Innovative, future-oriented and sustainable

It is a unique bachelor degree program in cooperation with different partners that combines the relevant content of different disciplines, and trains students to cope with the complex field of transportation management. The study location is Karlsruhe – here are the best conditions to design a sustainable transport study program: Here are located many different transport related companies and Universities. Moreover, the city of Karlsruhe and the region of Baden Württemberg are magnets for important transport-related Industry headquarters.

Cooperation-partners of the degree program:
- **INIT AG**, Karlsruhe (www.initag.de)
  World market leader in transport telematics applications
- **PTV AG**, Karlsruhe (www.ptvgroup.com)
  World leader in traffic simulation solutions
- **Siemens**, Karlsruhe (www.siemens.de)
  World market leader in traffic engineering

The cooperation with different partners allows the bachelor program to have a strong practical component. Here, real tasks are studied on-site, so that students become active in real-life examples at an early stage, providing networking opportunities, valuable experience and outstanding career prospects.

Transport management – for a mobile future!
From A to B – fast, safe, comfortable and cost-effective. Who does not want that? But the limited supply of transport infrastructure like roads, railways, and buses, along with increasing transport demand, and notable differences between local and regional needs makes this vision a challenging task. Construction of new transport infrastructure is costly, time and resource consuming, and often very complex. Maintenance costs are often neglected. Transport solutions are in high demand, as cities are directly impacted by the quality of its transport systems. The Transportation Management Degree Program offers thorough knowledge of solutions and strategies for optimizing the interaction of transport supply and demand.

This is the content of this unique Bachelor degree program at the University of Karlsruhe – University of Applied Sciences. Beyond classical study programs, this Bachelor degree offers a full interaction between Mobility and Geomatics along with the required knowledge of economics and technology.

With different tasks and different application fields, the Transportation Management Degree Program offers multiple options for a professional future, for example:
- Engineering and Transport consultancy companies
- Public transport and rail-oriented companies
- Transport and Planning associations
- Local, regional and national authorities, and ministries
- Universities and research institutions
- All areas of mobility management (for example E-mobility)
- Cutting-edge services and technologies
- Transport industry, for example, car industry

The Transportation Management Bachelor Degree Program comprises seven semesters. Transportation is the cornerstone of this higher education program.

The first two semesters provide basic courses that refresh previous knowledge and provide the foundations regarding transportation.

The third and fourth semesters provide an in-depth knowledge of different transport subjects. Emphasis is given to, for example, expanding knowledge on transport modelling and software development, and preparing students for the future practical semester.

The fifth semester is the internship semester. Here, new skills are learned and applied independently. This internship may be carried out at one of our cooperation partners or other companies. Students are intensively supervised, with a focus on independent work for the development of intelligent solutions for their different tasks. At this point, students’ specialization choice is also conceptualized.

In the sixth and seventh semester, students may consolidate their area of expertise. The study ends with a bachelor thesis within the seventh semester.

The bachelor thesis may be carried out with one of the cooperation partners or with other industry partner. Students are now capable of solving many different interdisciplinary and complex tasks independently and innovatively. Afterwards, the students will be awarded the academic degree “Bachelor of Sciences (B.Sc.)”. With this high-level professional degree, students have the option to begin a master’s degree, like one of the programs offered in the Hochschule Karlsruhe.

### Program Design

<table>
<thead>
<tr>
<th>Semester</th>
<th>Content (Modules)</th>
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<tbody>
<tr>
<td>1. Semester</td>
<td>Mobility, traffic planning and Informatics foundations, transport economics, Mathematics I</td>
</tr>
<tr>
<td>2. Semester</td>
<td>Transport infrastructure project, transport &amp; environment, programming, GIS foundations, Mathematics II</td>
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<tr>
<td>3. Semester</td>
<td>Data analysis &amp; statistics in transport, public transport systems, operations research, mobile software, transport modelling, scientific research and projects</td>
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<tr>
<td>4. Semester</td>
<td>Transport technologies, planning laws and participation, transport demand analysis, software development, microscopic simulation, project management and project design</td>
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<tr>
<td>5. Semester</td>
<td>Practical semester (internship)</td>
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<tr>
<td>6. Semester</td>
<td>Compulsory elective subject, specialization module I &amp; II, specialization project</td>
</tr>
<tr>
<td>7. Semester</td>
<td>Soft skills, language &amp; rhetoric, bachelor thesis</td>
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#### Specialization subject
(in the 6th and 7th semester by thematic areas):
- **Digital transport systems:**
  - dynamic information systems, intelligent traffic systems, ubiquitous mobility systems
- **Transport planning:**
  - sustainable mobility, transport safety, transport planning
- **Transport ecology:**
  - sustainable mobility, transport operations, transport ecology
- **Transport and logistics:**
  - logistics and transport management, transport operations, decision support systems for transport companies