

EVALUATION REPORT FOR INSTITUTIONAL PILOT EVALUATION

University: Azerbaijan Technical University

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I Description of the evaluation process

International cooperation in quality assurance has been an essential element of the Bologna process aiming to create a European Higher Education Area. A central tool in this work has been the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (also known as the ESG). The Twinning project offers an opportunity for applying the ESG in Azerbaijani higher education. One of the mandatory results of the project was to develop Standards and Guidelines for Quality Assurance in Higher Education in Azerbaijan (AzSG), in line with the ESG, and to test them with three higher education institutions, one of them being the Azerbaijan Technical University (AzTU).

In April 2016 a Drafting Group was appointed by the Ministry of Education of the Republic of Azerbaijan to work on a proposal for AzSG. A draft manual for the pilot evaluations was discussed with the Advisory Group in a seminar in June 2016. The draft was published on the Twinning project's website in order to get feedback on the assessment areas and criteria. Amendments were made to the manual based on the feedback. The pilot institutions were supported to conduct a self-evaluation through several trainings, which took place starting in September 2016. The self-evaluation report by AzTU was presented to the evaluation group in February 2017. In February 2017 informative visits were conducted to all three higher education institutions participating in the pilot. Practical details of the upcoming site visits were discussed during these visits.

The main aims of the pilot evaluation have been set as follows: supporting the strategic management of institutions, providing external feedback to the institution's own internal quality assurance procedures as well as informing the internal and external stakeholders of the compliance of the institution's quality assurance with the ESG. The pilot evaluation will have an institutional approach with the focus on teaching and learning.

Thus, the expert team was asked to assess Azerbaijan Technical University against the Standards and Guidelines for Quality Assurance of Higher Education in Azerbaijan on the basis of 7 assessment areas: Strategic Planning; Management; Human Resources; Study Programmes and Their Development; Students; Research Activities; Teaching and Learning Resources and Support Services.

The team consisted of five members, including international as well as local experts from Azerbaijan, and was supported by the Project Manager.

After the preparation phase, the work of the team in Baku started on Monday, April 24, 2017, with an introduction to the higher education system of Azerbaijan at the Ministry of Education of the Republic of Azerbaijan. The introductory meeting was followed by



team meeting where the team members agreed the overall questions and issues to discuss during the site visit to the university, which was carried out during 25-27 April 2017 (the site visit programme can be found in Annex 1). During those three days of the site visit meetings were held with the management, academic and research staff, representatives of various support services, students, alumni and external stakeholders of the institution. On the last day of the visit feedback on preliminary conclusions of the team were presented to the rectorate of AzTU.

On Friday, April 28, the team held an all-day meeting, during which both the structure of the final report was agreed and findings of the team were compiled in a first draft of the assessment report. This work was executed in a cooperative way and the members of the team extensively discussed their individual views on all the seven assessment areas.

The evaluation has been conducted on the basis of the Self-Evaluation Report of Azerbaijan Technical University and its compulsory appendices. At the request of the team, additional information was made available prior to and during the site visit. The team members had a tour of the premises, thus obtaining an impression of the lecture rooms, library and other facilities. The present evaluation report will provide the institution with information regarding their strengths and good practices as well as recommendations for the institution's further development.



II Description of the university

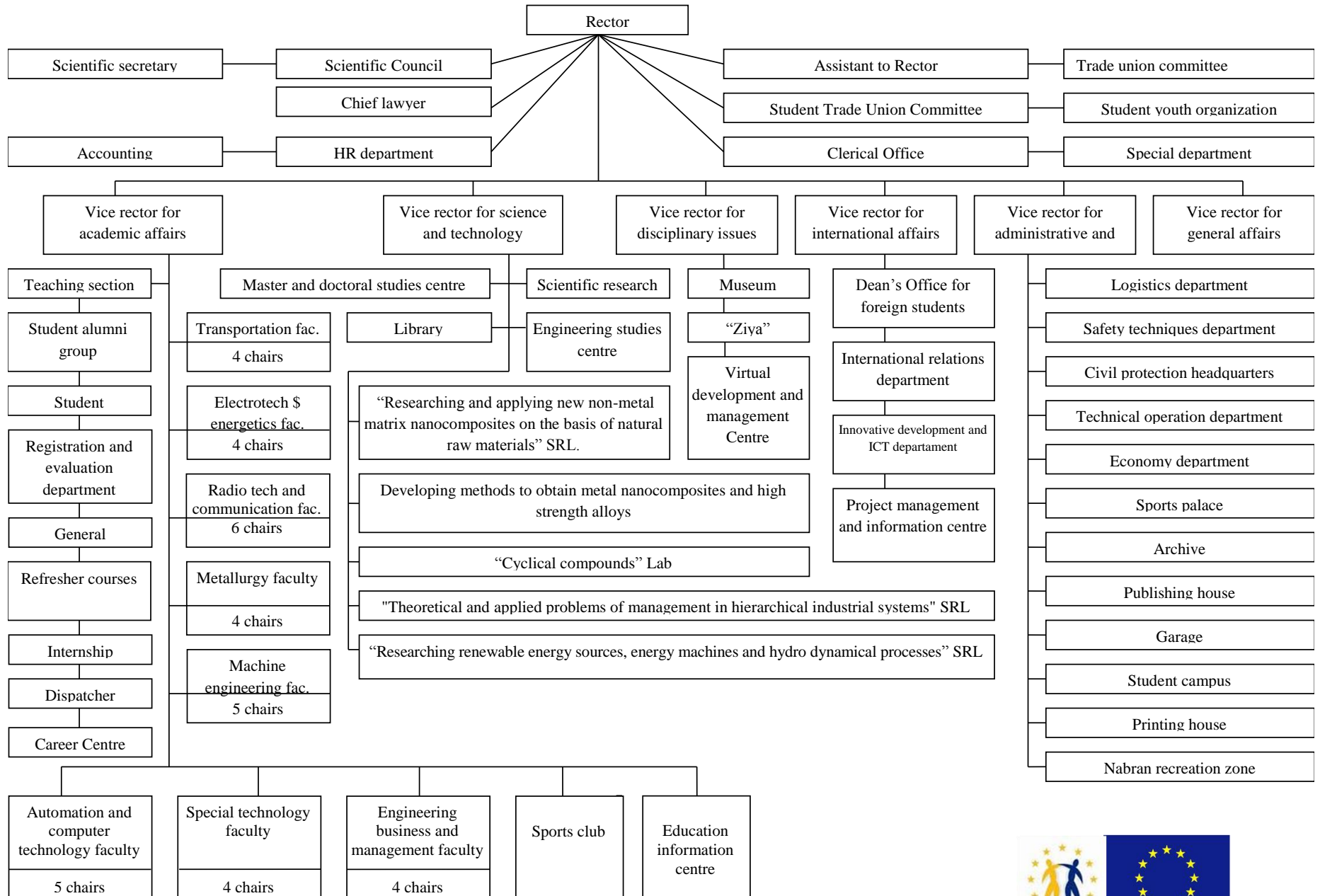
Azerbaijan Technical University (AzTU) was founded in 1945 and officially created in 1950 and is located in Baku. It is one of the higher education institutions in the field of technology in Azerbaijan and provides education in wide range of areas including machine engineering, metallurgy, electrical engineering, transportation, information technology and automation.

