based learning integrated throughout the curriculum. Students gain hands-on experience with engineering equipment and simulation software, preparing them for real-world challenges.

In addition to technical subjects, the programme includes courses on communication, organizational development, and business engineering, equipping students with the soft skills needed for leadership and teamwork in engineering environments. Assessment is carried out through a combination of coursework, laboratory reports, and examinations.

The general structure of the programme is depicted in the following table:

Category	Notation	Credit	Weight, %
Mathematics	MATH	16	6.7
Basic Science	BS	26	10.8
English Composition & Social Science	ECS	33	13.75
Obligatory Mechanical Engineering Courses	OME	75	31.25
Elective Mechanical Engineering Courses	EME	60	25
Bachelor's Thesis	BT	21	8.75
Practical Training	PT	9	3.75
Total		**240**	**100**

Table 3: Structure Ba Mechanical Engineering, Source: SAR ASOIU

All three Bachelor's degree programmes include lectures, seminars, and laboratory classes. The theoretical foundation of the different engineering disciplines is presented in lectures during which students are explained the basic methods and concepts. In seminars, students discuss the material being studied and solve relevant tasks. In laboratory classes, students gain practical skills to work with specific laboratory equipment and modern methods of engineering and computer science.

The labour market needs, employers' expectations, and a balance between theoretical and practice-oriented modules are taken into account. The internship (practical training) in the fourth year last for 14 weeks and 21 ECTS points (18 ECTS points in the Mechanical Engineering programme) are awarded.

In the final year, all students must conduct a graduation project (Bachelor's thesis), where students are expected to carry out literature search and complete the theoretical parts of their projects. Then students carry out the practical part of their projects.

Students select the project from the list offered by the departments at the end of the fourth semester. Then the list of selected projects with the students' names are signed by the Head of Department, the Dean, and the Vice-Rector for Academic Affairs and approved by Rector of the University at the beginning of the fifth semester. At the end of the seventh semester, supervisors of selected projects are assigned and places of practical training are also found for each student. Students can start to work on their graduation projects as soon as the project is approved and a supervisor is assigned to him/her. Students and supervisors meet once every week within the eighth semester to discuss the progress made by the students.

The graduation projects take a semester and students can work individually towards their projects. At the end of the graduation projects, students write their graduation work, which consists of introduction, review, research methods, calculations, conclusion, and list of references. Students in a group project are graded based on their assigned individual work and individual presentations.

The first grading of the project is carried out by several examiners of the respective department. The final grading of the graduation projects is given by the State Attestation Commission of respective faculty.

In addition to the "regular" fall and spring semesters, a short summer semester is offered. The short summer semester is organized so that students can make up failed or missed courses (cancelation of academic debts). The length of the summer semester is six weeks. Students' cannot take more than 9 ECTS points during the summer semester and must pay additional fees for attending the courses. Teachers are recruited voluntarily for the summer semester. In this case, the amount of teacher's work is paid in an hourly manner.

The experts learn during the audit, that the internship is usually combined with the Bachelor's thesis and thus conducted outside ASOIU. This has several advantages because working on the Bachelor's thesis within a company or research institute allows students to tackle real-world problems rather than purely theoretical ones, bridging the gap between academic learning and practical application. In the case of ASOIU it is also important to point

out that companies and research institutes can provide access to data, technical equipment, and resources that are not available at the university (see criterion 3.2). Additionally, collaborating with a company helps students to build valuable contacts, which can be beneficial for job perspectives because companies often use these collaborations to identify and recruit promising graduates.

In the discussion with the experts, the employers express their general satisfaction with the qualification profile of the graduates of three programmes under review. However, they point out that students should get more hands-on experience with modern instruments and acquire more practical competences.

After analysing the module descriptions and the study plans, the experts confirm that all degree programmes under review are divided into modules and that each module is a sum of coherent teaching and learning units. All practical lab work and internships are well integrated into the curriculum and the supervision by ASOIU guarantees for their respective quality in terms of relevance, content, and structure.

The degree programmes are organized in a modular way; each module is a consistent and standalone course consisting of three – six ECTS points. Each module lasts one semester. The majority of modules has pre-requisites, which should be passed before taking the module.

During the audit, the experts notice the students use Artificial Intelligence (AI) in preparing for exams and in completing their assignments. However, no official guideline on the use of AI exists

As the use of artificial intelligence (AI) becomes more and more important, the experts point out that an official AI guideline would be needed and students should be introduced in correctly using AI. It is useful for a university to issue an official guideline for the use of AI, because it provides clarity, consistency, and ethical direction for students, faculty, and staff. Additionally, teaching students the correct AI use is important to give them the tools, knowledge, and mindset to thrive in a digital, AI-augmented world.

A guideline helps to define what constitutes acceptable vs. inappropriate use—e.g. when it is allowed to use AI for brainstorming vs. when it counts as plagiarism or academic misconduct. Without clear rules, students may unknowingly cross ethical lines, which supports fair assessments and prevents unintentional violations of academic honesty policies. Proper guidance ensures AI supports learning, rather than replacing critical thinking, research, or writing skills and teachers can incorporate AI meaningfully into teaching, e.g., using AI as a learning tool rather than as a shortcut. For this reason, the experts recommend issuing an official AI guideline for all students at ASOIU and to teach all students how to

correctly use AI.

In the discussion with the experts, the students express their wish for conducting more excursions/site-visit to companies so that they get a better impression where to do the internship and what the focus of the different companies is. Offering more site visits to companies for students is useful because this way they can experience first-hand how theoretical concepts are applied in real industry settings. Seeing professionals in action can spark new interests or confirm what career path students want to pursue and students get a clearer idea of job roles, workplace culture, and skills needed in specific sectors. In addition, direct interaction with companies can open doors to internships or job opportunities. This is especially relevant for students who are unsure about their interests.

The experts are overall satisfied with the structure and content of the three undergraduate programmes under review. The courses are structured logically, with the right sequence based on prerequisite knowledge. One of the highlights is the well-structured internship programme. Students' reports and feedback show that it's practical and beneficial.

Module descriptions are available for most courses. However, the module descriptions for the internships and the Bachelor's thesis weren't provided, and the workload for internships isn't clearly defined. A proper module description would help organize this better, including workload and other essential details. (see criterion 1.5 and 4.1).

In summary, the experts confirm that the choice of modules and the structure of the curriculum ensure that the intended learning outcomes of the respective degree programme can be achieved.

International Mobility

ASOIU has around 100 Memorandums of Understanding mostly with universities in Turkey, Russia, and Central Asia but also with European Universities, e.g. double degree programmes with Strasbourg and Warwick Universities.

The cooperation between ASOIU and the University of Strasbourg is primarily characterized by the founding and operation of the French-Azerbaijani University (UFAZ). The focus is on joint study programs, double degrees, exchange opportunities and the promotion of joint research projects. The partnership is part of a broader internationalization strategy of both universities and is supported by other European and international network.

Since 2015, the ASOIU has been taking part in the Erasmus+ network. Within the Erasmus+ network, the university has until recently participated in various projects for the improvement of the quality of higher education.

Student mobility is realized in several directions. With the Erasmus+ International Credit Mobility, the ASOIU students gain the opportunity to study for a short period in leading universities of Europe. Furthermore, the "Mevlana Programme" offers opportunities for academic mobility with Turkish universities. According to the provided information, students from ASOIU took part at Erasmus+ exchange programmes with universities in Turkey, Germany, Poland and Romania. Additionally, some students went to universities in Russia, India, and Yemen.

As the experts learn, Azerbaijan has not officially left the Erasmus+ programme, but the programme's activities in the country have been effectively "unofficially suspended" since the beginning of 2025. This affects all ongoing and planned projects, including student and faculty exchanges, Capacity Building in Higher Education (CBHE) and Jean Monnet Initiatives. New projects are no longer registered and even active projects have been stopped. The national Erasmus+ office in Azerbaijan is also facing closure. There is no official justification from the government for the suspension.

ASOIU provides some opportunities for students to conduct internships and exchange programmes abroad. The Department of International Affairs is responsible for managing and coordinating the international activities such as managing student mobility programmes, developing and maintaining relationships with partner institutions and organisations around the world, recruiting and admitting international students, providing support and assistance to international students during their time at ASOIU.

However, students' academic mobility is very low. Currently only the Mechanical Engineering programme has two undergraduate students taking part at international exchange programmes. If students go abroad it is done during their time as Master's students and not as undergraduates. As they tell the experts during the audit, they are "afraid" to go abroad and unsure where to go, how to finance the studies, and if the credits acquired abroad will be recognised at ASOIU. Several opportunities for students to spend some time during their studies abroad exist, but especially undergraduate students from the engineering programmes are reluctant to joint international exchange programmes. At the same time, there are a few incoming international students in the Mechanical Engineering and Instrumentation Engineering programmes, e.g. from Kazakhstan and the Arabic countries.

The experts understand these problems and see that academic mobility is severely impacted by the suspension of the Erasmus+ programme. Nevertheless, it would be useful to actively encourage students to take part at long or short term academic mobility programmes. To support students' academic mobility, it would be useful to sign more international cooperation agreements especially for engineering students. For facilitating the recognition of credits acquired abroad, it would be useful to sign a Learning Agreement

with each students that wants to study abroad. Additionally, it would be possible to recognise courses attended abroad as electives.

Signing a Learning Agreement, which specifies the courses a student will take at the host university, before a student goes abroad offers several key advantages that ensure a smooth and academically productive mobility experience. It confirms that these courses will be recognized by the home university upon successful completion. This prevents the risk of losing credits or facing delays in the studies due to unrecognized coursework. The Learning Agreement encourages early and careful planning of studies abroad and allows students to focus on making the most of their international experience without unnecessary administrative concerns. Although exchange opportunities are promoted, many students seem hesitant—likely due to fears about delayed graduation, needing retakes, or financial challenges. The process is not very clear, and the limited support makes students less likely to apply. Along with matched courses and learning agreements it would help to offer distance learning options to make up for mismatched subjects. This approach would help students to plan better and to avoid delays. Also, financial support details, selection criteria, and committee members should be shared upfront to build trust and encourage participation.

In summary, the experts appreciate the efforts to foster international mobility but staff and students' mobility is currently limited. Only a few students from instrumentation and mechanical engineering participated in exchange programmes recently, and none from ecological engineering.

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Reports
- Webpage ASOIU: http://asoiu.edu.az/en
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The admission procedure for Bachelor's students is based on the Unified National Exams: Azerbaijan citizens holding appropriate documents from a high school are required to pass the entrance examination, which is centrally organised by the State Students Admission Commission (now State Examination Center, SSAC). The entrance examination is carried out in two stages. In the first stage, applicants take entrance exams in Azerbaijani or Russian language and in foreign languages and mathematics. The maximum number of points

that applicants can earn in the first stage of the entrance exam is 300 points, with 100 points for each subject. The second stage of entrance exams to higher education institutions depends on the concrete study programmes that the applicants want to join. The maximum score that applicants can get in the second stage of the entrance exam is 400 points. Based on the total score, students are admitted to the different programmes at universities in Azerbaijan.

For international applicants, admission is managed directly by the Azerbaijan State Oil and Industry University International Cooperation Office and International Students Dean Office. Enrollees are admitted without passing the centralized examination of Azerbaijan. The applicants apply directly to the University electronically and are registered for the respective programme.

The maximum intake per year is around 25 students in all three Bachelor's degree programmes. The number of applications and newly enrolled students in the Bachelor's degree programme Ecological Engineering for the last five academic years is depicted in the following table:

		2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Study places		16	17	22	21	21
Applicants	∑	16	17	22	21	21
	F	14	12	13	13	10
	M	2	5	9	9	11
Application		100%	100%	100%	100%	100%
First-Year student	∑	16	17	22	21	21
	F	14	12	13	13	10
	M	2	5	9	9	11
Rate of female students		0.45	0.29	0.52	0.5	0.57
Foreign students	∑	0	1	0	0	0
	F	0	0	0	0	0
	M	0	1	0	0	0
Rate of foreign students		0	0	0	0	0

Percentage of occupied study places		100%	100%	100%	100%	100%

Table 4: Statistical data on enrolled students in Ecological Engineering, Source: SAR ASOIU

The numbers are similar in the Bachelor's degree programme Mechanical Engineering. Within the last six academic years from 2019/20 to 2024/25, the programme almost tripled its planned capacity, growing from 11 to 25 study places while maintaining a strong demand. Applications matched capacity exactly during the first three intakes and again in 2023/24, dipped only slightly to 95 % in 2022/23 and to 88 % in 2024/25, so occupancy has never fallen below the national benchmark of 70 %. Every eligible applicant enrols, which means first-year cohort sizes mirror the application numbers. The exact number of applications and newly enrolled students in the Bachelor's degree programme Mechanical Engineering for the last six academic years is depicted in the following table:

		2019/2020	**2020/2021**	**2021/2022**	**2022/2023**	**2023/2024**	**2024/2025**
Study places		11	20	25	20	20	25
Applicants	∑	11	20	25	19	20	22
	F	0	3	1	3	3	4
	M	11	17	24	16	17	18
Application	∑	100%	100%	100%	95%	100%	88%
First-Year students	∑	11	20	25	19	20	22
	F	0	3	1	3	3	4
	M	11	17	24	16	17	18
Rate of female students	∑	0	0.15	0.04	0.16	0.15	0.18
Foreign students	∑	1	1	1	0	1	1
	F	0	0	0	0	0	0
	M	1	1	1	0	1	1

Rate of foreign students	∑	0.09	0.05	0.04	0	0.05	0.05
Percentage of occupied study places	∑	100%	100%	100%	95%	100%	88%

Table 5: Statistical data on enrolled students in Mechanical Engineering, Source: SAR ASOIU

Why was there such an increase in study places in Instrumentation Engineering in 2023/24? How many new students were accepted? Numbers in the table are not correct.

		2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
Study places		20	20	25	30	25
Applicants	∑	20	20	25	30	24
	F	9	9	13	15	4
	M	11	11	12	15	20
Application		100%	100%	100%	100%	96%
First-Year student	∑	20	21	25	30	24
	F	9	6	13	15	4
	M	11	15	12	15	20
Rate of female students		0.45	0.29	0.52	0.5	16%
Foreign students	∑	0	1	0	0	2
	F	0	0	0	0	2
	M	0	1	0	0	0
Rate of foreign students		0	0.01	0	0	0,02
Percentage of occupied study places		100%	100%	100%	100%	100%

Table 6: Statistical data on enrolled students in Instrumentation Engineering, Source: SAR ASOIU

Undergraduate students at ASOIU have to pay tuition fees or can receive a scholarship. The tuition fee is 2000 USD for one year for international students and 1800 AZN (941€) for one year for local ones.

To motivate students, various scholarships are provided by the government. The number of available scholarships for each faculty is determined by state order. For example, at the Faculty of Chemical Technology and the Faculty of Information Technology and Control 175 scholarships are available. The financial support depends on the students' GAPF (General Average Progress Factor). In addition, private companies offer scholarships and students from low-income families as well as students with disabilities can receive a tuition waiver.

In summary, the experts find the terms of admission to be binding and transparent. They confirm that the admission requirements support the students in achieving the intended learning outcomes.

Criterion 1.5 Work load and credits

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the experts:
ASOIU applies the European Credits Transfer System (ECTS) for measuring the students' total workload. The experts confirm that ECTS points are awarded for all mandatory parts of the degree programmes, including the practice (internship). The workload includes face-to-face teaching hours, individual studying-time, as well as preparation for and taking part in the examinations.

The Bachelor's degree programmes encompass 240 ECTS and one ECTS credit is equal to 30 hours of students' total workload. Details on the students' total workload in hours are presented in the module descriptions of each degree programme.

In the discussion with the students the experts see that the general workload of the students' workload is appropriate, but they underscore that ASOIU needs to verify if the students' workload is aligned with the awarded credit points. This is especially necessary for the internship and the graduation project. Here the length of the courses is obviously not consistent with the awarded ECTS points.

