### Module/Course Description/Syllabus

<table>
<thead>
<tr>
<th>Module:</th>
<th>International Logistics (IL)</th>
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| Module courses: | Transport Logistics (TL)  
Production & Warehouse Logistics (PWL)  
Project Management (PM)  
Seminar on International Logistics (SoIL) |
| Course Title: | Transport Logistics |
| Recommended alternative module or courses: | - |
| Course of studies: | Business Administration |
| HISinOne Code: | 1141011 |
| Study Cycle: |  
- first  
- second  
- third  
- short |
| Frequency: |  
- winter term  
- summer term  
- each semester |
| Language competence Level: | |
| Responsible for the Module/Course: | Prof. Dr.-Ing. O. Kunze |
| Lecturer/s: | Prof. Dr.-Ing. O. Kunze |
| Type of course: | optimal  
compulsory |
| Mode of delivery: | face-to-face |
| Language of Instruction: |  
- English  
- German  
Level of course: | 5th semester |
| Teaching Methods: | Lecture (50%)  
Homework Exercises (25%) => group work  
Literature Research Project & Presentation (25%) => group work |
| Work parameters: | Contact hours in lecture form  
Exercises (hours)  
Self-studies (hours)  
All together (hours) |
| | 45  
20  
25  
|
| ECTS-Credits: | 03 |
| Number of Participants: | approx. 20 |
| Use for other studies: | Supply Chain Management |
| Length of programme: | 1 semester |
Prerequisites:

- Statistics
- Fundamental Mathematics
- English
- MS-Office (Excel, Word, Powerpoint)

Learning outcomes:

- Ability to detect optimization problems in logistics;
- Ability to model logistical problems formally as OR-models;
- Ability to solve problems by use of appropriate SW-tools;
- Understand potentials and limitations of optimization tools in logistics

Content:

- Logistics in a nutshell
- Optimization basics
- Brief summary of relevant OR-models and suitable algorithms, as e.g.
  - Shortest Path Problem SPP
  - Vehicle Routing Problem VRP & variances thereof (as e.g. VRP-TW)
  - Facility Location Problem FLP & variances thereof (as e.g. cml-FLP)
  - Chinese Postman Problem CPP
- ...
- Case studies:
  - problem modelling in different vertical industries
  - solving formally modelled problems by means of appropriate SW-tools
### Examination Regulations:

- Oral Exam 50%
- Group Exercises 25%
- Group Literature Research Project 25%

### Assessment methods/ components:

**Basis for Assessment:**
- Oral Exam: quality of oral answers
- Group Exercise: exercise result documentation & presentation
- Literature Research Project: presentation

### Assessment criteria:

- HNU-Standard

### Planned learning activities and teaching methods:

- see above
## Required reading and other learning resources/tools:

- Hillier/Lieberman
  - Introduction to Operations Research

- Brandimarte/Zotteri
  - Introduction to Distribution Logistics

## Recommended reading and other learning resources/tools:

- Selected journal articles on operations research in transport logistics

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**Additional information:**