AzTU has over 9000 bachelor and master students. Bachelor, master and doctoral studies are delivered in Azerbaijani and Russian, and close to 200 students come from abroad. The volume of the teaching staff is 560 out of which nearly 390 have a doctoral degree. Regarding research, the university has one scientific centre and six scientific laboratories.

The present university structure consists of 9 faculties and 33 specialities / programmes. In addition, a number of departments with designated tasks support the delivery of the educational and research tasks. The highest decision-making body is the Scientific Council. The organisation of the university is depicted in the chart below.



Azerbaijan Technical University



III Summary of the evaluation (mark with ‘X’):

	Fully conforms to requirements	Mostly conforms to requirements	Partially conforms to requirements	Does not conform to requirements
1. Strategic planning			X	
2. Management			X	
3. Human resources		X		
4. Study programmes and their development			X	
5. Students		X		
6. Research activities		X		
7. Teaching and learning resources and support services		X		

The assessment of the evaluation team is based on evidence presented in the university’s self-evaluation report, additional material requested from the university, and the interviews conducted over three days at the university. The following assessment areas mostly conform to the requirements presented in the AzSG: Human resources, Students, Research and Teaching and learning



resources and support services. The team found several strengths and good practices in these assessment areas, including the good relations between students and staff members, the system for motivating for high impact research and the use of international co-operation for staff development. The team has also given recommendations how to pursue further development in these assessment areas, such as modernizing teaching methods through skills-development of teachers and by offering more possibilities to young staff members, and upgrading the infrastructure for teaching and research purposes.

The assessment areas of Strategic planning, Management, and Study programmes and their development partially conform to the requirements presented in the AzSG. Strengths and good practices were also recognized in these areas, indicating a clear and well justified role of the university, clear decision-making processes and the match between the fields of the programmes and the needs of the industry. The team also found several areas for improvement in the core requirements, including establishing a quality assurance system that covers all the main functions of the university, developing the organisation further to better support the implementation of the strategy, and developing more systematic and active involvement of stakeholders in study programme development. Further evidence and analysis is provided in the sections below.

The evaluation team would like to thank the AzTU management for their hospitality and cooperation in the practical arrangements, which allowed the team to carry out a successful site visit. The team would also like to thank all the interviewees for open and trustful interviews, which allowed the team members to collect evidence and information for compiling the final report.

The summary below lists the main strengths and recommendations noted by the team. Each section in the report will describe further strengths, good practices and recommendations.

Strengths:

- The role of AzTU is clear and well justified
- Clear decision-making processes that are supported by active internal and external co-operation
- Good cooperation and friendly relations between students and staff members, which leads to that students are also listened to in the decision-making bodies
- System for motivating researchers to publish in internationally listed journals works
- International relationships and projects have been successfully used for development of both teaching and research



Recommendations:

- Establishing a quality assurance system, that covers the main functions of the university
- To develop the organisation further to better support the implementation of the strategy
- Modernizing teaching methods, by motivating and developing skills of teachers and offering more possibilities to young staff members
- A learning outcomes approach for study programmes should be developed and used as a basis for developing the learning process
- The technical infrastructure in classrooms and laboratories should be further developed, to enable new teaching approaches and research on a wider scale
- Increase the connections with industry, for example by having more systematic and active involvement of industries in study programme development



IV Results by assessment areas

1 STRATEGIC PLANNING							
Assessment	Fully conforms to requirements		Mostly conforms to requirements		Partially conforms to requirements	X	Does not conform to requirements
<p>Requirements:</p> <ul style="list-style-type: none"> ▪ <i>Role (mission and vision) of the institution in the context of national education system is well defined and supported by relevant (internal and external) stakeholders.</i> ▪ <i>The development strategy approved by the Scientific Council of the institution is compliant with the mission statement and objectives of the institutions. Short and/or mid-term plans for its realization are in place.</i> ▪ <i>Development strategy of the institution is line with its resources (finances, staff, infrastructure), capacity of attracting additional resources, changes in labour market and needs of the society.</i> ▪ <i>Relevant stakeholders (teaching staff, students and employers) are involved in the strategic development process of the institution.</i> ▪ <i>Processes to evaluate the achievement of the objectives set in the strategy are in place, short and/or mid-term plans are followed and the implementation monitored.</i> ▪ <i>Information about higher education institution’s mission, vision and objectives is publicly available (website, media, other channels).</i> <p>The role of the University is clear and the traditions of giving education in the field of technology is long. The University can autonomously and independently suggest new programmes to the Ministry, which approves them. Nowadays, the University is involved in training engineering specialists in all important industrial areas of Azerbaijan. The University is motivated in improving the education in line with the requirements of the labour market. The relevant stakeholders support the activity of AzTU in fulfilment of the mission on ensuring management and development of the industry. The Strategic Development Plan is discussed in the highest decision-making body of the institution, Scientific Council, and it also determines the development targets for the main operations of the institution. AzTU has approved and implements an action plan in accordance with the state strategy on development of education. The role of AzTU as described in the self-evaluation report and in the interviews seems to be clear and it is considered to be a strength.</p>							



The University has a Strategic Development Plan for years 2016-2020. Besides this, structural units have shorter term plans. Plans cover actions year by year and the responsibilities for carrying out the actions are defined. The strategy is approved by the decision of the Scientific Council and order by the Rector. The strategy is sent also to the Ministry of Education.

