Queste

Quality System of European Scientific & Technical Education
~ Assessment and Label of Excellence ~

Partners:

Participants:  EU or national level, Russia, and TACIS countries

- Industry and technology-business
- Chambers of Commerce and Industry, professional bodies
- University associations – engineering & technology
- Accreditation authorities and organisations
- Trade unions
- Student representatives
QUESTE

the Quality System of European Scientific and Technical Education Labellisation and scoring

✓ What is QUESTE?
✓ Pilot process and planner
✓ The model
✓ Dimensions for Quality Assessment
Assessment Criteria - A Brief Overview
✓ The Compass
An Interpretive Guide
✓ Rating Grid
From the Queste model to a label of excellence
Pilot phase

Rationale

- Lisbon Strategy: competitiveness of economy and knowledge-based society
- Bologna process:
  - to make degrees more compatible
  - to develop more comparable quality standards and accreditation procedures.

Within the European higher education space, although the Bologna venture is in itself quite promising, it could make it more difficult to differentiate between educational offerings or to identify excellence.

The QUESTE project seeks to address this issue in engineering education by providing stakeholders with a mark of verifiable excellence.
The QUESTE label indicates proven excellence — a high level of quality

• For the promoters of the initiative especially CESAER, quality and excellence should be associated with:
  - scientific education, however configured, that prepares graduates to take the lead in technological projects, and to anticipate and adapt to changes in technology, industry or the social and economic environment
  - a desire for continuous learning and professional development
  - a contextual awareness, in particular the needs of industry, technological business, and the profession
Description

QUESTE Project

QUESTE Process

QUESTE Model

QUESTE Dimensions

QUESTE Compass

QUESTE Label
QUESTE pilot process and planner

**Phase I**
Application - advisory visit

**Phase II**
Self assessment

**Phase III**
External assessment (site visit and report)

**Phase IV**
Awarding of the label
The QUESTE model provides a frame of reference for the planning and implementation of educational projects by teaching units. It presents a dynamic view of engineering education, based upon assessment, adaptation, improvement, and interaction with academic and industrial partners.

- **a clear sense of:**
  - the mission and strategic objectives of the institution, engineering school, and discipline unit,
  - the institutional identity, its core values, and "spirit", as points of reference for internal choices and internal or external communication,
  - educational objectives and outcomes, notably the intellectual and practical competencies that graduates should possess and a vision of the roles that graduates will play both in the profession, the economy, and society,

- **a working process of:**
  - internal quality assurance, i.e.
    - ongoing self-assessment, based upon visible standards
    - provision for periodic updating and improvement
    - provision for the external review of programmes, resources, and procedures
Roadmap
Acceptance of the QUESTE model and QUESTE recognition

The candidate institution and discipline-unit will explain their unique road map in terms of:

- **general strategy and positioning**
- **core values**
- **chosen objectives and expected outcomes**
- **adaptation and improvement process**

Assuming a successful site visit, the institution may then request recognition and membership in the QUESTE association. The model itself will be discussed and upgraded according the views of all institutions having already got this first recognition.
### Model

#### 3 – Expression of intended outcomes

Outcomes that relate to professional objectives should be broadly understood as acquired "cognitive resources".

**2 models:**

- **TU3 Dutch model differentiating B/M**
- **EPC UK model academic inputs/learning outcomes**

<table>
<thead>
<tr>
<th>Proposed item</th>
<th>Element of differentiation</th>
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</thead>
<tbody>
<tr>
<td>Mastery in a technical field</td>
<td>To be described in more detail in another reference framework, will vary according to the discipline and department. Important for short-term employability</td>
</tr>
<tr>
<td>Preparation for specific engineering functions (R&amp;D, System design, Infrastructure building)</td>
<td></td>
</tr>
<tr>
<td>Work and time management</td>
<td>Strong element of differentiation</td>
</tr>
<tr>
<td>ability to do research (in an applicative context)</td>
<td></td>
</tr>
<tr>
<td>ability to design</td>
<td></td>
</tr>
<tr>
<td>Development of intellectual skills:</td>
<td>Strong element of differentiation</td>
</tr>
<tr>
<td>analysis, holistic view (on all kind of constraints)</td>
<td></td>
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<tr>
<td>ability to work in a group</td>
<td></td>
</tr>
<tr>
<td>ability to have a critical view and an independent judgment</td>
<td>Strong element of differentiation</td>
</tr>
<tr>
<td>ability to understand risks</td>
<td></td>
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<tr>
<td>ability to maintain own knowledge and to take benefit of networking (personal development)</td>
<td>element of differentiation</td>
</tr>
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</table>
The Queste model is a descriptive framework of strategy and its implementation; 4 axes

- **Target Market (TM)**
  - General profiles of graduates

- **Core values (CV)**
  - related to:
    - educational process
    - graduates

- **Educational outcomes (EO)**

- **Quality process (QP)**
  - indicating continuous improvement
  - including: target market, core values, educational outcomes

Each of the 4 axes:
- is to be described by the educational institution
- (the description) is to be consistent with the 3 others
The QUESTE Compass
An Interpretive Guide
To the
QUESTE© Dimensions for Quality Assessment
A progressive learning organization has internal capacities for self-assessment, reflection, self-correction & self-managed improvement in the pursuit of its objectives.

- Capacities for internal and external assessment at the institutional, discipline, and program level
- Internal assessments verify faculty and student progress toward the realization of discipline & program-level objectives
- Qualitative feedback is obtained externally from graduates, employers, graduate school advisors, alumni, and practitioners...

* Peter Senge, The Learning Organization
## Competency objectives and expected outcomes

<table>
<thead>
<tr>
<th>Mastery of a technical field</th>
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<tr>
<td>Development of intellectual fields: analysis, problem solving, application of mathematical and scientific principles</td>
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<tr>
<td>Preparation for specific engineering functions: R and D, System Design, Infrastructure building…</td>
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</tbody>
</table>

<table>
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<th>Work and Time Management</th>
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</thead>
<tbody>
<tr>
<td>Ability to conduct Research and develop Innovation</td>
</tr>
<tr>
<td>Ability to conceive and design documents, devices, processes, products, systems with due consideration of constraints from industry and society</td>
</tr>
<tr>
<td>Ability to work in a group and communicate effectively</td>
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<table>
<thead>
<tr>
<th>Acquisition of a critical view and independent judgment</th>
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<tbody>
<tr>
<td>Ability to understand and manage risk and uncertainty</td>
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<tr>
<td>A capacity of continuing personal and professional development</td>
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<td>Entrepreneurship attitude</td>
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In a Global World of Education

- Competition of HSTEI towards excellence for EU countries
- Launching of QUESTE in Russia: EU-Russia Symposium on entrepreneurship and innovation cooperation of Higher scientific education with research and industry under EU Finland presidency on December 14-15
- QUESTE in China: with EQUIS/EFMD support
Q3E: Quality of Entrepreneurship Education in Europe

Partners:

- model
- referentials
- assessment