AQAS

AGENTUR FÜR
QUALITÄTSSICHERUNG DURCH
AKKREDITIERUNG VON
STUDIENGÄNGEN E.V.

EXPERTS' REPORT

ARCHITECTURAL ENGINEERING EDUCATION (BACHELOR OF EDUCATION)

BUILDING ENGINEERING EDUCATION (BACHELOR OF EDUCATION)

AGROINDUSTRIAL TECHNOLOGY EDUCATION (BACHELOR OF EDUCATION)

TECHNICAL AND VOCATIONAL EDUCATION (MASTER OF EDUCATION)

Universitas Pendidikan Indonesia

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HEI	**Universitas Pendidikan Indonesia**
Campus, if applicable	**Bandung**

Programme	**Architectural Engineering Education**		
Degree	**Bachelor of Education**		
Extent	144 Semester Credit Units		
Length of studies	8 semesters		
Language	Bahasa		
Start Study programme (Date)	2006		
Maximum capacity of students	60	Per Semester ☐	Per Year ☒
Average number* of entering students		Per Semester ☐	Per Year ☐
Average number* of graduates		Per Semester ☐	Per Year ☐
* reference period:			

Concept accreditation	☐
First-time international accreditation	☒
No. reaccreditation	

Responsible agency	AQAS e.V.
Responsible consultants	Dr. Dorothee Groeger, Alexandre Wipf

Programme	**Building Engineering Education**
Degree	**Bachelor of Education**
Extent	146 Semester Credit Units
Length of studies	8 semesters
Language	Bahasa
Start Study programme (Date)	1996

Maximum capacity of students	60	Per Semester ☐	Per Year ☒
Average number* of entering students		Per Semester ☐	Per Year ☐
Average number* of graduates		Per Semester ☐	Per Year ☐
* reference period:			

Concept accreditation	☐
First-time international accreditation	☒
No. reaccreditation	

Programme	**Architectural Engineering Education**		
Degree	**Bachelor of Education**		
Extent	133 Semester Credit Units		
Length of studies	8 semesters		
Language	Bahasa		
Start Study programme (Date)	2006		
Maximum capacity of students	60	Per Semester ☐	Per Year ☒
Average number* of entering students		Per Semester ☐	Per Year ☐
Average number* of graduates		Per Semester ☐	Per Year ☐
* reference period:			

Concept accreditation	☐
First-time international accreditation	☒
No. reaccreditation	

Programme	**Agroindustrial Technology Education**		
Degree	**Bachelor of Education**		
Extent	145 Semester Credit Units		
Length of studies	8 semesters		
Language	Bahasa		
Start Study programme (Date)	2006		
Maximum capacity of students	80	Per Semester ☐	Per Year ☒
Average number* of entering students		Per Semester ☐	Per Year ☐
Average number* of graduates		Per Semester ☐	Per Year ☐
* reference period:			

Concept accreditation	☐
First-time international accreditation	☒
No. reaccreditation	

Programme	**Technical and Vocational Education**		
Degree	**Master of Education**		
Extent	36 Semester Credit Units		
Length of studies	4 semesters		
Language	Bahasa		
Start Study programme (Date)	2005		
Maximum capacity of students	30	Per Semester ☐	Per Year ☒
Average number* of entering students		Per Semester ☐	Per Year ☐
Average number* of graduates		Per Semester ☐	Per Year ☐
* reference period:			

Concept accreditation	☐
First-time international accreditation	☒
No. reaccreditation	

Content

Decision of the Standing Commission

on the programmes

"**Architectural Engineering Education" (Bachelor of Education)**

"Building Engineering Education" (Bachelor of Education)

"Agroindustrial Technology Education" (Bachelor of Education)

 "Technical and Vocational Education" (Master of Education)

offered by

Universitas Pendidikan Indonesia, Indonesia

Based on the report of the expert panel and the discussions of the Standing Commission in its 9th meeting on 31 May 2021, the Standing Commission decides:

1. The study programmes "**Architectural Engineering Education**" (**Bachelor or Education**), "**Building Engineering Education**" (**Bachelor of Education**), "**Agroindustrial Technology Education**" (**Bachelor of Education**) and "**Technical and Vocational Education**" (**Master of Education**) offered by **Universitas Pendidikan Indonesia** are accredited according to the AQAS criteria for Programme Accreditation.

   The accreditation is conditional.

   The study programmes essentially comply with the requirements defined by the criteria and thus the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and the European Qualifications Framework (EQF) in their current version. The required adjustments can be implemented within a time period of twelve months.

2. The conditions have to be fulfilled. The fulfilment of the conditions has to be documented and reported to AQAS no later than **31 May 2022**.

3. The accreditation is given for the period of **six years** and is valid until **30 September 2027**.

Conditions:

1. The workload in the course descriptions of all programmes has to be presented coherently and consistently. In addition, the workload of the thesis defence in the Bachelor's programmes has to be taken into consideration and indicated transparently.

2. In "Building Engineering Education", the number of credits per course has to be consistent with the overall workload in one semester as presented in a coherent study plan.

The following **recommendations** are given for further improvement of the programmes:

All Programmes:

1. As steps in the pursuit of internationalization, the experts recommend to further encourage students and staff mobility, to develop and support international research cooperation and to support lecturers and staff in (further) improving their English skills.

2. The experts recommend refining the learning outcomes with regard to a more competence-oriented description. At the same time, a review (or even reduction) of the essential learning outcomes could lead to a reassessment of the curriculum with the aim of merging or integrating courses and topics.

3. More current and up to date literature should be used in the programmes.

4. It is recommended to place student information on courses and lesson plans jointly in one document.

5. UPI should strengthen its contact with industry, especially with the labour market institutions other than vocational schools.

6. The experts recommend varying teaching methods and strategies.

7. UPI should use a greater variety of assessment forms in the programmes.

"Architectural Engineering Education" (Bachelor of Education) & "Building Engineering Education" (Bachelor of Education):

8. The experts recommend including Building Information Modelling (BIM) as a mandatory course in the Architectural and Building Engineering Education programmes.

"Building Engineering Education" (Bachelor of Education):

9. In "Building Engineering Education", the experts recommend creating specialisations addressing specific disciplines within Building Engineering Education, e.g. building engineering, water resources engineering, traffic engineering or construction management.

"Agroindustrial Technology Education" (Bachelor of Education):

10. The period of the internship in industry in "Agroindustrial Technology Education" should be expanded, e.g. to 12 weeks.

11. In "Agroindustrial Technology Education", the number of religious seminars should be reduced and only offered in one semester.

12. In "Agroindustrial Technology Education", the experts recommend splitting the basics in mathematics into two courses covering two semesters.

13. UPI should raise the number of teaching staff holding a PhD in the "Agroindustrial Technology Education" programme.

"Technical and Vocational Education" (Master of Education):

14. For "Technical and Vocational Education", UPI should offer a compulsory pre-thesis writing course in the first or second semester and a course on qualitative research methods.

With regard to the reasons for this decision the Standing Commission refers to the attached assessment report.

