



Lab of Forest Management
and Remote Sensing,
Aristotle University of
Thessaloniki

Qualifications
Framework and
competences of
the Remote
Sensing specialists
managing
Mediterranean
forest ecosystems



Education and Culture DG

Mobility and lifelong learning instruments of the EU

- The European Framework of Key Competences
- **The European Qualification Framework for lifelong learning (EQF)**
- The European Quality Assurance Reference framework for Vocational Education and Training (EQAVET)
- The European Credit Transfer and Accumulation System (ECTS)
- The European Credit system for Vocational Education and Training (ECVET)
- Europass service
- The National Academic Recognition Information Centres (NARIC)

EQF

The European Qualifications Framework for lifelong learning

- Common European reference framework for linking countries' qualifications systems together
- A translation device to make qualifications more readable and understandable across different countries and systems in Europe
- Two principal aims
 - To promote citizens' mobility between countries
 - To facilitate citizens' lifelong learning



EQF

The European Qualifications Framework for lifelong learning

- 2008-Apr-23: set in action
- 2010: recommended target date for countries to relate their national qualifications systems to the EQF
- 2012: for countries to ensure that individual qualification certificates bear a reference to the appropriate EQF level



How does EQF work?

- Qualifications described as learning outcomes
- Learning outcomes are classified
 - Into levels
 - In terms of
 - Knowledge
 - Skills
 - Competences



LEVELS		Knowledge
		In the context of EQF, knowledge is described as theoretical and/or factual.
Level 1	The learning outcomes relevant to Level 1 are	• basic general knowledge
Level 2	The learning outcomes relevant to Level 2 are	• basic factual knowledge of a field of work or study
Level 3	The learning outcomes relevant to Level 3 are	• knowledge of facts, principles, processes and general concepts, in a field of work or study
Level 4	The learning outcomes relevant to Level 4 are	• factual and theoretical knowledge in broad contexts within a field of work or study
Level 5*	The learning outcomes relevant to Level 5 are	• comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge
Level 6**	The learning outcomes relevant to Level 6 are	• advanced knowledge of a field of work or study, involving a critical understanding of theories and principles
Level 7***	The learning outcomes relevant to Level 7 are	• highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research • critical awareness of knowledge issues in a field and at the interface between different fields
Level 8****	The learning outcomes relevant to Level 8 are	• knowledge at the most advanced frontier of a field of work or study and at the interface between fields



Levels of the HQF

- Levels 6-8 correspond to Higher Education
 - Level 6: BSc
 - Level 7: MSc
 - Level 8: PhD

LEVEL	DESCRIPTION
1	It is related to the possibility of continuing to the second cycle of Secondary Education
2	It is related to the possibility of completing the second cycle of Secondary Education and/or attending a continuing vocational training programme.
3	It is related to the completion of the second cycle of Secondary Education and it also refers to qualifications that are acquired through vocational experience.
4	It is related to the completion of at least the second cycle of Secondary Education, which has been upgraded through further education and training or working experience.
5	It is related to the completion of a Post-Secondary Education and Training Programme, or the "swift cycle" of an Education and Training Programme.
6	It is related to the qualifications acquired through the first cycle of Higher Education.
7	It is related to the qualifications acquired through the second cycle of Higher education.
8	It is related to the qualifications acquired through the third cycle of Higher Education.

