Intelligent Transport Systems is a quickly evolving area facing a lack of qualified professionals.

**Why are these systems important?**

The ITS program integrates information and telecommunication technologies with transport engineering in order to achieve:

- better transport systems efficiency
- lower travel times
- higher safety and security
- reduction of environmental impacts
- increase in passenger comfort

**Graduates acquire** transport-technical knowledge, a detailed understanding of intelligent transport systems, their components, upcoming development in the field and also practical knowledge of the design, control and evaluation of these systems.

Part of the education is work on scientific projects and in the laboratories – e.g. Laboratory of traffic control and modelling, Laboratory of system reliability, Driving simulation research group or Laboratory for electronic identification systems and communication (e-ident).

**Graduates can find employment as:**

- designers of complex transport systems
- transport specialists in both the private and public sector
- transport supervisors for complex city systems, tunnel control systems, etc.
- specialists in design of in-vehicle ITS components
- managers of large transport projects

The Intelligent Transport Systems study program is offered by the **Department of Control and Telematics** which is performing science, research and education activities in the following main areas:

- traffic control
- human factors in transportation
- identification and navigation systems
- safety and reliability of telematics systems and equipment
- theoretical telematics

**information about ITS study program >>> its.fd.cvut.cz**
### Study curriculum of the Intelligent Transport System Master’s degree program

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<tr>
<th>Semester</th>
<th>Mathematics &amp; Physics</th>
<th>Informatics</th>
<th>Technical</th>
<th>Economical &amp; Environmental</th>
<th>Transportation</th>
<th>Special ITS</th>
<th>Languages &amp; Facultative</th>
<th>Projects</th>
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<tbody>
<tr>
<td>1st</td>
<td>ITS Mathematical Tools</td>
<td>System Engineering</td>
<td>Control System Theory</td>
<td>Economy and Management of ITS Projects</td>
<td>Traffic Flow Theory</td>
<td>Telematic Systems and Services</td>
<td>Language</td>
<td>Master Project</td>
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<td></td>
<td>Theoretical Physics at Transportation</td>
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<td>Analysis and Prevention of Traffic Accidents</td>
<td>Systems Analysis and Design of ITS</td>
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<td>2nd</td>
<td>Signals and Codes Pattern Recognition</td>
<td>Tutorial in Informatics</td>
<td>Technological Aspects of Quality</td>
<td>Energy Analysis of Land Carriage</td>
<td>Traffic Simulation</td>
<td>Telecommunications in ITS Identification Systems</td>
<td>Language</td>
<td>Compulsory Facultative Course</td>
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<td>3rd</td>
<td>Data Processing</td>
<td>Information Security</td>
<td>Special Materials and Technology (facultative)</td>
<td>ITS Effectiveness Assessment (facultative)</td>
<td>Safety and Reliability in Transportation</td>
<td>Railway Interlocking Systems (facultative)</td>
<td>Language</td>
<td>Compulsory Facultative Course</td>
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<td>Stochastic Models and their Applications</td>
<td>Geographical Information Systems</td>
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<td>Road Safety Audit</td>
<td>Vehicle Control Systems (facultative)</td>
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<td>Artificial Intelligence and Expert Systems in Transport</td>
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<td>Advanced Telematic Applications (facultative)</td>
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<td>Numerical Modelling</td>
<td>Risk Analysis and Management (facultative)</td>
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<td>Safety Critical Applications in Transport (facultative)</td>
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<td>Numerical Modelling</td>
<td>Applied Informatics</td>
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<td>Modelling of &quot;Human - Machine&quot; Interface</td>
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Intelligent Transport Systems study program is offered either as a single degree program at the Czech Technical University in Prague or as a multiple degree program combined with partner universities in Vienna, Austria and Linköping, Sweden.

The Department of Control and Telematics carries out its research activities with wide scientific and international cooperation. It cooperates with several industry partners e.g. in testing in-car telematics units and services, with research institutions (e.g. the Academy of Sciences of the Czech Republic), and with other European universities specializing in intelligent transport systems. It is also a member of the association ITS-EduNet, consisting of universities and organizations from Germany, Austria, Sweden, Great Britain, Italy, Slovenia, etc. The Department's personnel deals with many ITS research projects, both on European and national level.

The Faculty of Transportation Sciences is a leading transport-oriented faculty in the Czech Republic and is a part of the Czech Technical University in Prague, which has more than 300 years of history. Over 1,500 students in several specialized bachelor’s, master’s and Ph.D. programs benefit from project-oriented studies which, among other things, enables team work on transport projects under the supervision of experienced specialists.