

Introduction to the Curricula development workshop Ljubljana, 16 June 2022



CBHE PROJECT: 617695-EPP-1-2020-1-ES-EPPKA2-CBHE-JP

“Developing Interdisciplinary Postgraduate Programmes and Strengthening Research Networks in Geoinformation Technologies in Armenia and Kyrgyzstan”

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Co-funded by the
Erasmus+ Programme
of the European Union







- ❖ Discuss on the **concept & structure** of KG and AM doctoral studies
- ❖ Work on the **compatibility** of KG and AM course modules with European standards and practices
 - ❖ Course **content**
 - ❖ Course **description**
 - ❖ Formulation of **learning outcomes**
- ❖ **Particular attention:**
 - ❖ **Clarity** of description
 - ❖ Learning outcomes shall correspond to **Level 8 of the European Qualifications Framework**

EQF

The **European Qualifications Framework (EQF)** is a common **European** reference **framework** whose purpose is to make **qualifications** more readable and understandable across different countries and systems.

COUNCIL RECOMMENDATION

of 22 May 2017

on the European Qualifications Framework for lifelong learning and repealing the recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning

(2017/C 189/03)



- ❖ **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

- ❖ **Knowledge**
 - ❖ **Breadth and Depth**
 - ❖ **Context**
- ❖ **Skills**
 - ❖ **Applications of Knowledge**
 - ❖ **Communication skills**
 - ❖ **Organization of work**
 - ❖ **Learning skills**
- ❖ **Autonomy & Responsibility**
 - ❖ **Critical approach**
 - ❖ **Responsibility**
 - ❖ **Professional role**

Qualifications that signify completion of the third cycle are awarded to students who:

- have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field;
- have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity;
- have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication;
- are capable of critical analysis, evaluation and synthesis of new and complex ideas;
- can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise;
- can be expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge based society;



Knowledge and understanding:

1 (Bachelor) [Is] supported by advanced text books [with] some aspects informed by knowledge at the forefront of their field of study ..

2 (Master) provides a basis or opportunity for originality in developing or applying ideas often in a research context ..

3 (Doctorate) [includes] a systematic understanding of their field of study and mastery of the methods of research associated with that field..



Applying knowledge and understanding:

1 (Bachelor) [through] devising and sustaining arguments

2 (Master) [through] problem solving abilities [applied] in new or unfamiliar environments within broader (or multidisciplinary) contexts ..

3 (Doctorate) [is demonstrated by the] ability to conceive, design, implement and adapt a substantial process of research* with scholarly integrity .. [is in the context of] a contribution that extends the frontier of knowledge by developing a substantial body of work some of which merits national or international refereed publication ..



Communication

1 (Bachelor) [of] information, ideas, problems and solutions ..

2 (Master) [of] their conclusions and the underpinning knowledge and rationale (restricted scope) to specialist and non-specialist audiences (monologue) ..

3 (Doctorate) with their peers, the larger scholarly community and with society in general (dialogue) about their areas of expertise (broad scope)..



Making judgements:

1 (Bachelor) [involves] gathering and interpreting relevant data ..

2 (Master) [demonstrates] the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete data ..

3 (Doctorate) [requires being] capable of critical analysis, evaluation and synthesis of new and complex ideas



Learning skills

1 (Bachelor) have developed those skills needed to study further with a high level of autonomy ..

2 (Master) study in a manner that may be largely self-directed or autonomous..

3 (Doctorate) expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement ..



Discipline specific skills

Thorough knowledge of one's own field of research and its social significance

Familiarity with the development and basic problems of one's own field of research

Knowledge of the general theory of science and of other disciplines relating to one's own field of research

Communication skills

Academic writing and communication

Interaction competence

Language skills and international competence

Media skills

Presentation skills



Research skills

Research ethics

Open Science

Research methodology

Scientific publishing

Research project management (planning, funding, data management, financial management)

Other competence to support the construction of professional expertise

Pedagogical skills (teaching and guidance experience, qualifications)

Leadership skills

Quality and development activities



- ❖ LO are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning (ECTS Guide)
- ❖ A LO is a written statement of what the successful student/learner is expected to be able to do at the end of the module/course unit or qualification (S. Adam)

