



agency for science and higher education

**REPORT
OF THE EXPERT PANEL
ON THE
RE-ACCREDITATION OF
Bjelovar University of Applied Sciences**

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INTRODUCTION

The Agency for Science and Higher Education (the Agency) is an independent legal entity with public authority, registered in the court register, and a full member of the European Quality Assurance Register for Higher Education (EQAR) and European Association for Quality Assurance in Higher Education (ENQA).

All public and private higher education institutions are subject to re-accreditation, which is conducted in five-year cycles by the Agency, in accordance with the Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09) and subordinate regulations, and by following *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ESG) and good international practice in quality assurance of higher education and science.

The Agency's Accreditation Council appointed an independent Expert Panel for the evaluation of the Bjelovar University of Applied Sciences.

Members of the Expert Panel:

- FH-Prof. Dr. Corinna Engelhardt-Nowitzki, Fachhochschule Technikum Wien, Republic of Austria, panel chair;
- Doc. dr. sc. Sonja Kalauz, Polytechnic of Applied Health Studies in Zagreb, Republic of Croatia;
- Dr. sc. Goran Đambić, v. pred., College Algebra, Republic of Croatia;
- Ivana Lalić, mag. med. techn., Croatian Nursing Council;
- Matija Marečić, student, Polytechnic of Zagreb, Republic of Croatia, student representative.

During the site visit, the Expert Panel held meetings with the following stakeholders:

- Management (dean and vice-deans),
- Self-evaluation Report Committee and Unit for Quality Assurance,
- Students,
- Alumni,
- Heads of study programmes,
- Full-time teaching staff and external teachers,
- Representatives of the business sector, potential employers,
- Vice dean for teaching and students,
- Vice dean for development.

The Expert Panel members had a tour of the HE institution's facilities, laboratories, practicum for nursing skills, library, IT classrooms, student administration office, International relations office and Student Entrepreneurial Incubator. During tour members attended sample lectures, where they held a brief Q&A session with students.

In accordance with the site visit protocol, the Expert Panel examined the available additional documents and study programme descriptions (learning outcomes).

The Expert Panel drafted this Report on the re-accreditation of Bjelovar University of Applied Sciences on the basis of Bjelovar University of Applied Sciences self-evaluation report, other relevant documents and site visit.

The Report contains the following elements:

- Short description of the evaluated higher education institution,
- Brief analysis of the institutional advantages and disadvantages,
- List of institutional good practices,
- Analysis of each assessment area, recommendations for improvement and quality grade for each assessment area,
- Detailed analysis of each standard, recommendations for improvement and quality grade for each standard,
- Appendices (quality assessment summary by each assessment area and standard, and site visit protocol),
- Summary.

In the analysis of the documentation, site visit to the Bjelovar University of Applied Sciences and writing of the Report, the Expert Panel was supported by:

- Marina Cvitanušić Brečić, coordinator, ASHE,
- Davor Jurić, assistant coordinator, ASHE,
- Marko Hrvatin, interpreter at the site visit,
- Ivana Rončević, translator of the Report, ASHE.

On the basis of the re-accreditation procedure conducted, and with the prior opinion of the Accreditation Council, the Agency issues a following accreditation recommendation to the Minister for Higher Education and Science:

1. **Issuance of a confirmation on compliance with the requirements** for performing the activities, or parts of the activities,
2. **Denial of license** for performing the activities, or parts of the activities,
3. **Issuance of a letter of expectation** with the deadline for resolving deficiencies of up to three years. A letter of expectation can include the suspension of student enrolment within a set period.

The accreditation recommendation also includes a quality grade of a higher education institution, and recommendations for quality improvement.

SHORT DESCRIPTION OF THE EVALUATED HIGHER EDUCATION INSTITUTION

NAME OF HIGHER EDUCATION INSTITUTION: Bjelovar University of Applied Sciences

ADDRESS: Trg Eugena Kvaternika 4, 43000 Bjelovar

DEAN: doc. dr. sc. Zrinka Puharić, dr. med.

ORGANISATIONAL STRUCTURE:

Bjelovar University of Applied Sciences (BUAS) is represented by the Dean and two Vice-deans. Organisational units established within the BUAS are educational organisational units (departments) and common services. The internal organisation is specified by the provisions of the *Regulation on the internal organisation and organisation of work places*, adopted by the Governing Council of the BUAS. BUAS comprises the following three departments: Department of Mechatronics, Department of Nursing and Department of Computer Science. Each department is chaired by the Head of Department, who is accountable to the Dean. The Head of Department is also the head of the respective study programme.

Common services include a set of organisational units of the HEI: Secretariat, Dean's Office, Finance and Accounts Service, Student Administration, Library, IT Service and Maintenance Service.

STUDY PROGRAMMES:

Bjelovar University of Applied Sciences delivers three undergraduate professional study programmes in:

- Mechatronics,
- Nursing,
- Computer Science.

NUMBER OF STUDENTS: 733 (272 full-time and 461 part-time)

NUMBER OF TEACHERS: 28

SHORT DESCRIPTION OF THE EVALUATED HIGHER EDUCATION INSTITUTION

Bjelovar University of Applied Sciences is a legal successor of the Technical College in Bjelovar, which was founded by the decision adopted by Bjelovar City Council on 24 April 2007. It is a legal entity established as a private polytechnic and acts as a public institution performing higher education activities. The founder and holder of the founding rights of the BUAS is the City of Bjelovar.

Mission of the Bjelovar University of Applied Sciences

The mission of the Bjelovar University of Applied Sciences is to educate competent experts in the field of technical and biomedical sciences to meet the needs and cooperate with the entrepreneurial and health care systems of the Republic of Croatia's continental region. The BUAS keeps up with, adopts and applies scientific and professional knowledge, implementing it in its study programmes to educate students who will be rendered competitive and recognisable in the labour market.

Vision of the Bjelovar University of Applied Sciences

The vision of the Bjelovar University of Applied Sciences is to be an influential higher education institution recognisable for its modern approach to education whereby existing study programmes and equipment are regularly upgraded, and new programmes are developed in partnership with local and regional stakeholders. This vision is set to be promoted by competent, committed employers who receive continuous professional training in both national and international contexts in order to be able to ensure modern teaching well adapted to the specific needs of students.

BRIEF ANALYSIS OF THE INSTITUTIONAL ADVANTAGES AND DISADVANTAGES

ADVANTAGES OF THE INSTITUTION

1. Amazing development ambition and persistent passion to improve;
2. Rather strong support from the local community, deeply embedded into their local network and vital industry co-operation;
3. Motivated, employable students that are ready for the market (sound employability);
4. School management is highly aware of current weaknesses and the required fields of action and has a realistic appraisal of the school within its context;
5. Highly motivated teachers and productive mutual communication flows between teachers and the management.

DISADVANTAGES OF THE INSTITUTION

1. Roll out of knowledge and practice more into teaching, with regard to learning outcomes and ECTS;
2. Internationalization maturity;
3. Future growth plans would require more space, increased (e.g. diversified by means of projects ...) financial sources as well as an improved HR-development and recruitment of teachers;
4. Lifelong learning in the initial phase.

LIST OF INSTITUTIONAL GOOD PRACTICES

EXAMPLES OF GOOD PRACTICE

1. Nursing practicum equipment;
2. Mechatronic student projects;
3. Getting to know the lecturers as external teachers first, before full employment;
4. Good collaboration with external professional organisations and institutions in the local community (labour market);
5. Connection with more than twenty scientific databases.

ANALYSIS OF EACH ASSESSMENT AREA, RECOMMENDATIONS FOR IMPROVEMENT AND QUALITY GRADE FOR EACH ASSESSMENT AREA

I. Internal quality assurance and the social role of the higher education institution

Analysis

Overall, the documentation provided and the on-site visit have provided ample evidence that the school has reached a satisfactory level of functional internal quality assurance. There is a widely communicated academic strategy, including a detailed SWOT analysis and consistently corresponding action plans. In particular, internal quality assurance adequately assesses all activities and programs through reliable processes, the involvement of relevant stakeholders and the use of multiple data sources and methods. Recommendations from previous evaluations are thoroughly analysed and translated into concrete amendments. Bjelovar UAS promotes academic integrity and upholds ethical standards. Academic and other activities are widely communicated through various channels - both, online through social media and through events and co-operative activities - as well as the development of the social role in the local context of the school. The institution has started lifelong learning activities. In view of the short period since the initiation of these activities, these efforts of course have not yet been advanced to the status of fully systematic and frequently implemented activities (seminars, short formats in professional education, etc.).

Recommendations for improvement

Due to the small size of the institution, the quality assurance system is currently well suited. However, further growth would require a higher degree of formalization. In particular, the human resource situation should be improved for the nursing field. External associates should be mentored more intensively.

The school's strategy includes ambitious visions for the future and concrete action plans. The HEI constructively incorporates proposals from previous evaluations and makes utmost efforts to modernize itself continuously despite various internal development requirements and external constraints. Some of the suggestions made in the re-accreditation report from May 2013 have been conclusively implemented, and some still need to be continued.

The on-site visit has shown very consistently the commitment of management and employee representatives required for such an orientation. Fields of the future are in particular personnel development (in nursing with special attention to the recruitment of new, qualified teachers in a foreseeable time-frame), the development of sufficient prerequisites for internationalization, the preparation for intensified applied research activities, further amendment of the lifelong learning activities and the concretization of ethical questions regarding the specific concerns that new medical and engineering technologies raise for patients, users, technical developers and other affected stakeholders.

Despite excellent cooperation with the local authorities and intensive integration of the school into its local environment, there is evidence that the public funding components are not secured in the long term. In view of the great difficulties typically encountered by universities in developing alternative sources of revenue (industrial projects, applied

research projects, further education products for the economy), the present expert panel repeats the recommendation of the 2013 re-accreditation report to initiate viable negotiations with the municipal authorities to secure the institution in the long term.

Quality grade

Satisfactory level of quality

II. Study programmes

Analysis

The general objectives of all studies of all study programmes are in line with the mission and strategic goals of the HEI and the demands of the labour market. After completing the studies, students are employed very quickly in health organisation, IT sectors and other entities. The level, profile and level of qualification are aligned with EQF and QCF. HEI management plans to upgrade existing studies programmes i.e. introduce the second degree in the existing areas (professional specialisation).

The undergraduate study in nursing is facing a potentially big problem: insufficient clinical practice, which is very important for entrance of the graduates on the labour market in their region, country and other EU countries, following the recommendation of EU directives that define who could be mentor, method of mentoring, performing training hours in field nursing care/2300 hours. Another issue is the implementation of nursing practice standards in the training/teaching process and advanced human/teaching resources, moreover, the projection of required teaching personnel.

The learning outcomes in the study programmes are aligned with the level, profile and QCF/EQF. The implementation of assessment based on learning outcomes in teaching began a year ago and there are still problems with the understanding of their application. At the beginning of implementation of the learning outcomes in the teaching process, the HEI organized some education course. HEI management provides evidence of a successful implementation of learning outcomes, but they are aware difficulties exist and that they have to monitor/supervise the teaching process permanently.

HEI management have to organise education courses on how to implement learning outcomes in the teaching process. Implementation of learning outcomes has to be monitored permanently.