ASOIU should follow the ECTS Users' Guide to determine the students' total workload. As described in the ECTS Users' Guide, the estimation of students' workload should include all learning activities. This is the time students typically need to complete all learning activities (such as lectures, seminars, projects, practical work, self-study and examinations). In other words, a seminar and a lecture may require the same number of contact hours, but one may require significantly greater workload than the other because of differing amounts of independent preparation by students.

As workload is an estimation of the average time spent by students to achieve the expected learning outcomes, the actual time spent by an individual student may differ from this estimate. Individual students differ: some progress more quickly, while others progress more slowly. Therefore, the workload estimate should be based on the time an "average student" spends on self-studies and preparation for classes and exams. The initial estimation should then be verified via students' satisfaction questionnaires.

Since the workload of the students was only estimated by the programme coordinators, the experts expect ASOIU to re-evaluate the calculation of ECTS points and asking the students about their actual workload, especially the time they need for self-studies, for each course. For example, it would be very useful to a respective question in the students' satisfaction questionnaires.

In any case, ASOIU needs to verify the students' total workload and make sure that the actual workload and the awarded ECTS points correspond with each other. This information should be made transparent in the module descriptions and the study plans. This alignment guarantees that the credits awarded accurately represent the time and effort students are expected to invest, making the educational process transparent for all stakeholders, including students, teachers, and external evaluators. By verifying the actual workload, institutions ensure that their courses meet these standards, maintaining comparability with other institutions both nationally and internationally. This is especially important for student mobility and the recognition of qualifications, as ECTS is used as a common "currency" for credit transfer.

In summary, the experts conclude that the total work load of the degree programmes is adequate and that there is no structural pressure on the quality of teaching and the level of education due to the work load. The students express their general satisfaction with the amount and the distribution of their work load. The estimated time budget is realistic, and the students can usually complete the respective degree programme without exceeding the standard study period.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the experts:

During the classes, active and interactive teaching methods (e.g. lectures, discussions, reports, presentations, and group work) are applied. ASOIU wants to encourage the students to gain knowledge from different scientific areas and wants them to be able to solve specific problems through an interdisciplinary approach. This should ultimately contribute to the transition from a teacher centered to a student oriented teaching method. In order to involve all students in the learning process and to develop their thinking and analytical skills, the teaching staff uses several methods of training and gives assignments on different levels of complexity.

The most common method of learning in the Bachelor's degree programmes is class session, with several courses having integrated laboratory work. Lecturers generally prepare presentations to support the teaching process. At Bachelor level, the students first gain theoretical knowledge and have more practical classes in their further studies. In general, the following teaching methods are used in the degree programmes: lectures; seminars, laboratory classes, internship, small group activities, and final thesis.

Traditional teaching methods are face-to-face lectures and are class based, requiring all students to attend classes. At least 75% of class attendance is compulsory for all the courses. Lectures are conducted using standard computer based presentations in the form of pre-prepared slides. In addition, white boards and marker pens are used whenever necessary in order to explain difficult topics in greater detail or to answer student questions. Material for lectures such as syllabus, examination questions, presentations topics, slides and additional literature are uploaded to the university's electronic system (Unibook) by every teacher. Every student has an access to the system and can download all necessary information. Results of laboratory works and midterm exams, presentations scores, timetable and final exam scores are available on this page

With individual or group assignments, such as discussions, presentations, or written tasks, students are expected to improve their academic as well as their soft skills. Laboratory work covers laboratory preparation, pre- or post-tests, laboratory exercises, reports, discussions, and presentations. In addition, practical activities should enable students to be acquainted

with academic research methods.

In summary, the expert group considers the teaching methods and instruments to be suitable to support the students in achieving the intended learning outcomes. In addition, they confirm that the study concepts of all programmes under review comprise a variety of teaching and learning forms as well as practical parts that are adapted to the respective subject culture and study format. It actively involves students in the design of teaching and learning processes (student-centred teaching and learning).

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 1:

The experts are glad to hear that ASOIU has signed cooperation agreements with universities from countries such as Turkey, Uzbekistan, and Kazakhstan. The experts point out that these cooperations should be filled with life and that students should be supported and encouraged to participate.

The experts confirm that ASOIU has an official guideline for using Artificial Intelligence (AI). However, the experts still see a need to teach the students on correctly using AI, just issuing a guideline is not enough.

The experts consider criterion 1 to be mostly fulfilled.

2. Exams: System, concept and organisation

Evidence:

- Self-Assessment Reports
- Module descriptions
- ASOIU Examination Regulations
- Academic Regulation for Undergraduate Studies
- Discussions during the audit

Preliminary assessment and analysis of the experts:
According to the Self-Assessment Report, there is a period for midterm exams and a period for the final exams. The form of the exams for each module is specified in the module descriptions. Periods of examinations are scheduled in the academic calendar. During the examination period students take exams according to the approved schedule.

Students' academic performance is evaluated based on their performance in the mid-term and final exams. In addition, in several courses students have to do presentations and 75 % of attendance in class is required. The details, which assessment forms are used in which courses and how they contribute to the final grade, are described in the respective module descriptions. Midterm exams are held during the 7th or 8th week of the semester and final exams are held after the 15th week.

The most common type of evaluation used are written examinations; however, quizzes, laboratory work, assignments (small projects, reports, etc.), presentations, and seminars may contribute to the final grade. Written examinations, either closed-book or open-book, typically include short answers, problem-solving or case-based questions, and calculation problems.

Some lecturers also give multiple choice or true-false questions in examinations or quizzes. The grade from laboratory work usually consists of laboratory skills, discussions, reports, and oral exams. Students can access their results of laboratory works and midterm exams, presentations scores, timetable and final exam scores mid-term and final exams via ASOIU's digital platform "Unibook".

In their final year, all Bachelor's students at ASOIU must complete a graduation project. Students are expected to carry out literature search and complete the theoretical parts of their project before starting with the practical work. Students can select the project from the list offered by the department. Many final theses are conducted in co-operation with companies and the topics are often chosen according to the needs and requirements of the industrial sector, mainly the oil and gas industry. At the end of the graduation project, students write their thesis, which consists of introduction, literature review, research methods, calculations, conclusion and list of references. The assessment of the graduation project consists of the preparation of a thesis and an oral presentation in front of an assessment panel. Students are expected to prepare slides and present their projects orally. The presentation time is 10 minutes and at the end of the presentation 5 minutes are allocated for questions. The assessment depends on the style of the presentation, confidence of the student, the ability to answer the questions and the content of the project. Each commis-

sion member fills in a separate assessment form. The final grading is taken to be the average grade given by all the commission members. For the final grade, 50 % comes from pre-exam activities (mid-term, presentations, classwork, etc.), and 50 % from the final exam.

If students fail an exam, they are allowed to take 2-3 make-up exams per semester (for a maximum of 10 ECTS points). A student who cannot sit a written examination because of ill health must bring a valid doctor's certificate. During examination period a second chance is given to students to re-sit for the examinations that they have missed. The dates of the make-up examinations are announced within five days after the end of the examinations. These exams are conducted within two weeks after the end of the examinations. Student are not allowed to retake the exam in order to improve their results if they have a passing grade.

Students, who cannot attend practical courses for acceptable reasons, can repeat the laboratory work later; the lecturers are responsible for the arrangement. Students can also ask for explanations and can appeal their grades. The details and regulations related to the exams are described in the ASOIU Examination Regulations.

The grades for the exams range from A to F, and/or between 100 and 0. In order to compensate for a final examination that has not been passed, a student can have a re-sit or must repeat the course in the next semester or in the short summer semester. The summer semester is aimed at students who have performance deficits and have failed or missed some exams. An additional fee is charged for each credit point to be made up.

Percentage	Course Grade	%
91-100	A	10
81 – 90	B	15
71 – 80	C	35
61-70	D	20
51-60	E	15
50 and less	F	5

Table 7: Grading scheme, Source: SAR ASOIU

The ECTS grade is a relative grading indicating the student's performance within the cohort; A top 10%; B next 15%; C next 35%; D next 20%; E next 15%; F next 5%.

The experts inquire about the Bachelor's thesis and would like to know, whether they are done at the university or externally at companies or research institutions; they also ask

about the involved quality management. They learn that most students do their final thesis at companies or research institutes. The quality of external research activities is checked by the supervisor, and one supervisor of the Bachelor's thesis must be a member of the teaching staff.

During the audit, the experts notice that the scientific demand and volume of work of the mid-term exams is quite low. Currently, mid-term exams in all three programmes are not on an adequate level for a Bachelor's degree programme. The inspected samples from all three undergraduate programmes included only two very generic questions. The experts emphasise that it necessary to put more emphasis on questions related to transfer skills and critical thinking. Students should not only learn facts by heart and write a short essay about a general topic but also learn to think in a problem-oriented way and be able to transfer knowledge and methods to other areas. The exams should test a broad range of topics, which have been discussed in the respective course and not only focus on a few topics. A structured exam allows teachers to compare students' performance across a common set of questions and helps to make the criteria and grading transparent. Otherwise, the experts are satisfied with the inspected sample examinations as well as the Bachelor's theses from all degree programmes under review.

The students confirm during the audit that the exam load is appropriate and they are well informed about the examination schedule, the examination form, and the rules for grading. Students are generally satisfied with the fairness and transparency. They also have the right to review their exams as per national laws. However, according to the students' feedback, there is a need for more group work and presentations as part of their assessment. Also, they would like to have more project type assessments instead of written final exams.

In summary, the experts confirm – besides the mentioned deficits - that the different forms of examination used are competence-oriented and are suitable overall for verifying the achievement of the intended learning outcomes as specified in the respective module descriptions. The form of examination is determined individually for each course and published in the respective module description.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 2:

The experts appreciate the ASOIU and the three involved Faculties have initiated a review of all mid-term exams. The experts expect to receive the results of this review and samples of the new mid-term exams in the further course of the accreditation procedure.

The experts consider criterion 2 to be mostly fulfilled.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

- Self-Assessment Reports
- Staff Handbooks
- Study plans
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the experts:

At ASOIU, the staff members have different academic positions. There are professors, associate professors, and lecturers. The academic position of each staff member is based on research activities, publications, academic education, supervision of students, and other supporting activities.

According to the information provided by ASOIU, there are 19 teachers involved in the Bachelor's degree programme Ecological Engineering, among them one full professor, 11 associate professors, and seven teachers. The full professor and the associate professors hold a PhD degree, while the teachers have a Master's degree.

In the Department of Instrumentation Engineering, there are currently 14 teachers (seven with a PhD). This includes two professors, three associate professors, and nine teachers. The teaching staff in the department is supported by 13 academic staff members from other departments.

The teaching staff involved in the Bachelor's degree programme Mechanical Engineering encompasses 24 persons, including two full professors, 11 associate professors, and 11 teachers. The full professors, the associate professors, and one teacher hold a PhD degree, while the rest of the teachers have a Master's degree.

In addition, there are administrative staff, technicians and some visiting lecturers from other universities in each department and each faculty.

From the provided staff handbook, the experts derive that most of the teachers have received their academic education in Azerbaijan. In order to further promoting the university's internationalisation, it would be a good idea to send promising graduates abroad for attending PhD programmes at renowned international universities and then subsequently hiring them as teachers.

ASOIU has a policy for promoting the academic staff based on their research activities and scientific publications. There is a scoring system in place, where the teachers get a certain amount of points based on the number and type of publications. In addition, the academic contributions e.g. attending conferences are also taken into account. Teachers also receive financial benefits according to their academic score. This scoring system is quite unusual in comparison to other European countries, but the teaching staff is satisfied with it and expresses no critique.

All fulltime members of the teaching staff are obliged to be involved in teaching/advising, research, and administrative services. However, the workload can be distributed differently between the three areas from teacher to teacher.

During the audit, the experts learn that there are 15 weeks of teaching in every semester. However, the teaching load differs from semester to semester and from teacher to teaching. The respective ASOIU regulation states that teachers should spend 550 hours per year in direct contact with students. This includes lectures, laboratory work, and advising students. The teachers confirm that their teaching load is adequate and leaves them enough room for conducting research activities.

In summary, the experts confirm that the composition, scientific orientation and qualification of the teaching staff are suitable for successfully implementing and sustaining the degree programmes. However, teaching is dominant and the teachers at ASOIU have hardly any scientific publications in renowned international journals.

The experts discuss with ASOIU's management, how new staff members are recruited. They learn that every year the faculties and departments announce their vacancies to ASOIU's management, which publicly announces the vacancies. One way to recruit new teachers is to hire promising Master's students from ASOIU after completing their Master's degree. They usually enrol in a PhD programme parallel to teaching at the university. After finishing their PhD programme and fulfilling other criteria with respect to teaching, research, and publications, teachers can apply for being promoted to Associate Professor. New teachers receive a contract for one year, if ASOIU is satisfied with their performance, another limited contract is offered, usually after five years, an unlimited contract is offered. The promotion system is clear and follows national legislation.

There's a strong focus on research, staff is encouraged and rewarded for their research output, which is reportedly higher than the national average. Academic leave is also available taking into account local legislation.

Staff Development

ASOIU encourages training of its academic and technical staff for improving the didactic abilities and teaching methods. As described in the Self-Assessment Reports, faculty members regularly participate in training or workshops.

Faculty members are encouraged to write and publish technical articles and books, to attend external seminars and conferences in order to renew and broaden their technical knowledge, to attend short training sessions organized by the university and the department from time to time, and to give internal seminars and short training courses relevant to their fields of expertise. In addition, all staff members take part at in-house and external training courses.

The experts discuss with the members of the teaching staff the opportunities to develop their personal skills and learn that the teachers are satisfied with the internal qualification programme at ASOIU, their opportunities to further improving their didactic abilities and to spending some time abroad to attend conferences, workshops, or seminars.

Staff development is supported by Training and Evaluation Department, which offers various online and in-person training in software tools (Aspen, AutoCAD, etc.), teaching methods, lab skills, and research support. New staff members also receive orientation training. Training needs are identified via staff surveys.

In summary, the experts confirm that ASOIU offers sufficient support mechanisms and opportunities for members of the teaching staff who wish for further developing their professional and teaching skills. The teaching staff is competent and their English proficiency is sufficient. There's clear attention to personal and professional development.

Student Support

ASOIU offers a comprehensive advisory system for all undergraduate students. At the start of the first semester, every student is assigned to a tutor. Each tutor is a member of the teaching staff and is responsible for a group of students from his classes. He/she is a student's first port of call for advice or support on academic or personal matters.

The role of the tutor is to help the students with the process of orientation during the first semesters, the introduction to academic life and the university's community, and to respond promptly to any questions. They also offer general academic advice, make suggestions regarding relevant careers and skills development and help if there are problems with other teachers. The students confirm during the discussion with the experts that they all have a tutor who they can approach if guidance is needed.

In general, students stress that the teachers are open minded, communicate well with them, take their opinions and suggestions into account, and changes are implemented if necessary.

Students who prepare their final project have one or more supervisors, who are selected based on the topic of the final project. The role of the final project supervisor is to guide students in accomplishing their final project, e.g. to finish their research and complete the final project report.

Students can receive assistance from the Graduate Career Center of ASOIU about career guidance and consultancy, career development training, soft skill training, and job opportunities. The Centre provides information on training and job seeking to help students develop career plans and workplace understanding. In addition, the Center support students to find suitable jobs by organising a job fair in May and December of every year and by forwarding job vacancies to the students. Moreover, during the internship students are introduced to professional life and acquire additional skills that help them finding an adequate position after graduation. Job perspectives in Azerbaijan for graduates from instrumentation and mechanical engineering, especially in the oil and energy sector, are very good. On the other hand, it is much harder for ecology engineers to find a suitable occupation, which is related to their major.

Finally, there are several student organizations at ASOIU, for example the “Union of Student Associations”, which organizes meetings, round tables, training courses, discussion clubs, and other students’ activities such as arts and sports.