Although not explicitly defined, the University's main task, mission and vision can be found from the Strategic Development plan, for example in the main objectives and the development priorities of the University. These are well described and the strategy is compliant with these. Short- and mid-term plans have not been made on the University level, but on the level of structural units. For better communication towards the stakeholders, the main task, mission and vision could be emphasized more in future versions of the strategy.

The strategy includes ten main areas. All these areas have been described and divided into numerous strategic objectives (more than 40) and strategic tasks (more than 70). Not only the objectives and the tasks are described, but also a mechanism for the implementation is described in the strategy.

Although the objectives and tasks are leading the University to good direction, it may happen that not all of these can be carried out in five years. For example, acquiring modern technical equipment requires large sums of money and the time period can easily get longer. Actually, this is work that probably never ends. Because of the large amount of different needs, prioritizing of the objectives and tasks should be made on the University level.

In the interviews the evaluation team was told that the strategy is prepared mainly by the staff members. The students and the companies seem to have a minor role if any. It is recommended that in the future the updates for this strategy and also when making the next new strategy, all the relevant stakeholders will be systematically taken into the strategy process.

The yearly budget is prioritized according to the strategic plans, which is important for achieving the strategic goals. The responsibilities for implementation are defined, and the deans and the chairs have an important role in implementation. The Rector and the Vice-Rectors have a supervising role.

For the reporting, the University has possibilities such as the website, newspaper and mass media, which can also be used for

communicating about the improvements. The Rector has also a responsibility to report to the Ministry. In addition, the annual report describes the main outcomes every year. However, in the interviews it was not clear how effectively the strategy of the University is communicated internally to staff members and the students, or student organisations. The situation was similar with the external stakeholders. Therefore the evaluation team suggest, that the University pays increasingly attention to inform these stakeholders about the Strategic Development Plan and the strategic objectives. Also, systematic meetings together with companies on achievements and future plans are suggested, at least on the University and faculty levels.

The University has for a long time had international cooperation in forms of development and research projects as well as staff and student exchange. Especially the projects have offered good possibilities to develop the operations of the University but also the skills of the staff members and students. The evaluation team heard in many interviews good practises connected to international projects, and it encourages the University to actively continue work for the internationalisation e.g. through new projects. It also supports the idea of enhancing studies in English language in the faculties and new programmes taught in English.

In the interviews several groups indicated that increasing the connections with industry and other companies would be beneficial. It can give more possibilities for internships, visiting lecturers, better employability for the graduates and new research projects. The evaluation team recommends that the University start an internal development work in this area by assessing largely the possibilities for cooperation with industry and other companies.

In many interviews the team also heard a wish for upgrading the technical infrastructure both in the classrooms and in the laboratories. As this is very clearly the question on funding, the evaluation team encourages the University to make the base of funding sources more versatile, and if possible, increase the cooperation with companies also in this area.

Strengths, good practice

- The role of AzTU is clear and well justified
- The University's main task, mission and vision are described in the Strategic Development plan
- Many good practises were connected to international projects and thus foreign relationships

Recommendations

- More prioritising of objectives and tasks should be made in the University level plan

- All the relevant stakeholders should be taken along to the strategy process in the future
- The University should pay more attention to inform all stakeholders about the Strategic Development plan and the objectives
- Systematic meetings together with companies on achievements and future plans are suggested
- The University should largely assess the possibilities for increasing cooperation with industry and other companies
- To actively continue work for the internationalisation of the University



2 MANAGEMENT							
Assessment	Fully conforms to requirements		Mostly conforms to requirements		Partially conforms to requirements	X	Does not conform to requirements
<p>Requirements:</p> <ul style="list-style-type: none"> ▪ <i>The management structure of the institution supports the achievement of institutional objectives set in the development strategy.</i> ▪ <i>Rights and responsibilities of structural units (Scientific Council, faculty, chair and others) are clearly defined and the implementation of decisions taken is effective.</i> ▪ <i>Staff members filling managerial positions have relevant qualifications, their rights and responsibilities are clearly defined; institution supports the development of their managerial skills and competences.</i> ▪ <i>The allocation of financial resources inside the institution supports the implementation of the development strategy (including short and/or mid-term plans) of the institution.</i> ▪ <i>Structural units of higher education institution have mutual and functional relations (internal collaboration) and they cooperate with other institutions and organizations (external collaboration).</i> ▪ <i>The internal (formal and informal) communication between different levels of the management staff, teaching staff and students is purposeful and effective.</i> ▪ <i>Internal quality assurance system (monitoring, analysis, assessment and forecasting) is supporting the strategic management of the institution.</i> <p>The organization chart shows that the Rector is leading the University with six Vice-Rectors, administrative units, Scientific Council and student and trade union organisations. The organisation includes all relevant units needed to operate the University properly. The University leadership has a strategic approach to the reforms. Measures are taken to make AzTU structure more effective to obtain institutional targets. As an example, two faculties training specialists were recently merged. Also some of the chairs were merged and their number was brought down. In addition to these, other institutional reforms are planned for the future. AzTU has made proposals on establishing education clusters applying “Vocational school – College – University” model.</p> <p>The decision-making process in the University seemed to be clear. In the interviews it was told that the Scientific Committee</p>							



makes the decisions, which then leads to the orders of the Rector. The deans' offices in the faculties are informed of the orders, and they are further communicated to the chairs and staff members.

Although the organization can fulfil the required tasks, the development of organization could bring even more of the needed efficiency. Firstly, from the organization chart you can find quite many units. In the interviews it was noticed that some of the units are really small, in some cases even only one person. Therefore the evaluation team recommends the University to consider whether it is possible to make the units stronger and thus also better capable to carry out the important strategic goals.

Secondly, the needs of the companies, like internationalisation as well as the development of new technologies, also increase pressure for the renewal of the University in the future. Especially the rapid development in technological areas, production methods (like 3D-printing, robotisation etc) and ICT-sector (like Big Data, IoT etc) challenge the present situation.

At AzTU there is a known tradition of division of tasks and responsibilities among structural units. Some clarifications are being made, such as:

- Regulations are developed and approved taking into account the contemporary challenges and national requirements in the area of higher education
- Internal discipline rules for students are approved in order to strengthen discipline
- Within the E-University -project AzTU has increased the efficiency of teaching and management processes and increased discipline in the implementation of education as planned.

