

Experiences with accreditation by the Accreditation Board for Engineering and Technology [ABET]

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Education and Student Affairs

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Recognition of Cross-border Capacity Building in Earth Observation
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Aerospace Engineering

Facts & Figures

Number of staff:

- 59 support staff
- 228 academic staff

Number of students:

- 1800 of students (BSc & MSc)
- 380 first year students

Funding:

- € 22 M - Government funding
- € 7 M - External funding

Aerospace Engineering

Research departments

- Mechanics, Aerospace Structures and Materials
- Aerospace Design, Integration and Operations
- Earth Observation and Space Systems

Aerospace Engineering

Educational programmes

- BSc Aerospace Engineering (3 years)
- Msc Aerospace Engineering (2 years)
- MSc Geomatics (2 years)

Aerospace Engineering Educational philosophy

- Covering almost all areas of aerospace engineering both with expertise and laboratory equipment
- Complex and challenging study objects
- Object-oriented learning
 - aircraft and spacecraft
- Broad technical education
- Working in multinational teams
- Systems engineering approach
- Development of project, intellectual skills
- Real-life practice using unique facilities
- Highly appreciated by students

Aerospace Engineering

Internationally oriented

One of the best aerospace engineering institutions world wide, acknowledged by industry and accreditation boards

- Fully English taught programme
- 23% International students
- Member of IDEA League, PEGASUS university networks
- Bilateral international agreements
- Working in multinational research teams
- Largest aerospace engineering faculty in Western Europe

ABET

- Why ABET next to Dutch accreditation?
 - Aerospace Engineering is unique programme in the Netherlands: ABET compares Delft to US aerospace engineering programmes
 - Contributes to international character

ABET process

1995 and 2001

- Self-study and site visit
- Based on requirements
- Site visit and part of self-study combined with VSNU (Dutch accreditation)
- Leading to Substantial Equivalency

Criteria 2006

- Self-study and site visit
- Emphasis on outcomes (preparation for entry into professional practice)
- Combination ABET and QANU (Dutch accreditation) difficult
- Leading to accreditation

Overall appraisal of study programme (ABET/VSNU 2001)

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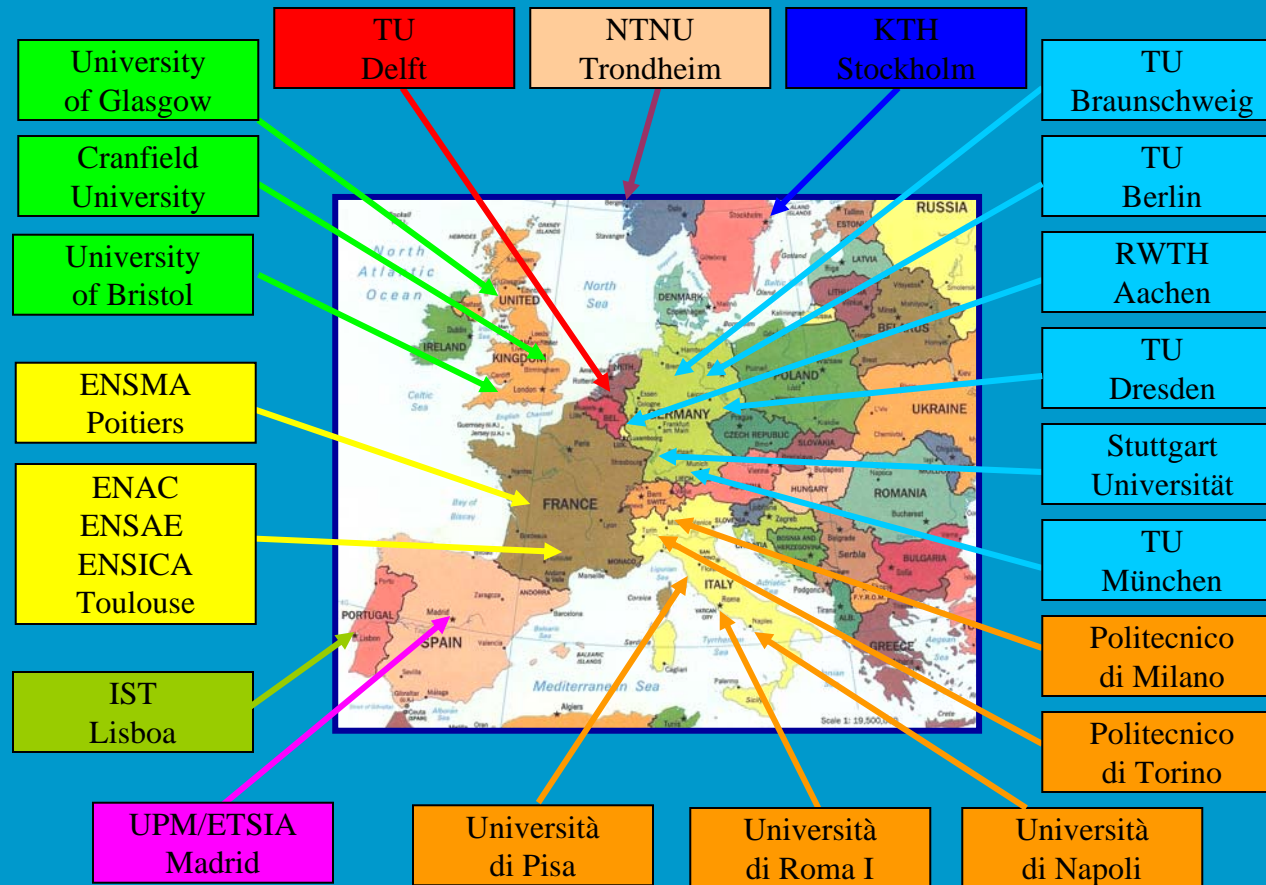
ABET and Aerospace Engineering

- Stimulated internationalization process
- Contacts with US Aerospace Engineering programmes
- Useful in contacts with industry (e.g Boeing)
- Promotional value in attracting students

European cooperation

- Bilateral agreements (e.g. student exchange)
- Double degree with IST, Lissabon
- The Pegasus network: network of important aerospace programmes in Europe

The pegasus network



Objectives of Pegasus

- Improve educational process and curricula to specifically serve AS industry's needs
- Show similarities and differences of European curricula to the AS World
- Co-operate with other groups and networks to fulfil the EU policy lines in higher education
- Increase co-operation between partners and industry as well as national and European research agencies
- Contribute to attract non-European students and engineers through competitive curricula and continuing educational services
- Be recognised as the most efficient channel to get university inputs at the integrated EU level

Do we need international accreditation?

- Site visit QANU was several weeks ago
- Discussing whether to continue ABET accreditation (Bsc/MSc structure not compatible with US system)
- Strong involvement in European aerospace engineering network

International accreditation helps in building cross-border capacity, but cooperation between institutes is important as well.

References

- www.lr.tudelft.nl (Aerospace Engineering)
- www.abet.org (Abet)
- <http://www.nvao.net/nieuws/2007/198> (Presentation D. Holger: *ABET, the Engineering Accreditation Process in the USA, and Globalization*)
- www.pegasus-europe.org (Pegasus network)