With respect to disability compensation the experts learn that ASOIU has established regulations to support students with disabilities, ensuring they have equitable access to academic programs, including exams, and laboratory work. ASOIU's regulations are designed to create an inclusive educational environment. These regulations aim to provide personalized learning experiences for students with disabilities, ensuring they can participate fully in all academic activities.

While discussing the students’ satisfaction with the library and the access to current international literature, the experts notice that there is obviously no introduction for first year students on using digital databases and the respective offers of the library. Introducing new students to scientific databases and the university library’s offerings is highly beneficial because scientific databases provide students with access to peer-reviewed, credible, and up-to-date resources that are essential for academic research. Unlike general web searches, these databases ensure students are using trustworthy sources, which is crucial for producing high-quality academic work. New students are usually not acquainted with the whole range of library offerings and are uncertain how to use academic resources. Orientation sessions make the opportunities transparent giving students the foundational knowledge and confidence to access what they need and seek help when necessary. To this end, the experts recommend introducing all new students at ASOIU in using digital databases and

the respective offers of the library.

The experts notice that there are enough resources available to provide individual assistance, advice and support for all students. The support system helps the students to achieve the intended learning outcomes and to complete their studies successfully and without delay. The students are well informed about the services available to them. In summary, the comprehensive tutorial and support system for students is one of the strong points of the degree programmes.

Criterion 3.2 Funds and equipment

Evidence:

- Self-Assessment Reports
- Visitation of the facilities
- Discussions during the audit

Preliminary assessment and analysis of the experts:
Basic funding of the degree programmes and the facilities is provided by ASOIU and the involved faculties and departments. Most of the financial sources are derived from government funding (85 %), which includes the tuition fees. The rest derives from cooperations with companies.

The Faculty of Chemical Technology consists of four departments (Department of Petrochemical Technology and Industrial Ecology, Department of Chemistry and Inorganic Substances Technology, Department of Organic Substances and High Molecular Compounds Technology, and Department of Social Disciplines). The Faculty of Chemical Technology has the following undergraduate teaching laboratories: General Chemistry Laboratory, Organic Chemistry Laboratory, Inorganic Chemistry Laboratory, and Ecological Engineering Laboratory. In addition, students use the following laboratories of other faculties of the university: Engineering Physics Laboratory and Computer Laboratory.

The Faculty of Information Technologies and Control has four departments: Department of Instrumentation Engineering; Department of Electronics and Automation, Department of Computer Engineering, and Department of General and Applied Mathematics. There are the following laboratories: Analog Measuring Instruments Laboratory, Digital Measuring Instruments Laboratory, Metrological Instruments Laboratory, and Biomedical Instruments Laboratory. In addition, there are some computer laboratories with adequate hardware and professional software. Finally, there is a well equipped and modern simulation laboratory.

The experts point out that there is room for improvement with respect to the visited laboratories in the Faculty of Information Technologies and Control. A Bachelor's degree programme in Instrumentation Engineering requires a suite of specialized laboratories equipped with technical instruments that support both foundational and advanced practical training. These labs are essential for teaching students the principles of measurement, control, automation, and signal processing as applied in industrial and scientific settings. Essential instruments include a variety of sensors, transducers, calibrators, controllers, analytical devices, and signal processing tools, providing students with practical skills relevant to modern industrial environments.

The chemistry laboratories provide an infrastructure which supports the learning outcomes defined. Equipment is very well maintained and oriented at the needs of up-to-date education. For all experimental work carried out by the students they are requested to prepare beforehand, take notes during the performance of the experiment and write a report about their observations including a conclusion.

The Faculty of Chemical Technology maintains laboratories for Inorganic Chemistry, Organic Chemistry, and Analytical Chemistry. The laboratories are modern and spacious and give sufficient room to work in small groups. Overall the equipment is very suitable and in excellent condition. Safety measures as well as the available instruments are up-to-date and are aligned with international standards. On the other hand, the Ecology Laboratory is in dire need of improvement. This concerns the outdated instruments as well as the practically non-existent safety measures. The chemistry laboratories should serve as a role model and the Ecology Laboratory should follow this example. The experts point out that the basic personal protective equipment that needs to be available to all persons working in laboratories includes safety goggles, laboratory coats, and hand gloves. It must be worn all the time when working in the laboratory. Students should be trained in the right use of the equipment (e.g. the need to change contaminated gloves before touching a door handle or a keyboard, which also might be used by persons not wearing safety gloves). The personal protective equipment should be stored separately from street clothes. In addition, working safety hoods should be available in all labs (with exhaust to the outside) and chemicals and solvent containers should be labeled properly and be stored in special lockers with exhausts leading outside the labs. Moreover, there should be emergency exits signs and posters with the safety regulations. Finally, it is important that all students know how sterile work in a laboratory is conducted and that at least once year a safety inspection of the laboratories should be done. This does not only include wearing gloves, but also hair should be covered and pipette tips need to be changed for different reagents. The teachers need to make sure that all students are familiar with sterile work, especially if they are preparing personnel for further work in diagnostic laboratories.

With respect to the laboratories for the Mechanical Engineering programme, the experts visit the university's welding laboratory. In this lab are two laser welding systems for metals. In one system, the welding head is manipulated by a robot, although there were no safety precautions in the area of movement of the robot arm. The second system was a stationary, fully encapsulated device. There was also an encapsulated CNC milling machine in this laboratory. What all the devices have in common is that they cannot be meaningfully integrated into the practical laboratory training of the students.

In the laboratory with the scanning electron microscope, a 200 litre gas cylinder was not chained and was completely free-standing. There is supposed to be an older tensile testing machine from Instron GmbH in the building, but this was not shown. A new tensile testing machine (also from Instron GmbH) is currently being ordered.

The experts stress that there is a need for improvement. A comprehensive Bachelor's degree programme in Mechanical Engineering requires a diverse set of laboratories to cover the breadth of the discipline. These labs are essential for bridging theoretical knowledge with practical skills and for providing hands-on experience with modern engineering tools and instruments, this should include laboratories for materials, mechanics, manufacturing, fluids, thermodynamics, dynamics, measurement, and computer-aided engineering. Each lab should feature industry-standard instruments such as universal testing machines, hardness testers, precision measurement tools, flow benches, and advanced software, ensuring students gain both foundational knowledge and practical skills needed for the profession.

The visited laboratories at the Faculty of Oil Mechanics and the Faculty of Information Technology and Control clearly display the necessity for renewing the technical equipment and modernisation. While the current facilities support basic practical activities, modern laboratories would enrich the students' learning experience by providing them with hands-on exposure to current technologies, which is essential for developing their skills and for their preparedness for the job market. Therefore, allocating funds for equipment upgrades is an essential step towards enhancing the educational and research capabilities of the three degree programmes under review.

In general, the experts see during the on-site visit that the laboratories are equipped with the necessary basic equipment, but that there are a number of outdated instruments (with the exception of the chemistry and simulation laboratories). This impression is confirmed by both the students and the teachers, who, in conversation with the experts, assess some of the technical material equipment of the teaching laboratories as worthy of improvement. The experts point out that there are some bottlenecks due to a lacking infrastructure and the technical equipment in the laboratories needs to be updated and increased in numbers. Additionally, more modern instruments for conducting research activities should be

available. The expert group understands that modern research equipment for sophisticated laboratory work, sufficient in terms of quality and quantity, is not readily available and that the funds are restricted. For this reason, the experts expect ASOIU to submit a schedule and financing plan on how to update and increase the basic instruments and the technical equipment in the laboratories within the next five years. The first steps towards concrete implementation should be taken as soon as possible.

During the audit, the students express their general satisfaction with the available resources and conditions of studying, thereby confirming the positive impression of the expert group. The students also express their satisfaction with the library and the available literature there. Remote access via VPN is possible and ASOIU offers access to several scientific digital databases and students can access current scientific papers, e-books, and papers.

In summary, the expert group judges the available funds, the technical equipment, and the infrastructure (laboratories, library, seminar rooms etc.) to comply – besides the mentioned restrictions – with the requirements for adequately sustaining the degree programmes.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 3:

The experts are glad that ASOIU has recognised the need to improve the safety standards in the laboratories especially in the Ecology Laboratory. The experts expect to receive a verification of the implemented improvements in the further course of the accreditation procedure.

With respect to the need for updating and supplementing the technical equipment in the laboratories, the experts ask ASOIU to submit a concept and a timetable on how to update and supplement the technical equipment in the laboratories within the accreditation period so that students can get hands-on experience with current scientific methods.

The experts consider criterion 3 to be mostly fulfilled.

4. Transparency and documentation

Criterion 4.1 Module descriptions

Evidence:

- Self-Assessment Reports

- Module descriptions
- Homepage ASOIU: https://asoiu.edu.az/
- Homepage Ba Ecological Engineering: https://asoiu.edu.az/chemical_technology_faculty/specialization_detail/13
- Homepage Ba Instrumentation Engineering: https://asoiu.edu.az/information_technologies_and_control/department/6
- Homepage Ba Mechanical Engineering: https://asoiu.edu.az/oil_mechanical_engineering/specialization_detail/1
- Discussions during the audit

Preliminary assessment and analysis of the experts:

After studying the module descriptions of all programmes under review, the experts confirm that the module descriptions include all necessary information about the respective module such as, module title, persons responsible for the module, teaching methods, awarded credits and students' work load, learning outcomes, content, admission and examination requirements, forms of exams, and recommended literature.

However, the experts point out that the module handbooks do not include the module descriptions of the practise (internship) and graduation project (Bachelor's thesis).

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report
- Sample Transcript of Records for each degree programme
- Sample Diploma Certificate for each degree programme

Preliminary assessment and analysis of the experts:

The experts confirm that the students of all degree programmes under review are awarded a Diploma after graduation. The Diploma consists of a Diploma Certificate and a Transcript of Records.

In addition, ASOIU issues a Diploma Supplement to every graduate, which is aligned with the European template.

Criterion 4.3 Relevant rules

Evidence:

- Self-Assessment Report
- All relevant regulations as published on the university's webpage

Preliminary assessment and analysis of the experts:
The experts confirm that the rights and duties of both ASOIU and the students are clearly defined and binding. All rules and regulations are published on the university's website and the students receive the relevant course material at the beginning of each semester. This includes a syllabus and exam schedule.

However, the experts point out that all programmes' homepages should include the essential information about the respective study programme such as the learning outcomes, the length and awarded ECTS points, the general profile, and a link to the module handbook. Currently, the homepages of the programmes do not offer a lot information and should be updated.

Including all essential information about a study programme on its homepage is fundamental for transparency, informed choice, quality assurance, and student engagement, while also facilitating recognition and mobility within the higher education system

Providing comprehensive information—such as learning outcomes, programme profile, curriculum, and module descriptions—on the programme's homepage ensures transparency for prospective and current students. This allows students to make informed decisions about their studies, understand what is expected of them, and what they will achieve upon completion of the programme. In addition, a transparent presentation of curriculum details and module descriptions aids in the recognition of qualifications and credits, especially for students who may transfer between universities or participate in exchange programmes. This openness removes barriers to mobility and supports the recognition process across institutions and countries.

Finally, making module descriptions and curriculum structure publicly accessible supports internal and external quality assurance processes. It ensures that the programme's content, learning outcomes, and assessment methods are logically connected and meet institutional and accreditation standards.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 4:

The experts confirm that ASIOU has drafted module descriptions for the practise (internship) and graduation project (Bachelor's thesis). However, only the samples submitted for

the Instrumentation Engineering programme are fine. For this reason, the Mechanical Engineering and the Ecological Engineering programmes still need to submit updated module descriptions for the practise (internship) and graduation project (Bachelor's thesis).

With respect to the programmes' homepages, the experts expect that they will be updated soon.

The experts consider criterion 4 to be mostly fulfilled.

5. Quality management: quality assessment and development

Evidence:

- Self-Assessment Report
- AUPET Academic Policy
- Discussions during the audit

Preliminary assessment and analysis of the experts:

ASOIU applied for international accreditation, because it is their goal to align the educational programmes with international standards and foster the competiveness of the graduates not only on the national but also on the international job market. To this end ASOIU is highly interested in receiving an external view on their teaching and learning processes.

The experts discuss the quality management system at ASOIU with the representatives of the Rector's Office and the Heads of Department. They learn that there is an institutional system of quality management aiming at continuously improving the degree programmes. This system relies on internal as well as external quality assurance. Internal quality assurance encompasses all activities focused on implementing measures for improving the teaching and learning quality at ASOIU. There are regular revision processes in place that take into account feedback by external and internal stakeholders. Minor adjustments can be implemented directly, whereas major revisions takes place every five years.

Each department is under the control of the respective faculty as far as strategic decision-making is concerned. The Dean of the Faculty has the overall responsibility for all strategic decisions concerning the faculty and the Head of the Department is responsible about the day to day running of the department. The Head of the Department arranges meetings with

the teaching staff at regular intervals to make sure that there are no problems and to solve any problems by either contacting the Dean or the appropriate staff of the university.

The experts discuss the quality management system at ASOIU in the course of the different discussions. They learn that there is a continuous process in order to improve the quality of the degree programmes and it is carried out through internal quality assurance.

The quality assurance of the different departments and faculties is conducted through meetings. All Heads of Department are required to attend the faculty meetings, whereas all teaching staff has to attend the departmental meetings. The aim of the departmental meetings is to take corrective actions in order to improve the quality of teaching and learning.

Students' satisfaction is measured by carrying out short surveys for each module at the end of the semester. This provides feedback to those who are responsible for maintaining the quality of the degree programme. This is organised by the Dean's Office.

The satisfaction surveys are conducted anonymously through ASOIU's digital platform "Unibook". The questionnaires are distributed and evaluated at the end of the semester. With 12 questions, the students are asked to give their feedback on the teaching content, communication, laboratory work, etc. Participation is not compulsory, but students are encouraged by their teachers and academic advisors to participate at the surveys and to give their feedback.

In case of negative feedback, the Head of Department is talking to the respective teacher and measure to improve the situation are applied. These measures include investigation of the negative cases and observance of the teacher's performance in class for some period. If no improvement is achieved, the teacher can be replaced.

Students also are involved in the further development of the degree programmes by submitting their ideas and recommendations (there is special box in the faculty building to collect any suggestions), which are analysed by the respective department.

In addition, students are members of the Scientific Council at Azerbaijan State Oil and Industry University (ASOIU). The council is composed not only of administrative and academic staff but also includes student representation, ensuring that students have a voice in the university's governance and decision-making processes. However, many students didn't know who their representatives in the Scientific Council are. More transparency about representatives could help students engage more actively.

The experts gain the impression that the departments take the students' feedback seriously and changes are made if necessary. In case of negative feedback, the Head of Department

talks to the respective teacher, analyses the problem, and offers guidance. There are regular meetings with students where they can voice their issues and suggestions. Nevertheless, the experts see that the students are not comprehensively informed about the results of the surveys. Informing students about the results of satisfaction surveys is necessary because sharing survey results shows students that their feedback is taken seriously and valued by ASOIU. This transparency fosters a sense of trust and respect, making students feel heard and appreciated as stakeholders in their educational experience. In addition, when students see that their opinions lead to visible outcomes or changes, they are more likely to participate in future surveys. Consequently, the experts expect ASOIU to inform students directly about the results of the questionnaires and about possible improvements in the respective course. The feedback loops need to be closed.

Surveys are conducted, but the questions could be improved, having more targeted questions about specific courses, teachers, labs, and materials. Moreover, the experts point out that there should be a regular and institutionalised survey on students' workload in every course. For example, this could be done by including a respective question in the course questionnaires that students have to fill out at the end of each semester. This is especially necessary for the internship and the Bachelors' thesis. Here, the students' total workload and the awarded ECTS points are not aligned. Regularly monitoring and evaluating student workload helps identify discrepancies between the estimated and actual workload experienced by students. This feedback loop allows institutions to adjust course design, teaching methods, and assessment strategies to better match the intended learning outcomes with the actual effort required. Such alignment is essential for quality assurance, ensuring that courses are neither overloaded nor under-demanding, and that students are not unfairly burdened or under-challenged (see Criterion 1.5).

