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SMARTCITY
Innovative Approach Towards a Master
Program on Smart Cities Technologies

CBHE Joint Project 598317 SMARTCITY: Innovative Approach towards a Master Program on Smart Cities Technologies

	Title and reference number of the work package (WP)	*WP4 EU based Quality Assurance System*

Activities carried out to date to achieve this result:

N°	Activity Title	Start date	End date	Place	Specific and measurable indicators of achievement
4.3.	Development of QAS and Guide on its use		06/05/2019	Ulaanbaatar Mongolia	

Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG)

II. European standards and guidelines for quality assurance in higher education

Part 1: Standards and guidelines for internal quality assurance

The standards for quality assurance have been divided into three parts:
- Internal quality assurance
- External quality assurance
- Quality assurance agencies

1.1 Policy for quality assurance

Standard:
Institutions should have a policy for quality assurance that is made public and forms part of their strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes, while involving external stakeholders.

Guidelines:
Policies and processes are the main pillars of a coherent institutional quality assurance system that forms a cycle for continuous improvement and contributes to the accountability of the institution. It supports the development of quality culture in which all internal stakeholders assume responsibility for quality and engage in quality assurance at all levels of the institution. In order to facilitate this, the policy has a formal status and is publicly available.

Quality assurance policies are most effective when they reflect the relationship between research and learning & teaching and take account of both the national context in which the institution operates, the institutional context and its strategic approach. Such a policy supports
- o the organization of the quality assurance system;
- o departments, schools, faculties and other organizational units as well as those of institutional leadership, individual staff members and students to take on their responsibilities in quality assurance;
- o academic integrity and freedom and is vigilant against academic fraud;
- o guarding against intolerance of any kind or discrimination against the students or staff;
- o the involvement of external stakeholders in quality assurance.

The policy translates into practice through a variety of internal quality assurance processes that allow participation across the institution. How the policy is implemented, monitored and revised is the institution's decision.

The quality assurance policy also covers any elements of an institution's activities that are subcontracted to or carried out by other parties.

1.2 Design and approval of programmes

Standard:
Institutions should have processes for the design and approval of their programmes. The programmes should be designed so that they meet the objectives set for them, including the intended learning outcomes. The qualification resulting from a programme should be clearly specified and communicated, and refer to the correct level of the national qualifications framework for higher education and, consequently, to the Framework for Qualifications of the European Higher Education Area.

Guidelines:
Study programmes are at the core of the higher education institutions' teaching mission. They provide students with both academic knowledge and skills including those that are transferable, which may influence their personal development and may be applied in their future careers.

Programmes
- o are designed with overall programme objectives that are in line with the institutional strategy and have explicit intended learning outcomes;
- o are designed by involving students and other stakeholders in the work;
- o benefit from external expertise and reference points;
- o reflect the four purposes of higher education of the Council of Europe (cf. Scope and Concepts);
- o are designed so that they enable smooth student progression;
- o define the expected student workload, e.g. in ECTS;
- o include well-structured placement opportunities where appropriate;
- o are subject to a formal institutional approval process.

Accreditation with ASIIN - Degree Programmes, Institutions and Systems
Introduction to the procedural principles

List of key documents

At European level: "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (May 2015, in the applicable version) (ESG, European Standards and Guidelines)
European Union: ECTS Users' Guide, Luxembourg (2015, in the applicable version).
European Communities: European Qualifications Framework, EQF, (Empfehlung der Europäischen Parlaments und der Europäischen Rates vom 23. April 2008 zur Einrichtung des Europäischen Qualifikationsrahmens für lebenslanges Lernen (2008/C 111/01)

2.1 Quality

ASIIN's understanding of quality is characterized by two key elements:
- o The content-related quality of teaching and learning is defined by the higher education institution1 itself by determining the objectives and expectations for outcomes.
- o The higher education institution and its members include external requirements owed to the political, legal and socio-economic environment in which they design and implement their education and/or training programmes. As a consequence, content-related quality is not chosen arbitrarily since it must also meet external expectations: In contrast to economic success (the central standard for quality and quantity-related production objectives of businesses), quality criteria for higher education institutions can only be developed in reference to the effect which the activities of the institution have on society, the economy and education policy making.

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2.2 Quality management and quality assurance

Management systems are systems used to both define the policies and objectives of an organisation and how to reach those objectives. An organisation can employ different management systems at the same time, e.g. to manage quality, budgets or risks.

"Quality management" can be described as quality-oriented governance in an organisation. Therefore, it is part of the management unit which coordinates, reviews and orients all activities in and of an organisation (e.g. higher education institution) towards compliance with the objectives defined by the organisation itself and other parties, while at the same time making sure that the objectives of the organisation are developed further. Quality management systems (QMS) unite all procedures, methods and tools destined for quality management which are aimed at some or all processes in an organisation.

"Quality assurance" refers to all activities which allow for the quality of an object to be maintained. Quality assurance activities can be an integrated part of a quality management system or implemented separately for single issues that need to be controlled.

