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Problem Based Internship in Surveying and Planning Curricula

Esben Munk Sørensen and Stig Enemark, Denmark



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School of Surveying and Planning

The only University in Denmark for Cadastral Surveyors – 30 Masters yearly.

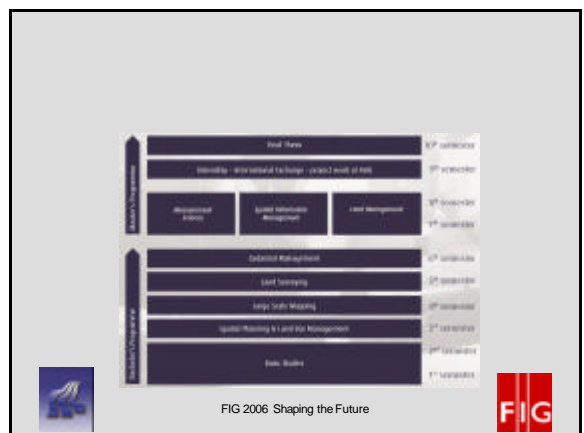
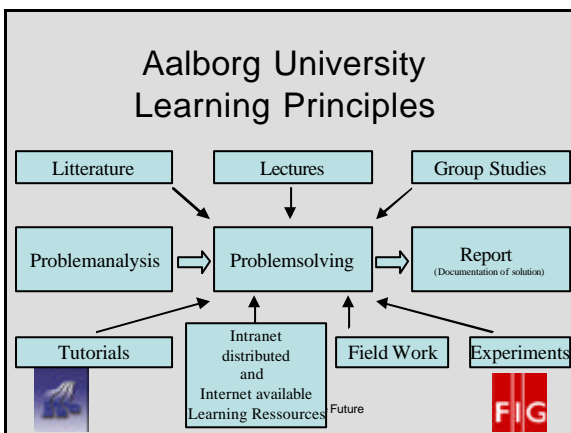
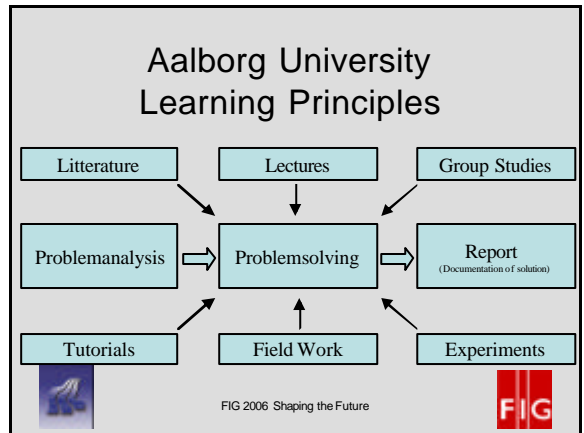


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FIG

Inspiration for internship as a study element

- Inspiration from graduate engineers from the AAU.
- Here it has, for a number of years, been possible to carry through an internship.
- The internship has contributed to disseminate the knowledge of the graduate engineers from the AAU.
- It has also given the students a good insight into the work tasks and development needs of the enterprises.

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FIG

Innovation

- The internship semester **has not been established to recreate** the "apprenticeship".
- It is an explicit purpose to create a platform for closer inter-play between practice, research and education.
- When the students have finished the the first year on their Master programme they are well equipped with the latest knowledge within the single research-based teaching fields.
- After this, they will have a good basis for developing their ability in an internship course to understand and work up problems from the real working life.
- And with this foundation the contents of the final projects are supposed to be marked by the insight that the students have obtained into the development wishes of the enterprises.
- The students combine their own theoretical skills and in this way create not only theoretical solutions in their projects, but also create solutions that can be used. **A modern work for this is innovation.**

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FIG

The first class

1. Internship site
2. Project subject

- The Secretariat for the Agricultural Commission in Northern Jutland.
- An investigation of the Secretariats consultancy for applicants and instructions for the Agricultural Commission.
- The Municipality of Aalborg, Technical Services Centre
- Preservative neighbourhood planning in Hæsleås.
- The Secretariat for the Agricultural Commission in the County of Southern Jutland
- The single case management of the Act of Agriculture.
- Sven Allan Jensen's Urban Planning Practice.
- Environmental impact assessment of neighbourhood and municipal development plans.
- Private company; Chartered Surveyors, Slagelse
- Surveying consultancy and the Act of Agriculture.
- COWI A/S international consulting group, Aalborg Dept.
- Development and implementation of the InternetGIS map server for use in COWI.
- The Chartered Surveyor's firm Søren Lange, Aalborg
- Environmental impact assessment of neighbourhood plans.
- Leica Geosystems AS
- Test of SpiderNet at the GPS reference.
- The Chartered Surveyor's firm Nøllemann & Bjørnkjær.
- Field control of laser scanning data.
- The Chartered Surveyor's firm Hvenegaard AS
- System 2000 in the cadastral case preparation.
- The Municipality of Egtved
- Strategic local planning.
- Ministry of Agriculture, Land Consolidation Office in Tønder
- Evaluation of property pilot studies.

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FIG

Pictures from internship

FIG

Lesson Learned.

- The students
 - found them selves well qualified to the internship and meet the professional tasks and challenges in the internship
 - were able to follow and take part in the daily work in the companies and officecis.
 - felt that they have to be very motivated to go through an internship.
 - felt it was nessacary to devote on self to the internship
 - Need to mobilize personal ressources
- For several of the student they felt very well prepared for doing the studywork in the thesis
- It was very fascination to realize that they were able personally to meet the challenges as individuals – without the security in the group work known from the university.
- The students have to be aware of using the possibilities at the concrete firm, company ore office.
- For many days in the internship it was long days with hard works and very often nit was necessary to be at the office also in the nights.
- Following Summer all – except 2 – got a job before defending masterthesis



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