ASOIU has a strong connection with the industry. Every undergraduate programme includes an internship, and students find it relevant and practical. Employers and alumni, which are part of industry also give regular feedback to departments which helps improve the curriculum. According to the feedback from employers, they are happy with the graduate profile of the programmes and they often hire students after internships.

The experts discuss with the representatives of ASOIU's partners from public institutions and private companies if there are regular meetings with the partners on faculty or department level, where they discuss the needs and requirements of the employers and possible changes to the degree programmes. They learn that some employers and alumni are invited to give their feedback on the content of the degree programmes. Additionally, there are regular meetings, usually once a year, with alumni and employers in each department

to discuss the content and further development of the study programmes. The experts appreciate that ASOIU stays in contact with its alumni and has a close relation with its partners from the industry.

In summary, the expert group confirms that the quality management system is suitable to identify weaknesses and to improve the degree programmes. However, there is still room for improvement. Students should be better informed and not all feedback loops are closed.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 5:

The experts appreciate that ASOIU has recognised the need to close the feedback loops and to inform students about the outcomes and resulting actions from the satisfaction questionnaires. The experts expect to receive verification of the results of the scheduled meetings and the intended dialogue with the students.

The experts consider criterion 5 to be mostly fulfilled.

D Additional Documents

Before preparing their final assessment, the panel asks that the following missing or unclear information be provided together with the comment of the Higher Education Institution on the previous chapters of this report:

- none

E Comment of the Higher Education Institution (29.07.2025)

ASOIU provides the following statement:

Reply from Faculty of Oil Mechanics:

“Academic mobility

Azerbaijan State Oil and Industry University (ASOIU) is actively working to enhance its student and staff mobility programs and has taken concrete steps to ensure these mobilities take place. The university has signed agreements and Memoranda of Understanding (MoUs) with several regional, European, and Central Asian universities - specifically identified for mechanical engineering-related mobility - including Middle East Technical University, Necmettin Erbakan University, Niğde Ömer Halisdemir University, Bahçeşehir University, Western Macedonia University, L. N. Gumilyov Eurasian National University, Karaganda Industrial University, University of Miskolc, İzmir University of Economics, Malatya Turgut Özal University, Termez State Engineering and Agro-Technology University, Tashkent State Technical University named after I. Karimov, Koç University, Burdur Mehmet Akif Ersoy University, Auezov University, and Satbayev University. ASOIU has initiated negotiations, identified quotas, and addressed other relevant matters to facilitate student and staff exchanges for the Fall and Spring semesters of the 2025-2026 academic year.

Since 2015, the Azerbaijan State Oil and Industry University (ASOIU) has been a member of the Erasmus+ network. Within this framework, the university has participated in a number of projects aimed at improving the quality of higher education.

Through the Erasmus+ International Credit Mobility program, ASOIU students have had the opportunity to pursue short-term studies at leading universities across Europe. As part of this program, students have studied at universities in Turkey, Germany, Poland, and Romania. Additionally, some students have been sent to universities in Russia, India, and Yemen.

Although Azerbaijan has not officially withdrawn from the Erasmus+ program, its participation has been temporarily suspended as of early 2025. It is hoped that a positive decision will be made by the Azerbaijani authorities to resume the program and further promote student mobility.

Recognition of academic credits for students studying abroad.

Students who have studied abroad and return to continue their education at Azerbaijan State Oil and Industry University (ASOIU) do so in accordance with the principles of academic mobility and credit transfer established by the Ministry of Science and Education of the Republic of Azerbaijan.

Academic credits obtained at foreign higher education institutions are evaluated by the "Academic Recognition Committee" to be established at the University, based on course syllabi. The syllabi of the courses completed abroad are required and their equivalence to the ASOIU curriculum is verified. An Individual Learning Path is prepared for the student. Within this plan, an optimal balance between previously earned and new credits is determined. If necessary, credit differences are compensated according to existing regulations. Additionally, courses completed abroad may be recognized as elective courses within the student's major.

A coordinator is appointed for students studying abroad to facilitate more flexible resolution of their academic matters.

About the University's Website

As previously mentioned, the information provided on the University's website regarding academic programs is incomplete, which creates difficulties in accessing and understanding the necessary details. Taking these concerns into account, the University's website is currently being updated, and all required documents related to the "Mechanical Engineering" program is being uploaded.

About the Labs

As noted, some of the equipment used in the existing laboratories is outdated and needs to be replaced with modern alternatives. In order for students majoring in Mechanical Engineering to become familiar with modern scientific methods and to carry out laboratory work in line with current requirements, the modernization of existing research laboratories and the establishment of new, modern laboratories is essential.

This initiative has been included in the short-, medium-, and long-term DEVELOPMENT STRATEGY of Azerbaijan State Oil and Industry University for the years 2021–2030.

About the Midterm Examinations

Taking into account the previously noted feedback, it is planned to conduct midterm examinations in the following format starting from the next semester:

- The date of the midterm exam is coordinated with the dean's office and organized in the 7th week in accordance with the academic calendar.

- Midterm exams in the “Mechanics” department will be held in written format.
- The point value of each question and the evaluation criteria will be determined in advance.
- Exam questions are prepared based on the current course syllabus. At least 50–70% of the questions are expected to focus on practical application and analytical thinking.
- Students will be informed about exam rules, answering methods, and time limits beforehand.
- A proctoring instructor must be present in the examination room.
- The exam time will be officially announced.
- Compliance with rules will be ensured, and cheating will be strictly prevented.
- At the end of the exam, all answer sheets will be collected.
- Evaluation will be carried out based on pre-defined criteria.
- Grades will be entered into the LMS system and communicated to students.
- Students who are not satisfied with their exam results may submit an appeal, and a process will be in place to review such cases.

Collaboration of the “MECHANICS” department with industrial enterprises

Industrial internships serve to help students apply their theoretical knowledge in real working environments, develop professional skills, and enhance their readiness for the labor market. For the effective organization of industrial internships, the “Mechanics” department closely cooperates with the following enterprises, and the internships of students are organized in institutions relevant to their specialization. In addition, the topics of bachelor's graduation theses are developed jointly with the staff of these enterprises, and regular excursions to these institutions are organized. The “Mechanics” department collaborates with the following enterprises:

“METAK” company, "Baku Oilfield Equipment" Ltd., “Caspian Pipe Coatings” LLC, “SOCAR DOWNSTREAM MANAGEMENT” LLC, “COCA-COLA Company”, SOCAR “Oil and Gas Research and Design Institute”, “Neftqazmash” machine-building plant, “Binagadi Oil”, “Absheronneft OGED”, “N.Narimanov OGED”, “DALMA” platforms, “BORUSAN CAT” company, “SOCAR Complex Drilling Works Trust”, “Heydar Aliyev Baku Oil Refinery”, “Norm” OJSC, “ECOTECH ENVIRONMENTAL” LLC, “Azel Systems” LLC, “SOCAR-KBR” LLC, “Ministry of Defense Industry Scientific Research Institute”, “Azerbaijan Railways” CJSC.

SAFETY RULES

For laboratory classes in subjects taught by the “Mechanics” department

- Entry to the laboratory is only permitted with the instructor’s permission.
- Students must be familiar with the safety instructions in advance.
- Wearing proper laboratory attire (lab coat, goggles, gloves) is mandatory.
- Laboratory discipline must be strictly followed, and silence should be maintained.
- The locations of fire extinguishers and emergency exits must be learned beforehand.
- Equipment should only be used according to instructions or under the supervision of the instructor.
- It is strictly prohibited to touch universal testing machines (UDM), hardness testers (Brinell, Vickers, Rockwell), and other mechanical testing devices while they are in operation.
- Do not interfere with devices while they are under electrical load.
- During tension and compression tests, do not stand near the test specimens, as fragments may fly out upon breaking.
- Equipment must not be operated without first checking the electrical cables.
- Any exposed wires or short circuits must be immediately reported to the instructor.
- Do not touch electrical equipment with wet hands.
- There is a high risk of injury from the sudden breaking of material samples under stress; always maintain a safe distance.
- Do not touch rotating or moving parts (e.g., hinged systems, gears) with your hands.
- The dimensions of test specimens must be taken accurately and precisely.
- After testing, the equipment must be turned off and the workspace cleaned.
- Broken specimens must be collected carefully and disposed of in designated containers.
- In case of injury or accident, immediately inform the instructor or laboratory supervisor.
- It is important to be familiar with the first aid kit intended for emergencies.

NOTE:

The gas cylinder in the laboratory room of the Mechanics Department has been securely fastened to the wall in compliance with safety requirements.

Fire Emergency Procedure Statement

An effective Fire Safety and Evacuation Plan (“this plan”) requires the coordination of many occupants in a building. All building occupants, including faculty and other academic personnel, staff, students, and patients need to be aware of their roles and responsibilities in case of an emergency.

This section outlines specific responsibilities for university personnel, students, as well as the evacuation director and wardens. Visitors should also be instructed on proper response to alarms and the requirement to evacuate.

RESPONSIBILITIES OF CLASSROOM LECTURERS AND INSTRUCTORS

1. Be familiar with building and emergency procedures and be prepared to provide direction to students attending your class in the event of an emergency.

2. Orient students with a brief overview of emergency evacuation procedures on the first day of class to:

a. Provide general information relating to emergency procedures.

b. Inform students that evacuation is required when the alarm system is activated.

c. Inform students of the location of the nearest exits, and where to assemble outside.

3. Take responsible charge of the classroom during building emergencies and alarms.

4. Report an emergency by activating the alarm systems and calling 1-1-2.

5. Be familiar with evacuation options for persons with disabilities.

6. During a communicable disease outbreak, wear a face covering when inside a building and continue to wear it outside in designated evacuation area.

RESPONSIBILITIES FOR LABORATORIES AND OTHER LOCATIONS WITH HAZARDOUS MATERIALS

1. Be familiar with building emergency procedures and act in the event of an emergency. Refer to Sections 3 and 4.

2. If the emergency is in or near your research area, report directly to the incident command about any hazardous materials and activities in your research area. This will help

ensure the safety of emergency responders and the resumption of normal operations as soon as possible.

3. Wear a face covering when inside a building and continue to wear it outside in designated evacuation area.

RESPONSIBILITIES OF STUDENTS

1. Be familiar with building emergency procedures and act in the event of an emergency.

2. Respond to building alarms and promptly evacuate.

3. Follow directions of instructors, evacuation wardens, police and fire representatives.

4. During a communicable disease outbreak, wear a face covering when inside a building and continue to wear it outside in designated evacuation area.

Upon discovery of a fire emergency at ASOIU, all occupants must take immediate action to ensure personal and public safety.

Activation of Alarms:

Alarms must be activated when fire, smoke, or the smell of gas is detected, or during any situation that poses a potential hazard inside a building. Fire alarms are activated manually using pull-stations, which are located near each stairwell exit and throughout the buildings.

The fire alarm system at ASOIU includes loud audible horns and visible strobe lights. If the alarm does not activate when a pull-station is used, evacuate the building immediately and try to activate any other nearby alarms. If needed, shout warnings and knock on doors to alert others.

Note: False activation of a fire alarm is a criminal offense and may lead to arrest and prosecution.

Evacuation Procedures:

All building occupants must evacuate when a fire alarm is triggered or when a fire emergency is apparent. Failure to evacuate is a violation of ASOIU policies and local regulations.

During evacuation:

- Follow the instructions of ASOIU Security personnel and Building Marshals.
- Turn off machinery or equipment in your area if it is safe to do so.
- Close doors behind you to slow the spread of fire or smoke.

- Use the nearest safe exit; if exits are blocked by smoke or fire, go to a room farthest from danger and call 112.
- If smoke is present, stay low to the ground where the air is cleaner. If possible, cover your nose and mouth with a cloth to filter smoke.
- Do not obstruct or delay the evacuation.
- Never use elevators during fire emergencies.
- Be aware of individuals with disabilities or mobility issues. Assist them only if it does not endanger your safety.
- If someone is unable to evacuate, inform responding emergency personnel immediately upon exiting the building. Provide their location and a description.
- Stay to the right in stairwells and use handrails.
- Before opening any door, feel it with the back of your hand. Do not open it if it is hot.

Important Safety Reminders:

- Do not attempt to fight a fire yourself.
- Do not re-enter a building for any reason until it is declared safe by emergency personnel.
- If trapped, open windows from top and bottom if possible to release heat and allow fresh air in.
- Hang a visible item (e.g., clothing) out the window to signal for help.
- Call 112 and report your exact location and situation.

About the Accreditation and Quality Assurance

Currently, the “Accreditation and Quality Assurance“ department has begun its activities at ASOIU. One of the areas of activity of the department is the verification, assessment and solution of problems of quality of education.

The “Accreditation and Quality Assurance“ department organized a meeting with students to analyze and present the survey results (https://asoiu.edu.az/single_news/3149).

Taking into account the opinions of the ASIIN Accreditation Commission regarding the updating and clarification of surveys, an updated version of the list of questions for determining the quality of educational services currently provided by ASUOI was developed (https://forms.gle/k7DneR2gTpQkfguW9)

About curriculum and credits

In the bachelor’s curriculum, 40% of the hours are allocated to classroom (auditory) learning, while 60% are dedicated to out-of-class independent study, as determined by the decision of the Ministry of Science and Education regarding the organization of the educational process. This approach allows students to engage more in independent work and learning during their studies.

Basis: The organization of education through the credit system at the bachelor’s and master’s levels in higher education institutions, including primary (basic higher) medical education.

This system was approved by the Cabinet of Ministers of the Republic of Azerbaijan on December 24, 2013, by decree No. 348. (https://e-qanun.az/framework/27030)

Curricula are updated every five years. For the 2020–2025 academic years, the curriculum includes 21 credits for industrial internship and 9 credits for the preparation and defense of the bachelor’s thesis. When preparing the curriculum for the 2025–2030 academic years, the noted remarks will be taken into account, and it will be fully aligned with international standards.”

Reply from Faculty of Information Technology and Control:

“**1. Students’ academic mobility is rather low and should be better promoted. The number of international cooperations and scholarships should be increased and students should be encouraged to spend some time abroad.**

In accordance with the "State program to increase the international competitiveness of the system of higher education of the Republic of Azerbaijan" approved by the decree of the President of the Republic of Azerbaijan (https://president.az/az/documents/category/orders), the development of the project of a new master's program for specializations within the specialty "Instrumentation engineering" of the "Instrumentation engineering" department is currently being completed. This program envisages obtaining a double diploma with two foreign universities - the Satbaeva University of Kazakhstan and the Uzbek Technical University, and admission is planned for the next year. In addition to this work, the development of a project to bring the undergraduate curriculum into compliance begins.

At the present time, foreign students at the bachelor's level are being trained at the "Instrumentation engineering" department. Azerbaijan State Oil and Industry University (ASOIU) is actively working to enhance its student and staff mobility programs and has

taken concrete steps to ensure these mobilities take place. The university has signed agreements and Memoranda of Understanding (MoUs) with several regional, European, and Central Asian universities - specifically identified for mechanical engineering-related mobility - including Middle East Technical University, Necmettin Erbakan University, Niğde Ömer Halisdemir University, Bahçeşehir University, Western Macedonia University, L. N. Gumilyov Eurasian National University, Karaganda Industrial University, University of Miskolc, İzmir University of Economics, Malatya Turgut Özal University, Termez State Engineering and Agro-Technology University, Tashkent State Technical University named after I. Karimov, Koç University, Burdur Mehmet Akif Ersoy University, Auezov University, and Satbayev University. ASOIU has initiated negotiations, identified quotas, and addressed other relevant matters to facilitate student and staff exchanges for the Fall and Spring semesters of the 2025-2026 academic year.

These steps will contribute to increasing the international mobility of students.

2. For facilitating the recognition of credits acquired abroad, it would be useful to sign a learning agreement with each students that wants to study abroad. Additionally, it would be possible to recognise courses attended abroad as electives.