EXPERTS' REPORT

ON THE PROGRAMMES

ARCHITECTURAL ENGINEERING EDUCATION (BACHELOR OF EDUCATION)

BUILDING ENGINEERING EDUCATION (BACHELOR OF EDUCATION)

AGROINDUSTRIAL TECHNOLOGY EDUCATION (BACHELOR OF EDUCATION)

TECHNICAL AND VOCATIONAL EDUCATION (MASTER OF EDUCATION)

OFFERED BY UNIVERSITAS PENDIDIKAN INDONESIA

Visit to the university: 8 – 11 March 2021

Panel of Experts:

Prof. Dr. Wolfgang Bogacki	Koblenz University of Applied Sciences, Department of Civil Engineering
Prof. Dr. Mamadou Diakité	Fulda University of Applied Sciences, Department of Food Technology
Prof. Maria Celeste T. Gonzalez	Ateneo de Manila University, Philippines, Education Department
Prof. Dr. Bernd Zinn	University of Stuttgart, Faculty of Management, Economics and Social Sciences, Institute of Educational Science
Mr. Barata Antariksa	TVET school Bekasi 1, Bekasi, Indonesia (labour market representative)
Dominic Helm	Student of Karlsruhe University of Applied Sciences (student representative)

Coordinator:

Dr. Dorothee Groeger, Alexandre Wipf	AQAS, Cologne, Germany

I. Preamble

AQAS – Agency for Quality Assurance through Accreditation of Study Programmes – is an independent non-profit organisation, supported by more than 90 member institutions, both higher education institutions (HEIs) and academic associations. Since 2002, the agency has been accredited by the German Accreditation Council (GAC). It is therefore a notified body for accreditation of higher education institutions and programmes in Germany.

AQAS is a full member of ENQA and also listed in the European Quality Assurance Register for Higher Education (EQAR) which confirms that our procedures comply with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), on which all Bologna countries agreed as a basis for internal and external quality assurance.

AQAS is an institution founded by and working for higher education institutions and academic associations. The agency is devoted to quality assurance and quality development of both academic studies and teaching in Higher Education Institutions. The activities of AQAS in accreditation are neither restrained to specific academic disciplines or degrees nor to a certain type of Higher Education Institution

II. Accreditation procedure

This report results from the external review of the programmes in Architectural Engineering Education, Building Engineering Education, Agroindustrial Technology Education (Bachelor of Education) and Technical and Vocational Education (Master of Education) offered by Universitas Pendidikan Indonesia.

I.1 Criteria

The programmes are assessed against a set of criteria for programme accreditation developed by AQAS. The criteria are based on the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) 2015. To facilitate the review each criterion features a set of indicators that can be used to demonstrate the fulfilment of the criteria. However, if single indicators are not fulfilled this does not automatically mean that a criterion is not met. The indicators need to be discussed in the context of the programme since not all indicators necessarily can be applied to a programme.

I.2 Approach and methodology

The initialisation

The university mandated AQAS to perform the accreditation procedure in May 2019.

The University produced a Self-Evaluation Report (SER). In December 2019, the University handed in a draft of the SER together with the relevant documentation of the study programmes and an appendix.

The appendix included e.g.:

- Overview over statistical data of the student body (e.g. number of applications, beginners, students, graduates, student drop outs).

- CVs of the teaching staff

- Information on student services

- Core information on the main library

- Undergraduate/graduate academic regulations

AQAS checked the SER regarding completeness, comprehensibility and transparency. The final version of the SER was handed in January 2021.

The accreditation procedure was officially initialised by a decision of the AQAS Standing Commission on 29 May 2020.

The nomination of the panel of expert

The composition of the panel of experts follows the stakeholder principle. Consequently, representatives from the respective disciplines, the labour market and students are involved. Furthermore, AQAS follows principles for the selection of experts of the European Consortium for Accreditation (ECA).

The Standing Commission nominated the before mentioned expert panel in May 2020. AQAS informed the university about the members of the expert panel and the University did not raise any concerns against the composition of the panel.

The preparation of the site visit

Prior to the site visit, the experts reviewed the SER and submitted a short preliminary statement including open questions and potential needs for additional information. AQAS forwarded these preliminary statements to the University and to the panel members in order to increase transparency in the process and the upcoming discussions during the site visit.

The site visit

After a review of the Self Evaluation Report, a virtual site visit to the University took place on 8–11 March 2021. The experts interviewed different stakeholders, e.g. the management of the HEI, the programme management, teaching and other staff, as well as students and graduates, in separate discussions and consulted additional documentation as well as student work. The visit concluded by the presentation of the preliminary findings of the group of experts to the University's representatives.

The report writing

After the site visit had taken place, the expert group drafted the following report, assessing the fulfilment of the AQAS criteria for the programme accreditation. The report included a recommendation to the Standing Commission. The report was sent to the University for comments.

The decision

The report, together with the comments of the University, forms the basis for the AQAS Standing Commission to make a decision regarding the accreditation of the programmes. Based on these two documents, on 31 May 2021 the Standing Commission took its decision on the accreditation. AQAS forwarded the decision to the university. The university had the right to appeal against the decision or any of the imposed conditions.

In June 2021, AQAS published the report and the result of the accreditation as well as the names of the panel of experts.

III. General Information on the University

Universitas Pendidikan Indonesia (UPI) is a multi-campus university located mainly in Bandung, West Java. The higher education institution was founded in 1954 as a teacher education college and has since been further expanded and developed into its current status as a state university. UPI offers a wide range of Bachelor's, Master's and doctoral programmes for both teacher education and other employment fields along

6 campuses. On its main campus, UPI runs 8 faculties and 1 postgraduate school. In total, the university offers programmes for currently ca. 46.690 students (January 2021).

According to UPI, the university strives to implement a "Tridharma" of higher education, that is education, research and community service interrelated. Research aims to develop educational sciences, educational disciplines and other discipline programmes in a cross-fertilization approach.

Educational science programmes have been designed to qualify teachers as well as non-teaching staff. Educational discipline programmes aim at qualifying teachers on a certain subject for early education, primary education and secondary education.

In particular, UPI formulates the following aims: 1) producing educators and educational staff, scientists and experts in all types and programmes of higher education, who have global competitive and comparative advantages; 2) producing, developing, and disseminating knowledge and technology to improve the welfare of the community; 3) creating community service programmes based on research results of vocational, technological, and engineering education and 4) developing both national and international collaborations with higher education institutions, research institutions, industrial services, professional associations, the government, and other scientific societies.

The Bachelor's programmes to be accredited are affiliated with the Faculty of Technological and Vocational Education located in Bandung, which offers 14 programmes. The Master's programme is run by the School of Postgraduate Studies. A chairperson / head of study programme is allocated for each programme.

UPI uses a local credit system based on the tertiary education system in Indonesia, called a Semester Credit Unit, SKS. One SKS for both theory and practice courses is said to have a workload of 170 minutes or 2.83 hours per week with 16 meetings per semester.

IV. Assessment of the study programmes

1. Quality of the Curriculum

> *The intended learning outcomes of the programme are defined and available in published form. They reflect both academic and labour-market requirements and are up to date with relation to the relevant field.*
> *The design of the programme supports achievement of the intended learning outcomes.*
> *The academic level of graduates corresponds to the requirements of the appropriate level of the European Qualifications Framework.*
> *The curriculum's design is readily available and transparently formulated.*
> *[ESG 1.2]*

1.1 General Assessment of all Programmes

The experts assess the four programmes to be well-established and academically sound. In particular, the programmes show considerable potential on which to further develop them. UPI is one of the most sought-after universities among Indonesian high-school graduates and the high number of applicants provides proof of this. UPI can therefore select among the best and the experts met committed and engaged students. It would be beneficial for all if even more students could be offered the chance of studying at UPI.

Before providing an individual evaluation of each programme, the experts would like to express the following general remarks which apply to all programmes.

The experts support and encourage UPI in furthering and strengthening its internationalisation. With the aim of becoming a leading institution in the ASEAN region, international cooperation and networks will be an essential prerequisite. As steps in the pursuit of this goal, the experts recommend to further encourage student and staff mobility, to develop and support international research cooperation and to support lecturers and staff in (further) improving their English skills (**Finding 1**, see also Chapter 5).