They have to analyse critical points in the teaching process and try to help teachers in realizing learning outcomes (mentors or guidelines may be ensured). Suggestion: monitoring/supervising the teaching process permanently. They have to produce the documentation to follow up on the process of implementing learning outcomes and permanently inform teachers of their development in this part of the teaching process.

The HEI uses feedback from students, employers, professional organisations and alumni in the procedures of planning, proposing and approving new programmes, and revising or

closing the existing programmes. The HEI has to include students, employees, professional organisation and external stakeholders in the planning, proposing and approving of new study programs (demands of community). The process of obtaining stakeholder feedback is on a high level. Many of them are very cooperative and try to help students in the development of their professional carriers. They are very impressed and satisfied with the HEI's plan to develop graduate study programmes (specialisation in their field).

The HEI does not yet ensure ECTS adequate allocation. HEI ECTS allocation depends on many elements; hence many students and teachers have not yet fully understood what "ECTS" and the content/workload of ECTS really means. It seems that the relationship between the learning outcomes and the competences has not been fully understood by the students and teachers.

Ensuring adequate ECTS allocation is necessary. According to that, they have to analyse ECTS score in some elements: students workload in direct and indirect teaching/self-teaching process, complexity of teaching materials or other students' obligations (seminars, oral and written exams, student activity in the teaching process, practical training, etc.). The clinical training in nursing education is a very important part of the ECTS score. The ECTS in clinical practice should contain: the complexity of nursing care, the complexity of performance standards in clinical practice (SOP) and the time for performing skills.

The student practice is an integral part of the study programmes, but the students of nursing have obvious difficulties in performing their clinical practice. There are problems with the criteria for the selection of mentors and methods of mentoring. A big problem is to perform the number of the proposed clinical training hours defined in the EU Directive in nursing for general care. It was noticed that at the undergraduate study of nursing there is a problem with teachers' overload (in the field of special care) where the number of norm hours of a few teachers exceeds the legal norm by as much as 100 hours.

Recommendations for improvement

The HEI should ensure better conditions for performing clinical practice (criteria for the selection of mentors, implementing new mentoring methods and performance standards in clinical practice (SOP). Students should perform their clinical practice in a clinical department under the supervision of the best nurses/clinical educators or mentors. The HEI has excellent equipment concerning nursing practicum in which student training with regard to basic nursing care skills in clinical practice is performed. In the clinical department students should perform many sensitive skills. This demands very precise demonstration and supervision. The HEI has to ensure the performance of 2 300 hours of clinical training as regulated by Directive 26/2005/EC and 55/2013 EC. The HEI has to ensure an adequate number of lecturers in the study of nursing. As stated in the Self-evaluation Report, three lecturers have 100 hours over the legally prescribed number of norm hours (450). An adequate number of lecturers who will perform teaching in the study of nursing should be ensured within one year.

The HEI should work on a better connection with employees, professional organisations in other regions in the country and make efforts to attract students from neighbouring

countries such as Bosnia and Herzegovina, Slovenia or Montenegro. One of possible ways for this could be launching graduate studies programs.

Quality grade

Minimum level of quality

III. Teaching process and student support

Analysis

The criteria for enrolment in the study programmes are well defined and easy to find. Labs and classrooms are very well equipped to prepare students for the work in industry. Connection with the local industry is strong so students can easily work during the study. Some professors are from other universities so they can only be contacted by email and after class. BUAS collects and analyses data about students, but students are not sufficiently informed about the results of analyses. Employability is very high for all study programmes. Difference in foreknowledge among students who graduated from nursing secondary schools and other schools is especially seen in the study programme in nursing.

Recommendations for improvement

Better communication with alumni and not just industry is recommended for forming better focus points in studying. Erasmus and other forms of student exchange should be improved by tests and teaching in foreign languages. Students should be encouraged to write final papers in foreign languages.

Quality grade

Satisfactory level of quality

IV. Teaching and institutional capacities

Analysis

The Panel commends the fact that the qualifications of teachers with election in the appropriate area are appropriate for the delivery of study programs and achievement of the intended learning outcomes. The overall number of teachers is appropriate for delivering all three programs, resulting in a student-teacher ratio of 25.94, which is well below the legally defined maximum of 30. The ratio of students and full-time teachers ensures a high quality of study for all three programs: nursing (0.39), mechatronics (0.57) and computer science (0.82).

Some external teachers come from the industry, while some of them come from other institutions and have relevant industry experience. The students and alumni confirmed that both internal and external teachers are/were qualified and industry-relevant. The institution encourages the participation of external associates in the supervision of final

theses and encourages the organisation of professional practice in institutions in which the external associates are employed.

The institution is always looking for quality teachers and has put in place procedures to make sure that the employment and advancement of the best candidates. Teacher recruitment procedures arise from the development goals of the higher education institution and they are aligned with the legislation and internal regulations in effect. There are clear rules on how teachers can advance into higher grades and the teachers are well aware of these rules.

The institution supports teachers in their professional development, most notably by financing doctoral studies, financing professional improvements in external institutions and organizing internal seminars and workshops. The institution encourages the assessment and improvement of teaching competencies based on the results of student satisfaction surveys. The teachers participate in mobility.

The Panel is pleased to report that the institution has significantly improved its infrastructure from the last reaccreditation. For the nursing program, a completely new nursing practicum laboratory has been established that fully conforms with the European directives for nursing (36/2005/EC and 55/2013/EC). For mechatronics, the current laboratories satisfy all requirements for obtaining defined learning outcomes, as do for the computer science.

The size of the library is adequate for the number of students. The library has subscription to 18 different journals and offers access to 24 different scientific databases available for full-text access.

The main sources of funding are the local government and tuition fees that sum up to ca. 85% of the total income. The Panel believes that the institution manages the available financial resources rationally and with foresight.

Recommendations for improvement

The analysis of the nursing program shows that three teachers have more norm-hours than allowed. Although it seems that these excessive teaching duties do not stand in the way of their professional and scientific research, the Panel believes that it might not leave enough time for their professional and personal development. The Panel recommends hiring new teachers within one year in order to lower the workload of existing teachers.

The Panel wants to commend the institution for selecting very motivated and qualified external associates and for providing an adequate environment for professional and personal development. The Panel recommends that the institution should implement mechanisms that will motivate external associates to participate more in supervising the final theses. Based on the discussion with all external stakeholders, the Panel learned that the dean, vice deans and the heads of program studies have excellent knowledge of the learning outcomes, but that many full-time employees and external associates could benefit from some additional training on that topic. In addition, the meeting with students has shown that the nursing program faces more challenges with regard to learning outcomes than the study programmes of mechatronics or computer science. With that in mind, the Panel suggests additional trainings in the topic of learning outcomes, especially with regard to their level and their connection to examination methods.

The discussion with students showed that the process of scheduling the courses leaves some place for improvement, especially in the nursing program and recommends the schedules for each semester to be created and communicated as early as possible and in firmer cooperation with external associates. Once created and published, the schedule for a semester should be changed only for serious reasons, which should minimize cancellations and enable students to better plan their time. Teacher recruitment should put emphasis on the English language knowledge and scientific work skills in order to go toward the institution's strategic goals.

The Panel recommends that the institution should tighten its connections with the industry and other academic institutions, and should engage in more projects that would generate revenue and help diversify its income sources. However, this should be done with care concerning teaching capacity and employee workload.

Quality grade

Satisfactory level of quality

V. Professional and/or scientific activity

Analysis

Apart from the education of students, the Bjelovar UAS is committed to ensuring high quality and quantity of professional and scientific research. Although the Bjelovar UAS actively participates in commercial and professional projects, its scientific productivity and international reputation are still weak. The HEI supports the participation of students in the projects. Most students produce final papers based on practice (with a low focus on academic requirements). However, a significant number of students participate in conferences and are co-authors of the published papers. Still, the improvement of teaching with regard to professional and scientific activities is yet limited, when looking at the overall academic activity of the Bjelovar UAS and the unequal distribution of scientific-research activities among employees. The HEI supports professional activity, scientific paper writing and the publication of projects in journals, as well as the participation in professional domestic and international conferences. Accordingly, it is recommended that the HEI invests additional efforts in increasing the scientific output and publishing in top-quality domestic and foreign journals (in English). The HEI has a strong policy of professional development of the teaching staff - the teachers are encouraged to professionally train and participate in conferences, as well as the participation of students and teachers in professional and/or scientific activities for the purpose of meeting the institutional mission. A significant number of students participated in scientific conferences and/or were co-authors of professional papers. The BUAS students won several awards for participating in the scientific projects.

Recommendations for improvement

The HEI should strengthen and develop the mechanisms for improving international cooperation, increasing the number of published papers in the relevant bibliographic

databases to enter the Register of Scientific Institutions. It is necessary to draw up a plan of activities to encourage the participation of teachers in cooperation with industry and professional and scientific organizations, not just in the region. It is recommended to improve knowledge transfer by organizing special workshops and courses on innovative technologies, media advertising and collaboration with collaborators from different fields. The HEI is recommended to strengthen and develop the mechanisms for improving the establishment of international cooperation, increasing the number of published works in journals indexed in relevant bibliographic databases. The Panel has the opinion that further efforts should be made to formalize financial support and employment as well by means of a strengthened the support of the local community. There is a need to continuously inform the public about the activities of the HEI (open door days - continue to organize, half-time on a local radio or television station, a round table with local external stakeholders and associations). It is recommended that the HEI invests further efforts in developing the transparency of professional and/or scientific achievements at the national and international level. The BUAS should encourage teachers to participate in the work of international professional associations and to attend international conferences to enhance their scientific reputation, and thus the reputation of the HEI in the world.

Quality grade

Satisfactory level of quality

DETAILED ANALYSIS OF EACH STANDARD, RECOMMENDATIONS FOR IMPROVEMENT AND QUALITY GRADE FOR EACH STANDARD

I. Internal quality assurance and the social role of the higher education institution

1.1. The higher education institution has established a functional internal quality assurance system.

Analysis

The internal quality assurance evaluates all activities of the HEI, in particular study programmes in mechatronics and nursing, teaching, and the support for students. According to the written documents and the on-site interviews, this is done by means of several methods. The school conducts student satisfaction surveys, teacher surveys and monitors their graduates' employment. Also, student pass rates are analysed in order to identify the needs for advancement. Furthermore, several formal and informal feedback processes are in place, which are anchored in committees for further analysis and definition of corrective actions, as required. The committees have a clear organisational structure and hold frequent meetings where data is analysed and interpreted. Also the feedback from the employees – mainly teachers – concerning the adequateness of the committee structure was positive during the site visit. Altogether, the school systematically collects and analyses data and the committees are in charge of implementing amendments.

The interviews at the site visit resulted in strong evidence in favour of the high commitment of the management and all the institution's employees to continuous promotion of the quality standards in all fields of study, as well as concerning scientific and professional activity and management. The site visit also showed some evidence for the study ability of students with special needs (e.g. barrier-free access to rooms and first-aid knowledge of teachers). However, there is room for improvement, as for example regarding the accessibility of the student office, the student incubator and some of the student labs.