Elective subjects of the "Instrumentation engineering" specialty major have been selected in accordance with internationally accredited programs.

Students studying abroad are allowed to return to Azerbaijan State Oil and Industry University (ASOIU) to continue their education in accordance with the principles of academic mobility and credit transfer established by the Ministry of Science and Education of the Republic of Azerbaijan.

Academic credits obtained in a foreign university are assessed by the "Academic Recognition Commission" created at the university based on the curricula. In this case, it is necessary to provide the curricula of the disciplines obtained abroad and check their compliance with the ASOIU curriculum. An Individual Learning Path is developed for the student. Within the framework of this plan, the optimal balance of received and earned credits is determined. If necessary, the difference in credits is closed in accordance with the current rules. In addition, courses taken abroad can be recognized as optional subjects of the specialty.

For students who have studied abroad, a coordinator is assigned and the issues of such students are dealt with more flexibly.

The Ministry of Science and Education of the Republic of Azerbaijan, in cooperation with the International School of Programming "Algorithmics", organized the "IT-Academy" project, in which students of the "Instrument Engineering" department participated. ASOIU conduct "Code for the Future" courses, where students are trained in IT professions. Certain "Elective" subjects (the list of subjects is approved by the rector of ASOIU on the recommendation of the department) are replaced by these courses so that students do not have loan arrears upon graduation.

Upon successful completion of the courses, students are given appropriate certificates.

3. The instruments in several laboratories are quite old and should be replaced. Additionally, more advanced devices should be purchased so that students can get hands-on experience with current scientific methods.

Currently, the "Instrumentation engineering" department has two computer classes and two laboratories: "Measuring Devices" and "Analog and Digital Devices ", equipped with new equipment.

In addition, in accordance with paragraphs 4.6, 4.7 and 4.8 of the Strategic Development Plan of the ASOIU (https://asoiu.edu.az/file/62), in the coming years it is planned to purchase new devices, measuring instruments and systems, as well as equip new laboratory facilities.

These measures will help improve the quality of laboratory classes.

4. Safety standards must be strictly followed in all laboratories, especially the Ecology Laboratory is lacking in this respect.

Currently, laboratory premises of the "Instrumentation engineering" specialty are equipped with safety instructions (Appendix 1, 2, 3).

The implementation of these measures will improve the safety of laboratory classes.

5. Offer more excursions/site-visits to companies so that students get a better impression where to do the internship and what the focus of the different companies is.

This year, it is planned to conduct the disciplines "PLC and SCADA in the control and monitoring of technological processes" and "Design of systems based on DCS in technological processes" fully (lectures, practical classes and laboratory work) in production.

Regular production classes on other subjects will be continued in production (for example, disciplines on metrology and quality control are controlled at the "Institute of Metrology"). Appendix 4 presents a brief report on regularly held production classes in the "Instrument Engineering" specialty.

These events will help students master the requirements and features of work in production.

6. It is necessary to verify the students' workload and to award the ECTS point accordingly. Students should be familiar with workload and ECTS calculation.

Currently, internships in "Instrument Engineering" specialty are carried out on the basis of instructions from the Ministry of Science and Education of the Republic of Azerbaijan.

Active and Passive Hours

In the bachelor's curriculum, 40% of the hours are allocated to classroom (auditory) learning, while 60% are dedicated to out-of-class independent study, as determined by the decision of the Ministry of Science and Education regarding the organization of the educational process. This approach allows students to engage more in independent work and learning during their studies.

Basis: The organization of education through the credit system at the bachelor's and master's levels in higher education institutions, including primary (basic higher) medical education.

This system was approved by the Cabinet of Ministers of the Republic of Azerbaijan on December 24, 2013, by decree No. 348.

Curricula are updated every five years. For the 2020–2025 academic years, the curriculum includes 21 credits for industrial internship and 9 credits for the preparation and defense of the bachelor's thesis. When preparing the curriculum for the 2025–2030 academic years, the noted remarks will be taken into account, and it will be fully aligned with international standards.

The students were informed by the curators of the groups (teachers of the department) and tutors (staff of the dean's office) about workload and ECTS calculation.

7. It would be useful to issue an official AI guideline for all students at ASOIU and to teach all students on correctly using AI.

Currently, in “Instrumentation Engineering” program there is subject “Artificial Intelligence (Machine, Deep Learning)” which introduces students to artificial intelligence (AI), its features and capabilities.

In addition, the Vice-Rector for Science and Technology of ASOIU prepared a guide (ASOIU policy on the responsible use of artificial ıntelligence. V.1) to using AI (Appendix 5).

These recommendations will help students use AI correctly.

8. Mid-term exams should be real exams and not just writing a small essay about a given topic. Currently, mid-term exams in all three programmes are not on an adequate level for a Bachelor’s degree programme.

Taking into account the opinions of the ASIIN Accreditation Commission regarding the midterm exams, it is planned to compose midterm questions from practical questions for subjects that have seminars, and to compose midterm questions in the form of creating a corresponding scheme and/or algorithm for other subjects.

These steps give the questions a more practical character.

9. The information about the programmes on the university’s homepage is incomplete and is hard to find.

A new website for ASOIU has been developed and will be launched in full in the near future. The shortcomings identified by the ASIIN Accreditation Commission will be eliminated in the next academic year.

The website will include extensive information to help organize the department's activities and teaching (information about the department, classes, teachers, international relations, etc.).

All the necessary information has already been provided to the IT department for inclusion on the ASOIU website.

It helps to students obtain all the necessary information about the “Instrumentation Engineering” department and program, and choose the specialty they are interested in.

10. The module handbook needs to include module descriptions for all modules.

Syllabus of Practical training (Industrial practice):

Course Unit Title	Practical training (Industrial practice)
Course Unit Code	PT
Type of Course Unit	Compulsory
Level of Course Unit	4th year INEN program
National Credits	0
Number of ECTS Credits Allocated	21
Theoretical (hour/week)	-
Practice (hour/week)	18
Laboratory (hour/week)	-
Year of Study	4
Semester when the course unit is delivered	8
Course Coordinator	-
Name of Lecturer (s)	-
Name of Assistant (s)	-
Mode of Delivery	Face to Face
Language of Instruction	English
Prerequisites	-
Recommended Optional Programme Components	-

Course description:

Practical training is an important aspect of "Instrumentation engineering" programs. It acts as a bridge between the theoretical knowledge acquired in the classrooms and the practical challenges present in the real-world work environment. This intensive experience exposes students to the complexities of their chosen field, providing insight into the application of theoretical concepts in industrial settings.

Objectives of the Course:

The objective of industrial practice is to familiarize students with real-world work scenarios, equipping them with the skills necessary for the professional landscape. It aims to bridge the gap between academic knowledge and practical application, fostering a seamless transition for graduates into the workforce.

Practical training is the essential system to open understudies to genuine work life circumstances and to outfit them with the vital abilities that increase their activity keenness.

Practical training Outcomes

At the end of the practical training the student will be able to		Assessment
1.	Understand and apply fundamental principles of science and engineering.	1,2
2.	Communicate effectively.	1,2
3.	Identify, formulate and model problems and develop engineering solutions using a systems approach.	1,2
4.	Conduct research in selected areas of engineering.	1,2
5.	Understand the importance of sustainability and cost effectiveness in the design and development of engineering solutions.	1,2
6.	Be a generalist engineer with good technical knowledge, management, leadership and entrepreneurial skills.	1,2
7.	Be aware of the social, cultural, global and environmental responsibilities of an engineer.	1,2
8.	Improve themselves through continuous professional development and lifelong learning.	1,2

Assessment Methods: 1. Practical training (Industrial practice) report, 2. Bachelor Thesis (Graduation work)

Course's Contribution to Program

		CL

1	Ability to develop as a specialist in the field of fundamental sciences and apply basic knowledge.	4-5*
2	Ability to analyze and model functional and structural schemes of various purpose devices and systems.	4-5*
3	Ability to use modern methods and tools, creation, selection, and application of engineering and information technology tools and modern devices and equipment.	4-5*
4	The ability to use the strategy of team cooperation in the exchange of information, knowledge, and experience to achieve the set goal.	4-5*
5	As a result of training, the ability to use engineering knowledge, mathematical models, and basic concepts of physics and chemistry in production and technological processes, automation, measurement, and control systems.	4-5*
6	The ability to use modern software to process technical documents of devices, design their structures, and algorithmize processes.	4-5*
7	The ability to apply artificial intelligence to improve the quality characteristics of measurement and control systems.	4-5*
8	The ability to process information acquisition, processing, and transmission processes based on schematic and programmable logical integrated circuits.	4-5*
9	Ability to use knowledge to improve quality indicators and environmental safety of production processes.	4-5*
10	Self-development ability to apply theoretical and experimental knowledge in solving modern engineering problems.	4-5*

* Depend on practical training place

CL: Contribution Level (1: Very Low, 2: Low, 3: Moderate, 4: High, 5: Very High)

Course Contents

Week	Chapter	Topics	Exam
1	•	Orientation at the enterprise, safety briefing, familiarization with the enterprise structure	
2	•	Study of production equipment and technological processes at the enterprise	
3	•	Study of production equipment and technological processes at the enterprise	
4	•	Inspection and preparation of a preliminary report on the equipment or technology of interest	
5	•	Inspection and preparation of a preliminary report on the equipment or technology of interest	
6	•	Inspection and preparation of a preliminary report on the equipment or technology of interest	
7	•	Completion of practical assignments, analysis of equipment and processes	
8	•	Completion of practical assignments, analysis of equipment and processes	
9	•	Completion of practical assignments, analysis of equipment and processes	
10	•	Preparation of an extended analysis and proposal for optimization for a specific equipment or technological line	

11	•	Preparation of an extended analysis and proposal for optimization for a specific equipment or technological line	
12	•	Preparation of an extended analysis and proposal for optimization for a specific equipment or technological line	
13	•	Preparation of a general report in accordance with the required rules and preparation for presentation	
14	•	Preparation of a general report in accordance with the required rules and preparation for presentation	
15			Defense of final report (at a university or at the enterprise)

Recommended Sources

TEXTBOOK(S)

- The necessary literature and references to sources are provided to each student individually by the practical training supervisor.

Assessment

Attendance	50%	Less than 75% practical training attendance results in NA grade
Presentation	0%	
Lab	0%	
Quiz	0%	
Midterm Exam	0%	
Final report and presentation	25%	Written
Defense of final report	25%	Oral
Total	100%	

Assessment Criteria

Final grades are determined according to the Academic Regulations of Azerbaijan State Oil and İndustry University for undergraduate studies

Course Policies

- Attendance of the course is mandatory.
- Cheating and plagiarism will not be tolerated.
- Cheating will be penalized according to the Azerbaijan State Oil and Industrial University General Student Discipline Regulations

ECTS allocated based on Student Workload

Activities	Number	Duration (hour)	Total Workload (hour)
Practical training duration	14	18	252
Self-study	14	10	140
Tutorials	14	16	224
Preparation of final report and presentation	1	13.5	13.5
Defense of final report	1	0.5	0.5
Total Workload			630
Total Workload/30(h)			21
ECTS Credit of the Course			21

Syllabus of Bachelor's Thesis (Graduation work):

Course Unit Title	Bachelor's Thesis (Graduation work)
Course Unit Code	BT
Type of Course Unit	Compulsory
Level of Course Unit	4th year INEN program
National Credits	0
Number of ECTS Credits Allocated	9
Theoretical (hour/week)	-
Practice (hour/week)	8
Laboratory (hour/week)	-
Year of Study	4
Semester when the course unit is delivered	8
Course Coordinator	-
Name of Lecturer (s)	-
Name of Assistant (s)	-
Mode of Delivery	Face to Face
Language of Instruction	English
Prerequisites	-
Recommended Optional Programme Components	-

Course description:

The bachelor's thesis is independent work undertaken by the student under the guidance of academic staff as a finalization of a bachelor's degree, during the last semester.

Objectives of the Course:

The main objective of a bachelor's thesis is for the student to independently apply the theoretical and practical knowledge acquired during his/her studies at a higher education institution within the framework of a project or research project. The thesis provides the student with the opportunity to demonstrate his/her research skills, technical analysis skills and written presentation skills in the chosen field.

Practical Training Outcomes

At the end of the practical training the student will be able to		Assessment
9.	Apply technical knowledge in developing engineering products to simplify day to day conveniences	1
10.	Demonstrate capability of self-education and clearly understand the value of achieving perfection in project implementation & completion	1
11.	Demonstrate the importance of teamwork and a multi-disciplinary approach	1
12.	Demonstrate professionalism with ethics; present effective communication skills and relate engineering issues to broader societal context	1
13.	Develop technical documentation and user manual of engineering products	1
14.	Identify and analyze problems of the society and arrive at appropriate solutions	1

Assessment Methods: 1. Bachelor Thesis (Graduation work)

Course's Contribution to Program

		CL
1	Ability to develop as a specialist in the field of fundamental sciences and apply basic knowledge.	5
2	Ability to analyze and model functional and structural schemes of various purpose devices and systems.	5

3	Ability to use modern methods and tools, creation, selection, and application of engineering and information technology tools and modern devices and equipment.	5
4	The ability to use the strategy of team cooperation in the exchange of information, knowledge, and experience to achieve the set goal.	5
5	As a result of training, the ability to use engineering knowledge, mathematical models, and basic concepts of physics and chemistry in production and technological processes, automation, measurement, and control systems.	5
6	The ability to use modern software to process technical documents of devices, design their structures, and algorithmize processes.	5
7	The ability to apply artificial intelligence to improve the quality characteristics of measurement and control systems.	5
8	The ability to process information acquisition, processing, and transmission processes based on schematic and programmable logical integrated circuits.	5
9	Ability to use knowledge to improve quality indicators and environmental safety of production processes.	5
10	Self-development ability to apply theoretical and experimental knowledge in solving modern engineering problems.	5
CL: Contribution Level (1: Very Low, 2: Low, 3: Moderate, 4: High, 5: Very High)		

Course Contents

Week	Chapter	Topics	Exam
1	•	Selection and coordination of the topic of the graduation work, preparation of a preliminary plan with the supervisor	
2	•	Literature review, analytical analysis and preliminary studies	
3	•	Literature review, analytical analysis and preliminary studies	
4	•	Literature review, analytical analysis and preliminary studies	
5	•	Preparation of the technical or scientific part of the final graduation work (calculations, models, research)	
6	•	Preparation of the technical or scientific part of the final graduation work (calculations, models, research)	
7	•	Preparation of the technical or scientific part of the final graduation work (calculations, models, research)	
8	•	Obtaining practical results and their interpretation	
9	•	Obtaining practical results and their interpretation	
10	•	Writing and completing a graduation work	
11	•	Writing and completing a graduation work	
12	•	Writing and completing a graduation work	
13	•	Evaluation of the graduation work by the supervisor and making edits	
14	•	Preparing a presentation for the defense	
15			Defense of graduation work (at a university or

			at the enterprise)

Recommended Sources
TEXTBOOK(S)

- The necessary literature and references to sources are provided to each student individually by the graduation work supervisor.

Assessment

Attendance	0%	
Presentation	0%	
Lab	0%	
Quiz	0%	
Midterm Exam	0%	
Graduation work and presentation	50%	Written
Defense of graduation work	50%	Oral
Total	100%	

Assessment Criteria
Final grades are determined according to the Academic Regulations of Azerbaijan State Oil and İndustry University for undergraduate studies

Graduation Work Policies

- Choose a topic in a timely manner and work according to the plan;
- Comply with the rules of plagiarism and scientific ethics;
- Follow the structure and format of the graduation work (including introduction, literature review, research and conclusion);
- Meet regularly with the supervisor;
- Submit a written report and presentation within the established deadlines.