The programmes have transparently described intended learning outcomes on various levels, which are adequate and which provide a comprehensive overview of the programmes. Their number is quite large. The experts believe, however, that the learning outcomes (and the programmes) would benefit from a further refinement, especially with regard to a more outcome-oriented / competency-oriented description. The experts recommend that learning outcomes be written following the SMART Principle: Learning outcomes should be specific, measurable, achievable, realistic, and time-bound. At the same time, a review (or even reduction) of the essential learning outcomes could lead to a reassessment of each curriculum with the aim of merging or integrating courses and topics. Currently, the number of courses is quite high while the range of topics is generally adequate (**Finding 2**).

The Bachelor's programmes contain practical phases in the 7th and 8th semester in the form of a shorter industrial internship and a longer school internship.

The vocational pedagogical and subject didactic studies in the Bachelor's programmes and in the Master's programme include typical teacher training modules for the training of pedagogical staff in vocational schools and company trainings. In the individual programmes – in addition to the chosen specialist focus – the professional pedagogical and subject didactic competence development is adequate, especially in the content areas of theories, organization and structures of vocational training on the macro-didactic level and professional teaching, learning and development on the micro-didactic level. In addition, both theoretical and practical learning opportunities are included in the programmes which enable students to gather experiences in vocational pedagogical and school practical fields as well as in methods and techniques of knowledge acquisition in vocational education (especially in the Master's programme). Overall, it can be stated that the studies in the vocational pedagogical (pedagogical competencies) and subject didactic (pedagogical content competencies) accompanying courses convey profession-oriented competencies for teachers.

Course syllabi and descriptions are extensive and provide a good overview of individual classes. However, the indication of the workload, especially with regard to the exact amount of contact hours and hours of self-study, is at times incoherent and inconsistent. The course descriptions thus have to be revised in order to show the workload consistently. In addition, the workload of the thesis defence in the Bachelor's programmes has to be taken into consideration (**Finding 3**).

Finally, the programmes would benefit from using more up to date and current literature across all courses, especially but not only in the pedagogical courses (**Finding 4**).

1.2 Architectural Engineering Education (Bachelor of Education)

Description

According to UPI, the programme conveys personality competence, social competence, pedagogical competence, and professional competence in planning, conducting, managing, and evaluating learning processes in vocational architecture in vocational schools, related training programmes and other kinds of societal education. Graduates of the programme are said to be able to pursue a career as a teacher, educator, society-based construction technical facilitator and research assistant.

For students who do not aim at becoming teachers, the programme is designed to prepare graduates to be able to manage educational processes in society in arranging facility technical working programmes, in managing participative planning processes and in developing societal groups' capacity in a working area. Graduates who want to become a practicing architect need two extra courses based on the national professional requirements as well as further studies in professional architecture. The programme is also said to convey basic research skills.

UPI outlines that the learning outcomes of the programme have been and are continuously discussed with stakeholders, such as practitioners. Experts or guest lecturers are said to be invited to share their knowledge and experience with the students.

The curriculum, as outlined in the SER, consists of mainly two kinds of elements: those that convey pedagogical competences and those that convey subject-specific knowledge. Additionally, general courses have to be taken. In particular, the curriculum consists of pedagogic competence subjects of 28 SKS credits, expertise programme subjects of 100 SKS credits (divided into 55 SKS theory-based courses and 45 SKS studio-based courses) and general courses covering 16 SKS credits. Of those 144 SKS credits, 16 have to be chosen as electives, such as "Building Information and Modelling", "Urban Design" or "Advanced Digital Design". UPI claims that the curriculum is based on the requirements of both the Technology and Vocational Education Association and the Indonesian Architectural Engineering Education Association.

Practical elements are included e.g. in the 7th semester in the form of an industrial internship and in the 8th semester as a teaching practice internship in a vocational school to find out tasks and responsibilities of a teacher in the educational field.

UPI also strives to foster the acquisition of soft skills such as communication skills, collaborative competence in a team, leadership competence, critical thinking and decision-making competence.

Experts' Evaluation

A comprehensive module handbook of the Architectural Engineering Education programme exists in an English translation. This handbook documents all curricular elements of the programme in detail. It also gives an overview on which modules are to be taken in which semester and which courses are compulsory or elective.

The intended learning outcomes are presented in the handbook for each module in detail. According to the nature of vocational education as well as of architecture as an interdisciplinary subject, intended learning outcomes are subject specific as well as interdisciplinary. In addition, UPI and the faculty, as outlined in the SER, stress the goal of building the personal, pedagogic, professional, and social competences of their graduates. This objective is reflected in the curriculum by 100 SKS credits of subject courses, 28 SKS credits of pedagogic subjects, and 16 SKS credits of general modules. As a typical element of architectural study programmes, 45 SKS credits out of the subject courses are studio-based, which imparts cross-subject knowledge in correspondence with the holistic approach in architecture.

The intended learning outcomes as given in the module descriptions are judged appropriate to achieve the desired qualification. To complete the programme, a final thesis (6 SKS credits) has to be prepared and defended. The achieved academic degree "Bachelor of Education" corresponds to the national qualifications framework and, taking the number of subjects and the duration of 8 semesters into account, is more than comparable to a typical Bachelor's degree within the European Qualifications Framework.

According to results of the tracer study, all graduates have found a job one year after graduation and most of them in less than three months following their graduation, which demonstrates their readiness for and high acceptance in the labour market. This impression was confirmed by the statements of the alumni and labour

market representatives. The only improvement suggested by the alumni and labour market representatives was to expand the practical training period in industry.

The curriculum structure, as given in the study plan, fully supports the achievement of the intended learning outcomes. The order of subjects in the different semesters is logical and enables students to acquire the desired competences step-by-step. It should be mentioned that a large number (13) of elective courses are offered in the 5th to the 7th semester, which allow the students a broad choice of specialisation topics. Internships to gain practical experience are included in the curriculum, in vocational schools (8th semester) as well as in industry (7th semester).

In view of the rapid changes towards digitalisation in the construction industry, it will be mandatory for architects in the future to have good knowledge of Building Information Modelling (BIM). Therefore, it is strongly recommended to include BIM, which is currently offered as an elective course, as a compulsory course in the curriculum, which should include the theoretical background of digitalisation in the building industry as well as practical hands-on training with the respective software (**Finding 5**).

As the study programme is designed as an on-campus presence programme with strong emphasis on attendance (80% of attendance required), there are, under non-pandemic conditions, no part-time studies or distance learning units offered. Though there is no explicit mention in the module descriptions of which courses are open to other programmes, it was explained during the online site visit that according to the new government policy of "freedom of learning" students will be able to take courses at other programmes of the faculty, within the university, or at another (also international) university. These general study conditions and regulations are made clear to all students and are deemed understandable by the expert group.

1.3 Building Engineering Education (Bachelor of Education)

Description

The objectives of the programme are defined by UPI as educating teachers/educators, research assistants and community-based development facilitators. As educators, graduates are expected to have personal, social, pedagogical and professional competence in planning, implementing, managing and evaluating the learning process of building engineering vocational education in vocational schools, educational and training institutions and other social education institutions. In non-educational fields, graduates are supposed to work as community-based development facilitators or technical facilitators such as assistant planner, drafter or quantity surveyor.

