<table>
<thead>
<tr>
<th>Module:</th>
<th>International Logistics (IL)</th>
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</table>
| Module courses: | Transport Logistics (TL)  
Production & Warehouse Logistics (PWL)  
Project Management (PM)  
Seminar on International Logistics (SoIL) |
| Course Title: | Production and Warehouse Logistics (PWL) |
| Recommended alternative module or courses: | - |
| Course of studies: | Business Administration |
| HISinOne Code: | 1141020 |
| 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: | ☐ optional  
☐ compulsory |
| Mode of delivery: | face-to-face |
| Language of Instruction: | ☐ English  
☐ German  
Level of course: | 5th semester |
| Teaching Methods: | Lecture (80%)  
Laboratory Exercises (20%) => group work |
| Volume: | 03 |
| Work parameters: | Contact hours in lecture form: 45  
Exercises (hours): 20  
Self-studies (hours): 25  
All together (hours): |
| ECTS-Credits: | 03 |
| Number of Participants: | approx. 20  
Length of programme: 1 semester |
| Use for other studies: | Supply Chain Management |
### Prerequisites:

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

### Learning outcomes:

- Ability to detect optimization problems in intra logistics;
- Ability to do basic calculations on input, throughput and output of warehouses
- Understand queuing theory basic
- Ability to model & analyse simple production systems (push & pull)

### Content:

- Warehouse Logistics
  - Warehouse Functions
  - Basic Warehouse Types & Operations
  - Warehouse Layout & Equipment
  - Warehouse Planning Challenges
    - Space calculus (e.g. zone vs. chaotic storage space)
    - Throughput calculus (e.g. single & double cycle calculus)
    - Stock level calculus (e.g. EOQ, SLI SLII)
  - Warehouse Planning Steps
- Production Logistics
  - Queuing Theory Basics
  - Push (MRP)
  - Pull (JIT, JIS)
## Examination Regulations:

Oral Exam 100%

## Assessment methods/components:

Basis for Assessment:
Oral Exam: quality of oral answers

## 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 |
|                     | Arnold/Furmans  
Materialfluss in Logistiksystemen (excepts) |
| Recommended reading and other learning resources/tools: | selected journal articles on operations research in production & warehouse logistics |

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**Additional information:**