ECTS allocated based on Student Workload

Activities	Number	Duration (hour)	Total Workload (hour)
Graduation work duration	14	8	112
Self-study	14	5	70
Tutorials	14	4	56
Preparation of graduation work and presentation	1	31.5	31.5
Defense of graduation work	1	0.5	0.5
Total Workload			270
Total Workload/30(h)			9
ECTS Credit of the Course			9

11. Close the feedback cycles and inform the students directly about the results of the course questionnaires.

Currently, the “Accreditation and Quality Assurance“ department has begun its activities at ASOIU. One of the areas of activity of the department is the verification, assessment and solution of problems of quality of education.

The “Accreditation and Quality Assurance“ department organized a meeting with students to analyze and present the survey results (https://asoiu.edu.az/single_news/3149).

Taking into account the opinions of the ASIIN Accreditation Commission regarding the updating and clarification of surveys, an updated version of the list of questions for determining the quality of educational services currently provided by ASUOI was developed (https://forms.gle/k7DneR2gTpQkfguW9)

12. Why was there such an increase in study places in Instrumentation Engineering in 2023/24? How many new students were accepted? Numbers in the table are not correct.

STATISTICAL INFORMATION

		2019/2020	**2020/2021**	**2021/2022**	**2022/2023**	**2023/2024**
#Study places		20	21	25	30	25
# Applicants	*∑*	20	21	25	30	24
	F	9	6	13	15	4
	M	11	15	12	15	20
Application rate		100%	100%	100%	100%	96%
# First-Year student	*∑*	20	21	25	30	24
	F	9	6	13	15	4
	M	11	15	12	15	20
Rate of female students		0.45	0.29	0.52	0.5	0.16
# Foreign students	*∑*	0	1	0	0	2
	F	0	0	0	0	0
	M	0	1	0	0	2

Rate of foreign students		0	0.047	0	0	0.083
Percentage of occupied study places		100%	100%	100%	100%	100%
# Graduates	∑	-	-	20	21	26
	F	-	-	8	10	20
	M	-	-	12	11	6
Success rate		-	-	100%	95%	92.8
Dropout rate		0	0	0	0	7.2
Average duration of study/years		4	4	4	4	4
Average grade of final degree		-	-	84.2(B)	82.1 (B)	71.28(C)

Reply from Faculty of Chemical Engineering:

1. Internships and the Bachelor's Thesis modules in Ecological Engineering

Module: Professional Internships in Ecological Engineering
ECTS Credits: 21
Level: Bachelor
Duration: One semester
Prerequisites: Completion of core ecological engineering courses; basic laboratory and fieldwork skills
Module Description:
This module provides students with hands-on experience in real-world settings such as environmental agencies, research institutions, engineering consultancies. The internship enables students to apply theoretical knowledge in ecological technologies, environmental monitoring, sustainable systems, and remediation techniques. Students will work under supervision to carry out tasks related to data collection, environmental analysis, ecosystem restoration, or project management.

Learning Outcomes:
Upon successful completion, students will be able to:
- Apply ecological engineering principles in practical, professional contexts
- Perform environmental assessments and monitoring using field and lab methods
- Collaborate in multidisciplinary teams and communicate effectively
- Understand the organizational structure and work culture of ecological and environmental institutions
- Reflect critically on their learning and development during the internship

Assessment:
- Internship Report (50%)
- Supervisor Evaluation (30%)
- Defense (20%)

Weekly Time Allocation (14 weeks):

Activity	Total Hours
On-site Internship Work	420 hours
Internship Journal / Daily Reports	40 hours
Consultation with Academic Supervisor	30 hours
Final Presentations Preparation	28 hours
Final Internship Report Writing	52 hours
Total per Week	570 hours

Module: Bachelor’s Thesis in Ecological Engineering
ECTS Credits: 9
Level: Bachelor
Duration: Final semester
Module Description:
The Bachelor's Thesis is independent research or applied project that demonstrates the student's ability to analyze ecological engineering problems, develop solutions, and present findings coherently. Under academic supervision, students select a topic aligned with ecological engineering themes such as sustainable water treatment, solving ecological problems of petrochemical processes or environmental modeling.
Learning Outcomes:
Upon successful completion, students will be able to:
- Formulate a research question or engineering problem in the ecological domain
- Design and conduct experiments, simulations, or case studies
- Analyze and interpret data with scientific rigor
- Present findings in a structured, academic format
- Defend their conclusions and methodology through oral presentation

Workload Breakdown:

Activity	Hours
Research planning and methodology	50 hrs
Literature review and problem formulation	60 hrs
Fieldwork / data collection / modeling	70 hrs
Data analysis and interpretation	40 hrs
Thesis writing	60 hrs

Verbal defense preparation and delivery 20 hrs
Total 310 Hrs

2. Academic mobility

Azerbaijan State Oil and Industry University (ASOIU) is actively advancing its student and staff mobility initiatives and has undertaken significant measures to support these exchanges. To facilitate mobility—particularly in the field of mechanical engineering—the university has established formal partnerships through agreements and Memoranda of Understanding (MoUs) with numerous institutions across the region, Europe, and Central Asia. These include Middle East Technical University, Necmettin Erbakan University, Niğde Ömer Halisdemir University, Bahçeşehir University, University of Western Macedonia, L. N. Gumilyov Eurasian National University, Karaganda Industrial University, University of Miskolc, İzmir University of Economics, Malatya Turgut Özal University, Termez State Engineering and Agro-Technology University, Tashkent State Technical University named after I. Karimov, Koç University, Burdur Mehmet Akif Ersoy University, Auezov University, and Satbayev University.

ASOIU has already begun preparations for the 2025–2026 academic year, including negotiations, quota planning, and addressing administrative details to ensure the successful implementation of both Fall and Spring semester mobilities for students and academic staff.

Since 2015, ASOIU has been part of the Erasmus+ network, contributing to several initiatives focused on enhancing higher education standards. Under the Erasmus+ International Credit Mobility (ICM) program, ASOIU students have benefited from short-term study opportunities at top universities in Turkey, Germany, Poland, and Romania. Beyond Europe, student exchanges have also extended to institutions in Russia, India, and Yemen.

While Azerbaijan’s participation in Erasmus+ has not been officially terminated, it has been temporarily suspended as of early 2025. There is optimism that Azerbaijani authorities will reach a favorable decision to reinstate the country’s involvement in the program, thereby continuing to support and expand international academic mobility opportunities.

RECOGNITION OF ACADEMIC CREDITS OF FOREIGN-EDUCATED STUDENTS

Continuing education of students studying abroad with return to the Azerbaijan State Oil and Industry University (ASOIU) is carried out in accordance with the principles of academic mobility and transfer of loans established by the Ministry of Science and Education of the Republic of Azerbaijan.

Academic credits received at a foreign higher educational institution are evaluated on the basis of subject syllabuses created at the University by the "Commission on Academic Recognition." Syllabuses of subjects obtained abroad are needed, and their equivalence to the curriculum of ASOIU is checked. An individual curriculum is drawn up for the student. Within the framework of this plan, the optimal balance of previous and new loans is determined. If necessary, credit differences are closed in accordance with the current rules. In addition, lessons abroad can be recognized as elective subjects. For students studying abroad, a coordinator is appointed, and the issues of these students are resolved more flexibly.

3. LABORATORIES

The instruments in ecological engineering laboratory are old, for this reason laboratory lessons are carried out in research centres, where students get hands-on experience with current scientific methods.

The university aims to renew and modernize the Ecological Engineering Laboratory to enhance the quality of education, research, and innovation in the field of environmental sciences and sustainable engineering according to university strategic plan (https://asoiu.edu.az/file/62, 4.6)

Planned Improvements:

1. Infrastructure Upgrade:
   - o Renovation of lab space to meet safety, accessibility, and ergonomic standards.
   - o Improved layout for better workflow and interdisciplinary use.
2. Modern Equipment Installation:
   - o Acquisition of advanced instruments for water, air, and soil analysis (e.g., spectrophotometers, gas sensors, soil testers).
   - o GIS and remote sensing tools for spatial environmental analysis.
   - o Data loggers and field sensors for real-time monitoring and modeling.
3. Digital Integration:
   - o Implementation of digital lab notebooks and data management systems.
   - o Integration with university servers for cloud-based collaboration and remote data access.
4. Sustainability and Innovation Focus:
   - o Equipment for green technology prototyping (e.g., biofiltration systems, small-scale wastewater treatment models).
   - o Facilities for student-led research and startup incubation in ecological engineering.
5. Training and Capacity Building:
   - o Workshops for faculty and students on the use of new tools and software.
   - o Collaboration with industry and research partners for joint project development.

Fire Emergency Procedure Statement

Azerbaijan State Oil and Industry University (ASOIU)

An effective Fire Safety and Evacuation Plan (“this plan”) requires the coordination of many occupants in a building. All building occupants, including faculty and other academic personnel, staff, students, and patients need to be aware of their roles and responsibilities in case of an emergency.

This section outlines specific responsibilities for university personnel, students, as well as the evacuation director and wardens. Visitors should also be instructed on proper response to alarms and the requirement to evacuate.

RESPONSIBILITIES OF CLASSROOM LECTURERS AND INSTRUCTORS

1. Be familiar with building and emergency procedures and be prepared to provide direction to students attending your class in the event of an emergency.
2. Orient students with a brief overview of emergency evacuation procedures on the first day of class to:

a. Provide general information relating to emergency procedures.

b. Inform students that evacuation is required when the alarm system is activated.

c. Inform students of the location of the nearest exits, and where to assemble outside.

3. Take responsible charge of the classroom during building emergencies and alarms.
4. Report an emergency by activating the alarm systems and calling 1-1-2.
5. Be familiar with evacuation options for persons with disabilities.
6. During a communicable disease outbreak, wear a face covering when inside a building and continue to wear it outside in designated evacuation area.
RESPONSIBILITIES FOR LABORATORIES AND OTHER LOCATIONS WITH HAZARDOUS MATERIALS
1. Be familiar with building emergency procedures and act in the event of an emergency. Refer to Sections 3 and 4.
2. If the emergency is in or near your research area, report directly to the incident command about any hazardous materials and activities in your research area. This will help ensure the safety of emergency responders and the resumption of normal operations as soon as possible.
3. Wear a face covering when inside a building and continue to wear it outside in designated evacuation area.
RESPONSIBILITIES OF STUDENTS
1. Be familiar with building emergency procedures and act in the event of an emergency.
2. Respond to building alarms and promptly evacuate.
3. Follow directions of instructors, evacuation wardens, police and fire representatives.
4. During a communicable disease outbreak, wear a face covering when inside a building and continue to wear it outside in designated evacuation area.

Upon discovery of a fire emergency at ASOIU, all occupants must take immediate action to ensure personal and public safety.
Activation of Alarms:
Alarms must be activated when fire, smoke, or the smell of gas is detected, or during any situation that poses a potential hazard inside a building. Fire alarms are activated manually using pull-stations, which are located near each stairwell exit and throughout the buildings. The fire alarm system at ASOIU includes loud audible horns and visible strobe lights. If the alarm does not activate when a pull-station is used, evacuate the building immediately and try to activate any other nearby alarms. If needed, shout warnings and knock on doors to alert others.
Note: False activation of a fire alarm is a criminal offense and may lead to arrest and prosecution.
Evacuation Procedures:
All building occupants must evacuate when a fire alarm is triggered or when a fire emergency is apparent. Failure to evacuate is a violation of ASOIU policies and local regulations.
During evacuation:
- Follow the instructions of ASOIU Security personnel and Building Marshals.
- Turn off machinery or equipment in your area if it is safe to do so.
- Close doors behind you to slow the spread of fire or smoke.
- Use the nearest safe exit; if exits are blocked by smoke or fire, go to a room farthest from danger and call 112.
- If smoke is present, stay low to the ground where the air is cleaner. If possible, cover your nose and mouth with a cloth to filter smoke.

- Do not obstruct or delay the evacuation.
- Never use elevators during fire emergencies.
- Be aware of individuals with disabilities or mobility issues. Assist them only if it does not endanger your safety.
- If someone is unable to evacuate, inform responding emergency personnel immediately upon exiting the building. Provide their location and a description.
- Stay to the right in stairwells and use handrails.
- Before opening any door, feel it with the back of your hand. Do not open it if it is hot.

Important Safety Reminders:

- Do not attempt to fight a fire yourself.
- Do not re-enter a building for any reason until it is declared safe by emergency personnel.
- If trapped, open windows from top and bottom if possible to release heat and allow fresh air in.
- Hang a visible item (e.g., clothing) out the window to signal for help.
- Call 112 and report your exact location and situation.

4. WORKLOAD AND ECTS CALCULATION

During the accreditation it was revealed that students are not familiar with workload and ECTS calculation. To support student success and transparency in academic expectations, tutors have an essential role in communicating how ECTS credits relate to student workload. It was spoken with tutors and for the next academic year they will ensure knowledge of this information by students.

5.MID-TERM EXAMS

Mid-term exams serve as an essential component of the assessment strategy in the Ecological Engineering curriculum. The Faculty of Engineering has initiated a comprehensive audit of all mid-term exams within the Environmental Engineering programme. This review focuses on ensuring alignment with the intended learning outcomes, course objectives, and Bachelor-level academic standards.

Redesign of Exam Formats

- Beginning from the next academic semester, all mid-term exams will be redesigned to include:

  Structured written exams with technical problem-solving, quantitative tasks, case-based analysis, or conceptual application.
- Essay-only exams will be limited to courses where critical reflection is explicitly part of the learning objectives (e.g., ethics or policy), and even then, essay tasks will be more rigorous and structured.
- A mandatory training session on assessment design and exam construction will be conducted for all teachers by the start of the upcoming term.
- Teaching staff will receive guidelines and templates for designing mid-term exams that align with the ECTS workload principles.

6. RESULTS OF STUDENTS SURVEY

The university acknowledges the importance of closing the feedback loop and ensuring that students are informed of the outcomes and resulting actions from course evaluations. Student feedback is a valuable component of our quality assurance process, and we are committed to strengthening this dialogue. Regarding the student's survey, the opinions of the accreditation commission appointed by ASIIN are taken into account. As an example, we are providing the link to the survey for the purpose of determining the quality of the educational services currently offered at our university.
A meeting organized to communicate the survey results to students:
https://asoiu.edu.az/single_news/3149

7. University's Website

As previously mentioned, the information provided on the University's website regarding academic programs is incomplete, which creates difficulties in accessing and understanding the necessary details. Taking these concerns into account, the University's website is currently being updated
https://asoiu.edu.az/chemical_technology_faculty/specialization_detail/13

8. ASOIU Policy on the Responsible Use of Artificial Intelligence

1 Purpose
This policy establishes clear, legally-compliant rules for the acquisition, development and use of Artificial Intelligence (AI) – including generative AI systems such as large-language-model chatbots – in all teaching, learning, research and administrative activities at Azerbaijan State Oil and Industry University (ASOIU). It seeks to

- protect academic integrity and human creativity;
- safeguard personal data and other confidential information;
- uphold the intellectual-property rights of staff, students and third parties;
- encourage ethical, innovative and equitable AI adoption in line with national legislation and international good practice.

2 Scope
The policy applies to every member of the ASOIU community (academic staff, researchers, students, administrators, contractors and partners) and to every AI-enabled tool or service used on- or off-campus when carrying out University business.
3 Legal & Regulatory Foundation
AI use at ASOIU must always comply with the laws of the Republic of Azerbaijan, in particular:

Area Key Azerbaijani legislation Main requirements that affect AI use
Personal data & privacy Law on Personal Data No 998-IIIQ (11 May 2010) Prior, informed consent is required before processing or disclosing any "open-category" personal data; cross-border transfers need additional consent or legal basis. (CaseGuard, dlapiperdataprotection.com)

Information security Law on Information, Informatization and Protection of Information (3 Apr 1998) Information systems must implement confidentiality, integrity and availability controls that match the risk of the data being processed. (natlex.ilo.org)

Education & academic rights Law on Education (2009) – esp. Ch. I & Art. 1 on state principles and quality of educationUniversities must guarantee the quality and independence of learning outcomes and protect students' rights during assessment. (natlex.ilo.org)

Intellectual property Law on Copyright and Related Rights (1996, as amended) AI outputs may incorporate third-party content; authors remain liable for infringement.
Sector integrity National anti-corruption & academic-integrity regulations (e.g. Ministry of Science and Education codes) Plagiarism and contract-cheating (including unacknowledged AI-generated work) are disciplinary offences.

