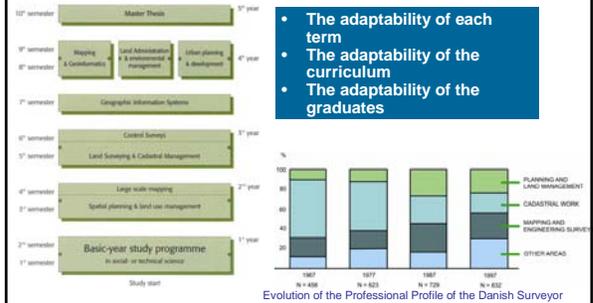


Curriculum Development The Danish Experience

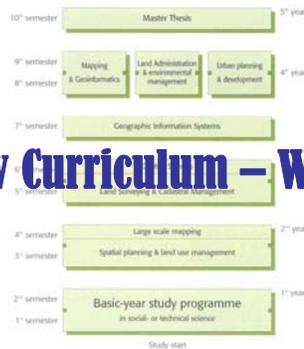
Prof. Stig Enemark
 President
 Aalborg University, Denmark

FIG COMMISSION 2 SYMPOSIUM, PRAGUE, 7-9 JUNE 2007

2003: Well functioning and flexible Curriculum for more than 10 years



New Curriculum – Why ?



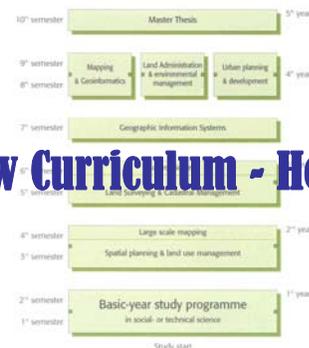
Universities in transition

- A new law of university governance
 - A council with majority external members from the trade and industries
 - The council employs the rector
 - The rector employs the deans, who will employ the head of departments
 - Faculty and department boards will be replaced by academic councils
 - The study boards will still be responsible of the educational programmes
- A new structure for the University programmes
 - The Bologna-agreement 3+2+3 principle
 - 3-year Bachelor programme; 2-year Masters programme; 3-year Ph.D.
 - Master programmes are open for various bachelor programmes
- A new law for the university programmes
 - Only one law regulating all educational programmes
 - All programmes must be revised and adjusted to the new structure

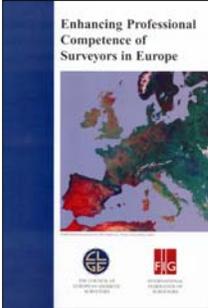
A new 3+2 structure Consequences for the surveying education

- Will bachelors possess the necessary competences ?
 - A broad education within both technical and social science
 - Bachelor: three years of know-how studies, Masters: two years of know-why
 - Existing 2½ year technical college program in surveying and mapping
 - Is the labor market prepared for bachelors ?
- Focus on the five-year masters programme
 - To obtain a license for cadastral surveying requires a five year programme plus three years of professional practice.
 - Without the demand for a full scale five year programme, it may easily be divided a technical and a social science part
- The title of the graduates ?
 - The title is supposed to follow the masters specialisation
 - However, the title Chartered surveyor should be exclusive for the graduates having followed the full five program in surveying.

New Curriculum - How ?



International trends



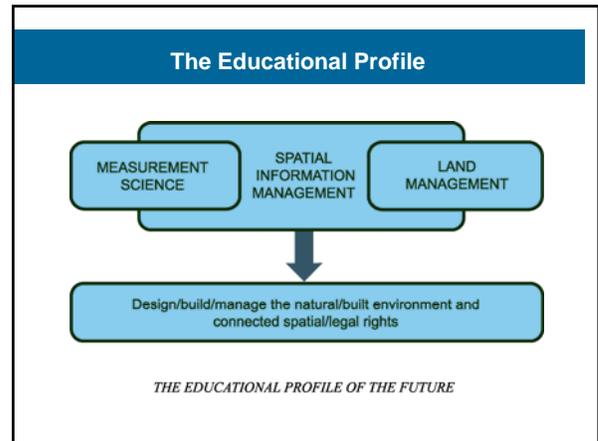
Germany, Bonn (4.5 years)

Common content → Options → Option SM → Option GIM/LM

Denmark, Aalborg University (5 years)

Common content → Options → Option SM → Option LM

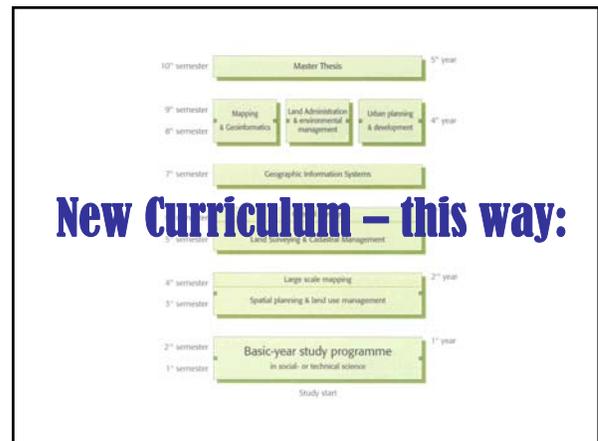
Core subjects:
 Real Estate Economics (REK)
 Land Management (LM)
 Geographical Information Management (GIM)
 Surveying and Mapping (SM)
 Support subjects:
 Other
 Maths, statistics, stats etc. (MATH)