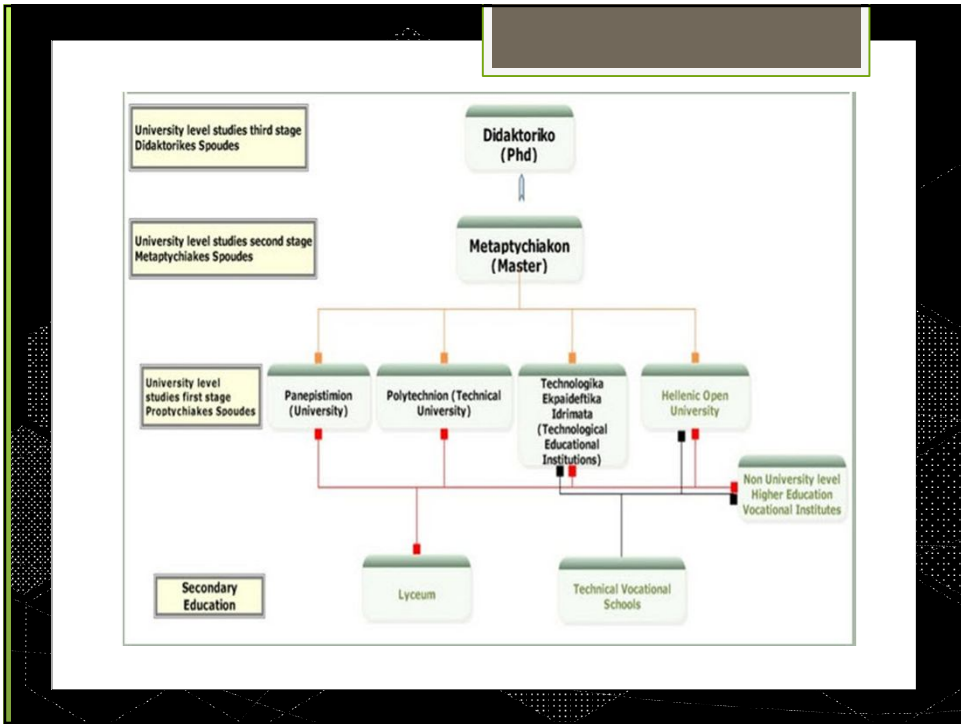
Responsible organisations

- HQF levels 1-5
 - The Organisation for Vocational Education and Training (OEEK, part of EOPPEP)
 - Related to the European Credit system for Vocational Education and Training (ECVET)
- HQF levels 6-8
 - The Hellenic National Academic Recognition Information Center (H-NARIC)



Hellenic National Academic Recognition Information Center (H-NARIC)

- Responsible for
 - Recognition of university or technological degrees that are awarded by foreign Higher Education Institutions (HEI)
 - Providing information about educational systems and accreditation of Institutions in Greece and abroad





The National *Europass* Centre (**NEC**) – Role

- Acts as a national partner in the European network of NECs
- NEC is a part of Organisation for Vocational Education and Training (OEEK)
- Coordinates the management of the Europass documents in Greece
- Promotes
 - Transparency of professional qualifications and skills
 - Facilitation of mobility in Europe for educational and professional purposes



The National *Europass* Centre (**NEC**) - Actions

- Provides information on Europass
- Promotes the following Europass documents in Greece
 - Europass Curriculum Vitae (CV)
 - Europass Language Passport
 - Europass Mobility (Erasmus, Comenius, Leonardo da Vinci, EPEAEK etc)
 - Europass Certificate Supplement (does not apply to university degrees)
 - Europass Diploma Supplement

The School of Forestry and Natural Environment

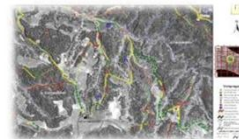


- Provides GIS/RS related classes at three levels
 - BSc (HQF level 6)
 - MSc (HQF level 7)
 - PhD (HQF level 8)



BCs in 'Forestry and Natural Environment'

- Duration: 5 years
- Approach
 - Theoretical
 - Practical
- Taught classes related to RS specialists
 - Forest Aerial Photography
 - Environmental Remote Sensing
 - Geographic Information Systems (GIS)
 - Forest Cartography
 - Forest Cadastral
 - Topography
 - Forest Management
 - Forest Informatics
 - Forest fires
 - Forest Recreation
 - Nature Protection and Forest Landscape Design



MSc in 'Planning and Development of Natural Resources'

- Duration: 18 months course
- Approach
 - Theoretical
 - Practical
- Taught classes related to RS specialists
 - Geographic Information Systems (GIS)
 - Environmental Remote Sensing (RS)
 - Information Systems and the Environment
 - Statistics and Sampling Techniques
 - Research Methodology
 - Adaptive Forest Management



