

Title of the whole course: Safety and Environmental Effects of Traffic, Advanced Course 3

Environment, Energy & Transport

Name of the Educational Test Site:

Lund University

Objective of the whole course

To develop the student's ability to analyse and evaluate effects on safety and environment as well as consequences on different levels.

Content of the whole course

Traffic safety problems and negative environmental impacts from traffic. The course is divided into the following sections:

- 1) Safety issues and negative environmental impacts caused by traffic. Example of phenomena that are studied are the definition of traffic safety, the environmental impacts from traffic and use of energy, socio-economic effects, the influence of speed on safety and environment, safety risks for different kinds of passengers, traffic safety effects by different physical measures, relation between traffic planning and safety/ environment, impact of traffic flow on safety environment, components in pollution and effects on environment and health, pollution quantity depending on vehicle, motor and fuel, environmental aim, noise, barrier effects and land use
- 2) Methods for researching and measuring the above phenomena are traffic safety measurements and methods for measuring environmental consequences.
- 3)) Research methods that are used to study the unwanted effects of traffic. For example the Swedish conflict technique, environmental consequence descriptions, general principle for calculations of pollution quantities, noise calculations, programmes used for this.
- 4) Measures to increase safety and decrease environmental problems on different levels, from comprehensive level to detail design.

Which parts of PORTAL (project results) were taken up?

Principles and methods to model exhaust emissions and fuel consumption from transport. Besides the described methods in Portal some other methods (working at other levels) were described as well.

Which PORTAL material was used?

The written material will be used as optional literature. The OH was used in the lecture.

Separate / existing course	Existing course
Optional / compulsory course	Optional course
Name of the corresponding curricula	Faculty of engineering. Master of Science (Civil Engineering)
Participants' level	On their 4 th year (the total length is 4,5 years). Specialising on transport
Type of input	Lecture
Number of participants	About 15
Timing	Nov 2002
Exercises	PBL 2+2h
Language	Swedish

Name of the teacher	Eva Ericsson
- e-mail	Eva.Ericsson@tft.lth.se
- Phone number	+46 46 222 91 38
Website of institution and / or lecturer	www.tft.lth.se
Language of lecturer	Swedish,
Fields of expertise	Environment, energy and transport