Examples of Qualification Framework from the experience at University of Padova

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Location

Land, Environment, Agriculture and Forestry (LEAF) Dept.

- Permanent academic staff: **29** professors and **22** researchers
- Other personnel: **33** technicians, librarians and administrative employees
- **31** PhD students
- Research budget: **5 M €**

Structure

- **32** Departments
- **8** Schools
- **60,000** students (11,700 graduated/yr)
- Permanent academic staff: **2,500** (+ 2,400 non academic)
- **40** Services and Research Centers
- A unified system of **41 University libraries**
  - with 1.9 M volumes, 12,500 magazines and 6,000 on-line magazines
1. Implementing the Bologna process and the Lisbon Strategy towards HE European Framework

Main action lines (1/3)

“Bologna process” = inter-governmental process which promotes reforms in higher education with 47 countries, leading to establishing a ‘European Higher Education Area’

6 main actions:
- a system of academic degrees that are easy to recognise and compare: shared Diploma Supplement to improve transparency, joint and double degrees
Main action lines (2/3)

“Bologna process” = inter-governmental process which promotes reforms in higher education with 47 countries, leading to establishing a ‘European Higher Education Area’

6 main actions:
- a system of academic degrees that are easy to recognise and compare: shared Diploma Supplement to improve transparency, joint and double degrees
- a system based on 3+2+3 cycles (with learning contents well described: Dublin descriptors)

The 3+2+3 system: Bachelor + Master + PhD

Contents of the 3 titles: see the “Dublin descriptors”

Making judgements:
1. (Bachelor) [Skill] gathering and arranging relevant data...
2. (Master) [Skill] demonstrating the ability to integrate knowledge and handle complexity, and formulate judgements with acceptable data...
3. (Doctorate) [Skill] prepares being capable of critical analysis, evaluation and synthesis of new and complex ideas.

Communication:
1. (Bachelor) [Skill] information, ideas, problems and solutions...
2. (Master) [Skill] making conclusions and the underlying knowledge and rationale (reviewed scope) to specific and non-specialist audiences (nonspecialised).
3. (Doctorate) [Skill] with their peers, the larger scholarly community and with society in general (dialogue) about his area of expertise (broad scope).

Learning skills:
1. (Bachelor) [Skill] have developed those skills needed to study subjects with a high level of autonomy...
2. (Master) [Skill] study in a manner that may be largely self-directed or autonomous...
3. (Doctorate) [Skill] expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement...
Main action lines (3/3)

“Bologna process” = inter-governmental process which promotes reforms in higher education with 47 countries, leading to establishing a ‘European Higher Education Area’

6 main actions:
• a system of academic degrees that are easy to recognise and compare: shared Diploma Supplement to improve transparency, joint and double degrees
• a system based on 3+2+3 cycles (with learning contents well described: Dublin descriptors)
• a system of accumulation and transfer of credits (ECTS)
• mobility of students and teachers
• cooperation with regard to quality assurance
• the European dimension in Higher Education: increase the number of modules and teaching and study areas where the content, guidance or organisation has a European dimension

Quality Assurance

ENQA
The European Association for Quality Assurance in Higher Education disseminates information, experiences and good practices in the field of QA in higher education to European QA agencies, public authorities and higher education institutions

EQAR
The European Quality Assurance Register for Higher Education, established in 2008 to increase the transparency of quality assurance in higher education across Europe

ENQA
www.enqa.eu

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

EQAR
www.eqar.eu

ESG

2. HE system related to forestry at University of Padova

28 National QA Agencies registered
The new educational structure

180 credits 3 years

1st cycle
(BSc: "Laurea")

120 credits 2 years

2nd cycle
(Master:"Laurea magistrale")

PhD

1 credit = 25 hrs

The UNIPD educational structure in forestry

180 credits 3 years

1st cycle
(BSc: "Laurea")

120 credits 2 years

2nd cycle
(Master:"Laurea magistrale")

PhD

1 credit = 25 hrs

Teaching in forestry science at UNIPD

1 PhD Program

30+5 students/yr

2 Curricula in Italian

5 study programs

3 Curricula in English

MSc Forest and Environmental Science

20 foreign students/yr

70 Italian students/yr

100-120 students/yr

BSc Forest and Environmental Technology

(coherent with a national framework which defines minimum no. ECTS for each group of subjects, the thesis, the training activity)

1st year 68 credits
Math, Physics, Inorganic and Organic Chemistry, Plant and Animal Biology, Geology, Economics

2nd year 68 credits
Forest Genetics, Soil, Ecology, Forest Zoology, Forest Plant Botany, Applied Statistics