According to the self-assessment report, the above-mentioned measures are not sufficient, and further improvement will be implemented. Although in the interviews the representatives of the structural units felt that there are no remarkable problems concerning the rights and the responsibilities between the units, the evaluation team recommends that further measures are taken as was told in the self-evaluation report.

Functional tasks of each person at AzTU holding a position are regulated by regulatory documents. Based on the interviews, reforms are carried out in the HR-department to determine the qualifications related to leadership and administrative positions. The leadership ensures that respective work is being carried out for administrative and teaching staff to perform their work at

high level and improve their competences. In the future, labour functions of staff will be analysed, and rights and responsibilities of staff members will be indicated.

In self-evaluation report, it is stated that the allocation of financial resources supports the implementation of development strategy, including implementation plans. AzTU motivates teaching staff and improves social conditions of its employees e.g. by following means:

- Average monthly salaries have been raised
- A proposal on applying differential salary system for teaching staff will be made and
- Special attention will be paid to the volume of work.

It was also told in the interviews that the University supports the strategy by allocation of the financial resources. In addition to this the evaluation team sees that further motivation of the management and staff on all levels is important. As one possibility for this, the evaluation team suggests that increasing gradually the freedom to allocate the financial resources more by the faculties or in cooperation with the faculties, could motivate to carry out the strategic objectives more effectively.

The E-University -portal that the university uses as one channel of internal communication has certain sections to ensure mutual and functional relations among structural units, other institutions and organizations, but the present situation is not yet at proper level according to the self-evaluation report. Therefore, a commission is established and relevant measures are taken. The problems occur at least partly due to the used software and insufficient use of corporate email. These things certainly need further development. Both internal and external co-operation was told in the interviews to be active, both formally and informally. That happens in many levels in the University, as we heard e.g. from the deans, heads of chairs and teachers. Also, the interviewed external stakeholders mentioned many good examples on the cooperation.

The leadership has put emphasis on the communication matters. Possibilities for meeting the students and staff exist. All staff members and students may contact the Rector. In addition, the heads of student organizations regularly meet the Rector. AzTU also takes into account ensuring the objectivity, efficiency and transparency. The communication is described in the self-evaluation report as goal-oriented and efficient. Also, it was clearly stated in several interviews that there is good cooperation and friendly relationships between the students and the staff members.

Registration and evaluation department was established to carry out the Quality Assurance System and to take care of quality and evaluation issues. It was established within a TEMPUS programme. Following this, an evaluation survey of teaching staff was carried out on different indicators. Currently, students have a possibility to evaluate teaching by using the E-University -portal. For example, almost 1400 students evaluated different subjects and teachers in autumn 2016, and the evaluations will continue. In the self-evaluation report it is said that AzTU is going to set up a Quality Assurance System and to improve this area following the national standards and guidelines.

A lot of work has already been done in developing the quality assurance for teaching. The evaluation team recommends that the University continues this work and develops the Quality Assurance System to cover all the main functions throughout the University, including all structural units. The Quality Assurance System, if applied in a proper way, could in long-term lead to better performance and better competitiveness of the University and its students.

In the interviews the evaluation team did not get fully clear picture of the future role and the goals of the Quality Assurance Center, probably due to the fact, that the unit is recently created. Therefore, the team sees that the future role and goals of the Quality Assurance Center should be clarified.

Strengths, good practices

- The organisation includes all relevant units needed to operate the University properly
- The University has clear decision-making processes
- The cooperation both internally and externally is active
- There is good cooperation and communication and friendly relationships between the students and the staff members

Recommendations

- To develop the organisation to better support the strategy and fulfil the needs of the industry
- To increase gradually the freedom to allocate the financial resources more by the faculties or with the faculties
- To develop the Quality Assurance System to cover all the main functions of the University
- To clarify the role and goals of the recently created Quality Assurance Center

3 HUMAN RESOURCES							
Assessment	Fully conforms to requirements		Mostly conforms to requirements	X	Partially conforms to requirements		Does not conform to requirements
<p>Requirements:</p> <ul style="list-style-type: none"> ▪ <i>Rights and responsibilities of staff members as well as the qualification required are defined according to the purpose of their position (e.g. in job descriptions). Recruitment process is transparent.</i> ▪ <i>The number (proportion) of full-time teaching staff members is in accordance with national requirements.</i> ▪ <i>The distribution of full-time teaching staff by age and qualifications facilitates the sustainability of studies in a certain study area.</i> ▪ <i>Existence of monitoring and assessment mechanism of the teaching activity of teaching staff (quality and professionalism) in higher education institution.</i> ▪ <i>Relevance of teaching support staff to regulatory requirements (number, major etc.) in higher education institution.</i> ▪ <i>The institution monitors, supports and encourages the professional and teaching-skills development of the academic staff on a regular basis.</i> ▪ <i>Academic staff members participate in international exchange programmes, projects and conferences.</i> ▪ <i>The institution has a HR development (including motivation) system in place. Assessment of the work of the teaching staff takes into account the quality of their teaching as well as of their research, including development of their teaching and research skills, and their international mobility.</i> <p>According to the self-evaluation, leadership and administrative positions at AzTU are regulated by regulatory documents. Moreover, interviews confirmed that rights and responsibilities of staff members as well as the qualification required were clear to the interviewed staff members.</p> <p>The recruitment process for teachers and other academic positions is transparent. First, announcements are circulated in the media, after which interviews and a demonstrative lesson take place, and then the faculty decides on the recruitment. In the case of professors, the Scientific Council will also discuss the matter. In appointment of heads of chairs and deans, the Rector sets up a special selection committee. This commission then interviews the candidates and after that the Rector makes the final decision. AzTU publishes the announcements for also these positions in the media. When it comes to the administrative or other non-teaching staff, however, the process is not as transparent: for example, the positions are not publicly advertised in the media, and</p>							



the selection criteria are not as clear. Thus, the process relies more on individual contacts and views of the units.

According to the interviews, the University has plans to develop the recruitment and selection system further and steps to systemize the recruitment process are taken. Among other things, the transparency of the process will be better. The evaluation team supports the plan to systemize the recruitment process and make it more transparent. In addition to this, it is necessary to make sure, that the rights and the responsibilities of the individual staff members are in written form, e.g. in job descriptions, in order to ensure a certain standard in all positions. This is especially important in managerial positions. Defining the job descriptions could be supported by implementing a job analysis of different positions.