2.4 Accreditation

Accreditation is defined as an instrument of quality assurance. It confirms in a way that is comprehensible to all interested parties - including those outside the higher education institution - that at a certain point of time an object under review complies with certain standards. These standards are publicly accessible and compliance is required from all institutions which want to acquire the certificate. Accreditation is connected with a yes/no decision if the object under review is awarded the certificate or quality seal for a certain period.

3.4 Review of degree programmes in an accreditation procedure: orientation on results

ASIIN's understanding of quality is based on the stated goals and results of a qualification process. A programme is seen as a qualification process.

The definition of the substantive aspects which constitute the quality of a programme is based on the objectives and expectations set out by the higher education institution; they should take into account the political, legal and socio-economic context within which a programme is created and implemented. The quality of the qualification process is then established based on the combination of its elements and the extent to which it achieves its objectives.

The accreditation procedure examines the logic and effectiveness of the qualification process within a programme. A programme is typically implemented in three phases:

1. Definition of objectives: For each programme, the main focus lies on the learning outcomes that should be achieved by students during their studies. This means that the overall learning outcomes aimed at in the programme must be rigorously collated with the learning outcomes of the individual modules in the programme.
2. Implementation: Here, the focus is on the measures, instruments and resources which are the product of the supporting or organisational processes of a higher education institution that it invests in the implementation of a programme (input) in order to attain the defined goals (outcome).
3. Further development and checking results: The institution's internal quality assurance process is considered at this juncture; its feedback mechanisms should lead to continuous improvements in the programme.

ASIIN's process-oriented perspective and underlying quality concept mean that the responsibility for quality and the process firmly lies with higher education institutions which are, therefore, also responsible for defining the objectives for a given programme. In this way, they give expression to their strategic orientation, the image they seek to create and their integration within the social context.

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The Procedure of Education Accreditation Process
| MNCEA: Mongolian National Council for Education Accreditation |

One. General Condition

1.1 This procedure is complied with organizing accreditation processes for TVET institutions, HEIs and their academic programs in a range of functions and responsibilities of the Mongolian National Council for Education Accreditation (referred to as the "NCEA").

1.2 The accreditation process must be satisfied to principles of transparency, consciousness and equality for stakeholders at all levels of the process.

1.3 The accreditation process is conducted in two ways namely; HEIs and TVET institutions (referred to as the "Institution") and degree –awarding academic programs (referred to as the "program").

1.4 Institutional and program accreditation means that officially – empowered evaluation experts make an external review on the self-evaluation report prepared by the given HEI, which ensures that the institution or program meet accreditation criteria and requirements endorsed by the NCEA, and make a evaluation assessment by assuring the academic quality.

1.5 The process of institutional and program accreditation have 3 generic levels such as;
- o Self –evaluation
- o External review
- o Accreditation decision–making

Two. Accreditation Process

2.1 The institutional accreditation has following sequential steps and procedures.

Step of conducting the self-evaluation:
2.1.1 The institution will appoint a team assigned to undertake self-evaluation and to perform an assessment on whether it satisfies to accreditation criteria and requirements endorsed by the NCEA, and finally, draft summarized self-evaluation report.
2.1.2 Upon the self-evaluation report is discussed and approved via the HEI's Board of Trustees, a request /application form/ on accreditation will be submitted to the NCEA Secretariat Office.
2.1.3 The NCEA Secretariat Office will accept only the request that meet below conditions;
a. Data on the application form must be complete and accurate.
b. Information specified on the application form must be potential to be evident through information on the institution's website and official documents.

2.1.4 The Secretariat Office will scrutinize accurately the institution's request within 10 days after receiving the request and if it is acceptable, it will appoint a coordinator, invoices costs related to the accreditation and conclude a contract with the institution. The office will stipulate responsibilities and obligations of contractor parties and conditions of payment and annexes the timelines with all phases, timings and responsible bodies until a decision is made.

2.1.5 The coordinator will serve to coordinate parties involved in the accreditation process and provide with methodological guidelines and advices for implementing responsibilities and obligations stipulated in 2.1.4 of this procedure, on behalf of the Secretariat Office.

2.1.6 The institutions should draft and submit its self-evaluation report in accordance with the coordinator's guidelines within 3 months after the contract is concluded. The coordinator will scrutinize the self-evaluation report and supplementary data within 10 days after receiving the report. If there is any incomplete and inaccurate, the coordinator can return the report to the institution and accordingly, the institution submits back to the coordinator by eliminating detected inaccuracy and incompleteness within 7 days.

2.1.7 If the self-evaluation report and supplementary data are complete and accurate, the coordinator will hand out it to the respective commission, by accompanying with reference letter.