The curriculum covering 146 credits includes general courses totalling 16 SKS credits, educational courses with 26 SKS credits and 104 SKS credits for subject specific courses, among those electives from a range of options totalling up to 16 credits. In the 8th semester, a field experience programme in a vocational school is obligatory.

UPI also strives to foster the acquisition of soft skills such as communication skills, collaborative competence in a team, leadership competence, critical thinking and decision-making competence.

Experts' Evaluation

Module descriptions of the Building Engineering Education programme exist in an English translation. They document the curricular elements of the programme in detail. A curriculum structure or study plan is not included but is described in the SER. It is recommended to provide all the information regarding the curriculum at one place, e.g. similar to the module handbook of the Architectural Engineering Education programme (**Finding 6**).

The intended learning outcomes are presented for each module in detail. According to the nature of vocational education as well as to the broad field of subjects typical for building engineering, intended learning outcomes are subject specific as well as interdisciplinary. In addition, UPI and the faculty, as outlined in the SER, stress the goal of building the personal, pedagogic, professional, and social competences of their graduates. According to the study plan given in the SER, the above objective is reflected in the curriculum by 104 SKS credits of subject courses (including electives), 26 SKS credits of pedagogical subjects (including the internship), and 16 SKS credits of general modules. According to information in the SER, the first six semesters comprises 20 credits and the remaining two 17 and 10 respectively. However, the number of credits for the modules listed in the table of the SER do not always sum up to the total number per semester; this has to be corrected (**Finding 7**).

The intended learning outcomes as given in the module descriptions are judged appropriate to achieve the desired qualification. To complete the programme, a final thesis (6 SKS credits) has to be prepared and defended. The achieved academic degree "Bachelor of Education" corresponds to the national qualifications framework and, taking the number of subjects and the duration of 8 semesters into account, is comparable to a typical Bachelor's degree within the European Qualifications Framework.

According to results of the tracer study, 90% of the graduates have found a job within six months after graduation, which demonstrates the graduates' readiness for and high acceptance in the labour market. This impression was confirmed by the statements of the alumni and labour market representatives. The only improvement suggested by the alumni and labour market representatives was to expand the practical training period in industry.

The curriculum structure, as given in the study plan, fully supports the achievement of the intended learning outcomes. The order of subjects in the different semesters is logical in general and enables the students to acquire the desired competences step-by-step. There is one module, "Entrepreneurship", which seems to be placed early in the overall curriculum (2nd semester). A shift to a higher semester, e.g. to the 7th semester as in the Architectural Engineering Education curriculum, could be considered.

It should be mentioned that a large number (18 different subjects) of elective courses are offered in the 6th and 7th semester (in total 16 SKS credits), which already allow the students a broad choice of specialisation topics. On the other hand, the number of compulsory modules and obviously the students' workload seem to be very high, which was acknowledged by the staff. In order to cope with this problem, which is typical for Civil/Building Engineering programmes due to the broad subject fields in the building industry, it is recommended to introduce the possibility of specialisation in higher semesters, e.g. building engineering, water resources engineering, traffic engineering, construction management (**Finding 8**).

Internships to gain practical experience are included in the curriculum, in vocational schools (8th semester) as well as in industry (7th semester).

In view of the rapid changes towards digitalisation in the construction industry, it will be mandatory for building engineers in the future to have good knowledge of Building Information Modelling (BIM). Therefore, it is strongly recommended to include BIM, which is currently offered as an elective course for architects, as a compulsory course in the curriculum, which should include the theoretical background of digitalisation in the building industry as well as practical hands-on training with the respective software (Finding 5, see above).

As the study programme is designed as an on-campus presence programme with strong emphasis on attendance (80% of attendance required), there are, under non-pandemic conditions, no part-time studies or distance learning units offered. Though there is no explicit mention in the module descriptions of which courses are open to other programmes, it was explained during the online site visit that according to the new government policy of "freedom of learning" students will be able to take courses at other study programmes of the

faculty, within the university, or at another (also international) university. These general study conditions and regulations are made clear to all students and are deemed understandable by the expert group.

1.4 Agroindustrial Technology Education (Bachelor of Education)

Description

The programme follows the aim to educate vocational school teachers in agricultural product processing, research assistants in agricultural product processing, practitioners in the agricultural/food processing industry and entrepreneurs in agricultural product processing. To align learning outcomes with the needs of the professional field, several studies have been conducted by UPI on required competencies in the field.

The provided curriculum is structured into 14 SKS credits on general courses, 8 SKS credits on basic courses on education, 4 SKS credits for faculty courses, 15 SKS credits on subject instruction courses, 82 SKS credits on agroindustry courses, 18 SKS credits on elective specialized expertise courses, 4 SKS credits on field experience practice. The Bachelor thesis covers 6 SKS credits. In the 7th semester, students are required to attend an industry internship; in the 8th semester, they carry out a professional practice at a vocational high school of agricultural product processing.

UPI also strives to foster the acquisition of soft skills such as communication skills, collaborative competence in a team, leadership competence, critical thinking and decision-making competence.

Experts' Evaluation

Desired qualifications to be achieved during the programme are presented as intended learning outcomes. They are both subject-specific and interdisciplinary in nature. For modules such as "Microbiology" and "Chemistry", laboratory internships are offered, which is very important. Innovative modules such as "Experiment Design" are offered, which have a very positive effect on the academic qualification of the graduates.

Intended learning outcomes are shown to be appropriate. Proof of their appropriateness can be provided through evaluations, graduate surveys, and feedback from the labour market.

The intended learning outcomes are updated according to current developments in the academic field and the labour market. The academic degree awarded to the graduates corresponds to the learning outcomes and the requirements of the appropriate level of the European Qualifications Framework and corresponds with the respective level of the national qualifications' framework.

Upon completion of the programme, the achievement of the intended level of qualification can be demonstrated by a final thesis.

All curricular elements and their functions are documented.

The curricular structure of the programme supports the achievement of the learning outcomes. The order of the curricular elements supports the learner's progression. However, the quality of the curriculum suffers from the fact that the curriculum is overloaded. Especially from the 1st to the 3rd semester, 9 modules are offered per semester, which is challenging. On average, 7–8 modules per semester would be very recommendable for the programme and could be achieved by a review of the learning outcomes (Finding 2, see above).

Both in the 1st and 5th semester, seminars on religious education are offered. This number is deemed too high for an engineering programme like agroindustrial technology education. This phenomenon is not specific to this particular programme but applies to all Bachelor degree programmes assessed here. The experts are aware of cultural traditions and national requirements, they would, however, recommend reducing the number

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of religious seminars so that they can only be offered in one semester (**Finding 9**). By optimizing the number of religious seminars, the feasibility to study the programme could be improved.

Mathematics is one of the most important modules for engineering. All special subjects in the programme are based on knowledge in mathematics. In this programme, mathematics is only offered in one semester. This means that no in-depth analysis seems possible and that topics are only dealt with superficially. However, as the experts learned during the talks with students and staff, the level of mathematical skills of high-school graduates seems to be relatively good. Nevertheless, a division of mathematics over 2 semesters would be beneficial, e.g. Mathematics I in the 1st semester and Mathematics II in the 2nd semester (**Finding 10**). Statistics could then be offered in the 3rd semester.

The curriculum defines which elements are compulsory and which are electives. Nevertheless, for some elective courses there is no information on the integrated practical parts. Practical elements are offered for the modules "Food Processing Technology", "Vegetable and Fruits Processing Technology", "Oil and Fat Processing Technology", "Spices & Herbs Processing Technology" and "Sugar and Freshener Technology" while for the modules "Cereals and Tubers Processing Technology", "Milk and Egg Processing Technology" and "Fish and Meat Processing Technology" no information is given regarding the offered practical parts. It should be ensured that the practical part is also offered for these elective courses (**Finding 11**).