In Azerbaijan, state requirements state that full time teachers have to teach at least 500 hours per year. In the interviews it was stated that AzTU follows this principle, although it was noted that the workload is not evenly distributed between semesters, and depends on the research activity of staff members. The teaching staff volume at AzTU is 563 teachers, of whom 415 are full-time and the rest are working part-time between 50 % and 75 %. When calculating the volume of active lesson workload per full-time teachers, it is clear that the regulatory requirement of not less than 500 hours per year is fulfilled. The number of the teaching support staff in AzTU is 223, and the number follows from the norm set by the government. According to the self-evaluation, AzTU aspires to engage the support staff to more academic activities than they currently are doing, and based on the discussions in the interviews, the evaluation team encourages AzTU to develop mechanisms for the teaching support staff to participate in the teaching process. This could also provide a channel for the younger staff members to get teaching experience, and in this way to contribute eventually also to the rejuvenation of teaching staff.

In their self-evaluation report, AzTU raises the relatively high average age of the teaching staff as an area for improvement, as the average age of teachers in the majority of chairs ranges between 50 and 60. Although a high age is not necessarily a problem in itself, the evaluation team notes that it poses challenges to the sustainability of the operations. The university should find ways of offering more possibilities to younger staff members to gain experience, and to pass the knowledge of the experienced to the young generation, in order to ensure the continuity of functions in the organization.

The evaluation team could identify two main ways for assessment and monitoring of teaching activity, the first being the more

traditional approach of holding open lessons that are observed by the heads of chairs, and the recently introduced student assessments of teachers, which the evaluation team commends. Based on the interviews, the open lessons are still the main mechanism, but some of the interviewees also stressed the importance of the student feedback. The evaluation team sees that the practice of observing open lessons is not a very systematic assessment mechanism and encourages the university to develop the monitoring and assessment mechanisms to be systematically defined and applied across the institution, as a part of its quality management system.

In 2016/17 more than 10 professors participated in academic exchange programs, such as Erasmus+, Tempus and Mevlana. Based on the interviews, also participation to international conferences and projects is active, albeit sometimes limited by the level of English proficiency of some staff members. The international co-operation was valued highly in the interviews, and many positive results could be highlighted. The evaluation team sees this as a strength of AzTU and recommends to further develop it so that more staff members from different chairs can benefit from the possibilities. Teaching staff are also offered possibilities to undergo training in the National Academy of Sciences of Azerbaijan, scientific research institutions and scientific manufacturing unions of the ministries and committees of the Republic of Azerbaijan.

In the self-evaluation document, the HR development system of AzTU is discussed merely in terms of salaries and plans of developing the salary system to a more assessment based one. The evaluation team recognizes this as one important aspect of HR development, but recommends developing a more holistic approach to HR development, paying attention especially to the development of teaching skills and pedagogical competences. A coherent monitoring and assessment system would be one supporting element of such a system, but it needs focus also on motivational issues to counterpoint the control elements.

Overall, the evaluation confirmed that the academic and administrative staff of AzTU are well motivated, disciplined, open-minded, and innovative, which was proved by the well-attended and lively participation in all interviews during the site visit. In the evaluation team's view, this provides a fruitful foundation for further development activities.

Strengths, good practice

- Very disciplined and motivated staff
- Number of support staff is high, and opens possibilities for rejuvenation of teaching staff
- International exchange programmes are used for staff development

Recommendations

- In order to ensure sustainability in a number of chairs, mechanisms to offer possibilities to young staff members to gain experience should be developed.
- The assessment and monitoring system for teaching process should be developed and integrated to the quality management and HR development systems of the university.
- HR development should focus on developing teaching methods and on motivating for change, and be based on an analysis of needs.
- Recruitment and selection procedures for administrative and support staff should be made more transparent, together with further developed written job descriptions.

4 STUDY PROGRAMMES							
Assessment	Fully conforms to requirements		Mostly conforms to requirements		Partially conforms to requirements	X	Does not conform to requirements
<p>Requirements:</p> <ul style="list-style-type: none"> ▪ Programmes are designed with objectives that are in line with the institutional strategy, national standards for higher education, expectations of the society and economy, and labour market needs. ▪ The content of the study programme is updated in the light of the latest research in the given discipline. ▪ Objectives, intended learning outcomes, admission and graduation requirements of the programmes are clearly defined; qualification resulting from the programme is clearly specified, communicated and referred to the appropriate level of the national qualifications framework. ▪ Expected student workload is defined in ECTS. ▪ Practical work/internship supports the achievement of the learning outcomes of the programme. ▪ Up-to-date teaching materials, innovative, creative and interactive learning methods and educational technology are used in teaching and learning process. ▪ Study programmes are monitored and reviewed regularly; relevant stakeholders (incl. students) are involved in these processes. ▪ Graduate satisfaction with the quality of study programmes are surveyed and analysed; the results are considered in the development of study programmes. <p>The strategic development plan of AzTU for the years 2016-2020 foresees to improve teaching plans and programmes in accordance with new state education standards for higher education levels (bachelor and master level) by 2017. As the Ministry of Education controls the study programmes quite a lot through state standards, the expectations of the society can be said to be channelled through them to a certain degree. In addition, in study programme development, also local enterprises are consulted. Based on the interviews, expectations of economy are well in line with the study programmes, as programmes serve directly essential economic sectors of Azerbaijan. However, the process for consultation is not systematic, and in practice varies between faculties and chairs. The evaluation team recommends developing systematic ways to include stakeholders to the development of study programmes.</p>							



As the number of research laboratories of AzTU was relatively low compared the number of study programmes, the content of study programmes is only loosely related with latest research. The strong dependence on the state standards can also limit the possibilities of the university to update the content of the study programme to follow the latest research in each field. When updating the research facilities, the evaluation team recommends taking into account also the needs of the study programme development.

AzTU has made good use of Erasmus and TEMPUS projects to develop several study programmes in co-operation with European universities. Three programmes of one faculty now match with programmes in European partner universities, and four as a result programs were accredited by the German accreditation agency ASIIN, which enables smoother student and staff exchange. The evaluation team encourages AzTU to continue with such projects to develop programmes also in other faculties. The expected student workload is defined in ECTS, which has enabled students exchange through Erasmus Plus programmes.