Three. Criteria and Essentials of Program Accreditation

	Criteria	Indicators
	Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) **II. European standards and guidelines for quality assurance in higher education** **Part 1: Standards and guidelines for internal quality assurance** **1.2 Design and approval of programmes**	
	INPUT:	
	Criterion 1. Program design The program must be designing, approving and improving the documents of operational planning and arrangement in accordance with mission criteria addressing to satisfy the stakeholders' demands.	
1.1	**Program essentials** The program must be designed in accordance with national and international education trends to satisfy the needs of program stakeholders.	o Analysis in future trends of development of society, economy, technology and the professional sector, and demands by the stakeholders. o Form of alumni /specialists/ o Comparative study of the program against identical programs at national and international level /difference, strengths, weaknesses, and improvement/
1.2	**Program mission and objectives** Program's mission has to be clear; expected knowledge, skills and trend of graduates have to be aligned with development and market demands of the professional sector.	o Mission, objectives, instructional and learning methodologies and the fixed assessment system of program implementation o The state of the expected outcome of the program being aligned with the school mission statement and objectives o The state of comments and feedback by the stakeholders being considered in identifying expected learning outcome and trends by the graduates and the program designing process involving the participation by representatives
1.3	**Documents of program design** Curriculum and syllabus must involve the content of knowledge, skills and trends expected to be obtained through the program, learning outcome oriented methodology, as well as accurate learning assessment form. The feedback and advice by the stakeholders must be regularly reflected and taken action.	o The state of general criteria of program being satisfied and approved o The state of curriculum integrating theory and practice at appropriate amount, and being addressed to develop learner's academic and individual skills o The state of syllabus being addressed to program outcome, providing correlation of content and skills, and reflecting diversity of teaching and learning methodologies and assessment

Criteria	Indicators

Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG)

II. European standards and guidelines for quality assurance in higher education
Part 1: Standards and guidelines for internal quality assurance

1.1 Policy for quality assurance

PROGRESS:

Criterion 3. Program management and administration
The program administration body must be distributing resources appropriately to ensure high quality learning and teaching process with no interruption, providing with comfortable teaching and learning environment and be implementing strategy and management to achieve program development.

3.1	**Program management process** Program management service must be dedicated to enhance the quality of teaching and learning process and to satisfy the input by participants and interested parties.	o Utilization, coordination, transparency of teaching and learning management and information system o The state of ensuring transparent input by the students and teachers in decision making related to program courses /department, professor's team, program committee/ o Implementation of rules and procedures for program design, implementation and assessment o Long and short term planning, implementation report, and analysis and mechanism of progress and improvements o Structural system of receiving and responding to comments and complaints must be complete o Research of staff human resources, analysis and assessment for development work, implementation of reward system based on performance and achievement
3.2	**Program marketing promotion** The program has to involve promotion arrangement and planning adequate to satisfy its sustainability.	o Frequency of conducting labor market survey o Program promotion, promoting strategies, their availability and efficiency
3.3	**Alumni policy** The program must have regular connection with its alumni, organize professional development short courses, and the graduates must be counseling the current students on pursuing their majors.	o Survey of alumni career promotion o Percentage of students who are studying at the advanced level o Policy, plan and involvement of courses for alumni o State of sustainable operation of alumni organization
3.4	**International relations and cooperation** There must be connections with international higher education institutions, research societies and professional organizations through programs of teacher and student exchange,	o Report and summary of current cooperative projects and programs o Amount of teachers and students being involved in exchange program and scholarships o Amount, outcome and impact of

	scholarship and collaboration, educational and research activities and workshops.	participation at international conference, workshop, research works and other operations
3.5	**In-country cooperation and social services** The program implementing organization must be working through connections with professional society, industry or service providers, employers association, government bodies and NGOs.	o Contract of cooperation and work outcome o Report and review of current works o Strategies and experience of cooperation o Form of social services, amount of participants and outcome /from teachers and students part/
3.6	**Financing/Funding** The program must have multi-source funding and certain amount of its funding must be spent on teacher and student development.	o Self-autonomy of budget and financing o Estimation of cost per student o Budget for reformation addressing expected outcome of the program o State and private sector support and financing and their expenditure o Generating, distributing and funding alternative budget source

	Criteria	Indicators
Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) **II. European standards and guidelines for quality assurance in higher education** **Part 1: Standards and guidelines for internal quality assurance** **1.1 Policy for quality assurance**		
OUTPUT:		
Criterion 8. Quality assurance and evaluation The program must have regular internal quality assurance mechanism which is directed to continuous development and have regular external evaluation.		
8.1	There must be regular program supervision, analysis and evaluation at stated frequency.	o Management and administrational resolution and outcome to ensure internal quality assurance of the program o Implementation and evaluation of fixed policy, program and plan of internal quality assurance o Input by program stakeholders in internal quality assurance o The state of evaluating at what extent the program achieved its expected outcome based on documented statistics as well as conducting self-evaluation o The state of reflecting research result in program progress and improvement with arrangement for program development o The state of supervising efficiency of program modification o To create feedback (interrelation, correlation) with the curriculum implementation