Strategic management pursues a quality assurance policy that is evidently linked to the strategy; however, the development of a realistically achievable research strategy could be strengthened further. The SWOT analysis of the university, contained in the written strategy, shows a clear and concrete view of strengths, weaknesses, opportunities and threats, and is accompanied by concrete measures including responsibilities.

The management is aware of human resource development needs. A variety of training offers for employees are in place, such as trainings, online resources and the possibility to attend professional and scientific conferences. The school offers financial incentives for, e.g., having published a paper and allows employees to make use of one home-office day per week that can be used for personal development. Also, the school provides financial support for teachers who enrol in doctoral studies and encourages them to do so.

Recommendations for improvement

Currently the quality assurance system and the policy of document management is well-suited according to the small size of the institution. However, further growth would require more formalized processes for, e.g. the definition of improvement measures in the face of feedback in case it indicates optimization needs.

There is also improvement potential in more intensively communicating the quality assurance policy and its importance for achieving the strategic goals to teachers and stakeholders, especially those who are not fully or not at all employed at the school. Naturally, external lecturers are more difficult to reach with communicative measures, so that, for example, conveying an understanding of learning outcomes requires intensified efforts.

The team spirit and mutual support among colleagues at Bjelovar UAS seems to be very well developed; still, the school could develop further towards a stronger, and in the future even at least partially formalized, peer-to-peer review policy.

Moreover, the development of a realistically achievable research strategy should be strengthened further, in case the school seeks to reach its vision to achieve scientific excellence in the long-term future.

In view of the high number of strategically important measures, it is recommended to henceforth seek for a clear prioritisation in order to achieve a profound probability of implementation.

Since the school has set itself numerous ambitious goals, to which the participants are very committed, a research strategy that has successfully been implemented will probably not be achievable in the short term. The development step from professional excellence to research excellence requires significant strengthening of the scientific training of the lecturers, a scientific output (journal articles, conferences, etc.) at an internationally recognized level and own research projects (in the scientific sense). As a consequence, it should also become apparent in the education that excellent final theses of the students (already today, from an engineering perspective, very well executed final projects) should be built consistently on research state-of-the-art and a clear theoretical scope (today rather technical and popular scientific sources).

If the institution aims to intensify its research activities, the technical state of the equipment, which is currently very good from a professional field point of view, should be expanded (for example by means of suitable research applications in suitable niches), in order to procure equipment for that development, because development from its own funds would probably overstretch the financial and personnel possibilities of the institution. A situation must be avoided in which lecturers (must) neglect educational standards in favour of research interests.

Quality grade

Satisfactory level of quality

1.2. The higher education institution implements recommendations for quality improvement from previous evaluations.

Analysis

The university has a number of successful examples of how it has analysed suggestions for improvement from previous assessments and translated them into improvement measures. In particular, there is a strategy and a consistent academic plan and mission statement for each study program. An alumni organisation has been established, and the school regularly looks at the careers of graduates. The Expert Panel's proposal in May 2013 to support inexperienced lecturers through mentoring measures has apparently prompted the university to take intensive care of the teaching staff. The recommendations in May 2013 report to diversify data sources for program monitoring have been implemented. Also the recommended consolidation of existing programs has been visibly advanced.

It is also a common practice at Bjelovar UAS to intensively analyse the suggestions for improvement that regularly reach the committees via feedback and surveys and subsequently to derive improvement measures. In line with the recommendations of the expert panel, the university has included monitoring of the needs of the labour market in its strategy. Various external channels are used, though in a partially informal manner. However, this fits well with the small size of the school.

Furthermore, the ratio of teachers to students has been significantly improved according to the national standard. The library has been equipped with various online capabilities for research in scientific databases. BUAS conducts analyses of student pass rates and has further developed the institutional capacities for nursing according to the recommendations of the re-accreditation report.

Although the recommendation from the re-accreditation report 2013 to improve learning outcomes was implemented a year ago, the university is at the beginning of its development on this topic. During the talks in Bjelovar, university representatives, especially at the level of deans, department heads and experienced lecturers, showed a good understanding of the topic and made visible efforts to implement it. In the curricula of the study programs, especially at syllabus level, the learning outcomes are implemented throughout.

The educational equipment has been significantly improved and has reached an excellent standard, especially in the field of nursing, which impressively documents the further development of the university. The equipment of the mechatronics course and the PC resources for the computer science course are also state-of-the-art. In mechatronics in particular, the university works both with basic laboratories (e.g. simple electrical circuits, CAD software) and with industrial components (e.g. Siemens controls, Festo pneumatic actuators), which is an important prerequisite for the graduates' future suitability for the profession. Practical internships are well-implemented.

Recommendations for improvement

Although it was recommended during the re-accreditation process in May 2013 to analyse external constraints and to secure the development of the university in the form of a multi-year commitment by the supervisory authorities, the long-term securing of the financing share of the local authorities does not seem to have been fully clarified. This represents a

severe risk for the university, especially in view of the intensive and successful further development of recent years that has been observed so far. It is recommended that the institution alternatively secures its revenues by trying to diversify its sources of finance in order to become less dependent on individual contributors. However, since both, the industrial environment and the national and international funding landscape, offer rather low acquisition probabilities and surcharge rates, the Panel expressly recommends to secure the financial share of the local government for several years according to public budgetary possibilities.

As a further improvement, it is advisable to revise the mission statements of the study programs so that all three programs are committed to the mission of teaching the latest technology standards. Furthermore, the mission statements should be less similar (as already stated in the re-accreditation report in May 2013, there is a lack of specific advantages and differences in the study program profile). Rather, the mission statement for each of the three study programs should make clear what - apart from common themes such as excellently trained and professional graduates - is the special feature of the respective study program, what is the decisive reason for future students, interested lecturers and companies to choose Bjelovar Polytechnic.

When implementing mentoring measures for teachers, a particular challenge is the supervision and further training of external lecturers, who have little time and sometimes limited motivation to occupy themselves with the concerns of the university beyond the pure teaching and student supervision, according to their own professional tasks. Here the Panel recommends intensifying the efforts to communicate important basic concepts of a higher education institution in a more sustainable way. These are - especially for lecturers with little university experience - in particular the concept of ECTS (in the on-site visit often misleadingly equated with the time of classroom teaching, ignoring the self-study of the students) and the introduced learning outcomes. Although the learning outcomes are clearly communicated to the students, it seems that the relationship between the learning outcomes and the competences required in the later occupational field has not been fully understood by the students. Since students are typically very strongly oriented towards examinations, the higher education institution should analyse examination practice at the course level in the next development step on the subject of learning outcomes. Ideally, this is not a central step that is commanded or even carried out by the university management, but instead is done by the teachers themselves in the course of a continuing education measure and is accompanied in the sense of a peer-to-peer improvement process, e.g. by the vice-dean of teaching or by moderators with didactic experience. External lecturers should be given an internal "buddy" who is a well-founded contact person and who intensively discusses the learning outcomes with the external lecturer in relation to the examination form of the externally taught course.

This decentralized approach combines two advantages: firstly, improvement and further training take place in one go. Secondly, this decentralized approach distributes the workload among many people and thus increases the probability of the measure being implemented. In addition to the design of the internship and the practical parts of the studies, the Panel recommends paying more attention to the quality of the final theses. The higher education institution has made a very good impression on the Expert Panel in the professional field

reference and practical project work, but at the moment there is still no consistent academic foundation that one would expect at bachelor level. The university should strengthen this without falling into the misleading trap of expecting only theory-based work from students who lack professional relevance.

The library should check hand in hand with the updating of the study programs whether the available access options to ebooks (especially textbooks) are sufficient. Insofar as teachers work with printed book copies, it should also be examined here whether bottlenecks are to be feared, especially with an increasing number of students.

Overall, the university is on a very good development path and has shown impressively that it implements recommendations for improvement with commitment and systematically. The Expert Panel recommends the continuation of this path with clear prioritisation and temporal gradation of the individual topics into short-term, medium-term and long-term measures. One of Bjelovar University's strengths is the intensive cooperation of all those involved, which makes the implementation and achievement of objectives appear extremely probable.

The university should pay close attention to the development of human resources in terms of the number of employees and their quality. Especially in the field of nursing, it is necessary to recruit additional staff. This especially applies in case the school would like to pursue its growth strategy and establish a new master program in mechatronics, but also in the other subjects. One risk here is the question of how easily or how quickly the university can attract qualified teachers. The idea of initially recruiting interested persons as external associates and only subsequently hiring them on a permanent basis is to be regarded as good practice. Yet, in view of labour market constraints, the feasibility of these good intentions is questionable. Particularly when external lecturers themselves have intensive professional obligations to fulfil, there is a danger that, firstly, there will be no interest in a transfer to a permanent teaching position at a higher education institution and, secondly, that the operation of the higher education institution will be impaired by a lack of time and motivation to deal with, e.g., didactic standards. Another problem for high-level external lecturers could be the availability of time and the frequent need for schedule changes or short-term cancellations. The university will not be able to avoid this as it is exposed to the external market in these matters. It should, however, establish effective processes that make it possible to master this challenge as professionally as possible.

There was no clear evidence - neither from documents nor from the on-site visit - of how the institution is following the recommendations of the May 2013 re-accreditation report to keep an eye on the workload of teachers in order to avoid overwork. However, this is a critical success factor for sustainable development, especially if the recruitment of new teachers is delayed. Thus, the Panel's recommendation remains unchanged, to keep an eye on teacher overload in order to identify undesirable developments quickly and to be able to take structural countermeasures on time.

Quality grade

Satisfactory level of quality

1.3. The higher education institution supports academic integrity and freedom, prevents all types of unethical behaviour, intolerance and discrimination.

Analysis

The institution actively draws employees' and students' attention to ethical rules - both in printed form and on the university's website. In addition, an ethics committee was set up, including a student representative.

The documents presented show that the university promotes ethical work in accordance with its Code of Ethics, promotes the integrity and freedom of academic performance, works according to ethical principles, and above all actively develops the principles of professional ethics in the study programs and in the consciousness of the students. As to the declaration in the presented documents, the ethical behaviour of students in clinical practice, which is part of the undergraduate professional study programme in nursing, is regulated by the ethical code of behaviour and dress in clinical practice in the undergraduate professional study programme in nursing.

As concrete measures for daily operative practice, the university has installed anonymous complaint boxes and uses plagiarism software to prevent unethical scientific behaviour. Moreover, according to the documents presented and several interviews, the university sanctions unethical behaviour, intolerance and discrimination and has put in place rules on disciplinary liability for staff and students, including disciplinary procedures and measures. Also, the school has elected student ombudsman.

The university stands for academic freedom and conditions for the realization of equality and fairness for all its employees. This can be seen, for example, in the fact that teachers are granted a high degree of autonomy in terms of content, although this sometimes makes it difficult to monitor compliance with academic and didactic standards - especially among external associates. On other issues of fairness and fairness during the on-site visit, there was no evidence to doubt the University's letter of intent in any way.

The system for resolving conflicts and irregularities appears practical after discussions with all participants, and is based primarily on informal solution mechanisms in accordance with the small size of the school.

