School of Engineering

t.FHSY - Airport Systems

Person responsible for the course:	Andrea Norbert Muggli, muga
Credits:	4
Valid for:	2009/2010
Last saved:	23.08.2010 17:31

Learning objectives:

This course is closely linked to the course Airport Processes (GOP), with an emphasis on Operation & Management. The course FHSY deals primarily with the planning aspects of airports, while the course GOP mainly illustrates the operational aspects of airports.

The students

- should be able to understand projects in the field of airports in a general context and thus to find sustainable solutions,
- understand the importance for the national economy of aviation as a public transport system as well as the importance of an airport for regional development,
- have an overview of the European situation of airports,
- know the growth dynamics of aviation and identify airports as structural bottlenecks,
- understand the models Hub&Spoke and O&D,
- understand airports as complex industrial systems and the interrelation with their environment,
- know the various forms of airport management and the distribution of duties and responsibilities at airports,
- understand the difference between major and regional airports.

In terms of planning, the students

- know the basics of airport planning - from demand forecasting and dominant user habits to the inauguration of new infrastructure,
- know the relevant international norms, essential simulation tools for efficient operations as well as for the administration of noise emissions and pollution,
- are informed about the Swiss authorisation procedures.

Course content:

Introduction Airport:
- comprehensive model
- operational model (MIL / CIV)
- overview process model
- handling processes (Airside / Landside)
- ATS
- airport authority
- production plan and steerage

Airport planning
- relevant SARPS
- operational models
- load characteristics

- terminal layout
- dock stands vs open stands
- capacity planning of stands, runways, pax- and freight facilities
- FAA capacity model
- PANS OPS
- noise and emissions planning
- phasing

Previous knowledge:

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Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14*(2L+2L)
Tutorial/Practicum	
Group teaching	
Block instruction	
Seminar	

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

Number	Type	Weighting
1	End of term exam	
1	Exam during the semester	
2	Further assessments	

Language of instruction:

German

Instruction material:

script
ICAO Annex 9 (Facilitation), 14 (Aerodromes) and 17 (Security)

Comments:

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