There is currently no dedicated AI Act in Azerbaijan, so ASOIU follows emerging EU and UNESCO principles on trustworthy AI until local regulations are issued.
4 Definitions (abridged)
Artificial Intelligence (AI) – software that performs tasks normally requiring human intelligence.
Generative AI – a model that produces novel text, code, images, audio or video in response to prompts.
Approved AI tool – an AI service vetted and authorised by ASOIU IT & the AI Governance Committee.
High-risk processing – any AI use that involves personal data (as defined above) or decisions with material impact on individuals (e.g. grades, recruitment).
5 Guiding Principles
Human primacy – AI supports but never replaces human academic judgement.
Transparency – material AI assistance must be declared using the templates in Appendix A.
Accuracy & accountability – users must fact-check, edit and take responsibility for AI outputs.
Privacy & security by design – no confidential or personal data is entered into public AI systems unless the tool is on the University's "approved for personal data" list.
Fair access – the University provides baseline access to selected free or institutionally-licensed AI tools to avoid deepening digital divides.
Compliance & stewardship – procurement, deployment and research with AI obey all domestic laws and sector codes cited in §3.

6 Governance & Responsibilities

Role Key duties
Rector Overall accountability; signs policy and ensures resources for implementation.
ASOIU AI Governance Committee (AIGC) Multidisciplinary body (IT, legal, ethics, faculty, students) that: (i) keeps an AI tool register; (ii) conducts AI Impact Assessments for high-risk use; (iii) reviews breaches; (iv) updates this policy annually.

IT Services Vet vendors, enforce security controls, maintain a “green list” of approved AI services, provide user support and training.
Faculty & Course Leaders Publish course-specific AI rules in syllabi; design assessments that align with intended learning outcomes; verify student declarations.
Researchers & PIs Seek ethics clearance for AI-driven studies; ensure data-handling plans respect the Personal Data Law.
Students & Staff Users Read and follow this policy; declare AI usage; refrain from prohibited behaviours (§8).
7 Permitted Uses (examples)

- Teaching & learning – brainstorming ideas, practising foreign-language conversation, code debugging, drafting outlines provided the learner acknowledges assistance.
- Research – data-pattern exploration, literature-search augmentation, simulation speed-ups, coding support, subject to disclosure in the methodology.
- Administration – summarising meeting notes, drafting routine emails, chatbot FAQs for student services, as long as no sensitive personal data is exposed.

8 Prohibited or Restricted Uses

- Unacknowledged AI-generated coursework or exam answers (plagiarism).
- Entering “confidential” or “high-risk” personal data into any non-approved AI system.
- Automated decision-making that produces grades, disciplinary outcomes or hiring decisions without meaningful human oversight.
- Training or fine-tuning AI models on copyrighted text, images or software unless the user owns or has licensed the material.
- Using AI tools to create deepfakes, disinformation, harassment content, or to violate any law.

9 Assessment Rules & Academic Integrity
Assessment type AI default Student obligations
On-site, proctored exams AI strictly forbidden; systems may be monitored. N/A
Take-home assignments AI allowed with disclosure. Submit Appendix A table or full prompt transcript.
Group projects / theses AI use allowed by supervisor; methodology chapter must detail tools & prompts. Include AI disclosure appendix.

Suspected breaches are investigated under ASOIU’s Academic Misconduct Regulations; AI-detector scores alone are never treated as conclusive evidence, but may trigger further enquiry (interview, viva, code review).
10 Data Classification & Tool Approval

ASOIU adopts a three-tier model:

- Public – unrestricted teaching materials: may be processed by any AI service.
- Internal – unpublished lecture notes, draft articles: only University-licensed tools.
- Confidential / Personal – student grades, HR files, research subject data: processing requires an AIGC-approved tool hosted under a contract guaranteeing (i) encryption, (ii) no external model-training, (iii) deletion on request.

11 Intellectual-Property & Copyright

- AI tools cannot be listed as authors.
- Users must verify that AI-generated text, images or code do not infringe third-party IP.
- Where AI systems incorporate licensed datasets (e.g. proprietary journals), users must respect publisher terms.

12 Procurement & Third-Party Vendors

Before purchasing or integrating an AI product, the requesting unit must:

1. Complete an AI Impact Assessment (template in Appendix B).
2. Obtain positive reviews from IT Services (security) and Legal (contract & data clauses).
3. Secure AIGC sign-off for high-risk applications.

13 Security & Risk Management

All AI tools integrated into University systems must:

- support SSO or strong multifactor authentication;
- store data in Tier III datacentres or higher;
- provide audit logs;
- undergo annual penetration testing.

14 Training & Awareness

ASOIU delivers mandatory e-learning modules on AI ethics and safe usage for all first-year students and new staff, plus advanced workshops for researchers and administrators. Completion is recorded in the HR system.

15 Enforcement & Sanctions

Violations may lead to measures under the Student Disciplinary Code or the Labour Code, ranging from grade penalties to dismissal. Serious data-protection breaches will be reported to the relevant state authorities as required by the Personal Data Law.

16 Review Cycle

The AIGC will review this policy annually or sooner if Azerbaijani legislation on AI comes into force or major technological shifts occur.

AI tool Prompt(s) & output used How the output was modified & integrated

ChatGPT 4o “Summarise Smith (2024) section 3 in 200 words” → paragraph Checked facts vs original paper; added citations; rewrote in own style.

(Attach full prompt-response transcript on request.)

Appendix B – AI Impact Assessment (AIIA) – key questions

1. Data category processed (public / internal / confidential).
2. Potential bias or discrimination risks.
3. Human-in-the-loop controls.
4. Supplier security & IP assurances.
5. Legal-compliance statement (Personal Data Law, IP Law, etc.).

Selected References

- Law on Personal Data No 998-IIIQ, 11 May 2010. CaseGuarddlapiperdataprotection.com
- Law on Information, Informatization and Protection of Information, 3 Apr 1998. natlex.ilo.org

• Law on Education of the Republic of Azerbaijan, 2009 (Ch. I – General Provisions). natlex.ilo.org
• "Artificial-Intelligence Law at Azerbaijan – Current Status," LawGratis, 2025. lawgratis.com

International good-practice examples consulted:
Stanford University (2023) Generative AI Guidance; MIT IS&T (2024) Generative AI Guidelines; National University of Singapore (2024) Policy for Use of AI in Teaching & Learning; Harvard University (2025) Generative AI Good-Practice; University of Oxford (2025) AI Communications Guidelines.

F Summary: Expert recommendations (18.08.2025)

Taking into account the additional information and the comments given by ASOIU, the experts summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Bachelor Ecological Engineering	With requirements for one year	-	30.09.2031
Bachelor Instrumentation Engineering	With requirements for one year	-	30.09.2031
Bachelor Mechanical Engineering	With requirements for one year	-	30.09.2031

Requirements

For all degree programmes

A 1. (ASIIN 1.5) Verify the students' total workload and award the ECTS points accordingly.

A 2. (ASIIN 2) Mid-term exams should be real exams and not just writing a small essay about a given topic. Currently, mid-term exams in all three programmes are not on an adequate level for a Bachelor's degree programme.

A 3. (ASIIN 3.2) Submit a concept and a timetable on how to update and supplement the technical equipment in the laboratories within the accreditation period so that students can get hands-on experience with current scientific methods.

A 4. (ASIIN 4.3) Make the information about the degree programmes (study plans, module descriptions, intended learning outcomes, etc.) in English available to all stakeholders e.g. by publishing them on the university's webpage.

A 5. (ASIIN 5) Close the feedback cycles and inform the students directly about the results of the course questionnaires.

For the Mechanical Engineering and the Ecological Engineering programmes

A 6. (ASIIN 4.1) The module handbooks needs to include module descriptions for all modules.

For the Ecological Engineering programme

A 7. (ASIIN 3.2) Strictly follow safety standards in the Ecology Laboratory.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to offer more excursions/site-visits to companies so that students get a better impression where to do the internship and what the focus of the different companies is.

E 2. (ASIIN 1.3) It is recommended to teach all students on correctly using AI.

E 3. (ASIIN 1.3) It is recommended to further promote and students' academic mobility and to establish more international cooperations and to provide more scholarships.

E 4. (ASIIN 1.3) It is recommended to facilitate the recognition of credits acquired abroad by signing a learning agreement with each student that wants to study abroad. Additionally, it is recommended to recognise courses attended abroad as electives.

E 5. (ASIIN 3.1) It is recommended to introduce all new students to using digital databases and the respective offers of the library.

G Comment of the Technical Committees (17.09.2025)

Technical Committee 01 – Mechanical Engineering/Process Engineering (01.09.2025)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the procedure and follows the assessment of the auditors without any changes.

The Technical Committee 01 – Mechanical Engineering/Process Engineering recommends the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Bachelor Mechanical Engineering	With requirements for one year	-	30.09.2031

Technical Committee 02 – Electrical Engineering/Information Technology (10.09.2025)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the accreditation procedure and follows the assessment of the experts without any changes.

The Technical Committee 02 – Electrical Engineering/Information Technology recommends the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Bachelor Instrumentation Engineering	With requirements for one year	-	30.09.2031

Technical Committee 09 – Chemistry, Pharmacy (17.09.2025)

Assessment and analysis for the award of the ASIIN seal:

After a brief discussion of the procedure, the TC agrees with the assessment of the expert group that there is still room for improvement, particularly in the areas of technical equipment, safety standards in the laboratories, the quality of examinations in the bachelor's programmes, module descriptions, the website and the information provided to students about the results of teaching evaluations. Therefore, a total of seven requirements and five recommendations are to be issued, which the TC approves.

The Technical Committee 09 – Chemistry, Pharmacy recommends the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Bachelor Ecological Engineering	With requirements for one year	-	30.09.2031

Technical Committee 11 – Geosciences (17.09.2025)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the accreditation procedure and follows the assessment of the experts without any changes.

The Technical Committee 11 – Geosciences recommends the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Bachelor Ecological Engineering	With requirements for one year	-	30.09.2031

H Decision of the Accreditation Commission (26.09.2025)

Assessment and analysis for the award of the subject-specific ASIIN seal:

The Accreditation Commission discusses the procedure, especially requirement A2. They decide to change the wording, in order to make clear that the current mid-term exams are not on an adequate level.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN-seal	Accredited by German Engineers	Subject-specific label	Maximum duration of accreditation
Bachelor Ecological Engineering	With requirements for one year	With requirements for one year	-	30.09.2031
Bachelor Instrumentation Engineering	With requirements for one year	With requirements for one year	-	30.09.2031
Bachelor Mechanical Engineering	With requirements for one year	With requirements for one year	-	30.09.2031

Requirements

For all degree programmes

A 1. (ASIIN 1.5) Verify the students' total workload and award the ECTS points accordingly.

A 2. (ASIIN 2) Ensure that mid-term exams in all three programmes are on an adequate level for a Bachelor's degree programme.

A 3. (ASIIN 3.2) Submit a concept and a timetable on how to update and supplement the technical equipment in the laboratories within the accreditation period so that students can get hands-on experience with current scientific methods.

A 4. (ASIIN 4.3) Make the information about the degree programmes (study plans, module descriptions, intended learning outcomes, etc.) in English available to all stakeholders e.g. by publishing them on the university's webpage.

A 5. (ASIIN 5) Close the feedback cycles and inform the students directly about the results of the course questionnaires.

For the Mechanical Engineering and the Ecological Engineering programmes

A 6. (ASIIN 4.1) The module handbooks needs to include module descriptions for all modules.

For the Ecological Engineering programme

A 7. (ASIIN 3.2) Strictly follow safety standards in the Ecology Laboratory.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to offer more excursions/site-visits to companies so that students get a better impression where to do the internship and what the focus of the different companies is.

E 2. (ASIIN 1.3) It is recommended to teach all students on correctly using AI.

E 3. (ASIIN 1.3) It is recommended to further promote and students' academic mobility and to establish more international cooperations and to provide more scholarships.

E 4. (ASIIN 1.3) It is recommended to facilitate the recognition of credits acquired abroad by signing a learning agreement with each student that wants to study abroad. Additionally, it is recommended to recognise courses attended abroad as electives.

E 5. (ASIIN 3.1) It is recommended to introduce all new students to using digital databases and the respective offers of the library.

Appendix: Programme Learning Outcomes and Curricula

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Ecological Engineering:

On the successful completion of the program graduates will be able to:

1. Solve complex issues and different tasks by using the principles of environmental science, ecological theories chemistry and ecological engineering.
2. Identify simple the most significant and observable features (e.g. shape, colour, texture, aroma) of leaves, trunk and bark of plants in immediate surroundings.
3. Establish linkages among terrain, climate, resources (food, water, shelter, livelihood) and cultural life. (e.g. life in distant/difficult areas like hot/cold deserts).
4. Apply engineering design to produce solutions that meet some needs to take into account a public health, safety and welfare, as well as global, cultural, social, environmental and economic factors.
5. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to conclude.
6. Apply multidisciplinary approaches including engineering, chemistry, mathematics, physics, geosciences, and biology to manage the unique challenges and balance the competing social, political, economic, and technical goals of environmental problems and solutions.
7. Exhibit a desire for life-long learning through higher education, technical training, teaching, membership in professional societies, and other developmental activities and will achieve positions of increased responsibility through these activities.
8. Be employed as an environmental technologist and perform all functions assigned to an environmental engineering technologist.
9. Acquire and apply new knowledge as needed, using appropriate learning strategies.
10. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

The following **curriculum** is presented:

I SEMESTR					
Course Code	Course Name	Hours	ECTS	Category	Prerequisite
HS-BO2	Business and academic communication in a foreign language General English	4	4	HS	CEFR B2.
HS-BO6	Business and academic communication in the Azerbaijani language	3	4	HS	Azd019
VSS-BO1.1	Calculus I	4	5	VT	MATH 226
VSS-BO3	Basics of physics	5	7	VT	PHY 242
VSS-BO5	General Chemistry 1 (Inorganic Chemistry)	3	4	VT	CHEM 220
VSS-BO9	Engineering graphics	3	6	VT	EG 225
TOTAL SEMESTR ECTS 30					

II SEMESTR					
Course Code	Course Name	Hours	ECTS	Category	Prerequisite
HS-BO1	History of Azerbaijan	4	5	HS	HIST 211
HS-BO3	Business and academic communication in a foreign language Speech Practice-Development of speech skills	3	3	HS	CEFR B2.
VSS-BO1.2	Calculus II	4	5	VT	MATH 226
VSS-BO6	General Chemistry 2 (Organic Chemistry)	3	4	VT	CHEM 230
VSS-BO11	Hydrology	4	6	VT	GEO 487
VSS-BO12	General ecology	4	7	VT	RNG 341
TOTAL SEMESTR ECTS 30					

III SEMESTR					
Course Code	Course Name	Hours	ECTS	Category	Prerequisite
HS-BO4	Business and academic communication in a foreign language Academic Vocab-ulary and Reading	4	4		CEFR B2.
	Effective Subjects	3	3	ES	
	Effective Subjects	2	3	ES	
VSS-BO2	Applied mathematics	4	6	VT	MATH 33021
VSS-BO7	Analytical chemistry and in-strumental analysis	4	4	VT	CHEM 444
VSS-B10	Physical bases of remote sensing	5	7	VT	FYS-3001
	Elective Subjects	2	3	ES	
TOTAL SEMESTR ECTS 30					

IV SEMESTR					
Course Code	Course Name	Hours	ECTS	Category	Prerequisite
HS-BO5	Business and academic communication in a foreign language: Social communi-cation activity	4	4	HS	CEFR B2
VSS-BO8	Basics of environmental chemistry and toxicology	4	5	VT	ENV 344
VSS-B13	Environmental impact as-sessment	4	6	VT	L7KE09
VSS-B16	Environmental Management	4	6	VT	ENS120
	Elective Subjects	6	10	ES	
TOTAL SEMESTR ECTS 31					

