

Course Theories & Methods

Date:	21 & 28 September, 5 & 12 October 2017
Time:	21 Sept.: 09.30 – 16.30 h / other days: 10.00 – 16.00 h
Location:	TU Delft – room t.b.a.
Course leader:	Prof. Vincent Marchau
Lecturers:	Dr. Sander van Cranenburgh, Dr. Andreas Hegyi, Dr. Jan Kwakkel, Dr. Victor Knoop, Prof. René de Koster, Dr. Niek Mouter
Days:	4
ECTS:	1 (attendance) / 4 (attendance + assignment)
Course fee:	Free for TRAIL/Beta/OML members, others please contact the TRAIL office
Registration:	www.rstrail.nl

Objectives

To support PhD students with their theoretical framing and methodological choices when doing their PhD research. PhD students are first given a quick overview of various theories and methods in the areas of Transport, Infrastructure and Logistics (TIL) and a basic understanding of some particularly relevant theories and methods in the areas of TIL. This allows them also to determine which other specialized courses might be interesting for them to follow at a later stage.

Course Description

Day 1: On the first day a short overview of (some) dominant Theories and Methods (T&M) used in the T L-domain will be presented and discussed, as well as a brief explanation of the assignment. Next, theories and methods in the area of transport will be presented with a focus on: (1) discrete choice models & stated choice data collection, (2) activity based theories and models.

Day 2: In the area of logistics the focus is on: (1) Theory related to Critical Performance Indicators, trade-offs logistics and operations, (2) Distribution networks, (3) Supply Chain Management: aligning incentives, and (4, optional): impact of behaviour on logistics.

Day 3: In the area of infrastructure the focus is on (1) Traffic Flow Theory, (2) Traffic Management and Control, (3) Dynamic Assignment Models and (4) Public transit operations and control.

Day 4: Students will present and discuss their setup of the assignment in class.

Assignment

A paper, summarizing the theoretical and/or methodological setup of (parts) of the PhD student's research (i.e. a draft chapter 2 of the student's PhD thesis).

Program

- Day 1 – 21 Sept.: Short intro (Prof. Vincent Marchau and Dr. Jan Kwakkel) and Transport T&M (Dr. Sander Cranenburgh and Dr. Niek Mouter)
- Day 2 – 28 Sept.: Logistics T&M (Prof. René de Koster)
- Day 3 – 05 Oct.: Infrastructure T&M (Dr. Andreas Hegyi and Dr. Victor Knoop)
- Day 4 – 12 Oct.: Presenting the setup of the assignment paper (Prof. Vincent Marchau and Dr. Jan Kwakkel)