Overall, there is no reason to doubt the intentions of the university to work according to good ethical principles, which are intensively recorded in writing. Typical mechanisms that support this operationally have been installed in a satisfactory manner. The discussions with the members of the university and the external stakeholders are a clear indication that this functions appropriately according to the standards to be expected from a university.

Recommendations for improvement

According to the analysed documents and the on-site interviews, the work performed by teachers is based on the principles of academic ethics. However, in the future, nursing as well as mechatronics and computer science will face more and more ethical questions, which students should be made aware of. In the field of nursing, these are e.g. the appropriate handling of new medical technologies, e.g. the question of robot-assisted care of elderly or impaired patients, e.g. euthanasia, palliative care, organ donation after cerebral death. Both, mechatronics and computer science, have to deal with ethical questions in the field of

artificial intelligence: For example, how to deal with autonomous transport robots whose navigation is based on probabilistic technologies, how to set suitable safety standards anyway, how to implement ethical decisions in algorithms, and e.g. what needs to be considered in connection with concepts such as "explainable AI" and the progress of data sciences. Other questions concern the environmentally sound and low-risk disposal of materials that are difficult to degrade or virulent, for example. A vocational education must keep these topics in an adequate balance of competitiveness, orientation towards human values of our cultural area and technological possibilities. The recommendation of the Expert Panel is to specifically sensitize these questions at suitable points in the curricula as well as within the framework of further training for teachers, in guidelines for the preparation of final papers, etc. and to encourage teachers and students to integrate these ethical concerns in a targeted manner into the specialist topics in the sense of "ethics-on-the-loop". This would constructively complement the cross-sectional function of the ethics committee. The Panel emphasizes the importance of ethical questions and recommends, instead of exaggerating many, rather superficial measures that run the risk of only having an effect on the surface (danger of the reaction of the audience in cognitive dissonance "why ethics again?!?"), to take a few targeted and highly sensitizing actions. A further recommendation is to encourage teachers and students who are writing their final theses to purposefully include (and discuss) literature sources in their textbooks, theses and published papers that relate to these topics and especially to existing ethical guidelines at national and European (and if applicable global) level.

If the university, as expressed in the discussion with the management, intends to grow to a number of e.g. 1,000 students, it will have to be considered how it can be achieved to broadly anchor the maintenance of outstanding ethical standards despite many participants. This, for example, seems comparatively simple for plagiarism testing. The sensitive and appropriate anchoring in the curricula and the strengthening of these topics in the mental model of students might become a particular challenge. The university should formulate very concrete measures for this concern in its growth strategy in order to achieve sustainable implementation quality. In addition to the already widely and clearly communicated declarations of intent and guidelines of the university, the criteria for the selection of new teachers and the continuous, but not to the contrary effect exaggerated raising of awareness at all levels will be necessary.

Quality grade

Satisfactory level of quality

1.4. The higher education institution ensures the availability of information on important aspects of its activities (teaching, professional and/or scientific and social role).

Analysis

Information about study programs and other activities of the school is published in Croatian and English and is easily accessible via the website, although the English version of the website contains limited information. Nevertheless, it would also be easy for foreign

students to find all the necessary information. In addition, the management of the international office is highly motivated and knowledgeable, e.g. on questions of credit recognition.

There is also manifold evidence of an open information policy towards external stakeholders. Bjelovar University of Applied Sciences publishes extensive information on the social role of the university and, as the on-site discussions with local stakeholders have shown, is often integrated into its local environment. This starts with the cooperation with the local kindergarten and ranges from the cooperation with secondary schools to extracurricular institutions. In the on-site discussions, the industry representatives also showed a high degree of satisfaction with the projects and graduates of the university, although not with specific regard to social matters.

Several brochures and monographs document the history and development of the university and, in the form of textbooks, the technical competence of the university. Numerous events (conferences, events) serve the integration of multiple external groups. Moreover, the presence in social media is comprehensive.

Recommendations for improvement

If the university, as stated during the on-site meetings, intends to attract more international students and prevent the migration of locally resident excellent high school graduates to other universities (e.g. Zagreb), it is nevertheless recommended to strengthen the English-speaking presence. This does not primarily concern the information policy, but rather the availability of English courses beyond the individual consultations or projects for foreign students that are currently treated as good practice. Both foreign students and ambitious domestic students have higher demands on the multilingualism of an academic institution. More detailed information on, e.g., pass rates, labour market data and other operational quality indicators could be provided on the university's website more visibly. Here is the recommendation to strategically select which information is particularly beneficial to the objectives and attractiveness of the university and to use it in a targeted manner for respective marketing and publicity efforts.

In technical matters in particular, the university must not underestimate the effort required to be equipped with the latest technology and to grow at this high level or to start research activities and/or establish master programs. It would be disadvantageous to use the time resources of the university staff for the acquisition of funds via the fee rather than for tasks in research, teaching and student support. However, the tighter and uncertain the financial resources of an institution, the higher the proportion of time that will inevitably flow into the generation and securement of financial resources, thus slowing down the development of the school in terms of content and education.

Quality grade

Satisfactory level of quality

1.5. The higher education institution understands and encourages the development of its social role.

Analysis

The profile of the university is not specifically or explicitly identified as a "social university" in the internal strategy. In this respect, the activities listed in the presented documents, which are available on the website, and those that are obvious during the tour and the interviews at the school correspond to a satisfactory standard.

The important role that this institution has in the local environment - both for the hospital sector and for industry and as an official institution for the promotion of the quality of life and work of the city of Bjelovar - should be emphasized in particular. Accordingly, the link with the municipality's strategy is close (and explicitly emphasized in both strategy documents). Hence, the manifold academic and non-academic activities of the university contribute intensively to the development of the city and the region.

The school's contribution to the foundations of vocational training in important future fields - nursing, mechatronics and computer science - is a valuable contribution to the local community.

The support possibilities for students, in particular the office for career development and the cooperation with industry and the hospital for the alternate use of technical equipment and laboratories, are to be emphasized positively. Industry co-operations and strategic partnerships are strong.

The list of courses on the development of civil society and democracy meets the expectations of an academic institution, without any particular conspicuous features.

Recommendations for improvement

In view of the great importance of the school in making Bjelovar an attractive location for ambitious people and industrial companies, it would be important to secure the development of the university financially in the long term. The necessary internationalization and the planned establishment of a mechatronics master's course require a solid and multi-year financing basis in addition to the undoubtedly existing high level of commitment of the school. In return, the university can intensify its marketing activities and thus make a stronger contribution to the visibility of the location. In the long term, the potential for research excellence exists in special niches. However, this requires solid financial resources, which allow for a capacity endowment with which such a request can be realized in terms of personnel and technical infrastructure.

Quality grade

Satisfactory level of quality

1.6. Lifelong learning programmes delivered by the higher education institution are aligned with the strategic goals and the mission of the higher education institution, and social needs.

Analysis

The lifelong learning programs at the university are ambitious, but are only just beginning to develop. The website is almost not informative, but conversations with university members and external stakeholders show the successful cooperation that was to be expected even before the on-site visit.

In the form of many individual measures, e.g. guidelines, cooperation talks with companies, individual seminars or courses, etc., the university has created good conditions for establishing this sector alongside pure university education. However, particularly in view of the analysis of the external environment (competition, market), it is doubtful that the lifelong learning programs can be a reliably supporting pillar of university activities or the inflow of funds in the near future.

Recommendations for improvement

The activities that are promising at today's beginning should be expanded and professionalized according to the action plans anchored in the strategy of the university. In doing so, it is important not to neglect other strategically important university projects. Another risk that the school should avoid is to utilize the scarce personnel resources in too many strategic initiatives at the same time: the consequence would be, firstly, the risk of overloading the persons involved and, secondly, the half-hearted processing of many measures without really being able to complete them to an excellent stage.

The Expert Panel found the university to have very good content and high potential for development. We expressly encourage the school to continue along the development path it has begun towards a level of quality that is highly likely to be satisfactory and possibly also high in the future.

Quality grade

Minimum level of quality

II. Study programmes

2.1. The general objectives of all study programmes are in line with the mission and strategic goals of the higher education institution and the demands of the labour market.

Analysis

The general objectives of all study programmes are in line with the mission and strategic goals of the HEI as well as with the demands of the labour market. After completing their studies, students are employed very quickly in health organisation, IT sectors and other items/work organisation. The level of study, profile and level of qualification are aligned

with EQF and QCF. HEI management is planning to upgrade existing studies programmes on second degree (graduate professional specialisations).

In the undergraduate study programme of nursing, a big issue is that a large number of hours of clinical training (2300 hours), included in the curriculum according to the Directive 36/2005/EC, cannot be implemented. It is difficult to implement direct practical classes (exercises) with mentors as defined by curriculum, and thus achieve the intended learning outcomes, i.e. ensure that the conditions for an objective assessment of the level of achievement of a particular outcome have been met. There are several reasons for this: mentors fit their mentoring obligations around their everyday duties at the clinic/hospital, and the time they spend working with students depends on their workload. This means that the tasks of demonstrating certain skills, supervising the execution of those skills, counselling, motivating and, finally, assessing the level of achievement of learning outcomes, can only be done in the time they have left (if there is any time left). The dynamics of their student mentoring depends on the workload in their department or clinic, which means that practical classes are not carried out systematically, but rather haphazardly; the intended learning outcomes cannot be achieved in such a way. The other problem is insufficient training of mentors, criteria for the selection of mentors, and lack of tools for adequate implementation and evaluation of learning outcomes (guidelines, procedures), including pedagogical and methodological parameters. The other problem is insufficient training of mentors, criteria for the selection of mentors, and lack of tools for adequate implementation and evaluation of learning outcomes (guidelines, procedures), including the pedagogical and methodological parameters. For example: the achievement of learning outcomes in the course Nursing Care of Adults II requires 70 hours of teaching and 80 hours of independent student work under the supervision of a mentor. Practical classes are organized for student groups (so, not 1:1) and last for several, usually 5 hours a day (a total of 14 days). If a mentor, in addition to all his/her regular duties and obligations within the working hours, spends as much as 3 hours (!) a day with students, it adds up to only a little more than 50% of the number of hours needed to achieve the outcomes related to practical classes.

Note: This problem is not confined to BUAS; this kind of practical teaching is a feature of all nursing studies in Croatia.

Recommendations for improvement

Following the recommendation of the EU Directive (who could be mentor, method of mentoring, performing training hours in the nursing care field/2300 hours). Implement nursing practice standards in training teaching process. Improve managing human/teaching resources through projection of required teaching personnel.

Quality grade

High level of quality

2.2. The intended learning outcomes at the level of study programmes delivered by the higher education institution are aligned with the level and profile of qualifications gained.

Analysis

The learning outcomes in the studies programmes are aligned with the level, profile and QCF/EQF.

The Decision of the Ministry of Science, Education and Sports (CLASS: 602-0413-08/00008 FILE No.: 533-20-14-0002 of 14 April 2014) on the **core curriculum of the undergraduate university and undergraduate professional study programme of nursing defines: general introductory part, number and titles of courses, course content, number of hours by methods of delivery, learning outcomes, monitoring student work and ECTS credits**. Such study programme was first implemented at Croatian higher education institutions in the academic year 2015/2016. Nursing is a regulated profession, and the study programme directly follows EU directives 36/2005 EC and 55/2013 EU. Monitoring the implementation of study programme according to defined content, accepted learning outcomes and assessment/evaluation of learning outcomes has become one of the most important aspects of internal quality assurance of each institution.