V SEMESTR					
Course Code	Course Name	Hours	ECTS	Category	Prerequisite
VSS-B14	Modelling of ecological systems	4	5	VT	ENGR 100
VSS-B15	Ecological monitoring	4	5	VT	ENGR 100
VSS-B1	Waste-free production processes and waste recycling	5	6	VT	TVM 4171
VSS-B19	Climate change and global warming	4	5	VT	ATMS 100
	Elective Subjects	5	9	ES	
TOTAL SEMESTR ECTS 24					

VI SEMESTR					
Course Code	Course Name	Hours	ECTS	Category	Prerequisite
VSS-B18	Integrated water resources management	5	6	VT	09MIWR
VSS-B20	Land reclamation, reclamation and ecological bases	6	5	VT	BIO 3015
VSS-B19	Civil defense	3	5	VT	ICA105
	Elective Subjects	4	9	ES	
	Elective Subjects	5	8	ES	
TOTAL SEMESTR ECTS 33					

VII SEMESTR					
Course Code	Course Name	Hours	ECTS	Category	Prerequisite
VSS-B04	Ecological engineering	6	6	VT	ENGR 100
	Elective Subjects	6	11	ES	
	Elective Subjects	7	10	ES	
TOTAL SEMESTR ECTS 27					

VIII SEMESTR					
Course Code	Course Name	Hours	ECTS	Category	Prerequisite
	Practical Training		21	PT	
	Bachelor Thesis with Final Presentation		9	BT	
TOTAL SEMESTR ECTS 30					

ELECTIVE COURSES

CODE	COURSE NAME	PREQ	ECTS	HOURSE
VTES-BO7	Technical English	ENGQ 1092	4	2
VTES-BO7	Classical and fuzzy logic	ELE 687	4	2
VTES-BO7	Processes and apparatus of environmental protection	GB18580	10	6
VTES-BO7	New safe technological processes	ITEC 209	10	6
VTES-BO7	Utilization of wastes of oil refining and petrochemical processes	ENGM 219	5	9
VTES-BO7	Environmental protection and efficient use of natural resources	GB18580	5	9
VTES-BO3	Radioecology	KJM 353	4	9
VTES-BO3	Environment and risk processes	L7KE09	4	9
VTES-BO4	Wastewater treatment	TVM 4171	5	8
VTES-BO4	Environmental problems of water supply systems	GB18580	5	8
VTES-BO1	Environmental problems of oil refining and petrochemical production	ENGM 219	6	11

VTES-BO1	Protection of the environment from harmful wastes of industrial enterprises	GB18587	6	11
VTES-BO6	Waste management	TVM 4171	7	10
VTES-BO6	Purification of gas emissions into the atmosphere	GB18587	7	10
ES-B08	Politics	POLS 10600	3	2
ES-B08	Basics of entrepreneurship and introduction to business	BUS 101	3	2
ES-B08	Information Management	ISTM 250	3	2
ES-B08	Information technology (specialty)	TCSS 142	3	2
ES-B07	Introduction to multiculturalism	MCS 105	3	3
ES-B07	Ethics and aesthetics	PHIL 1021	3	3
ES-B07	Logic	MATH 33021	3	3
ES-B07	Fundamentals of law	LAW 101	3	3
ES-B07	Sociology	SOC 300	3	3
ES-B07	Philosophy	PHIL 1021	3	3

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Instrumentation Engineering:

1. Ability to specialize in the field of fundamental sciences and apply basic knowledge.

2. Ability to analyze and model functional and structural schemes of various purpose devices and systems.

3. Ability to use modern methods and tools, creation, selection, and application of engineering and information technology tools and modern devices and equipment.

4. The ability to use the strategy of team cooperation in the exchange of information, knowledge, and experience to achieve the set goal.

5. As a result of training, the ability to use engineering knowledge, mathematical models, and basic concepts of physics and chemistry in production and technological processes, automation, measurement, and control systems.

6. The ability to use modern software to process technical documents of devices, design their structures, and algorithmise processes.

7. The ability to apply artificial intelligence to improve the quality characteristics of measurement and control systems.

8. The ability to process information acquisition, processing, and transmission processes based on schematic and programmable logical integrated circuits.

9. Ability to use knowledge to improve quality indicators and environmental safety of production processes.

10. Self-development ability to apply theoretical and experimental knowledge in solving modern engineering problems.

The following **curriculum** is presented:

1st SEMESTER

CODES	COURSE NAME	ECTS	HRS	PREREQUISITES
VTSS-B01	Linear algebra and analytic geometry	4	4	NONE
VTSS-B07	Fundamentals of hardware and software of computer systems	7	4	NONE
HS-B02.1	Foreign language: general English and speech practice	8	8	NONE
VTSS-B08	Engineering graphics and design	4	3	NONE
VTSS-B13	Computer-based instrumentation engineering	5	3	NONE
	TOTAL SEMESTR ECTS	**28**		

2nd SEMESTER

CODES	COURSE NAME	ECTS	HRS	PREREQUISITES
HS-B01	History of Azerbaijan	5	4	NONE
HS-B02.2	Foreign language: academic vocabulary and reading. Social communication skills	7	7	NONE
VTSS-B04	Fundamentals of physics	5	4	NONE
VTSS-B06	Chemistry	6	3	NONE
VTSS-B02.1	Calculus-1	4	4	NONE
	TOTAL SEMESTR ECTS	**27**		

3rd SEMESTER

CODES	COURSE NAME	ECTS	HRS	PREREQUISITES
VTSS-B02.2	Calculus-2	4	3	VTSS-B02.1
VTSS-B05	Applied physics	7	4	NONE
HS-B03	Business and academic communication in Azerbaijani	4	3	NONE
VTSS-B16	Materials science	6	4	NONE

VTSS-B18	Fundamentals of instrumentation technologies	5	4	NONE
VTSS-B12	Electronics and circuit design	6	4	NONE
	TOTAL SEMESTR ECTS	**32**		

4th SEMESTER

CODES	COURSE NAME	ECTS	HRS	PREREQUISITES
VTSS-B03	Applied mathematics	4	4	NONE
VTSS-B11	Measurement technologies	6	5	NONE
VTSS-B09	Electrical engineering	7	4	NONE
HS-B04.1	Elective	3	2	NONE
HS-B04.2	Elective	3	2	NONE
VTES-B01	Elective	10	5	NONE
	TOTAL SEMESTR ECTS	**33**		

5th SEMESTER

CODES	COURSE NAME	ECTS	HRS	PREREQUISITES
VTSS-B17	Microprocessors and microcontrollers	6	5	NONE
VTSS-B20	Physical principles of receiving information, modern sensors and transducers	6	5	NONE
VTSS-B21	Civil defence	3	2	NONE
VTSS-B10	Mechanical engineering	6	4	NONE
VTES-B02	Elective	9	6	NONE
TOTAL SEMESTR ECTS		**30**		

6th SEMESTER

CODES	COURSE NAME	ECTS	HRS	PREREQUISITES
VTSS-B14	Quality control and metrology	7	5	NONE
VTSS-B15	Industrial devices	6	5	NONE
VTES-B03	Elective	9	6	NONE
VTES-B04	Elective	8	6	NONE

TOTAL SEMESTR ECTS	30		

7th SEMESTER

CODES	COURSE NAME	ECTS	HRS	PREREQUISITES
VTSS-B19	Automated design systems of devices	6	**5**	NONE
VTES-B05	Elective	7	6	NONE
VTES-B06	Elective	8	5	NONE
VTES-B07	Elective	6	4	NONE
VTES-B08	Elective	3	2	NONE
TOTAL SEMESTR ECTS		**30**		

8th SEMESTER

CODES	COURSE NAME	ECTS	HRS	Prerequisite
	Practical training	21	22.5	
	Bachelor Thesis with Final Presentation	9		

ELECTIVE COURSES

CODES	COURSE NAME	ECTS	HRS
HS-B04.1.1	Philosophy	3	2
HS-B04.1.2	Sociology	3	2
HS-B04.1.3	Fundamentals of law	3	2
HS-B04.1.4	Logic	3	2
HS-B04.1.5	Ethics and aesthetics	3	2
HS-B04.1.6	Introduction to multiculturalism	3	2
HS-B04.2.1	Information technologies (in accordance with the specialty)	3	2
HS-B04.2.2	Information control	3	2
HS-B04.2.3	Fundamentals of entrepreneurship and aesthetics	3	2
HS-B04.2.4	Politics	3	2
VTES-B01.1	Analog and digital measurement devices	10	5

VTES-B01.3	Metrology aspect of measurement devices	10	5
VTES-B01.4	Human anatomy and physiology	10	5
VTES-B02.1	Analytic devices	9	6
VTES-B02.3	Applied metrology, calibration	9	6
VTES-B02.4	Biomedical electronics, micro and nano-transducers	9	6
VTES-B03.1	Digital signal processing	6	3
VTES-B03.3	Standardization and certification	6	3
VTES-B03.4	Biomedical technical methods and instruments. Intros-copy	6	3
VTES-B04.1	Systems modeling and simulation	6	4
VTES-B04.3	PLC and SCADA in process control and monitoring	6	4
VTES-B04.4	Biosensors MEMS and BioRobotics	6	4
VTES-B05.1	Automation of measurement processes (Lab View)	7	6
VTES-B05.3	Fundamentals of interchangeability	7	6
VTES-B05.4	Design of biomedical systems	7	6
VTES-B06.1	Modern information-measurement systems	8	5
VTES-B06.3	Qualimetry and quality management	8	5
VTES-B06.4	Biomedical signal processing and analysis	8	5
VTES-B07.1	Industrial robots	6	4
VTES-B07.3	Probability theory and statistics	6	4
VTES-B07.4	Artificial intelligence (machine, deep learning)	6	4
VTES-B08.1	Technical foreign language	3	2
VTES-B08.2	Classical and fuzzy logic	3	2
VTES-B09	HSE	2	2
VTES-B10	Project management	3	3

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Mechanical Engineering:

1. Engineering Knowledge: Apply principles of mathematics, science, and engineering to solve complex engineering problems.

2. Design/Development of Solutions: Design systems or processes that meet specific requirements, considering health, safety, cultural, societal, and environmental considerations.

3. Learning Standards: Establish and adhere to high learning standards to acquire the necessary knowledge and skills for complex engineering tasks.

4. Be Familiar with IT Design Tools: Gain proficiency in using modern IT tools and software for engineering design and analysis.

5. Learn Oil and Gas Equipment: Acquire comprehensive knowledge of the design, operation, and maintenance of oil and gas equipment.

6. Teamwork: Develop effective teamwork skills to collaborate with others in achieving engineering objectives.

7. Project Management: Apply project management techniques to plan, execute, and oversee engineering projects, ensuring timely and budget-compliant completion.

8. Long-lived Designs: Create engineering designs that are durable and reliable over time.

9. Cost-efficient Designs: Develop cost-effective engineering solutions that optimize resource use and minimize expenses while maintaining quality.

10. Ethical Practice: Demonstrate a commitment to professional ethics and responsibilities, ensuring integrity and ethical behaviour in engineering practices.

The following curriculum is presented:

FIRST YEAR I. SEMESTER

	CODE	COURSE NAME	ECTS	HOURS	Prerequisites
1	ENGL1101	Business and academic communication in a foreign language: General English	8	4	NONE
2	MATH1101	Linear algebra and analytic geometry	4	4	NONE
3	PHYS1101	Physics	8	6	NONE
4	MECH1101	Introduction to the specialty	4	3	NONE
5	MECH1102	Descriptive geometry and engineering graphics	4	4	NONE
6	LANG1101	Business and academic communication in the Azerbaijani language	4	3	NONE
	TOTAL SEMESTER CREDITS/ECTS		**32**		

FIRST YEAR II. SEMESTER

	CODE	COURSE NAME	ECTS	HOURS	Prerequisites
1	HIST1201	History of Azerbaijan	5	4	NONE
2	ENGL1201	Business and academic communication in a foreign language: Speech Practice-Development of speech skills	7	7	ENGL1101
3	CHEM1201	Chemistry	5	4	NONE
4	MATH1201	Calculus-1	4	4	MATH1101
5	COMP1201	Computer graphics	4	3	NONE
6	ELEC1201	Basics of electrotechnics and electronics	4	2	NONE
	TOTAL SEMESTER CREDITS/ECTS		**29**		

SECOND YEAR III. SEMESTER

	CODE	COURSE NAME	ECTS	HOURS	Prerequisites
1	MATH2101	Calculus -2	4	3	MATH1201
2	MATE2101	Materials science	4	4	NONE
3	MECH2101	Theoretical mechanics	6	3	NONE
4	COMP2101	Basics of programming	5	3	NONE
5	THER2101	Thermodynamics	4	2	NONE
6	LIFS2101	Life safety	4	3	NONE
7	CIVL2101	Civil defense	3	2	NONE
	TOTAL SEMESTER CREDITS/ECTS		**30**		

SECOND YEAR IV. SEMESTER

	CODE	COURSE NAME	ECTS	HOURS	Prerequisites
1	MATH2201	Applied mathematics	4	3	NONE
2	TECH2201	Materials technology	4	3	NONE
3	STRE2201	Strength of materials	6	4	NONE
4	MACH2201	Theory of machines and mecha-nisms	7	4	NONE
5	MECH2202	Flow mechanics	5	4	NONE
6	NTE	Elective	3	2	
	TOTAL SEMESTER CREDITS/ECTS		**29**		

THIRD YEAR V. SEMESTER

	CODE	COURSE NAME	ECTS	HOURS	Prerequisites
1	MACH3101	Machine production technology	7	5	NONE
2	ECON3101	Engineering economics	4	2	NONE
3	MACH3102	Machine design	7	5	NONE
4	COMP3101	Basics of automation	4	4	NONE
5	TE	Elective	7	4	
6	TE	Elective	2	2	
	TOTAL SEMESTER CREDITS/ECTS		**31**		

THIRD YEAR VI. SEMESTER

	CODE	COURSE NAME	ECTS	HOURS	Prerequisites
1	STAN3201	Metrology, standardization and certification	5	3	
2	NTE	Elective	3	2	
3	TE	Elective	7	5	
4	TE	Elective	7	5	
5	TE	Elective	7	5	
	TOTAL SEMESTER CREDITS/ECTS		**29**		

THIRD YEAR VII. SEMESTER

	CODE	COURSE NAME	ECTS	HOURS	Prerequisites
1	TE	Elective	8	6	
2	TE	Elective	8	6	
3	TE	Elective	8	6	
4	TE	Elective	3	2	
5	TE	Elective	3	2	
	TOTAL SEMESTER CREDITS/ECTS		**30**		

FOURTH YEAR VIII. SEMESTER

	CODE	COURSE NAME	ECTS	HOURS	Prerequisites
1	PRAC4201	Practice	21	14	
2	THES4201	Bachelor Thesis including its defense	9	6	
	TOTAL SEMESTER CREDITS/ECTS		**30**		

Non-Technical Elective (NTE):

- PHIL-2201 Philosophy
- MULT-2202 Introduction to multiculturalism
- INFO-3201 Information technology
- ENTR-3202 Basics of entrepreneurship and introduction to business

Technical Electives (TE):

- MACH-4101 Destruction of machines and structures
- TRIB-4101 Tribotechnical tests and forecasting
- STRE-3101 Strength of repair equipment
- LIFT-3101 Lifting machines
- DESG-3101 Applied machine design
- STRE-3202 Strength of drilling rig elements
- COMP-3201 Compressor units
- STRE-4101 Strength of oil production devices
- MECH-4101 Equipment of flow lines
- DYNA-3201 Dynamics and strength of industrial devices
- REDU-3201 Reduction units
- DYNA-3202 Dynamics of machines
- MACH-4102 Machines and engines
- MECH-4102 Mechanical vibration
- TECH-3101 HSE
- PROJ-4101 Project management