There is an idealized typical course plan available. The curriculum covers subject-specific and cross-subject knowledge as well as subject-related, methodological, and general skills. This is documented on the level of the intended learning outcomes. It is transparently described which elements are offered exclusively for the programme and which parts are also used in other programmes. Curricular modifications are documented in a transparent manner and contribute to an improvement in programme quality.

The agroindustrial engineering programme is strongly practice-oriented. Graduates can work in the pharmaceutical as well as in the cosmetics industry. However, a prerequisite for this is in-depth practical experience. The industrial internship is currently only offered for a maximum of 4 weeks, which is very short. It is recommended to extend the duration of the internship to at least 12 weeks (**Finding 12**). The labour market, as expressed by representatives whom the experts had the opportunity to talk to, is willing to cooperate; this opportunity should be taken.

1.5 Technical and Vocational Education (Master of Education)

Description

With the programme students are supposed to be enabled to be lifelong learners who are independent and adaptable towards the changes of the current era. In particular, the programme has 12 learning outcomes which aim to develop the affective, cognitive, general, and specific skills of the students. There is one learning outcome to develop the affective skills of the students, 4 to develop the cognitive skills, 2 to develop the general skills, and 5 to develop the special skills.

Students shall be qualified to have competences either as educators or as researchers. Students are admitted to the programme from various vocational fields in their undergraduate programmes. The topic of the Master thesis is then related to the students' vocational education background.

In terms of the curriculum structure, the programme has 4 groups of courses covering 3 courses on postgraduate expertise subjects (7 SKS credits), 5 courses on study programme core expertise subjects (15 SKS credits) and 3 electives on study programme expertise subjects (6 SKS credits). The thesis covers 8 SKS credits.

UPI also strives to foster the acquisition of soft skills such as communication skills, collaborative competence in a team, leadership competence, critical thinking and decision-making competence.

The programme is said to have collaborated with e.g. the Indonesian Technological and Vocational Education Association and Indonesia Vocational Teachers and Lecturers Association in developing the curriculum.

Experts' Evaluation

The curriculum of this programme adheres to the vision-mission and objectives defined by UPI and the School of Postgraduate Studies. The implementation of the curriculum follows the three principles of curriculum design. The curriculum is based on learning outcomes, learning experiences are student-centered, and evaluation is outcome-based. The TVE programme aims to prepare researchers and professional educators in technical and vocational education.

The curriculum takes into account the needs of students, industry, and technical and vocational schools. The TVE programme complies with all government regulation in the design of the curriculum. All stakeholders (students, academic staff, labour, industry, non-governmental organisations, and external educational practitioners) are involved in the review and revision/updating of the curriculum. The TVE programme collaborated with the Department of Technical Education of Magdeburg University in terms of curriculum validation.

The programme is designed appropriately to prepare students to be professional educators and researchers. The different subjects offered in the programme give the graduates the competencies and the skills needed when they join the labour force.

The twelve learning outcomes of the programme, the course/subject learning outcomes, and the sub-course learning outcomes indicators are helpful to articulate and concretise the objectives of the programme. The learning outcomes correspond to Level 8 of the Indonesian Qualifications Framework. The experts would however like to suggest that UPI reviews the alignment of the learning outcomes, course learning outcomes, and the sub-course learning outcomes indicators (Finding 1, see above). A review will allow the university to see overlaps and gaps which could be remedied. It will also be helpful if UPI designed a curriculum map with the help of all stakeholders to make sure that the 17 subjects offered respond to one or more learning outcomes.

The first two semesters of coursework seem to indicate a high workload since students have to register for 12 SKS credits per semester. The third semester is less burdened since the students will only register for 2 subjects (4 SKS credits). Management could initiate a review of the possibility of spreading out the subjects evenly among the three semesters.

Students have to take a mid-semester and final semester examination in the subjects they have to complete. These are generally paper and pencil tests. It might be good to consider performance assessment tools to test the understanding of the students and to see how they can apply theories in concrete situations (see Chapter 3 below).

The use of 2 curriculum documents (course module and semester lesson plan) is a good practice. However, it might be better if these two documents were consolidated into one since the components for each are almost the same. This way, the teaching staff will only be preparing and using one curriculum document (**Finding 6**).

A review of the 2 curriculum documents shows that most references/literature used by the teaching staff are somewhat outdated. The experts would like to recommend that teaching staff uses more updated references/literature to ensure that the TVE programme responds to the changing internal and external environment nationally and globally (Finding 4, see above). The list of references should include the complete bibliographic information required for the programme and not only the main works.

The experts concur with the alumni and the labour market that the strength of the programme is the content of the curriculum and the enhancement of the soft skills of the students. The alumni and the labour market pointed out, however, that students need to improve their proficiency in English.

The thesis is an essential component of the TVE curriculum. The experts appreciate the collaborative effort undertaken by the students with the teaching staff in conducting research. The alumni and the labour market also mentioned that it might be good to consider offering more courses on research that will further improve the research skills of the students. The first could be a course focusing purely on qualitative research methods. The second could be a pre-thesis writing course or academic writing course to prepare the students for the actual thesis writing. These two courses could give the students a competitive advantage in their jobs, in undertaking research, and getting published in academic journals (**Finding 13**).

Since the subjects are quite theoretical in nature, the experts suggest including a practical/application component in the different subjects of the TVE programme.

Conclusion

The criterion is partially fulfilled. To fulfil the criterion, the experts suggest the following conditions:

The workload in the course descriptions of all programmes has to be presented coherently and consistently. In addition, the workload of the thesis defence in the Bachelor's programmes has to be taken into consideration.

In "Building Engineering Education", the number of credits per course has to be consistent with the overall workload in one semester.

For further development, the experts recommend the following:

As steps in the pursuit of internationalisation, the experts recommend to further encourage student and staff mobility, to develop and support international research cooperation and to support lecturers and staff in (further) improving their English skills.

The experts recommend refining the learning outcomes with regard to a more competence-oriented description. At the same time, a review (or even reduction) of the essential learning outcomes could lead to a reassessment of each curriculum with the aim of merging or integrating courses and topics.

More current and up to date literature should be used in the programmes.

The experts recommend including Building Information Modelling (BIM) as a mandatory course in the Architectural and Building Engineering Education programmes.

It is recommended to place student information on courses and lesson plans jointly in one document.

In "Building Engineering Education", the experts recommend creating specialisations addressing specific disciplines, e.g. building engineering, water resources engineering, traffic engineering or construction management.

In "Agroindustrial Technology Education", the number of religious seminars should be reduced and only offered in one semester.

In "Agroindustrial Technology Education", the experts recommend splitting the basics in mathematics into two courses covering two semesters.

In "Agroindustrial Technology Education", it should be ensured that practical elements are included in all elective courses.

The period of the internship in industry in "Agroindustrial Technology Education" should be expanded, e.g. to 12 weeks.

For "Technical and Vocational Education", UPI should offer a compulsory pre-thesis writing course in the first or second semester and a course on qualitative research methods.

2. Procedures for Quality Assurance

The programme is subject to the higher education institution's policy and associated procedures for quality assurance, including procedures for the design, approval, monitoring, and revision of the programmes.
A quality-oriented culture, focusing on continuous quality enhancement, is in place. This includes regular feedback mechanisms involving both internal and external stakeholders.
The strategy, policies, and procedures have a formal status and are made available in published form to all those concerned. They also include roles for students and other stakeholders.
Data is collected from relevant sources and stakeholders, analysed, and used for the effective management and continuous enhancement of the programme.
[ESG 1.1, 1.7 & 1.9]

Description

Generally, the quality assurance policies at UPI rest on national and internal regulations, as stated in the self-evaluation report. UPI has implemented a Strategic Plan 2020–2025 in which policies, key performance indicators, annual targets, responsible parties and implementing units are defined and fixed.