The curriculum has shown significant shortcomings in the practical application of learning outcomes, particularly regarding the practical part of teaching (2300 hours): their implementation is not possible since the organisation of practical teaching does not follow the intended learning outcomes. The fundamental issue is the implementation of mentoring, i.e. systematic work with students at clinical sites. Mentors/nurses are employees of health institutions in which students conduct the practical part of their programme, which involves direct work with the student focused on: demonstration of skills or activities, practice and execution of skills under the supervision of a mentor (with counselling, guidance, etc.), and finally, assessment of the level of achievement of a particular learning outcome. Despite the efforts to teach, and since 2018 also to assess the students according to the learning outcomes, the meetings with the management of BUAS and teachers in the study programme of nursing showed that there are misunderstandings and difficulties with the process. HEI has organised some trainings. The management has provided evidence of a successful implementation of learning outcomes, but is aware of the difficulties and of need for continuous monitoring of the teaching process.

Monitoring of the achievement of predicted learning outcomes in teaching began to be implemented a year ago, and there is still some misunderstanding. At the beginning of implementation of learning outcomes and assessment of learning outcomes in teaching process, the HEI organized some education courses in the topic of application of learning outcomes in the teaching process. HEI management provides evidence of successful implementation of learning outcomes, but they are aware that difficulties exist and that they have to monitor/supervise the teaching process permanently.

Recommendations for improvement

HEI management have to organise education courses about implementing learning outcome in the teaching process. Implementation of learning outcomes has to be monitored permanently.

In order to achieve the intended learning outcomes, significant changes are needed, but first, the institution needs to ensure additional training for mentors and reorganise the

mentorship system. As there is no formal additional education (development of particular competencies) for mentors or clinical educators in the Republic of Croatia, it is necessary to organise continuous professional development for them, which will, among other, include the application of guidelines (in agreement with the Croatian Nursing Council), methods of implementation, monitoring and assessment of learning outcomes, and different methods and approaches in the teaching process.

It will also be necessary to determine the criteria by which the practical part of a particular course is implemented, thereby ensuring the achievement of the intended learning outcomes.

The processes of achieving learning outcomes and assessing the students according to the learning outcomes should be monitored by different tools: guidelines or procedures (which are missing), including all other pedagogical approaches (providing help to students who have difficulties acquiring skills, working with gifted students, counselling, motivating students, etc.)

The current method of mentoring at clinical sites needs to be reorganised, so that mentors are free of their usual work duties during the clinical practice. It is important to note that these issues are not pertaining to this particular study programme; all the nursing programmes in Croatia have the same problems. The organisation of studies and the curriculum set according to the EU Directives cannot be practically implemented (learning outcomes). This means that significant changes are needed with regard to the organisation of nursing studies in Croatia. One example is part-time study, where students are obliged to attend 60% classes. They are additionally exempted from 20% of classes, so the obligation of 40% remains. The learning outcomes have to be achieved - the question is: how?

Quality grade

Minimum level of quality

2.3. The higher education institution provides evidence of the achievement of intended learning outcomes of the study programmes it delivers.

Analysis

The HEI management did not provide a broad evidence of having successfully implemented learning outcome issues due to difficulties in the teaching process. There is no way of monitoring the process of achieving learning outcomes in the practical part of programme, due to lack of objective tools for teaching and assessing, and significant deficiencies in the organisation of practical teaching (as the direct/contact classes and independent work of students under the mentor supervision cannot be organised).

Recommendation for improvement

They have to analyse critical points in the teaching process and try to help teachers in realizing a profound learning outcome orientation (e.g., by means of mentors or guidelines). Continuous monitoring/supervision of the teaching process is recommended. Although the

curriculum for nursing studies in the Republic of Croatia is predetermined, additional efforts are needed to improve the practical part of the teaching process, where possible. BUAS should analyse critical points in the teaching process and help teachers with better implementation of learning outcomes. What is possible is to improve or introduce tools for implementation of learning outcomes and student assessment based on learning outcomes (guidelines/procedures /protocols). Together with healthcare organizations, HEI should ensure the work of mentors as prescribed by the curriculum (number of hours, assessment of intended outcomes, continuous professional development for mentors).

Quality grade

Minimum level of quality

2.4. The HEI uses feedback from students, employers, professional organisations and alumni in the procedures of planning, proposing and approving new programmes, and revising or closing the existing programmes.

Analysis

The HEI has to include students, employees, professional organisations and external stakeholders in the planning, proposing and approving of new study programs (community demands). Feedback processes with stakeholders is on a high level. Many of them are very cooperative and try to help students in developing their professional carriers. The Panel is impressed and satisfied with the plan of the HEI to develop graduate study programmes (specialisation in their field).

Recommendations for improvement

Cooperate more concerning study programmes change.

Quality grade

Satisfactory level of quality

2.5. The higher education institution ensures that ECTS allocation is adequate.

Analysis

The HEI does not ensure that ECTS allocation is adequate. ECTS credits are based on the required workload of students, and are allocated to individual courses in accordance with the course workload (lectures, seminars, practicum, exercises, etc.) With regard to standards 2.1, 2.2, and 2.3, BUAS does not ensure that ECTS are properly aligned with the actual student workload in the study programme of nursing. Core curriculum in nursing programme clearly prescribes the number of ECTS credits for each individual course, and they cannot be changed due to the (still valid) decision of the Ministry of Science, Education and Sports from 2014. However, it is **necessary to ensure the possibility of implementing the student workload** as prescribed by the curriculum, in practical part of the programme (practical teaching should be fully implemented to achieve the intended learning outcomes, by reorganising the way students are mentored). In addition, the Panel found that the study

programme of nursing lacks new textbooks and manuals from the fields of general and special health care in Croatian language.

Recommendation for improvement

The HEI has to ensure adequate ECTS allocation. ECTS have to be analysed in some elements: students' workload in direct and indirect teaching processes, complexity of teaching materials or other students' obligations (seminars, oral and written exams, student activity in the teaching process, practical training, etc.). The clinical training in nursing education is a very important part of ECTS score. Although the curriculum sets the number of ECTS for each individual course, within the courses **it is necessary and possible to ensure that the student workload is implemented** as prescribed by the curriculum (in the practical part). Practical classes, as set by the curriculum, should be carried out in a way to allow the implementation of learning outcomes and assessment based on learning outcomes, by reorganising the way students are mentored, and by applying objective tools for the implementation of learning outcomes and student assessment based on learning outcomes. In addition, the Panel found that the study programme of nursing lacks new textbooks and manuals from the fields of general and special health care in Croatian language.

Quality grade

Minimum level of quality

2.6. Student practice is an integral part of the study programmes.

Analysis

The student practice is an integral part of the study programmes, but the students of nursing have many difficulties in performing their clinical practice. There are problems with the criteria for the selection of mentors and mentoring methods. A big problem is performance of clinical practice with adequate clinical training hours, in teaching nursing for general care, in line with the EU Directive. In the study programme in nursing the institution has a problem with the teachers' overload (in the field of special nurses care), who have more hours per academic year than legally proposed norm for the teaching process.

Recommendation for implementation

The HEI has to ensure better conditions for student practice and improve the criteria for the selection of mentors, mentoring methods and performing Standard operating procedures for clinical practice (SOP). Students have to perform their clinical practice on a clinical department under the supervision of the best nurses. The HEI has an excellent nursing practicum and it will be the basis for performing clinical skills. However, in the clinical department, they are performing many sensitive skills and it demands very precisely demonstrated and supervised skills. The HEI has to ensure to perform 2 300 hours of clinical

training which is regulated by the Directive 26/2005/EC and 55/2013 EC. The HEI has to ensure an adequate number of lecturer who perform teaching in nursing (in the documents submitted is evident that some lecturers have 100 hours above proposal norm hours/450). Although the Polytechnic of Bjelovar is a private institution, the Panel considers that long-term teacher overload has a negative impact on the quality of studies and that the higher education institution should provide a sufficient number of lecturers to carry out the teaching process in nursing within one year.

Quality grade:

Satisfactory level of quality

III. Teaching process and student support

3.1. Admission criteria or criteria for the continuation of studies are in line with the requirements of the study programme, clearly defined, published and consistently applied.

Analysis

The criteria for enrolment of students in the first year of study, as well as transition from other higher education institutions are very clear and easy to find on the institution's website. The information is available in Croatian and in English. The official document *Decision on the conditions of student transition to undergraduate professional studies of the Bjelovar UAS* is also available.

Recommendations for improvement

None

Quality grade:

High level of quality

3.2. The higher education institution gathers and analyses information on student progress and uses it to ensure the continuity and completion of study.

Analysis

BUAS gathers information about students and their advancement. The information is gathered through polls and ISVU system. BUAS analyses data and adjusts their strategy and programs accordingly.

Recommendations for improvement

The recommendation for improvement is that BUAS makes analyses of student progress available and clear to students. Students should be more familiar with gathered information and their use.

Quality grade:

High level of quality

3.3. The higher education institution ensures student-centred learning.

Analysis

BUAS uses different kinds of learning such as problem-based learning, writing and doing projects, going to other institutions for improving student skills. Besides that, they collect information from students after every semester by poll. They also provide new equipment to students on which they can do practical work.

Recommendations for improvement

Lecturers should do polls on their teaching methods with other lecturers not relying only on student poll.

Quality grade:

Satisfactory level of quality

3.4. The higher education institution ensures adequate student support.

Analysis

BUAS provides students opportunities for self-development with CISOK centre, and with good connections with the local industry where students can work, and get practical knowledge. Lecturers have good day-to-day communication with students, while students communicate with external teachers by e-mail.

Recommendations for improvement

Students should be more encouraged to use the services of the CISOK centre.

Quality grade

High level of quality

3.5. The higher education institution ensures support to students from vulnerable and under-represented groups.

Analysis

BUAS has not had any students with disabilities so far and institution is not fully adjusted to those students. Because of that, there are no scholarships for those students.

Recommendations for improvement

Students with disabilities should get easier access to the student administration office and entrance to all labs if there would be any need for that.

Quality grade

Satisfactory level of quality

3.6. The higher education institution allows students to gain international experience.

Analysis

Students of BUAS are encouraged to go on exchange programs for which they have co-organisers. Because Bjelovar does not have dorm facilities, student have additional costs of renting the apartments. Bjelovar UAS has "student buddy" program for incoming students.

Recommendations for improvement

Bjelovar UAS should work on its recognition of ECTS for incoming students, and ensure more language conditions for it. There are no classes and tests organized in foreign languages, so incoming students need to take exams separately which complicates the situation for both students and professors.

Quality grade:

Satisfactory level of quality

3.7. The higher education institution ensures adequate study conditions for foreign students.

Analysis

BUAS has documents for incoming students in English and the Erasmus brochure. Accommodation is provided for incoming students in an apartment in Bjelovar. Accommodation is free for incoming students. Their satisfaction with BUAS is graded by a poll.