Examples of LO

- **List** the criteria to be taken into account when caring for a patient with tuberculosis
- **Classify** reactions as exothermic and endothermic
- **Relate** energy changes to bond breaking and formation
- **Compare** classical and quantum harmonic oscillator
- **Organise** a patient education programme
- **Discuss** the role of Internet in physics teaching
- **Design** a poster presentation
- **Examine** a patient
- **Use** MS Office effectively and skilfully
- **Display a willingness** to communicate well with patients
- **Resolve** conflicting issues between personal beliefs and ethical considerations

LO at the program level

- Describe what the learner can accomplish as a result of completing a program
- They should be aligned with the institution's mission
- They should focus on **broad conceptual knowledge** and **higher order skills**
- They represent the minimum requirements to complete a program

LO at the module/course level

- Describe what the learner can accomplish as a result of completing a module/course
- They should be aligned with the program LO
- They represent the minimum requirements to complete a module

Action Word (performance)	Learning Statement (the “what”)	Criterion (which governs the “what” of performance)
Apply	water sterilization techniques	to purify the drinking water.
Differentiate	between clients needing short and long-term counselling	to determine a treatment plan.
Produce	MS Excel spreadsheet reports	for both profit and non-profit accounting situations.
Evaluate and synthesize	research materials	to identify relevant areas for specific research focus
Apply	an understanding of the characteristics of quantitative and qualitative research methodologies	in research design and practice
Identify	the overall process of designing a research study	from its inception to its reporting stage.
Demonstrate	a better understanding of the communication process by identifying, explaining, and applying current communication theories	as they relate to a variety of contexts (e.g. interpersonal, intercultural, group, public and professional communication)



- **Identify the needs of stakeholders (i.e. students)**
- **Create a clear list of learning goals and outcomes.**
- **Identify constraints that will impact your curriculum design.**
- **Consider creating a curriculum map**
- **Identify the instructional methods**
- **Establish evaluation methods**
- **Remember that curriculum design is not a one-step process; continuous improvement is a necessity.**

Schweitzer, Karen. "Curriculum Design: Definition, Purpose and Types." ThoughtCo, Oct. 29, 2020, [thoughtco.com/curriculum-design-definition-4154176](https://www.thoughtco.com/curriculum-design-definition-4154176).



- Teacher-centred methods
- Learner centred methods
- Content focused methods

- ❖ Combination: Interactive/participative methods



- The lecture method
- The discussion method
- The programmed instruction method
- The study assignment method
- The tutorial method
- The seminar method
- The demonstration method
- The buzz group
- Brainstorming
- Role plays



USES: To orient students. To introduce a subject. To give directions on procedures. To present basic material. To introduce a demonstration, discussion, or performance. To illustrate application of rules, principles, or concepts. To review, clarify, emphasise or summarise.

ADVANTAGES: Saves time. Permits flexibility. Requires less rigid space requirements. Permits adaptability. Permits versatility. Permits better centre over contact and sequence.

DISADVANTAGES: Involves one way communication. Poses problems in skills teaching. Encourages student passiveness. Poses difficulty in gauging student reaction. Require highly skilled instructors.



USES: Discover new ideas, thoughts and responses very quickly

ADVANTAGES: Leads to a very animated and energising session. More reserved participants feel free to contribute.

DISADVANTAGES: It takes time particularly if it is a large group. May consume a lot of material e.g. flipcharts or writing materials. Requires high level facilitation skills.

Course provider (institution)
Course title
Target group
Type (compulsory/optional)
Number of ECTS credits allocated (if applicable); estimated workload
Mode of delivery (face-to-face/ distance learning etc.); number of contact hours
Language of instruction
Prerequisites and co-requisites (if applicable)
Course aims
Learning outcomes
Course content
Recommended or required reading and other learning resources/tools
Planned learning activities and teaching methods
Assessment methods and criteria
Additional information



- ❖ Curriculum development – analysis of the factors to be taken into account (institutional capacities, internationalization, labour market needs etc.) in particular institutional and national environment
- ❖ Practice: design of draft curricula and course modules for particular domains of Geoinformation technologies



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Thanks!

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