With its Strategic Plan UPI wants to become a "pioneering and superior university in the ASEAN region". Indicators for the achievement of this goal are, for example, the number of programmes with international accreditation and the number of students who graduate in time.

The Faculty of Technological and Vocational Education has defined its mission, strategies, targets and objectives which are connected to countable main target indicators, as outlined in the SER.

According to the SER, programmes hold annual evaluation meetings to review their curriculum. The evaluation meeting reviews the curriculum components, for instance the syllabus, semester learning plan, and module and learning materials renewal to meet the needs in the working fields. In addition, a holistic curriculum review is conducted every 5 years by inviting experts, graduates, users and lecturers.

Responsible parties and implementing units are defined on various levels, as outlined in the SER: a Quality Assurance Unit on university level, a Quality Control Unit on faculty level or graduate school level, respectively, and a Quality Control Cluster on programme level. These units operate differently regarding a programme: the Quality Assurance Unit and the Quality Control Unit develop quality standards, provide assistance and evaluate the implementation of quality assurance on university/faculty level. The Quality Control Cluster implements and ensures that quality assurance works well within the programme.

Internally, UPI applies a so-called Internal Quality Audit instrument to assess the quality of programmes annually. Additionally, each programme files a semi-annual and final report to measure its performance in the current year. External assessment is supposed to be based on the ISO 9001 certification.

Furthermore, UPI conducts several surveys, according to the SER. Among those are student satisfaction and lecturer performance questionnaires at the end of the semester and regular tracer studies of graduates/alumni. UPI claims to use the collected data in further developing the programmes.

UPI outlines that it collects information from stakeholders internally as well as externally. Information is collected through methods including questionnaires and in-depth interviews with stakeholders.

Experts' Evaluation

With regard to quality assurance the panel of experts agrees with the structures and measures used by the university and how every programme deals with this issue. Besides internal quality assurance tools, such as feedback through questionnaires filled out by students or data collection of students' progress, the university applies several instruments of external quality assurance. However, in order to further improve each individual programme it is important to continuously consider the needs of the labour market, especially with institutions outside the school sector, and create another linkage for students here as well. Therefore, each programme should strengthen its contacts with the industry and e.g. increase the numbers of lecturers from the labour market (**Finding 14**).

The experts welcome that experiences from student advisory bodies and groups are used for the enhancement of the programmes and that each semester the academic supervisors discuss their programmes with students to improve the offer. The results are also shared with the academic staff and often lead to a discussion with the students to enhance the modules. In general, the panel of experts is pleased with the processes of quality assurance.

Conclusion

The criterion is fulfilled.

For further development, the experts recommend the following:

UPI should strengthen its contact with industry, especially with labour market institutions other than vocational schools.

3.   Learning, Teaching and Assessment of Students

> *The delivery of material encourages students to take an active role in the learning process.*
> *Students are assessed using accessible criteria, regulations, and procedures, which are made readily available to all participants and which are applied consistently.*
> *Assessment procedures are designed to measure the achievement of the intended learning outcomes.*
> *[ESG 1.3]*

Description

UPI outlines 3 major methods of teaching and learning with the aim of fostering students' active engagement: the classical learning method, studio learning method and professional practice and training. The programmes will also use a project-based learning approach by integrating case studies. Additionally, the use of digital media is said to be implemented to support the learning process, especially for pedagogical subjects.

The learning process consists not only of face-to-face meetings, but also laboratory activities and professional practice in industry and in partner schools, as described in the SER.

In the Master's programme, the learning process is said to be student-centred as well. According to the information in the SER, each learning session promotes a learning method comprising a variety of presentation, responsiveness, assistance and assignment in forms of literature analysis, technical and vocational curriculum analysis and technical and vocational education policy analysis. Learning experiences emphasize analysis and synthesis of theoretical implementation, concepts and models, and their innovative development in solving problems of technical and vocational education.

The academic calendar is said to be fixed before the beginning of the semester by the university's Academic Directorate. Scheduling is carried out with the help of a software programme.

According to UPI, the learning process is measured by active classroom participation, subject's tasks accomplishment and formative assessment through midterm and final test. Furthermore, summative assessment is claimed to be used to assess the achievement of student learning outcomes.

Experts' Evaluation

The teaching staff attempts to provide varied learning methods and assignments/assessment methods to their students. The learning methods and assignments/assessment methods used in the four programmes are generally aligned with the programme learning outcomes, course learning outcomes, and sub-course learning outcomes indicators and the learning materials. This alignment is a way of ensuring that the students will acquire the competencies they need when they complete their degrees. The experts think this alignment could still be improved by undertaking an in-depth review of the course modules and the semester lesson plans with the management of the programmes, the teaching staff, and other stakeholders.

The four programmes under scrutiny generally conduct classes in the traditional way (face-to-face). The face-to-face classes are complimented with laboratory learning activities and professional practice/internships with industry and partner schools and thesis writing. The four programmes shifted to online teaching and learning because of the Covid 19 pandemic. The programmes adapted a learning management system to conduct classes. The course modules and the semester lesson plans allow the teaching staff to design and implement the course/subject they are teaching in a concrete manner. This is a very good practice.

The most common learning methods used by the teaching staff are lectures and discussions. The experts would like to encourage the teaching staff to use more varied teaching/learning methods that are more engaging, interactive and encourage active participation from the students (**Finding 15**). Some semester lesson plans in the appendices/attachments submitted to the experts show that the assignments and assessments columns were blank. It would be good if the management team could make sure that all components in the semester lesson plans are filled up for transparency and to clearly define expectations from the students.

The Architectural Engineering, Building Engineering, and Agroindustrial Technology Education programmes use a project-based learning approach in parts. They specifically use case studies and structured tasks for the purpose of exploring various phenomena and problems, discussing various alternatives to solve problems, improving the creativity of students, and enhancing the communication skills of students. This is commendable as it allows students to work collaboratively, enhance their critical thinking and creativity skills, and improve their communication skills. It may be helpful to include more projects done individually or in groups.

The learning process practiced in the TVE programme is guided by the principle of student-centred learning. Some specific approaches used are presentations, journal reviews, book reports, technical and vocational curriculum analysis. Learning experiences emphasize analysis and synthesis of theoretical implementation, concepts, and models, and their innovative development in solving problems of technical and vocational education.

The professional practice/internships with industry and partner schools, thesis writing, and engaging in community services are noteworthy. Students and graduates appreciated their internships, on the job trainings, and apprenticeships.

Students also engage in community services in some courses and are guided by the teaching staff.

The four programmes adhere to the assessment/grading system and the graduation scheme defined by UPI.

Many subjects across the four programmes require a mid-semester examination and a final examination. This could be very heavy workload for the students since many of the students are enrolled in 6 to 9 subjects per

semester. It might be helpful for each programme to assess the advantages and disadvantages of this practice. An alternative would be to ask students to do more projects applying the principles of project-based learning or more authentic performance assessments (**Finding 16**).

The experts would like the management and the teaching staff to evaluate the practice of considering 80% attendance as an assessment method since attendance is not considered an assessment tool following the principles of assessment and evaluation of students.

The experts took note of the active involvement of the teaching staff in conducting the teaching-learning process.