Recommendations for improvement

BUAS should provide more classes in English for incoming students to better involve them in the curriculum to ensure that they understand the classes better. More courses and exams for incoming students should be in English.

Quality grade

Minimum level of quality

3.8. The higher education institution ensures an objective and consistent evaluation and assessment of student achievements.

Analysis

Criteria for grading are published on the website of the study programs. Evaluation is entirely focused on learning outcomes. Tests in nursing are separated by learning outcomes and students can pass some of them, and later only ones which they didn't pass.

Recommendations for improvement

Learning outcomes in nursing should be better connected with grading. BUAS needs to find a way that allows students to pass an exam with a high percentage of correct answers not entirely focusing on learning outcomes. To assess the extent to which the student has achieved the intended learning outcomes, the choice of assessment methods is crucial. It is clear that the learning outcomes in the undergraduate study programme of nursing are aligned with the level and profile of the CQF and EQF, however, the methods of practical learning and teaching, and methods of evaluation and assessment are not clearly defined (they currently depend on the knowledge and experience of individual mentor). In this part of the teaching process, there are no tools/standards by which an objective assessment or evaluation of students' learning outcomes in clinical practice could be carried out. All this indicates to critical points / difficulties in attaining the adequate quality of the teaching process, i.e. affects the implementation of learning outcomes, and objective and consistent evaluation and assessment of students' achievement.

In other study programmes learning outcomes are better implemented so students do not have any complaints. BUAS should establish double grading to ensure that grading is objective.

Quality grade:

Minimum level of quality

3.9. The higher education institution issues diplomas and Diploma Supplements in accordance with the relevant regulations.

Analysis

After graduation student get their diploma and a diploma supplement.

Recommendations for improvement

BUAS should consider including learning outcomes in the diploma supplement.

Quality grade

High level of quality

3.10. The higher education institution is committed to the employability of graduates.

Analysis

BUAS educates very employable graduates who are educated well enough to adjust very fast to working conditions. Through BUAS cooperation with industry the students are prepared to work in industry.

Recommendations for improvement

Alumni club should be more active.

Quality grade

High level of quality

IV. Teaching and institutional capacities

4.1. The higher education institution ensures adequate teaching capacities.

Analysis

The qualifications of teachers with the election in the appropriate area are appropriate for the delivery of study programs and achievement of the intended learning outcomes. For the nursing program, out of 41 teachers, 32 teachers have been elected in Biomedicine and healthcare area, 3 in Social sciences area, 1 in Natural sciences area, 2 in Humanities area, 2 in Technical sciences area and 1 in Biotechnical sciences. For the mechatronics program, out of 19 teachers, 15 teachers have been elected in Technical sciences area, 2 in Social sciences area, 1 in Humanities area and 1 in Natural sciences area. For the computer science program, out of 12 teachers, 8 teachers have been elected in Technical sciences area, 2 in Social sciences area, 1 in Humanities area and 1 in Natural sciences area. The analysis of allocation of teachers to courses shows that teachers are appropriately assigned to courses for which they have been elected.

The overall number of teachers is appropriate for delivering all three programs. When we take into consideration both full-time teachers and external associates, the total number of teachers is 19.38. The total number of students in all three programs is 733. The two previous figures clearly show that the student-teacher ratio is 25.94, which is well below the legally defined maximum of 30.

The number of teachers and their workload are appropriate for the study programs of mechatronics and computer science. However, the analysis of the nursing program shows that three teachers have more norm-hours (587.5, 582 and 562.5) than allowed (540). Based on the analysed workload, the teachers' duties are appropriately distributed to teaching,

professional and/or scientific activities, professional and personal development and administrative duties, except for three mentioned exceptions.

The coverage of teaching by one's own staff at a higher education institution is appropriate for quality study and for all studies is higher than the prescribed minimum of one-third of full-time employees. For the nursing programme, the coverage of one's own staff is 0.39, for the mechatronics programme is 0.57, and for the computer sciences programme is 0.82.

Recommendations for improvement

The Panel commends the institution for excellent ratios of students and full-time teachers in mechatronics and computer sciences programs and recommend to keep it that way in the future, especially when number of students grows. The analysis of the nursing program has shown that three teachers have more norm-hours than allowed, but it also shows that those three teachers have been very productive in publishing both professional and scientific papers, resulting in a total number of 32 scientific and 45 professional papers published in the last 5 years, relatively evenly distributed among the three of them. Although it seems that teaching duties do not stand in the way of professional and scientific research, we believe that it might not leave enough time professional and personal development and might have negative impact in the long run. With that in mind, we recommend hiring new teachers in order to lower the workload of existing teachers and we believe that the period of 1 year is sufficient time to find and employ high-quality teachers. Employing new teachers in Nursing study programme will also have a good impact on the ratio of students and full-time teachers, which is just above the legally defined minimum and will bring this program in line with excellent ratios of mechatronics (0.57) and computer science (0.82).

Quality grade

Satisfactory level of quality

4.2. The higher education institution ensures appropriate quality of external associates.

Analysis

The analysis of relevant evidence shows that the external associates have elections in the appropriate areas and are appropriate for the delivery of study programs and achievement of the intended learning outcomes. At the meeting with external associates, we have learned that some of them come from the industry and some of them come from other institutions and also have relevant industry experience. This information matches the information gathered during the meetings with students and alumni that were unison in the view that both internal and external teachers are/were qualified, industry relevant, include some of the latest research and trends in the teaching process and are also able to provide both academic and professional views on the matter.

The institution encourages the participation of external associates in the supervision of final theses. In the mechatronics program, 14 supervisors of final theses were external associates, and in the nursing program, 34 external associates were supervisors of final theses. Since it is new, the computer science program still doesn't have candidates for final theses. It is also

visible that the supervision is not evenly distributed among all external associates who could do mentoring.

The institution encourages the organisation of professional practice in institutions in which the external associates are employed; some examples of institutions are Opća bolnica Bjelovar, Opća bolnica Koprivnica, Klinička bolnica Dubrava, Zavod za javno zdravstvo Bjelovarsko-bilogorske županije, Data Link Bjelovar. The Panel is under impression that this process of students having professional practice in institutions in which the external associates are employed is very well accepted by both teachers and students, because institutions gain access to sought future professionals and can evaluate them for possible future employment and students get a chance to work in a professional environment and improve their academic education with industry practice.

Recommendations for improvement

The Panel wants to commend the institution for selecting very motivated and qualified external associates and also for providing the right environment for professional and personal development (for example: external associates can publish papers and the institution takes care of all publishing costs).

The first area that can be improved is the fact that not all external associates participate in the supervision of final theses and the number of those supervisions is not evenly distributed. We recommend that the institution implements a mechanism that will motivate external associates to participate in supervising the final theses (two possible tools might be financial aspects and the prerequisite for re-election). Also, care must be taken that one teacher, either full-time or external, does not have too many concurrent final theses, because of possible negative effects on the quality of the final theses or other areas in which the teacher is active.

The second area where the Panel sees room for improvement are the learning outcomes. Based on the discussion with all external stakeholders, the Panel learned that the dean, vice deans and the heads of program studies have excellent knowledge of the learning outcomes, but that many full-time employees and external associates could benefit from some additional training on that topic. Also, the meeting with students has shown that nursing program has more challenges with learning outcomes than the study programmes of mechatronics and computer science. The fact that learning outcomes are not at the highest level is to be expected since the institution began implementing them in all programs in this academic year. With that in mind, the Panel suggests additional training in the topic of learning outcomes, especially with regard to their level and their connection to examination methods.

Finally, the discussion with students showed that the process of scheduling the courses leaves some room for improvement, especially in the nursing program. The Panel understands that it is not easy to manage external associates because they all are employed elsewhere. We recommend that the schedules for a semester should be created as early as possible and in firmer cooperation with external associates. Once created and published, the schedule for the semester should be changed only for major reasons, which should minimize cancellations and enable students to better plan their time.

Quality grade

Satisfactory level of quality

4.3. Teacher recruitment, advancement and re-appointment is based on objective and transparent procedures which include the evaluation of excellence.

Analysis

The Panel believes that the institution is always looking for high-quality teachers and that it has put in place procedures to make sure that the best candidates get employed and advance. Teacher recruitment procedures arise from the development goals of the higher education institution and they are aligned with the legislation and internal regulations in effect, as provided in the following evidence: Statut Veleučilišta u Bjelovaru, Pravilnik o unutarnjoj organizaciji i ustrojstvu radnih mjesta Veleučilišta u Bjelovaru, Pravilnik o radu Veleučilišta u Bjelovaru. Vacancies are advertised in relevant media such as the Official gazette (Narodne novine) and on relevant websites.

In selecting, appointing and evaluating teachers, the HEI takes into account their previous activities and experience, both academic and professional, as defined in the Odluka o uvjetima za ocjenu nastavne i stručne djelatnosti u postupku izbora u nastavna zvanja.

In promotion of teachers into higher grades, the institution takes into account teachers' achievements: teaching, successful projects, mentorships, final theses supervision, written scripts and books, additional lectures, etc. The procedure is well-defined and ends with a decision from the Professional Council.

The document Pravilnik o nagrađivanju izvrsnosti nastavnika i suradnika BUAS-a defines the procedures and criteria for assessing and rewarding teacher excellence which include professional and/or scientific and teaching activities: publishing scientific/professional papers, participation in national/international projects, etc. In the year 2018, 11 employees were rewarded. The teachers are aware of this procedure and eagerly participate in it.

Recommendations for improvement

The Panel commends the institution's approach for the selection of the best candidates for each position, specifically, the institution's decision to find out how a prospective teacher does teaching in the form of guest lectures.

As the institution works on the strategic measure 3.1.1 "Develop a plan for employment, advancement and improvement of teaching and non-teaching staff", the Panel suggests that one criteria for employment be proficiency in the English language, which will have positive impacts on the institution's desire to attract more foreign students and would also benefit the strategic goal "3.2.1. Poticati stjecanja međunarodnog iskustva nastavnog i nenastavnog osoblja". The Panel has also witnessed some teachers' reluctance to speak English so the Panel recommends that some form of internal/external education in the English language should be made available to teachers who feel they need it.

The last suggestion is that the institution should put emphasis on the candidates who participate in scientific research, in order to support the institution's intention of becoming

a scientific institution and also to act in the direction with strategic measure “3.2.4 Poticati objavljivanje znanstvenih članaka u indeksiranim časopisima”.

Quality grade

Satisfactory level of quality

4.4. The higher education institution provides support to teachers in their professional development

Analysis

The institution gives solid evidence of providing opportunities for the improvement of teaching competencies. Three most notable practices are enabling and financing doctoral studies for each applied candidate (fully covered by the institution), enabling and financing teacher’s professional improvements (3.000 kuna for each teacher per year) and organizing internal seminars and workshops. The institution has provided evidence of the use of a sabbatical for professional development.

The institution encourages the assessment and improvement of teaching competencies based on the results of student satisfaction surveys. New employees get support from the Vice dean for teaching and the Vice dean for development who attend teachers’ classes and then provide them with feedback and suggestions for improvements.