3rd year 48 credits
Forest Law, Forest Measurement, Geomatic, Forest Policy, Silviculture, Hydrology

12 credits Elective,
4 credits English Language (B1 Threshold*)
10 credits Training Activity
4 credits Thesis

* Common European Framework of Reference
MSc Forest and Environmental Science (curriculum in Italian)
(coherent with a national framework which defines minimum no. ECTS for each group of subjects, the thesis, the training activity)

1st year
- 20 credits
  - Ecological Land Planning, Fluvial Morphology, Applied Silviculture
- 28 credits Specialization

2nd year
- 26 credits Specialization
  - 8 credits Elective
  - 4 credits Advanced Informatics
  - 4 credits English Language (B2 Vantage*)
- 30 credits Thesis

* Common European Framework of Reference

MSc Forest and Environmental Science (specialization in Italian)

Study programs
- Forest and Environmental Science
- Land Protection
- Mountain Area Development
- Environment and Biodiversity Management
- Planning and Management of Green Areas

Qualification objectives
- From a training aimed to educate the future official of the forest administration (till the ’80s) to a mix of professional profiles:
  - forest professional working mainly as a self-employed consultant
  - forest officers for many public organizations (NPs, research organizations, …)
  - forester working in NGOs and companies (wood working, certification, …)
- In the forestry sector the first cycle (i.e. Bachelor) has only a role of defining a background, solid, scientific basis for the Master: the proposal for the students is 3+2 as one single co-ordinated program
- More professional, specific knowledge is acquired in the 2nd yr of the Master
- Focus on soft skills (communication, work in groups) and future learning skills

MSc Forest and Environmental Science (curriculum in English → links with the Erasmus Mundus program)

1st year
- 46 credits
  - Forest Policy, Valuation and Assessment of Forest and Environmental Goods and Services, Forest and Hillslope Hydrology, Forest Landscape Management, Forest Pathology and Wood Alterations, Integrated Watershed Management, Global Change and Forest Ecosystems

2nd year
- 26 credits
  - 8 credits Elective
  - 4 credits Advanced Informatics
  - 4 credits English Language (B2 Vantage*)
- 30 credits Thesis

* Common European Framework of Reference
An example

Research on CSR at university

Companies and NGO in the voluntary market

Expertise creation at the university → teaching

The objectives of the Erasmus Mundus programme (in brief)

- **Action 1**: Supporting the creation of consortia of high level education institutions in EU
- **Action 2**: Providing scholarships to high-qualified students and scholars from third countries to facilitate their participation in the courses
- **Action 3**: Facilitating the creation of high-quality partnerships between EU and third-country higher education institutions
- **Action 4**: Improving accessibility and enhance the profile and visibility of higher education in the European Union.

Erasmus Mundus MSc in agriculture, forestry and veterinary:
18 courses out of 131: 4 in Forestry + 1 PhD program (34)

The university networks

**MEDFOR**
- Lisbona
- Padova
- Lleida
- Porto
- Viterbo
- Valladolid
- Karadeniz (TUR)

All teaching in English (only in Montpellier: French)

**SUTOFOR**
- Copenhagen
- Dresa
- Bangor
- Padova
- Montpellier

**SUFONAMA**
- Copenhagen
- Goettingen
- Bangor
- Padova
- Alnarp
www.medfor.eu

www.sutrofor.eu

www.sufonama.eu

Associated partners
(⇒ thesis work)

- Non-EU universities (e.g.: UBC)
- International Research institutions (e.g.: CIFOR)
- International organizations (e.g.: Food and Agriculture Organization)
- NGOs (e.g.: Mediterranean Forest Owners Association, World Wildlife Fund Mediterranean Office)
General structure

- **120 ECTS**  60 (1st year – 2 semesters) + 30 (2nd year – 1 semester) + 30 for the thesis
- **1st year in one university** (general topics)  **2nd year of specialization** in another partner university with thesis work, preferably with an associated partner
- A **common field course** (between the 1st and the 2nd year for SUTROFOR and SUFONAMA, between the 1st and the 2nd semester for MEDITOR); 9-15 ECTS
- **Double or preferably a joint degree**
- Some common **on line courses** (Research methodologies, Climate change economics and policies, Field course preparation)

PhD School: Land, environment, resources and health

- Animal science
- Managerial engineering and economic evaluation
- Crop production science
- Biotechnology and bio-chemistry
- Viticulture, enology and marketing in the wine sector