Based on the self-evaluation and the interviews, a learning outcomes based teaching approach is still mostly missing. Definitions of learning outcomes are not very clear, and for example content of courses was mostly described in an hourly basis. Because of this, while the internships support the study process, and were valued by the students, they are only loosely supporting the achievement of stated learning outcomes. Lecturers are using different methods in teaching process, however there was no systematic push for developing innovative and interactive learning methods, such as e-learning or team-based learning. The evaluation team recommends AzTU to take a systematic approach to modernise teaching methods in the programmes, primarily through motivating, supporting and empowering teachers in skills development and teaching method experimentation. Solidly formulated learning outcomes would serve as a good backbone also for the development of the teaching process.

According to the self-evaluation, there are procedures to monitor and review the study programmes regularly. The Department of evaluation and QA Center as well as the deans of the faculties monitor the educational process through observing open lessons once a week or once a semester. Besides that, statistics such as exam performance, student evaluation of teaching and graduate employment are followed, discussed in the decision-making bodies of the university, and used for corrective action if necessary. Bigger reviews of the study programmes are carried out in accordance with the five year cycle of development of the state standards. The process begins with consultations between the dean's office and chairs on how the programmes should be developed. After that, a draft of the curriculum is prepared and discussed on the chair level. According to interviews, in this phase also external stakeholders are taken into discussions, although no defined process for that was identified. After a final proposal is



ready, it goes through the decision-making chain starting from the dean and is finally approved by the Rector. Also students are involved in these processes, as they have representatives in the decision-making bodies, and as the student feedback on teachers provides one important information source for development.

In their self-evaluation, AzTU sees a stronger engagement of alumni to the development processes as an area for development. Based on the interviews, the evaluation team agrees with this and encourages AzTU to develop methods to survey the satisfaction of graduates with the quality of study programmes, and to integrate also this data to the planning and review process of study programmes.

Strengths, good practice

- The portfolio of programmes serves the needs of the society and the industry
- Good possibilities for internships supports the development of students' practical skills
- International projects have been used successfully to develop education in chosen study programmes, which has also led to international accreditations

Recommendations

- The existing good connections to companies should be used for developing systematic ways to include industry representatives in the design and review of study programmes.
- A learning outcomes approach for study programmes should be developed and used as a basis for developing the learning process, including internships.
- Modernizing teaching methods, by motivating and developing skills of teachers and offering more possibilities to young staff members.

5 STUDENTS							
Assessment	Fully conforms to requirements		Mostly conforms to requirements	X	Partially conforms to requirements		Does not conform to requirements
<p>Requirements:</p> <ul style="list-style-type: none"> ▪ <i>Students’ rights and responsibilities are clearly defined; procedures to process complaints and proposals of students, and appeals mechanism regarding examination outcomes are in place.</i> ▪ <i>The system for the detection and prevention of academic fraud (including anti-plagiarism mechanisms) is in place.</i> ▪ <i>Students participate in decision-making bodies as well as in elections of student unions.</i> ▪ <i>Student assessment is objective, consistent, transparent and supports the achievement of learning outcomes.</i> ▪ <i>Flexible leaning opportunities are provided for the students. Recognition of prior higher education qualifications, periods of study in abroad and prior learning are in place.</i> ▪ <i>The higher education institution supports the international mobility of students, and the students’ participation in international mobility is increasing.</i> ▪ <i>The institution has mechanisms to support the internationalisation of the student body.</i> ▪ <i>Graduates are competitive in the labour market in their specialty area and the institution monitors the employment of its graduates.</i> <p>Students' rights and responsibilities are defined clearly in the three main documents of rules, responsibilities and rights of the students: “Manual for students”, “Rules of internal discipline” and “Rules of credit system in AzTU”. The documents are also presented to students when they are admitted to the university. There are three student organisations active in the university. They have representatives in all relevant decision-making bodies of the university, and based on the interviews, they have been able to also influence decisions. There are several ways for students to make proposals and complaints in the university. These can be done through an application form, electronic emailing to Rector and face-to-face discussions with the university management. There is a special mechanism for the appeals during the exams as well. An appealing committee thoroughly works with appellation cases.</p>							



Student assessment is mostly consistent, objective and transparent. Clear grading rules are described in the student manual. Additionally, most of the final exams are taken in the form of multiple-choice tests via computers, which minimizes human factor during the assessment of exams. The university has recently put into operation an antiplagiarism-software, which significantly improves the possibilities of prevention of academic fraud. The evaluation team encourages to widen the use of the software, as planned by the university. However, as there is no strong learning outcomes approach behind the teaching process, the assessment cannot be said to fully support the achievement of learning outcomes. When further developing an outcomes-based teaching approach, also the assessment methods should be developed in the light of enabling students to demonstrate that they have achieved the set learning outcomes.

Recognition of prior educational qualifications received abroad is carried out considering the decisions of Nostrification department of Ministry of Education of Azerbaijani Republic. Credit transfer is recognised through the rules of Bologna system. Based on the interviews, the procedures for these worked well also in practice, especially if the studies abroad match well with the corresponding studies that would have been studied at AzTU.

Based on the interviews it is clear that study programs are limited in flexibility concerning time of teaching and subject choice. While students are able to choose the specialities within the study programmes, they do not have many options when choosing which subjects they want to study within their specialty, especially in technical and engineering subjects. More flexibility could be added to the programme by increasing co-operation and opening study choices between closely related or otherwise mutually supportive chairs. University does provide evening classes for masters' students, however this is not the case for undergraduates and PhD students. The need for evening classes for these students should be surveyed to find out the need for added flexibility.

University has several programs supporting international mobility of students. However, from the interviews the evaluation team learned that many students have language requirement problems when applying for these programs. In the interviews the evaluation team heard both wishes for more English language instruction and extended English language teaching. While the university does have foreign language classes, the evaluation team recommends that the university extends the number of semesters of foreign language classes and carries out programs to help students in attaining international foreign language

certifications such as IELTS or TestDaF.

Regarding internationalisation of the university, based on the interviews and self-evaluation material it is clear that extensive work is carried out in many directions. For further development, the evaluation team recommends that the university increases measures for the internationalization of the student body. The university does have English language web pages and instruction in English is being planned and developed which is commended as a good start. Further activities to attract more international students could include more active participation in international educational fairs, developing relationships with foreign high schools, and creating strong presence in social media platforms.