The teachers participated in 29 mobility programs that lasted less than three months each and the institution participated in 7 mobility projects for higher education in the last 5 years.

Recommendations for improvement

The institution did not provide any formal evidence that it encourages the assessment and improvement of teaching competencies based on the peer-review recommendations. However, in discussions with teachers, the Panel found firm evidence that such a practice exists, but in an informal manner. The Panel recommends formalizing that practice in the years to come.

Quality grade

High level of quality

4.5. The space, equipment and the entire infrastructure (laboratories, IT service, work facilities etc.) are adequate for the delivery of the study programmes and ensure the achievement of intended learning outcomes and the implementation of professional and/or scientific activity.

Analysis

The institution’s strategic goal 2.1 in three measures clearly shows that the institution understands the importance of quality infrastructure.

In the previous reaccreditation, the institution lacked appropriate laboratories, especially in the nursing program so the recommendation was to invest more in the laboratories and in the library. The Panel is pleased to report that the institution followed those recommendations and has significantly improved its infrastructure. For the nursing

program, a completely new nursing practicum laboratory has been established that fully confirms to the European directives for nursing (36/2005/EC and 55/2013/EC). For mechatronics, the current laboratories satisfy all requirements for obtaining defined learning outcomes. As far as computer science program is confirmed, current hardware and software satisfy all requirements for achieving defined learning outcomes. The institution conducts regular surveys that, among others, ask students how they are satisfied with the infrastructure and equipment. The results are statistically processed and delivered to a member of the Unit for Quality Assurance who takes appropriate action.

The total amount of usable space in the institution is 1.352 m², i.e. 1,84 m² per student, which is well above the national standard.

Recommendations for improvement

The Panel is satisfied with the current infrastructure and encourages the institution to continue investing in the infrastructure, especially in light of a planned start of master programs (for example, current mechatronics equipment is good for the bachelor level, but some equipment is lacking for the master level) and higher admission quotas.

Quality grade

High level of quality

4.6. The library and library equipment, as well as access to additional resources ensure the literature necessary for ensuring high-quality of study and scientific and teaching activity.

Analysis

The library and library equipment, including additional resources, meet the conditions for a high quality of study and professional and/or scientific activity. The library has 66 m² in area, which is adequate for the number of students. In the previous reaccreditation, one of the recommendations was that the number and diversity of literature is not high enough, but that the internal books are of excellent quality. This Panel has found out that the number and diversity of literature has improved, resulting in 783 books of required literature, with an average of 11 items of the same title. The library has subscription to 18 different journals. For professional and/or scientific activities, the library has a sufficient number of computers that can access 24 different scientific databases available for full-text access (Portal elektroničkih izvora za hrvatsku akademsku i znanstvenu zajednicu).

In the library, students can get professional help for finding literature for seminars and final theses. Students are regularly surveyed about the quality of library services and can recommend some improvements.

Recommendations for improvement

Although the size and functionality of the library is sufficient for the present amount of students, the institution should have in mind that the growth in the number of students should be followed by the growth of library, both in a physical (acquiring more books and more titles) and virtual sense (more teaching materials via protected website). When the

institution becomes a scientific institution, the need for additional bibliographic databases might arise that will have to be financed by the institution itself.

Quality grade

High level of quality

4.7. The higher education institution rationally manages its financial resources.

Analysis

The Panel has analysed financial income and expenditures for 2017 and 2018 and has concluded that the financial sustainability and efficiency is evident in all aspects of the institution's activity. Total input has increased from cca 8,4 to 8,8 million kuna, while the expenditures have increased from 8,0 to 8,7 million kuna. From the expenditure sheet, it is visible that the institution has increased its financial reserve from 2,4 to 2,7 million kuna, which is an indicator of efficient and appropriate financial management. Its financial results are publicly available on its website which shows transparency in financial management. The main sources of funding are local government and tuition fees that sum up to cca 85% of total income.

Recommendations for improvement

The Panel commends the institution for managing its financial resources in a good manner that guarantees sustainability. The Panel sees the institution's capability to channel financial resources to a required business aspect in a timely manner as a big competitive advantage and a factor that can guarantee the institution's sustainability and growth, especially towards the master level programs. The institution has shown that it can manage its financial resources in a sustainable and transparent way and the Panel believes, based on presented evidence, that it will continue to do so in the years covered by the current Strategy.

The Panel recommends that the institution tightens its connections with the industry and other academic institutions and to engage in more projects that will generate revenue and help diversify its income sources.

Quality grade

Satisfactory level of quality

V. Professional and/or scientific activity

5.1. Teachers and associates employed at the higher education institution are committed to the achievement of high quality and quantity of professional and/or scientific research.

Analysis

The University of Applied Sciences has developed a strategy for the development of existing and planned professional and research activities in accordance with the recommendations set out in the EU Directive. This Strategy envisages the development of scientific-research activities, in line with the mission and vision of the University of Applied Sciences.

Apart from the education of students, the University of Applied Sciences is dedicated to ensuring high quality and quantity of professional and scientific research. Although the

University of Applied Sciences is actively involved in commercial and professional projects, its scientific productivity and international reputation are weak.

The University of Applied Sciences supports the participation of students in the projects. Students produce scientific graduate theses and graduate theses based on practice, and a significant number of students participate in conferences and are co-authors of scientific papers. However, the improvement of teaching through professional and scientific activities is limited to the low level of overall academic activity of the University of Applied Sciences and the unequal distribution of scientific-research activities among employees.

BUAS is a highly specialized institution of higher education, therefore its main goal and task is the professional training of students. Nonetheless, all teachers should also be dedicated to ensuring high quality and quantity of professional and scientific research. As can be seen from the information available in presented documents, participation in professional or commercial projects is good. Particularly worth mentioning is the *Tabletic* project, which is the result of a joint project of professional studies of mechatronics and nursing. However, the scientific productivity of the University of Applied Sciences due to the number of scientific publications is weak. In the last five years, only 0.24 papers per teacher were published in the highest category journals, or 0.29 papers in other publications. The overall scientific activity of the College is too weak. Only 24 quotations were recorded in WoSCC and h-index is small ($H = 4$).

Recommendations for improvement

It is necessary to draw up a plan of activities to encourage the participation of teachers in cooperation with industry and professional and scientific organizations, not only in the region. It is recommended to improve knowledge transfer by organizing specific workshops and courses on innovative technologies, media advertising and collaboration with associates from various fields.

Quality grade

Satisfactory level of quality

5.2. The higher education institution proves the social relevance of its professional and/or scientific research and transfer of knowledge.

Analysis

The BUAS has the appropriate procedures to ensure the effective conduct of professional and research activities. There is a system of reporting on the attendance of teaching staff at conferences, seminars, etc. Plans and reports are provided for the purpose of monitoring the professional development of teaching staff. The University of Applied Sciences provides effective support to the teaching staff in research and transfer of knowledge and technology. There is a developed network of cooperation with other higher education institutions and business entities. The new strategy envisages the expansion of this network of cooperation.

Recommendations for improvement

The BUAS is recommended to strengthen and develop the mechanisms for improving international cooperation, increasing the number of published works in journals of relevant bibliographic databases. BUAS develops good relations with the economy and the public sector through various projects and other activities. The Panel is of the opinion that further efforts should be made to formalize the financial support and employment with the support of the local community. It is necessary to continuously inform the public about the activities of the University of Applied Sciences (continue organizing open door days, e.g. half-time on a local radio or television station, round tables with local external stakeholders and associations).

Quality grade

Satisfactory level of quality

5.3. Professional and/or scientific achievements of the higher education institution have been recognized in the regional, national and international context.

Analysis

The BUAS supports professional activity and scientific papers and projects by publishing in journals as well as participating in professional domestic and international conferences. BUAS supports professional activities through the promotion of high-quality professional publication – 96 published professional papers, 41 reviewed articles from scientific and professional gatherings, 23 top-level papers in accordance with the Rulebook on Selection Criteria in Scientific Professions, 28 papers that fall into the category of other works and participation at national and international conferences.

Recommendations for improvement

It is recommended that the BUAS invests further efforts in developing the transparency of professional and/or scientific achievements at the national and international level. It is recommended that the BUAS invests extra effort for the purpose of increasing scientific output and publishing in the best domestic and foreign magazines (in English).

The University of Applied Sciences should encourage teachers to participate in the work of international professional associations and to attend international conferences to enhance their scientific reputation, and thus the reputation of the University in the world. One way to do this is to introduce the obligation to attend at least one international scientific meeting every three or four years as a condition for getting some of the financial support for a conference visit. It is necessary to improve the knowledge of the English language of a certain part of teachers. On a regional basis, the knowledge of the BUAS and the transfer of knowledge to companies should be made more visible by brochure printing.

Evidences exist on participation of employees in the nursing study program in the editorial board of the journals is obvious but it is necessary to encourage technical sciences to participate in professional associations and to arrange journals. The Panel recommends the BUAS as a young institution, developing and encouraging teachers to participate in editorial

board of journals and to develop the copyright and patents to enter the register of scientific institutions.

Quality grade

Minimum level of quality

5.4. Professional and/or scientific activities and achievements of the higher education institution improve teaching.

Analysis

The BUAS has a strong policy of professional development of the teaching staff - the teachers are encouraged to professionally train and participate in conferences, as well as the participation of students and teachers in professional and/or scientific activities for the purpose of meeting the institutional mission.

BUAS promotes student participation in projects and uses scientific equipment for student education. BUAS students work on the final theses within student projects and in projects for the exhibition of innovations.

A significant number of students participated in scientific conferences and/or were co-authors of professional papers. BUAS students won several awards for participating in the scientific projects of the BUAS. BUAS supports teachers in their training. However, there are no well-developed rules that ensure their development.

Recommendations for improvement

It is recommended to establish a formal vocational training system so that teachers are able to keep track of new findings in their field of work and thus encourage greater achievement in professional and/or scientific activities. Teachers should also take part in workshops on defining learning outcomes to enhance the teaching process.