Competences of the graduates

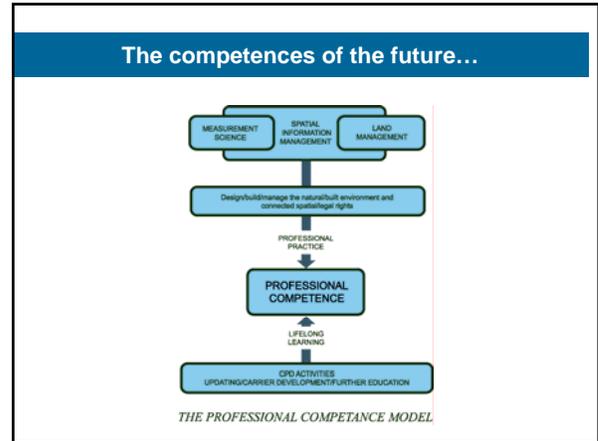
A survey of the last ten years of graduates
 Answers 75% ~ 300 graduates (1/3 female)

- Overall assessment of the programme**
 83% good or very good
 2% bad
- Professional qualifications**
 Fine match between the qualifications obtained, and the competences asked for in practice
- General qualifications**
 Interdisciplinary skills, problem solving, communication, and management – also a fine match.

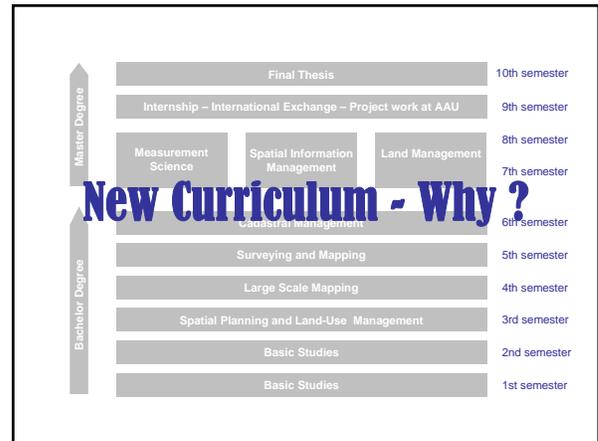


... A new curriculum

- Adapted to the new 3+2 structure
- Adapted to the international trends
- Professional areas adapted based on the survey of competences of the graduates
- The programme is secured for a 10 ten year period ahead
- The "Aalborg model" is maintained including the problem-based project work
- Continuing development of implementing IT in the educational process and in the interaction between education, research and professional practice.



- ## ... The competences of the future
- **The surveyors' educational council**
 - Representatives of the employers within the different professional areas + professors and students, in total 18 members
 - Discussion on the competences of the future in a visionary perspective
 - **The only surveying programme in DK**
 - Special demands of development and innovation
 - On the forefront – and preferably a little ahead
 - **The new curriculum is another step forward**
 - for building the competences of the future

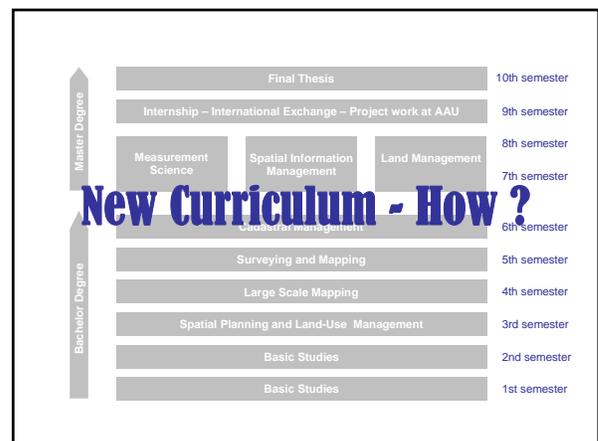


Facing the challenges

- **Lack of students**
- **Too big a gap between supply and demand**
- **Option for double degree and new specialisations in cooperation with Lund University, Sweden**
- **Option for offering a range of specialisations as master programmes under the Bologna agreement.**

Year	Enrol	OGrad.
2000	52	17
2001	39	23
2002	38	30
2003	35	30
2004	32	35
2005	25	46
2006	26	35
2007	32

Rate of unemployment < 1%



M. Sc. - Chartered Surveyor Study Programme AALBORG UNIVERSITY

New Curriculum September 2007

	AALBORG	COPENHAGEN	
Master's Programme	Final Thesis	Final Thesis	10 th semester
	Internship - International Exchange - project work at AAU	Internship - International Exchange - project work at AAU	9 th semester
Bachelor's Programme	Land Management	Geoinformation Technology & Management	8 th semester
	Measurement Science	Property Economics*	7 th semester
	Cadastral Management	Cadastral Management	6 th semester
	Land Surveying	Land Surveying	5 th semester
	Large Scale Mapping	Large Scale Mapping	4 th semester
	Spatial Planning & Land Use Management	Spatial Planning & Land Use Management	3 rd semester
	Site & Residential Planning	Site & Residential Planning	2 nd semester
	Maps & Spatial data	Maps & Spatial data	1 st semester

* In co-operation with faculty of Engineering DTU / Lund University

