Quality Assurance for Reform and Transformation of HEIs in Uzbekistan - QUARTZ
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Ensuring Quality in Higher Education: Student-centered curricula and PhD design

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Related Key Performance Indicators (KPIs)

Percentage of programmes aligned with the university's strategic goals (measured via curriculum mapping);

Number of interdisciplinary and research-driven programmes introduced;

Graduate impact assessment (employment rates, contributions to research, and societal engagement);

Stakeholder satisfaction levels (feedback from faculty, students, and industry partners);

Programme-to-resource ratio (ensuring infrastructure, faculty, and logistics match student demand);

Faculty-to-student ratio in each programme;

Utilisation rate of research and laboratory facilities per programme;

Percentage of programmes delivered with blended learning and digital tools;

Sustainability of programme offerings based on financial and logistical viability.

National Qualification Framework

The comprehensive system synchronising all qualifications within the education sector at the national or sub-national level and specific to a country's structure of education and training.

Outcome-Oriented	Prioritizes the achievements of learners over the educational processes undertaken.
Learning Outcomes	Specifies the knowledge, skills, and competencies a learner should possess upon earning a qualification.
Qualification Pathways	Illustrates how different qualifications interconnect, facilitating learner progression.
Diverse Learning Routes	Accommodates multiple educational pathways, including lifelong learning, leading to recognized qualifications.
Role in Education Development	Guides the structuring of degree systems and the design of academic programmes.
Recognition Facilitation and Stakeholder Relevance	Aids in the acknowledgment and understanding of qualifications by various stakeholders, e.g., learners and employers, in evaluating the value and applicability of qualifications.

NQFs – the European Context: Transparency, Comparability, and Portability

QF-EHEA Cycle	EQF Level	Description	Typical Qualifications
Short Cycle	Level 5	Introductory higher education, bridging secondary education and bachelor's level.	Higher National Diplomas (HND), Foundation Degrees, Diplomas of Higher Education.
First Cycle	Level 6	Undergraduate level, providing a broad knowledge base and developing analytical skills.	Bachelor's Degrees (e.g., BA, BSc), Professional Bachelor's Degrees.
Second Cycle	Level 7	Postgraduate level, focusing on advanced study and original research.	Master's Degrees (e.g., MA, MSc), Integrated Master's Degrees.
Third Cycle	Level 8	Doctoral level, involving substantial original research contributing new knowledge to the field.	Doctorates (e.g., PhD, DPhil), Professional Doctorates.

NQF of Uzbekistan available at:
Government of Uzbekistan. (2025). On measures to organize the activities of the National System for the Development of Professional Qualifications, Knowledge and Skills in the Republic of Uzbekistan. Lex.uz. Retrieved from https://lex.uz/en/docs/4814154

Comparable, still Unique

Source: CEDEFOP. (n.d.). National Qualifications Frameworks (NQF) Comparison Tool. Retrieved from https://www.cedefop.europa.eu/en/tools/nqfs-online-tool/nqf-comparison?country_1=BG&year_1=5340&country_2=IT&year_2=5340"

CORE PRINCIPLES AND ALIGNMENT MECHANISMS in HE

Learning Outcomes (LOs) are integral to the descriptors for each educational cycle (level) and define **what learners are expected to know, understand, and be able to do after completing a learning process**. The focus is on achieving specific knowledge, skills, and competencies.

Credit Accumulation and Transfer: The European Credit Transfer and Accumulation System (ECTS) is a tool to express the volume of learning based on the defined learning outcomes and their associated workload.

Credit Accumulation and Transfer

Credit Accumulation and Allocation:

- Learners earn credits by completing specific modules or units within a programme.

- Each module/unit is assigned a credit value based on the estimated learning hours required for achieving the defined LOs, which encompasses all learning activities, including attending lectures, participating in seminars, independent study, and completing assignments.

- Accumulated module credits contribute toward the total required for a qualification.

Credit Transfer:

- Credits obtained from one institution or programme can be recognized and accepted by another.

- Facilitates student mobility between institutions, both domestically and internationally.

- Supports lifelong learning by acknowledging prior learning and experiences.

ECTS Allocation:

- One credit corresponds to 25 to 30 hours of the total student's workload.

- 60 credits per full-time academic year

(please refer for further details to **ECTS User's Guide** at _https://ehea.info/media.ehea.info/file/ECTS_Guide/00/0/ects-users-guide-2015_614000.pdf_)

LEARNING OUTCOMES – EQF (for Life-long Learning)

In the context of the EQF, the learning outcomes are defined in terms of:

- **Knowledge:** described as theoretical and/or factual.

- **Skills:** described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).

- **Responsibility and autonomy:** described as the ability of the learner to apply knowledge and skills autonomously and with responsibility.