Conclusion

The criterion is fulfilled.

For further development, the experts recommend the following:

The experts recommend varying teaching methods and strategies.

UPI should use a greater variety of assessment forms in the programmes.

4. Student Admission, Progression, Recognition and Certification

> *Consistently applied, pre-defined, and published regulations are in place which cover student admission, progression, recognition, and certification.*
> *[ESG 1.4]*

Description

Student Admission

According to national regulations, admission is based on different procedures: national selection, joint selection of state universities and independent selection of UPI. Each procedure is allocated with a maximum number of students to be admitted. National selection is based on an Institute of Higher Education Entrance Test and computer-based writing tests, according to the information provided in the SER. UPI's independent selection is based on a written test.

Admission in the Master's programme is based on previous academic achievements and an Enrolment Test to the School of Postgraduate Studies, which consists of an English written test, an academic test and an interview. Student admission in the Master's programme makes use of a web-based online system. The programme is designed as a multi-entry programme open to students with a variety of educational backgrounds who may have to take additional courses.

Progression

Student's progression is monitored via the academic supervisors and the student directory system which is accessible to the head of the programme, as outlined by UPI.

Recognition and Certification

UPI outlines procedures for student transfer. At the end of studies, UPI issues a diploma and a transcript.

Experts' Evaluation

Based on the national regulations of admission the programmes follow nearly the same procedure of admission which enable interested high-school students to apply for their desired programme. The experts consider the admission process to be clearly defined. Besides the three mentioned ways of admission, students have the opportunity to get access to UPI based on special achievements. Furthermore, each study programme has the opportunity of individual testing to support the objectives of the programme. In case of the Master's programme, the experts also welcome the fact that one part of the admission process consists of an English written test to improve the foundation of internationality.

The panel of experts appreciates the monitoring and support of student's progression by allocating an academic supervisor to each student and by the fact that students with a low GPA have the opportunity to talk to their supervisor and receive individual guidance. In case students switch to another programme it is possible for them to transfer their credits.

At the end of each programme, graduates receive documentation explaining the qualification gained, including context, level, and status of the studies in an appropriate manner.

Conclusion

The criterion is fulfilled.

5. Teaching Staff

> *The composition (quantity, qualifications, professional and international experience, etc.) of the staff is appropriate for the achievement of the intended learning outcomes.*
> *Staff involved with teaching is qualified and competent to do so.*
> *Transparent procedures are in place for the recruitment and development of staff.*
> *[ESG 1.5]*

Description

In the self-evaluation report, UPI states that 22 lecturers teach within the programme "Architectural Engineering Education", one of them is a professor, 7 are associate professors, 12 assistant professors and 8 lecturers.

Lecturers of "Building Engineering Education" include 7 associate professors, 11 assistant professors, 3 lecturers and 3 assistant lecturers.

The human resources in the "Agroindustry Technology Education" programme consist of 12 lecturers, 1 laboratory assistant and 1 education staff. The 12 lecturers include 1 professor, 2 associate professors, 7 assistant professors and 2 lecturers.

In the Master's programme, UPI lists 18 lecturers all having a PhD degree. Out of 18, 9 are professors and 9 are associate professors.

The workload of teaching staff typically equates to 12 to 16 SKS credits in the fields of education, research and service, except for lecturers who get additional assignments.

According to UPI, lecturers may participate in professional trainings offered by the university or the Indonesian authorities. The educational workforce development programme is offered by the human resources division of UPI. The university claims to provide incentives for lecturers to attend seminars and workshops related to the development of science and scientific networks at national and international level. Programmes offered are also open to administrative personnel, according to information provided by UPI and cover topics such as

technical capacity building activities (IT, finance, administration, filing, procurement of goods and services, English, and ISO) and benchmarking activities for administrative management and quality assurance to various reputable universities.

Recruitment procedures follow the policies of UPI and national regulations, according to the information in the SER. Lecturer recruitment is started by a proposal confirming the needs of a programme. The recruitment process is carried out openly through announcements on the UPI website.

Experts' Evaluation

Required resources are checked with regard to the capacity of the institution and the number of teaching staff is considered sufficient for the delivery of all four programmes.

All human resources involved in teaching within the programmes are documented, including their academic and other relevant qualifications.

The 18 lecturers in the TVE programme hold doctoral degrees and have varied areas of expertise. The teaching staff are affiliated with several professional associations nationally and internationally such as the Indonesian Association of Lecturers and Teachers of Vocational Education (ADGVI), the Indonesian Association of Technical and Vocational Education (PAPTEKINDO), and the International Vocational Education and Training Association. They are also recognised for their expertise on technical and vocational education as they are invited as visiting professors, speakers, and research collaborators.

The School of Postgraduate Studies has made efforts to invite visiting lecturers from other countries to provide the students with an international flavour in the learning of technical and vocational education.

For the quality of teaching, the following must be required: A well-qualified teaching staff, a good level in English and good industry experiences of the teaching staff (especially for the agroindustrial technololgy engineering). It is a general characteristic of the Bachelor's programmes that the teaching requirements are in part covered by Master's graduates, so-called "assistant professors". The amount is particularly striking in the Agroindustrial Technology Education programme, with a total of 12 instructors out of which only 3 hold a PhD degree. Master's graduates can teach in the Bachelor's programme but this should be an intermediate solution rather than a permanent solution. For the quality of teaching, it is strongly recommended to increase the number of teaching staff with a PhD degree in this particular programme (**Finding 17**). This would also help raise the number and quality of research conducted at the department.

During the site visit, the experts experienced that English language skills among the teaching staff varied widely. Without proficient English language skills, it will hardly be possible to achieve the goals set by UPI. English skills play the most important role in internationalization (see above). Thus, UPI should support teaching staff in improving their English language skills (**Finding 1**, see above).

The number of teaching staff and teaching hours are documented and sufficient. The overall workload of staff (teaching, administration, research) is appropriate for the delivery of the programmes. Teaching staff and hours are available for the period of accreditation. If contracts expire in the next six years, the intent is to fill the position anew. Vacancies are being advertised. Transparent recruitment procedures for teaching staff are in place.

A concept for staff development is in place. Teaching staff is given the opportunity to take part in trainings for further development covering up to date scientific and didactic aspects.

Industry experiences are particularly important for engineering programmes such as agroindustrial engineering. An analysis of the curriculum vitae of teaching staff shows, however, that some teachers lack industry experience. Therefore, further qualification measures should focus on this aspect.

Conclusion

The criterion is fulfilled.

For further development, the experts recommend the following:

UPI should raise the number of teaching staff holding a PhD in the "Agroindustrial Technology Education" programme.

6. Learning Resources and Student Support

Appropriate facilities and resources are available for learning and teaching activities.
Guidance and support is available for students which includes advice on achieving a successful completion of their studies.
[ESG 1.6]

Description

UPI is state-funded and charges tuition fees for its programmes. As outlined in the SER, there are several scholarship opportunities for students. UPI funds are allocated to the faculties and programmes and an Annual Activities Budgeting Plan is set up. Programmes are supposed to be independent in using their budget.

The programmes are offered on UPI's campus in Bandung, which includes classrooms, libraries, laboratory rooms, computer labs as well as sports facilities. The facilities are described as accessible for students with disabilities with e.g. elevators in stories-building, ramps to access places with different heights or wider pedestrian roads.

In the SER, UPI lists several programme-specific facilities, among them a manual drawing studio, a wood and stone workshop, a structure and construction laboratory and a survey and mapping laboratory for "Architectural Engineering Education", computer laboratories and hydraulics laboratories for "Building Engineering Education" and day care, early childhood education, primary education and secondary education lab schools for all educational programmes.