The university monitors the employment of its graduates. According to the statistics from last five years, on average roughly 50 % of the Bachelor level graduates and 55 % of the Master's level graduates have been employed. Interviews confirmed that graduates from AzTU generally have a strong theoretical base to be competitive in the labour market. Alumni of the study programmes were needed in local job market, and at Master's level most of the students already had a part-time workplace. Good links to companies in some of the faculties provide internships that often can also lead to employment after graduation. An example of such a link was the co-operation between the Faculty of Special Technologies and the Ministry of Defence Industry, which was mentioned in a number of interviews. This good example could be used to develop similar, mutually beneficial co-operation between other faculties and industries too.

To gain more from the theoretical knowledge, a need for more enthusiasm towards the specialities and passion for self-education and self-development was brought up as an area for improvement. Also the need for stronger so-called soft-skills, such as communication or team working, was discussed during the meetings. The evaluation team suggests that the university mobilizes teachers, student organizations, and other suitable resources to develop measures and activities to motivate and inspire the students for self-development beyond the theoretical knowledge base. To continuously keeping up the graduate competitiveness, it is recommended to regularly gather data on the needs of industry through surveys

Strengths, good practice

- Clear manuals for first year students
- Students have representation and can have influence in decision-making bodies



- Relations and co-operation with companies, especially between the Faculty of Special Technologies and Ministry of Defence Industry

Recommendations

- When further developing an outcomes-based teaching approach, also the assessment methods should be developed in the light of enabling students to demonstrate that they have achieved the set learning outcomes.
- To develop internationalisation, more focus is needed for the programs of attracting international students for full-time studies, and for increasing the language skills for students aspiring to go for exchange in foreign universities.
- Develop co-operation with industries in all study programmes to increase students' internship and employment possibilities, taking advantage of the good experiences of the Faculty of Special Technologies
- Gather data on the needs of industry through surveys for increasing graduate competitiveness in labour market.



6 RESEARCH ACTIVITIES							
Assessment	Fully conforms to requirements		Mostly conforms to requirements	X	Partially conforms to requirements		Does not conform to requirements
<p>Requirements:</p> <ul style="list-style-type: none"> ▪ <i>The objectives for scientific and research activity are defined in the mission, strategy and development plan of the institution. The institution monitors the needs of society and the economy, and takes them into account in planning its research activities.</i> ▪ <i>The achievement of the objectives and the impact research activities are regularly measured and analysed (scientific and educational publications, doctoral students, patents etc.).</i> ▪ <i>The institution promotes and upholds high quality academic and ethical standards of research; procedures for dealing with allegations of research misconduct are defined and followed.</i> ▪ <i>Institution has an effective system to encourage and support the research and scientific activities of academic staff members (e.g., incentives for conducting research, counselling related to intellectual property, support for publishing in international journals, motivating the cooperation with employers).</i> ▪ <i>Students are involved in research and development activities; the supervision of students' research papers (seminar papers, applied projects, final thesis) is well organised.</i> ▪ <i>The institution participates in different regional and international scientific and research networks in their areas of academic activities.</i> ▪ <i>The institution has financial resources needed for scientific and research activities and a strategy that supports their acquisition in order to be competitive at international level.</i> <p>The objectives for scientific and research activity were defined the strategic development plan of AzTU, which forms a five-year plan for development of research. Based on this, departments have elaborated their own short term plans. However, there was no clear process for following the needs of society and the economy for the purposes of developing and planning research activities. Nevertheless, there was evidence of research topics following developments in the society, such as the introduction of research in the field of alternative energies.</p> <p>The institution has a scientific research department that coordinates research activities. Based on the interviews it is an active department that takes its responsibilities seriously. One of its tasks is to measure and analyse research quality. Main indicators</p>							



regarding this are publication and citation numbers in indexed databases. It also oversees the upholding of academic ethical standards, where the main tool is the new anti-plagiarism software. However, no broader view of ethical conduct of research was discussed in the interviews.

In 2016, in total over 470 scientific publications of staff were published in different outlets, including journals. The evaluation team was satisfied with the new system to encourage staff to publish in international high impact journals. For every publication in high impact - Thomson-and Reuters, Elsevier, Scopus, Springer – journals, there is a bonus sum that is paid at the end of the year. The bonus is received directly by the authors, not by the department, which was seen as motivating for the staff. The size of the bonus depends on the category of the publication. As 147 applications for bonus were approved in fall 2016, it can be said that the system has a significant impact in encouraging staff for research. The agreement with Web of science was set up in 2016, after that the publication of papers has been possible. There are also three journals that are published by the university, and two of the journals were approved to the catalogue of Thomson-Reuters, which the evaluation team commends as evidence of successful development of research activities. One barrier for more active international publication are the language skills of researchers. When not all researchers are able to publish in English language, it limits the scope of publications to most typically either Russian or Turkish research journals. The audit team recommends to pay attention to the language skills development of researchers, and to increase the international mobility of research staff.

Research co-operation with industry is also significant in some fields, especially between the Faculty of Special Technologies and the Ministry of Defence Industry, which has led to the planned setting-up of a technology park in the university campus. Also in telecommunications sector, the university has been able to co-operate in ways that have brought additional resources to the university that have been used both for research and teaching purposes. AzTU participates actively in regional and international research networks. In the interviews especially participation in international conferences was brought up. AzTU also itself organises an international conference annually.

Students are involved in research activities, especially on Master's and Doctoral level, where the thesis topics are research topics. Students are involved in grant projects and grant money that are given under the foundation of the president of Azerbaijan. Based on the interviews, the university encourages students to come up with their own topics for research, but also provides guidance on suitable topics for students who don't have exact ideas themselves. The supervision of students' research work seemed to be well organised. Lecturers are also involving the more active students to their own research projects and conferences.

Altogether, AzTU has 36 chairs, 1 research centre and 6 research laboratories that are involved in research activities. As 40 % of salary is formed on basis on research activities, staff members are motivated to conduct research in addition to teaching. The institution has financial resources needed to conduct research activities. The research funding comes mainly through two sources. A smaller part comes straight through the budget from the Ministry of Education, and the main source is grant money. The biggest amount of grants come from the Science and Development Foundation under the President of Azerbaijan. Although the current resources allow to conduct research in chosen fields, based on the interviews, the evaluation team recommends AzTU to continue seeking funding that it can use to increase the number of dedicated research labs, in order to conduct high impact research in more fields that it currently can. The initiatives for new technology parks in co-operation with external partners can be one solution to this direction.