Quality grade

Satisfactory level of quality

APPENDICES

1. Quality assessment summary - tables

<i>Quality grade by assessment area</i>				
<i>Assessment area</i>	Unsatisfactory level of quality	Minimum level of quality	Satisfactory level of quality	High level of quality
<i>I. Internal quality assurance and the social role of the higher education institution</i>			X	
<i>II. Study programmes</i>		X		
<i>III. Teaching process and student support</i>			X	
<i>IV. Teaching and institutional capacities</i>			X	
<i>V. Professional and/or scientific activity</i>			X	

<i>Quality grade by standard</i>				
<i>I. Internal quality assurance and the social role of the higher education institution</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
1.1. The higher education institution has established a functional internal quality assurance system.			X	
1.2. The higher education institution implements recommendations for quality improvement from previous evaluations.			X	
1.3. The higher education institution supports academic integrity and freedom, prevents all types of unethical behaviour, intolerance and discrimination.			X	
1.4. The higher education institution ensures the availability of information on important aspects of its activities (teaching, professional and/or scientific and social role).			X	
1.5. The higher education institution understands and encourages the development of its social role.			X	
1.6. Lifelong learning programmes delivered by the higher education institution are aligned with the strategic goals and the mission of the higher education institution, and social needs.		X		

<i>Quality grade by standard</i>				
<i>II. Study programmes</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
2.1. The general objectives of all study programmes are in line with the mission and strategic goals of the higher education institution and the demands of the labour market.				X
2.2. The intended learning outcomes at the level of study programmes delivered by the higher education institution are aligned with the level and profile of qualifications gained.		X		
2.3. The higher education institution provides evidence of the achievement of intended learning outcomes of the study programmes it delivers.		X		
2.4. The HEI uses feedback from students, employers, professional organisations and alumni in the procedures of planning, proposing and approving new programmes, and revising or closing the existing programmes.			X	
2.5. The higher education institution ensures that ECTS allocation is adequate.		X		
2.6. Student practice is an integral part of the study programmes.			X	

<i>Quality grade by standard</i>				
<i>III. Teaching process and student support</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
3.1. Admission criteria or criteria for the continuation of studies are in line with the requirements of the study programme, clearly defined, published and consistently applied.				X
3.2. The higher education institution gathers and analyses information on student progress and uses it to ensure the continuity and completion of study.				X
3.3. The higher education institution ensures student-centred learning.			X	
3.4. The higher education institution ensures adequate student support.				X
3.5. The higher education institution ensures support to students from vulnerable and under-represented groups.			X	
3.6. The higher education institution allows students to gain international experience.			X	
3.7. The higher education institution ensures adequate study conditions for foreign students.		X		
3.8. The higher education institution ensures an objective and consistent evaluation and assessment of student achievements.		X		
3.9. The higher education institution issues diplomas and Diploma Supplements in accordance with the relevant regulations.				X
3.10. The higher education institution is committed to the employability of graduates.				X

<i>Quality grade by standard</i>				
<i>IV. Teaching and institutional capacities</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
4.1. The higher education institution ensures adequate teaching capacities.			X	
4.2. The higher education institution ensures appropriate quality of external associates.			X	
4.3. Teacher recruitment, advancement and re-appointment is based on objective and transparent procedures, which include the evaluation of excellence			X	
4.4. The higher education institution provides support to teachers in their professional development.				X
4.5. The space, equipment and the entire infrastructure (laboratories, IT service, work facilities etc.) are adequate for the delivery of the study programmes and ensure the achievement of intended learning outcomes and the implementation of professional and/or scientific activity.				X
4.6. The library and library equipment, as well as access to additional resources ensure the literature necessary for ensuring high-quality of study and scientific and teaching activity.				X
4.7. The higher education institution rationally manages its financial resources.			X	

<i>Quality grade by standard</i>				
<i>V. Professional and/or scientific activity</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
5.1. Teachers and associates employed at the higher education institution are committed to the achievement of high quality and quantity of professional and/or scientific research.			X	
5.2. The higher education institution proves the social relevance of its professional and/or scientific research and transfer of knowledge.			X	
5.3. Professional and/or scientific achievements of the higher education institution have been recognized in the regional, national and international context.		X		
5.4. Professional and/or scientific activities and achievements of the higher education institution improve teaching.			X	

2. Site visit protocol

Reakreditacija Veleučilišta u Bjelovaru PROTOKOL POSJETA	Re-accreditation of the Bjelovar university of applied sciences VISIT PROTOCOL
13. - 16. svibnja 2019.	May 13 th -16 th 2019

	Ponedjeljak, 13. svibnja 2019.	Monday, May 13 th 2019
MJESTO/ VENUE:	<i>AZVO, Velika dvorana</i>	<i>ASHE, Main conference room</i>
13:00 – 14:00	<i>Edukacija članova panela</i>	<i>Training of the panel members</i>
14:00 – 16:00	<i>Interni sastanak Stručnog povjerenstva – priprema za posjet</i>	<i>Internal meeting of the Expert panel – site visit preparation</i>

	Utorak, 14. svibnja 2019.	Tuesday, May 14 th 2019
MJESTO/ VENUE:	VUB, Vijećnica	BUAS, Main Hall
9:00 – 9:45	Sastanak s dekanicom i prodekanima	Meeting with the dean and vice-deans
9:50 – 10:35	Sastanak s predstavnicima radne skupine za pripremu samoanalize i reakreditaciju (koordinatori ili zamjenici) + predstavnici Jedinice za osiguranje kvalitete	Meeting with representatives of the working group for the preparation of self-evaluation and re-accreditation (coordinators or vice-coordinator) + representatives of the Unit for Quality Assurance
10:40 - 11:00	<i>Interni sastanak Stručnog povjerenstva</i>	<i>Internal meeting of the Expert panel</i>
11:05 - 11:50	Sastanak sa studentima (otvoreno za sve studente) – A.B. Šimića 1, dvorana 1	Meeting with the students (open meeting) A.B. Šimića 1, room 1
11:50 – 13:00	<i>Radni ručak Stručnog povjerenstva</i>	<i>Working lunch of the Expert panel</i>
13:00 – 14:00	<i>Interni sastanak Stručnog povjerenstva (Analiza dokumenata)</i>	<i>Internal meeting of the Expert panel (Document analysis)</i>
14:00 – 14:45	Sastanak s Alumnima	Meeting with the Alumni
14:50 – 15:35	Sastanak s nastavnim osobljem VU (profesori/predavači, osim onih na rukovodećim mjestima)	Meeting with HEI's teachers (except those in the management positions)
15:40 – 16:00	Organizacija dodatnog sastanka o otvorenim pitanjima, prema potrebi	Organisation of additional meeting on open questions, if needed
16:00 – 18:00	<i>Interni sastanak Stručnog povjerenstva (Analiza sastanaka i pisanje izvješća)</i>	<i>Internal meeting of the Expert panel (Analysis of meetings and writing report)</i>

	Srijeda, 15. svibnja 2019.	Wednesday, May 15th 2019
MJESTO/ VENUE:	VUB, Vijećnica	BUAS, Main Hall
9:00 – 9:45	Sastanak s vanjskim suradnicima (nastavnici)	Meeting with external associates (teachers)
9:50 – 10:35	Sastanak s voditeljima studija (Odjela)	Meeting with the Heads for the Study programme (Department)
10:40 - 11:00	<i>Interni sastanak Stručnog povjerenstva</i>	<i>Internal meeting of the Expert panel</i>
11:05 - 11:50	Sastanak s vanjskim dionicima - predstavnicima strukovnih i profesionalnih udruženja, poslovna zajednica, poslodavci, stručnjaci iz prakse, organizacijama civilnog društva	Meeting with external stakeholders - representatives of professional organisations, business sector/industry sector, professional experts, non-governmental organisations
11:50 – 13:00	<i>Radni ručak Stručnog povjerenstva</i>	<i>Working lunch of the Expert panel</i>
13:00 – 14:30	Obilazak visokog učilišta (knjižnica, Zajedničke službe, Ured za međunarodnu suradnju, laboratoriji, Praktikum sestrinskih vještina, Studentsko poduzetničko-tehnološki inkubator) i prisustvovanje nastavi	Tour of the HEI (Library, Common Services, International Relations Office, laboratories, Practicum for nursing skills, Student Entrepreneurial Incubator) and visit to the classroom lectures
14:30 – 15:15	Sastanak s Prodekanom za nastavu i studente i Prodekanicom za razvoj	Meeting with the Vice-dean for teaching and student affairs and Vice-dean for development
15:15 – 15:30	Organizacija dodatnog sastanka o otvorenim pitanjima, prema potrebi	Organisation of additional meeting on open questions, if needed
15:30 – 16:00	<i>Interni sastanak Stručnog povjerenstva</i>	<i>Internal meeting of the Expert panel</i>
16:00 – 16:20	Završni sastanak s dekanicom i prodekanima	Exit meeting with the dean and vice-deans
16:20 – 18:00	<i>Interni sastanak Stručnog povjerenstva (Analiza dokumenata i pisanje izvješća)</i>	<i>Internal meeting of the Expert panel (Document analysis and writing report)</i>
18:00 ...	<i>Odlazak za Zagreb</i>	<i>Departure to Zagreb</i>

	Četvrtak, 16. svibnja 2019.	Thursday, May 16th 2019
MJESTO: VENUE:	AZVO, Mala dvorana	ASHE, Small conference room
9:30 – 12:00	<i>Interni sastanak Stručnog povjerenstva (pisanje izvješća)</i>	<i>Internal meeting of the Expert panel (writing report)</i>
12:00 – 13:00	<i>Radni ručak Stručnog povjerenstva</i>	<i>Working lunch of the Expert panel</i>
13:00	<i>Odlazak povjerenstva</i>	<i>Departure of Panel members</i>

SUMMARY

Overall, the BUAS has shown a committed and ambitious development that tries to achieve lasting progress despite scarce resources (space, staff, financial). Financial matters seem to be handled with care. The management is well aware of existing risks and improvement potentials and has consistently initiated concrete improvement measures. Particularly commendable are the nursing practicum equipment, the mechatronics student projects and the computer sciences PC equipment. Employability of graduates of all study programs is very high. Employees are highly motivated and communicate efficiently; thus, initiated changes (e.g., orientation towards learning outcomes, ECTS methodology, recommendations from previous evaluations) have begun to be effective in the organisation. Suitable staff training is available and should be enforced for the entirety of employees and external lecturers concerning key issues (e.g., ETCS). However, the workload of the key personnel has to be seen critically, especially in the field of nursing. Therefore, HR development and recruitment is a key issue with regard to labour market conditions. Internationalization efforts and lifelong learning activities have started, but are in need of further development. Academic standards of final theses are profound from a practitioner's perspective, but require improvement concerning scientific maturity. Existing scientific activities of teachers and individual students are promising and are supported by the management.

The support from the local community is strong and the school is embedded in a strong network with companies and other external institutions. However, the context developments to be expected henceforth make it advisable to significantly intensify these co-operations with regard to personnel capacity restrictions. It is recommended to diversify revenues through additional financial sources to make the HEI less dependent on individual contributors. Given the challenging industrial environment and the expected scarcity of national and international funding, the panellists, above all, strongly recommend securing the local government's financial share for several years, according to public budget possibilities.

Internal quality assurance is well suited, but would have to develop further at the sight of further growth. The study programs meet required standards well (the student-teacher ratio is below legal determination) with some exceptions - the school faces problems in performing the necessary clinical practice and with the respective mentoring. The Expert Panel strongly recommends achieving the adequate number of lecturers within one year. The quality assurance policy is evidently linked to the strategy, though in need of developing a realistically achievable research strategy. Research intensification and school growth would demand extended library subscriptions (scientific databases, e-resources).

Based on its Code of Ethics and as well concrete measures within daily practice, the university supports academic freedom and integrity and does its utmost to prevent discrimination, unethical practices and inadequate tolerance. Future efforts should focus on contemporary ethical questions, which students should be made aware of, e.g., artificial intelligence (robotics, assistive systems in nursing) or data abuse.

External communication is strong. Nevertheless, it is recommended to strengthen the English-speaking presence, if the school seeks attracting international students and intends to prevent the migration of local high school graduates to other universities.

Altogether, the Panel found the school to have very good content and high development potential. We strongly encourage continuing the initiated development towards a satisfactory and possibly also high level of quality in the future within all assessment categories.