The School of Postgraduate Studies outlines 38 classrooms, 1 auditorium, short throw projector, 1 reading room, 3 internet (student space) rooms, 1 computer laboratory, 1 sport laboratory, 2 lecturer and supervision rooms, 7 thesis defense rooms, 1 multipurpose room and 2 meeting rooms with touch screen projector and teleconference tool.

In addition to the on-site library, the university provides a digital library that can be accessed by both lecturers and students. According to UPI, it uses a management information system which is accessible to students and which contains information on courses and examinations.

During their studies, students are assigned an academic supervisor/advisor who provides consulting services related to academic and non-academic activities. Furthermore, support is clustered at the Integrated Service Unit of Guidance and Career Development and Counselling.

UPI claims to offer special services for students with special needs or special conditions, especially for students from lower income backgrounds.

Experts' Evaluation

Learning Resources

The descriptions of courses/modules are available. They need, however, revision with regard to the transparency of the workload (**Finding 3**, see above). Furthermore, they would also benefit from an enhancement of the connectivity among the competence which focus on what is to be achieved as learning outcomes (**Finding 1**, see above). Such connectivity is required to empower the skills and competence for teacher candidates, especially for vocational schools.

The procedures to ensure course coordination are good and accountable. Students seem to have no critical problems during the learning process and can complete their studies within the expected period of time.

The material resources such as computer workplaces are impressive, the resources constitute high-standard facilities and are adequate to support the achievement of the qualified learning outcomes.

Besides such resources, finance is the most important material resource, especially in the current pandemic situation. Perhaps, prospective external resources are kindly required to support students who are affected by the pandemic. The policy of corporate social responsibility could be considered as one of the external resources to support such students so that all students can complete their courses in the expected period of time without any financial problems.

The laboratories have complete and adequate equipment and are also supported by professional technical staff. The experts commend the university on this aspect and encourage UPI to keep the laboratories up to date.

There is a well-equipped technical centre in the "Agroindustrial Technology Education" programme. The existing equipment systems correspond to state of the art. Yet, the SER only speaks of "laboratory", no distinction is made between the technical centre and the laboratory. Equipment such as incubators for the yoghurt process have large volumes but can also realize smaller productions over a few kilogrammes and should therefore be specified as a technical centre in the documentation.

For the "Agroindustrial Technology Education" programme, the experts encourage UPI to provide more courses that are in accordance with the vocational school fields of competence, such as agricultural plantation. There are many good vocational schools in West Java which provide agricultural competences. They require good teachers who can guide their students to achieve good skills of agricultural competences and UPI can provide this. An external agricultural plantation laboratory would be useful in this context. However, the experts understand that this is a challenging endeavour for UPI.

According to the impressions gathered during the campus tours and the explanations of staff, the experts believe there is no problem regarding room and space required for the number of students in the programmes.

The access to appropriate literature, journals and academic sources is reliable and easy for students. The sources contain not only material on general technical competences but also on TVET in a global context since students will face such issues when they go to vocational school.

Student Support Services

UPI is the most sought-after university in Indonesia, especially in West Java. This proves that student support is effective and abundant. Good procedures for academic advising are in place, one specific academic advisor is assigned to a group of students. Students are thus accompanied throughout their studies. The introductory offerings are delivered well, both for new and potential students. In general, the experts hope that even more students can get the opportunity to study at UPI.

Based on the discussion with students and alumni, academic advisors have performed well in their job. Students and alumni shared very positive experiences with the experts.

The specific programme counselling for individual students is running well, the advisors have goodwill to allocate time with the students.

The study programmes provide bilingual courses for incoming oversea students, which is very helpful and should definitely be maintained. However, it has not become clear if incoming students receive a tuition fee waiver. The experts consider this valuable but understand that this poses a financial burden on the university.

The programmes include practical phases/internships, it is mandatory for all students to go to a vocational school to gather teaching practices as well as to join industry to do practical industrial works. The phases are assigned in the last two semesters. The programmes assist students in finding placements. Some vocational schools and industries have good relationship with the study programmes. It would, of course, be fruitful to expand the relationship to other valuable areas (**Finding 14**, see above).

Student diversity has been a consideration in Indonesia for quite some time, so the university provides scholarships, digital libraries, dormitories and courses of Bahasa for oversea students as learning resources and student support.

The support and administrative staff have a Bachelor's degree as a minimum requirement. They are provided with opportunities to develop their competences by joining several mandatory administrative workshops. The workshops are both nationally and internationally certified.

Conclusion

The criterion is fulfilled.

7. Information

Impartial and objective, up to date information regarding the programme and its qualifications is published regularly. This published information is appropriate for and available to relevant stakeholders.
[ESG 1.8]

Description

Information on the programmes, i.e. the learning objectives, the curriculum, the admission criteria and procedures, is available on the UPI website, according to the university. Learning material and the course handbooks are said to be updated regularly, usually every year.

Experts' Evaluation

Information on the four programmes is available and up to date on the website. Course descriptions and lesson plans are available. They require, however, a revision with regard to the correct and consistent allocation of workload (**Finding 3**, see above).

Conclusion

The criterion is fulfilled.

V.   Recommendations of the panel of experts

The panel of experts recommends

▪   to accredit with conditions

the study programmes "**Architectural Engineering Education**", "**Building Engineering Education**", "**Agroindustrial Technology Education**" (Bachelor of Education) and "**Technical and Vocational Education**" (Master of Education)" offered by **Universitas Pendidikan Indonesia**.

Findings:

1.   As steps in the pursuit of internationalization, the experts recommend to further encourage students and staff mobility, to develop and support international research cooperation and to support lecturers and staff in (further) improving their English skills.

2.   The experts recommend refining the learning outcomes with regard to a more competence-oriented description. At the same time, a review (or even reduction) of the essential learning outcomes could lead to a reassessment of the curriculum with the aim of merging or integrating courses and topics.

3.   The workload in the course descriptions of all programmes has to be presented coherently and consistently. In addition, the workload of the thesis defence in the Bachelors' programmes has to be taken into consideration.

4.   More current and up to date literature should be used in the programmes.

5.   The experts recommend including Building Information Modelling (BIM) as a mandatory course in the Architectural and Building Engineering Education programmes.

6.   It is recommended to place student information on courses and lesson plans jointly in one document.

7.   In "Building Engineering Education", the number of credits per course has to be consistent with the overall workload in one semester.

8.   In "Building Engineering Education", the experts recommend creating specialisations addressing specific disciplines within Building Engineering Education, e.g. building engineering, water resources engineering, traffic engineering or construction management.

9.   In "Agroindustrial Technology Education", the number of religious seminars should be reduced and only offered in one semester.

10.   In "Agroindustrial Technology Education", the experts recommend splitting the basics in mathematics into two courses covering two semesters.

11.   In "Agroindustrial Technology Education", it should be ensured that internships are included in all elective courses.

12.   The period of the internship in industry in "Agroindustrial Technology Education" should be expanded, e.g. to 12 weeks.

13.   For "Technical and Vocational Education", UPI should offer a compulsory pre-thesis writing course in the first or second semester and a course on qualitative research methods.

14.   UPI should strengthen its contact with industry, especially with the labour market institutions other than vocational schools.

15.   The experts recommend varying teaching methods and strategies.

16.   UPI should use a greater variety of assessment forms in the programmes.

17. UPI should raise the number of teaching staff holding a PhD in the "Agroindustrial Technology Education" programme.