DM204 (3. + 4. Kv., 10 ECTS)
Skedulering, Skemalægning og Ruteplanlægning
Scheduling, Timetabling and Routing

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University of Southern Denmark

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**Timetabling**

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<th>Mandal</th>
<th>Tirsdag</th>
<th>Onsdag</th>
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<td>8-9</td>
<td>DM63 (Sem)</td>
<td>MM/MMP36 (Sem)</td>
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<td>DM518 (Sem)</td>
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**Vehicle Routing**

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**Skema for M1 i Efterår 2008**
Sources


Further examples:

Contents: Modeling

Scheduling

- Activities
- Resources
- Objectives
- Constraints

Timetabling

- Interval Scheduling, Reservations
- Educational and Employee Timetabling

Vehicle Routing

- TSP
- VRP
- VRPBTW
- VRPTW
- CVRP
- DCVRP
- VRPB
- VRPPDTW
- VRPPD
- VRPBTW

Contents: Modeling
Contents: Solution Techniques

- Mathematical Programming
- Networks
- Branch and Bound
- Constraint Programming
- Dedicated algorithms
- Dispatching Rules and Construction Heuristics
- Metaheuristics: SA, Tabu Search, GA

Course prerequisites
- DM507 (algorithms and data structures)
- MM505 (linear algebra)
- DM515 (Introduction to Linear and Integer Programming)
- The content of DM811 and DM812 should be known

Students' Activity

During the Course (30 lectures, 4 hours per week)
- Work out exercises in class
- Learning new modelling languages (ZIMPL, Gecode)
- Read and present an article (still to be decided)

Final Assessment (10 ECTS)
- Group project (40% of the final grade) approved choice of a case study deliverables: program + report meant to assess the ability to apply
- Oral exam of 30 minutes with external examiner (60% of final grade) meant to assess the base knowledge

Course Material

Books:

Further literature:
- Articles
- Lecture notes
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