3. Governance issues related to implementing a QF
European Higher Education Area (EHEA) Framework

“The framework for the EHEA derives its distinctive purposes from the objectives expressed through the Bologna Process. The most directly relevant of these objectives are (a) international transparency, (b) recognition, and (c) mobility” (Bologna Working Group on QF, 2005 p. 57)

http://www.ehea.info/Uploads/qualification/050218_QF_EHEA.pdf

(a) International transparency

a. ECTS
b. Course description (see next slide)
c. Diploma Supplement
d. Other minor tools:
   a. Student guide (tutors, local language course, sport, medical and cultural services, standard costs of living, …)
   b. A conversion table for marks
   c. Special instructions for the thesis

Learning objectives (Dublin descriptors)

a. Knowledge and understanding
b. Applying knowledge and understanding
(c) Making judgement
(d) Communication
e. Learning skills

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<th>Soft skills</th>
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Table 1: Overview of the student

Table 6: Mark schemes for the ECTOS program for the Dublin descriptors used in the program (a) for the hard skills and (b) for the soft skills.
Courses description: Dublin descriptors (Knowledge and understanding, Applying knowledge and understanding, Making judgement, Communication, Learning skills)

The Tuning project:
“an approach to (re-)designing, develop, implement, evaluate and enhance quality first, second and third cycle degree programmes. The Tuning outcomes as well as its tools are presented in a range of Tuning publications, which institutions and their academics are invited to test and use in their own setting”.

The Tuning project (process)

Subject Areas
- Agriculture
- Architecture
- Art History
- Business
- Chemistry
- Civil Engineering
- Computing Science
- Dance
- Design
- Earth Sciences
- Economics
- Education
- Electrical & Information Engineering
- Engineering
- European Studies
- Fine Art
- Food Studies
- Gender Studies
- Geodetic Geography
- History
- Humanitarian Studies
- International Relations
- Landscape Architecture
- Languages
- Law
- Literary Studies
- Linguistics
- Mathematics
- Medicine
- Music
- Nursing
- Occupational Therapy
- Psychology
- Physics
- Physiotherapy
- Political Science
- Radiography
- Social Work
- Sport Science
- Theatre
- Theology & Religious Studies

(b) Recognition

- Legal recognition: still an open process. Individual governments of EU countries remain responsible for their education systems and are free to apply their own rules, including whether or not to recognise academic qualifications obtained elsewhere ... but a with the EM programs students get 2 Master titles recognized at least by 2 countries + the DS

- Market recognition: apparently good employment position (in international organizations, NGOs, companies, ... while public sector is suffering for the budget cuts) and many PhD positions

Links with the market (employment opportunities)
Conclusion: future challenges

(c) Mobility

- EU students included in groups of 10-20 highly qualified international students selected out of more than 500 students world-wide. Scholarships for EU and non-EU students (21,000 € per year)
- Excellent students → their skills and enthusiasm is carried on to “local” students – motivations to improve programmes
- Scholarships for third-country scholars and for short-term missions (1-3 months) for EU universities staff
- Compulsory Joint Summer Module, some on line courses
- International network, alumni association of all EM students/universities

A summary view

- Remarkable progress towards a common European educational area (Bologna process)
- Forest sciences: more advanced in the internalization process
- Start-up: a leading role of Scandinavian forest schools (DK, FIN, S); now a more enlarged cluster of universities

A general perception: to survive as a top-class university internationalization is not an option but a starting point
A summary view

- Still very dynamic, unstable and not consolidated experiences

- With a continuous process of integration, challenging problems to be considered:
  - Problems related to internal governance
  - Problems related to general context of governance

Internal governance-related problems

- A “professional” approach to the problem of participating to the EAHE building (not to be left to the personal interest of one or few professors)

- Administration
  - Heavy administrative burden: selection procedure, financial agreements, administrative manuals, etc.
  - You need a strong institutional commitment

- “One for all, and all for one”: keeping all partners satisfied

- International students are excellent but high demanding: teaching offer is only a component of students’ satisfaction

Problems related to the general context of governance

- Mobility → transparency (international accreditation) → increased competition; in this open market for HEIs is still there a room in Europe for so many universities teaching forestry?

- From the teaching focused on wood value chain to a vision of forests as multifunctional resources: are forest HEIs loosing their identity? (not mentioning e-learning and the risk to loose a traditional role of teaching institution)

- A possible solution for MSc and PhD programmes: a network of top quality universities offering high specialized compact courses? (e.g.: watershed management, forest monitoring, CSR, landscape planning, bio-energy, ...)

New developments: ERASMUS for ALL

The new EU programme for education, training, youth and sport proposed by the EC on November 2011

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Only if we cope with these challenges we can have people staying at our universities that, describing their past experience, can state - like Galileo Galilei after his staying at University of Padova - “I spent there the most productive and nice years of my life”

СПАСИБО!

This presentation can be downloaded from: www.tesaf.unipd.it/pettenella