Strengths, good practice

- Good motivation system for publishing in high level journals
- Involvement of students in research and laboratories that are good for student's works
- Strong research department, which is tracking research quality

Recommendations

- To plan research activities more in long term
- To increase number of dedicated research labs
- To increase researchers' mobility

7 TEACHING AND LEARNING RESOURCES AND SUPPORT SERVICES							
Assessment	Fully conforms to requirements		Mostly conforms to requirements	X	Partially conforms to requirements		Does not conform to requirements
<p>Requirements:</p> <ul style="list-style-type: none"> ▪ <i>Appropriate teaching and learning and research infrastructure (classrooms, laboratories, library, workshop rooms etc.) including up-to-date ICT solutions (including e-learning opportunities and electronic databases) is available both for staff and students.</i> ▪ <i>Up-to-date learning materials are used in the process of teaching and learning.</i> ▪ <i>Tutoring service provided by the institutions corresponds to the needs of the student body and takes into account special needs of individual students.</i> ▪ <i>The institution is providing internship opportunities, employment and career development services for students (career centre, alumni coordination system etc.)</i> ▪ <i>The institution recognises equal treatment of students regardless of their nationality, language, sex, social status, position and religion.</i> ▪ <i>The institution supports students' learning by providing different kinds of additional support services (dormitory, canteen, medical care, sport facilities, financial assistance etc.)</i> <p>The self-evaluation report, interviews and a tour of campus and facilities all confirmed that the university has appropriate teaching and research infrastructure. The available space for students meets the requirements set by the Ministry of Education. There are also computer classrooms and other ICT recourses available for the students and for teaching purposes; however the interviews revealed that they are not always sufficient. Improving the IT infrastructure in the classrooms, such as a greater availability of projectors or smartboards in the classrooms, would allow lecturers to give lessons in more interesting and varying ways. Based on the campus tour, the laboratories are well-equipped for teaching purposes. They also serve research purposes in a meaningful way, but the team's view is that the number of research labs should be developed in order to enable research on a wider scope of fields and topics.</p>							



AzTU has a relatively well-sized library with over 500 000 books in Azerbaijani, English, Russian, Turkish, French and German, although some parts of the physical collection seemed to be quite aged. As the world is moving more and more to digital materials, it is recommended that the collection of the library is updated regularly making use of electronic books. The development of the library could be supported by giving it more financial autonomy. The library has established cooperation with different libraries throughout the world, so the students have an opportunity to use the database of these libraries as well. However, the opportunities for electronic access to different databases provided by the library were not that well known based on the interviews. The evaluation team recommends to increase awareness of these resources and to integrate the use of the library's resources more with the teaching process. The library also provides students with reading halls for self-study and for teamwork. Students can work in the library from 9.00 until 18.00, which was seen adequate. In the future development of these facilities, the number of computers available for students in the library could be increased.

An electronic portal, e-university, is used to support the communications related to studies. All syllabuses are found in the portal, as well as the teaching materials. While no formal mechanisms were identified to ensure that up-to-date learning materials are used, the transparency of provided by the e-university portal nevertheless promotes it. The e-university portal also gives tools for the university to follow on student's study progress, and to address possible problems with it.

AzTU has altogether 25 tutors in the nine faculties. Interviews confirmed that the students are very satisfied with the work of tutors and that the tutors are assisting students during their educational process. However, according the regulations of the Ministry of Education, for every 100 students there should be one tutor. From the table given in the self-evaluation report it can be seen the number of tutors in most of the faculties is lower than this, which can cause tutors to become overloaded.

The university has good connections with manufacturing companies, plants and laboratories. This gives students good chances for internships, and for obtaining practical skills, that are very important in students' future careers. The evaluation team welcomes the recent establishment of a career centre in the university, in addition to the already existing internship department, which supports students in getting internship placements and getting employed after graduation. However, the number of staff at the time of the visit in these departments was only one in each, which poses risks in cases of illness or staff changing workplaces. As

the tasks of these units are closely related, the evaluation team encourages the university to increase the co-operation of these units to involve more employees in the operations and to make the employees interchangeable between them; or even considering combining these two to a single, larger unit. Developing an alumni network could also be used for strengthening the work of the career centre.

The evaluation team was satisfied with the additional support that the university provides to students. For example, considering the fact that many universities do not currently have dormitories, the presence of a dormitory in AzTU was seen as a strength. University also has four canteens, sport complex, clinic and a health and recreation centre in Nabran. According to interviews, students make use of them all. Another positive matter is that the University helps financially students from the low-income families. Based on the evaluation material, no problems related to the equal treatment, rights and opportunities of all students, regardless of their nationality, language, gender, social status, position and religion were identified.

Strengths, good practice

- Students are satisfied with support services, including additional support for students from families with low income
- Good laboratory facilities for students
- Good connections to industry, which provides internship opportunities
- E-university system provides transparent access to information regarding studies
- Establishment of a Career centre supports graduates in finding a job

Recommendations

- The technical infrastructure in classrooms and laboratories should be further developed, to enable more varied teaching approaches and research in a wider scale
- The number of tutors should be increased to lessen the risk of overburdening
- Replace traditional seminars by the organization of works in different projects
- More practical education in some specialties (e.g. organize some lectures in manufactures in order to see in practice how processes are going on)
- Developing the co-operation of the Career centre and the Internship centre to avoid the risks of dependence on single staff members

Annex 1: Site visit programme to AzTU

TUESDAY – APRIL 25

9.30—10.45 Top management

11.00—12.00 Deans

13.00—14.00 University Scientific Council

14.15—15.15 Heads of department

15.30—16.30 Student organisations

WEDNESDAY – APRIL 26

9.30-10.45 Deputy deans and heads of chairs

11.00—12.00 Evaluation and QA Center staff

13.00—14.00 Teachers

14.15—15.15 Support services staff

15.30—17.00 Tour of campus and facilities

THURSDAY – APRIL 27

9.30—10.30 External stakeholders

10.45—11.45 Research staff

13.00—14.00 Students

15.30—16.30 Final meeting with the top management and preliminary feedback