LEARNING OUTCOMES EQF - EXAMPLES

Level 6 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups

Level 8 - learning outcomes

Knowledge	Skills	Responsibility and autonomy
Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

Source: European Union. (n.d.). Description of the eight EQF levels. Europass. Retrieved, from https://europass.europa.eu/en/description-eight-eqf-levels

LEARNING OUTCOMES – QF of EHEA

In the context of the QF - EHEA, the learning outcomes are defined in terms of:

Knowledge and Understanding: Depth and breadth of subject-specific knowledge.

Applying Knowledge and Understanding: Ability to utilize knowledge in practical contexts.

Making Judgments: Capacity for critical thinking and informed decision-making.

Communication Skills: Proficiency in conveying information effectively.

Learning Skills: Commitment to continuous learning and professional development.

Learning Outcomes of QF-EHEA - Example

	Qualifications Framework for the European Higher Education Area (QF-EHEA)	
	Learning outcomes	**ECTS credits**
First cycl e qual ifica tion	Qualifications that signify completion of the first cycle are awarded to students who: · **have demonstrated knowledge and understanding** in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study; · **can apply their knowledge and understanding** in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study; · **have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments** that include reflection on relevant social, scientific or ethical issues; · can **communicate information, ideas, problems and solutions** to both specialist and non-specialist audiences; · **have developed those learning skills** that are necessary for them to continue to undertake further study with a high degree of autonomy.	Typically include 180-240 ECTS credits

Source: European Higher Education Area (EHEA). (2018). Paris Communiqué: Appendix III. Retrieved from
https://ehea.info/Upload/document/ministerial_declarations/EHEAParis2018_Communique_AppendixIII_952778.pdf

Programme LOs and Module LO: Ensuring Smooth Vertical Progression

Level-Appropriate Learning Outcomes: Each module should align with the qualification level at which it is taught.

Progressive Learning Approach: Modules build on each other to develop competencies over time.

Constructive Alignment: Teaching methods and assessments must match the cognitive demand of each level to accurately measure student attainment.

Prerequisites should be logical and reasonable, avoiding unnecessary repetition or barriers.

Example of LO Progression

L4: *Describe key research methods used in business studies. (Understand, Apply)*
L5: *Compare and contrast qualitative and quantitative research approaches. (Analyse, Evaluate)*
L6: *Critically evaluate and apply research methodologies to an independent study. (Evaluate, Create)*

Bloom's Taxonomy & Learning Levels:

Cognitive Skills Progression: Learning outcomes move from lower-order thinking (Remember, Understand, Apply) to higher-order thinking (Analyse, Evaluate, Create).

More on the revised Bloom's Taxonomy:
Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. Longman. Retrieved from https://www.researchgate.net/publication/235465787_A_Taxonomy_for_Learning_Teaching_and_Assessing_A_Revision_of_Bloom's_Taxonomy_of_Educational_Objectives.
https://www.apu.edu/live_data/files/333/blooms_taxonomy_action_verbs.pdf

DEFINING LOs - Examples
Programme LOs – <u>BSc Information Systems and Technologies</u> at VUM

Module LOs – Computational Intelligence L6	Module LOs – Principles of Programming L4
On successful completion of the module, students should be able to: ▪ Critically appraise a comprehensive/detailed understanding of the computational intelligence domain. ▪ Design and develop computational intelligence software artefacts. ▪ Critique and contextualise emerging research in the area of computational intelligence.	▪ On successful completion of this module, students should be able to: ▪ Interpret software requirements from given scenario. ▪ Structure programs using key programming constructs. ▪ Identify and implement modular elements of programs. ▪ Demonstrate understanding of the key principles of user-centric design to design and develop appropriate user interfaces.

QUARTZ Empowering Education

SSL: Student Induction & Orientation

Pre-Arrival Support *(Before the Start of the Semester)*	Welcome Week Activities *(First Week of Semester)*	Academic Orientation *(First Week of Semester)*	Student Wellbeing & Support *(First Week of Semester)*	Ongoing Induction Support *(Throughout the First Semester)*
•Access to online orientation materials (videos, handbooks, FAQs). •Virtual Q&A sessions with faculty and student mentors. •Completion of introductory academic skills modules.	•University Introduction: Overview of mission, values, and academic culture. •Campus & Facilities Tour: Library, IT services, student support centres, career offices. •Meet Your Faculty: Introduction to department heads, tutors, and key academic staff. •Social Integration: Ice-breaking activities, student clubs, networking events.	•Understanding Programme Structure: Modules, credits, assessments, and progression pathways. •Academic Integrity & Expectations: Plagiarism policies, research ethics, referencing guidelines. •Learning Support Services: Study skills workshops, tutoring, language support.	•Overview of counselling services. •Guidance on financial aid, housing, and student welfare programmes. •Safety briefing and emergency contact procedures. •Student Career Services for internship and placements. •Erasmus+ mobility opportunities.	•Regular check-ins with academic advisors or personal tutors. •Peer mentoring programmes for continued support. •Mid-semester review session to address challenges and feedback.

Thank you for your attention!