Studies Quality Assessment

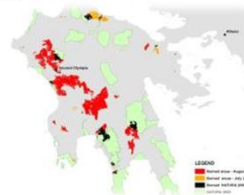
- Quality of studies assessed by
 - Internal committee
 - External committee
- Quality of teaching / teacher
 - Assessed by the students with the use of questionnaires (the process is done online since this year)
- Quality of research per member of staff, per research unit, and per department
 - Assessed by an internal and an external committee
 - The research assessment exercise is at the final stage for the School of Forestry and Natural Environment (i.e. external committee)

Qualifications for BSc level

- Some of the subjects related to RS and GIS are optional at BSc level
 - Relevant skills and competences are certified by the transcript provided by the secretariat of the School of Forestry and Natural Environment
- After the completion of the HQF a 'EUROPASS – DIPLOMA SUPPLEMENT' will be issued automatically in Greek and English
 - The supplement will be given to the graduates together with the BSc degree

Qualifications for MSc level

- The RS and GIS skills and competences
 - Certified by the MSc degree
 - Provided by the secretariat of the School of Forestry and Natural Environment on behalf of the University
- The MSc degree is on the 'Planning and Development of Natural Resources'
 - Specialisation is on 'RS and GIS'



Qualifications for PhD level

- The RS and GIS skills and competences are certified by the *title* and the *keywords* of the PhD dissertation
- The PhD degree is provided by the secretariat of the School of Forestry and Natural Environment on behalf of the University



Students mobility

- The School participates in organised mobility projects to other countries of the European Union (e.g. Erasmus, Comenicus, Leonardo da Vinci, etc -> soon merged into 'Erasmus')
- During the 5 years of the BSc degree the students have to:
 - Attend practical classes in the Taxiarchis and the Pertouli forests
 - Get a work placement in a Forest Service office
 - Get a work placement in a company (EPEAEK program – link to industry) –Optional-



Aristotle University of Thessaloniki Careers Service

- Responsible for helping 'Foresters' with a degree from the AUTH to find jobs in Greece, the EU and since two years ago to the rest of the world (special agreement of Greece with Canada and Australia) is the AUTH Careers Service



Professional Rights

- Consolidation of professional rights
 - Is done through the Geotechnical Chamber of Greece (GEOTEE)
 - Ensures the occupation of the degree holders in a number of professions
- External qualification
 - FMRS: member of EARSeL (European Association of Remote Sensing Laboratories) <http://www.earsel.org>



Expected competences (yet informal)

- BSc
 - Interpret air photos
 - Interpret forest maps
 - Interpret forest management plans
 - Mine, process and classify earth observation images
- MSc (in addition)
 - Interpret cadastral and other thematic maps
 - Create forest maps
 - Design and implement field surveys for mapping purposes
 - Conduct research in forestry RS/GIS
- PhD (in addition)
 - Lead spatial problem solving
 - Lead forestry research

Occupations

- Holders of a BSc, MSc and PhD degree from the School of Forestry and Natural Environment with a specialisation in GIS/RS can be occupied in any office or institution in the public or private sector that uses Geographic Information Systems and Remote Sensing
 - Especially in the planning of land use, in the urban and land-planning scheduling, and in the surveillance and protection of the environment and natural resources
 - Competences are described every time in the relevant calls (launched by the public or private sector) and are differentiated according to the degree



Occupation in the public sector

- Fire Service (fleet management with GIS, fuel mapping, fire risk)
- Forest Service (update of existing maps with the use of RS and GIS, declassification of forests, burned area mapping)
- Local Government (park management, civil protection)
- Management Authorities of Areas with rich biodiversity and rare natural habitats

Occupation in the private sector

- SMEs specialised in forestry (e.g. creation of forest management plans, declassification of forests, forest mapping, creation of forest maps for KTHMATOLOGIO)
- SMEs specialised in Survey Engineering (e.g. forest mapping, creation of forest maps for KTIMATOLOGIO)



Other

- NGOs (WWF, IUCN, etc.)
- ΚΤΙΜΑΤΟΛΟΓΙΟ (National Cadastral Survey)

