

Accreditation Practices in France : a powerful tool for improving quality in engineering education.

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Varsovie, February 15, 2005

C.T.I. Commission
des Titres d'Ingénieur

In France, the title of ingénieur diplômé has an academic and professional character.

Based on logic of integration of knowledge and a 5 years long curriculum

Education programmes are diversified, global coherence ensured by the CTI

C.T.I. Commission
des Titres d'Ingénieur

The legal base of CTI:
Law of July 10th, 1934
on the creation of CTI,
Law of January 26, 1984 on the
Higher Education system
Decrees on : CTI membership,
creation of the master grade, periodic
accreditation

C.T.I. Commission
des Titres d'Ingénieur

C.T.I

Commission des Titres d'Ingénieur

Since 1934 - Main characteristics : parity between academics and industrials

32 members

8

Academics

8

Representatives of industry

8

Repres. of other public and/or private institutes

8

Representatives of engineering assoc. and trade unions

CTI Missions

- **Accreditate new engineering curricula : authorization for the HEI to grant the title of ingénieur diplômé (qualified engineer).**
- **Periodically evaluate and accreditate existing curricula (6 years)**
- **CTI gives advices for the accreditation of public HEIs and accredits private HEIs after an audit and an assessment process.**
- **The CTI evaluates education programmes and the whole institution**
- **Accreditation is compulsory**
- **Given its experience and its regular visits, the guarantees the excellence of the national engineering education system and its adaptability to the international and european context**
- **Assist every body involved in engineering training in a global reflection on future evolution**

- **Assess and accreditate curricula, on requested, put forward by foreign institutions**

CTI Missions in the european and international context

- **The CTI action is defined in agreement with the Sorbonne, Bologna Process**
- **Is in favor of a national base for accreditation and a strong cooperation between national organizations.**
- **The CTI considers that the responsibility for education programmes quality belongs to the HEIs and the right to define references and criteria to the national accreditation agencies.**
- **The CTI gets engaged in mutual recognitions**
- **The CTI supports the search for a mutual recognition of accreditation decisions or for joint system of accreditation (joint degrees)**
- **The CTI recognizes as useful the creation and validation of a common Référentiel (framework) for quality assurance.**

CTI methods and procedures

- **Références and orientations**
- **Self-evaluation guide for engineering education programmes in HEIs**
 - **Strategy and general organisation**
 - **Partnerships: research, professional, international**
 - **Recruitment**
 - **Programme objectives, learning outcomes, ..**
 - **Employment of graduates**
 - **HEIs continuous improvement,**

CTI

Engineering training in France

Major trends

- Mathematics as a tool for modeling
- Basic physics and chemistry (all students) and links with research
- Detailed knowledge of the curriculum specialty
- Broad training in communication, social and human sciences, management, etc.
- Fluent use of one, preferably two, foreign language, including English; ability to work in a foreign environment
- Professional skills developed by alternation and project work in industry

CTI

International awareness

- 1 - The practice of foreign languages
- 2 - Foreign students at the institute and student exchanges
- 3 - Recognition / accreditation involving foreign institutes
- 4 - Degrees awarded by foreign institutes
- 5 - International recognitions : memorandum of understanding with ABET 1998, agreement for mutual recognition between CTI and Canadian Engineering Council 1999
- 6 – In Europe : EURACE project, applications to ECA and ENQA, cooperations with NVAO, ASIIN

CTI

Gateway to working in industry

1 - Alternation : standard training

Cooperative education - Apprenticeships

2 - Project - based learning

3 - New technologies

4 - Increasing industrial participation in the training of engineers

5 - Development of entrepreneurship

CTI

A few results

- 30 000 diplômes d'ingénieurs/year – master degree
- 250 HEI in engineering and 750 accredited programmes
- European and international activities
- Periodic accreditation discrepancies
- HEIs satisfaction survey

Conclusions

1 - CTI has defined its orientations and references, criteria and methods

2 - CTI notifications are followed by actions

3 - CTI has the role of adviser, not censor

4 - CTI fosters alignment with other national systems