



THE NEW STRUCTURE OF HIGHER EDUCATION ACCORDING TO THE BOLOGNA CONVENTION APPLIED IN THE FIELD OF TRANSPORT EDUCATION AT VŠB – TECHNICAL UNIVERSITY OF OSTRAVA

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Abstract: This article shows the manner, in which the results of the Bologna Convention are implemented into the new structure of transport branches of study. In addition to the presentation of the new accredited branches of study, the conception focused on the problems concerned with the arrangement of the branches of study according to the Convention mentioned above are given here.

Keywords: *education, transport, branches of study, Bologna Convention*

1. The new conception of branches of study in transport according to the Bologna Convention

Growing international cooperation requires coordination and collaboration in the field of education of people. The Institute of Transport at the Faculty of Mechanical Engineering, VŠB – Technical University of Ostrava (VŠB – TUO) took the results of the Bologna Convention into account when preparing the new conception of the branches of study in transport.

This new study conception was accredited by the accreditation process at the Faculty of Mechanical Engineering and some of the new branches of study in transport are available since the winter semester 2001. The branches of bachelor, master and doctoral study are prepared so that they are in professional relation.

It will be possible to study the *branches of study* within the faculty - wide study programme "Mechanical Engineering", which are mentioned in following text.

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1.1. Brief overview of the new branches of study in transport according to the Bologna Convention

BACHELOR STUDY	<p>STUDY PROGRAMME: MECHANICAL ENGINEERING</p> <p>BRANCHES OF STUDY:</p> <ul style="list-style-type: none"> • Transport and Materials Handling • Transport Technique • Transport Technologies with following specialisations <ul style="list-style-type: none"> ⇒ <i>Ground Transport</i> ⇒ <i>Air Transport</i>
MASTER STUDY	<p>STUDY PROGRAMME: MECHANICAL ENGINEERING</p> <p>BRANCH OF STUDY:</p> <ul style="list-style-type: none"> • Transport Technique and Technology with specialisations <ul style="list-style-type: none"> ⇒ <i>Rail Transport</i> ⇒ <i>Road Transport</i> ⇒ <i>Air Transport</i> ⇒ <i>Transport Technologies</i>
DOCTORAL STUDY	Still in preparation

1.2. Brief description of the new branches of study in transport according to the Bologna Convention

A) Bachelor study

Bachelor study contains following three branches of study:

Transport and Materials Handling – aimed to engineering, direction machine designing,

Transport technique – aimed primarily at traffic vehicles or means of transport and their operations, and

Transport technology – with the following specialisations:

Ground transport – aimed at traffic control, business and forwarding activities, and

Air transport – aimed at air operation activities (commercial pilot licensing up to theory of Air Transport Pilot, air traffic control or airline management) and aircraft operation and maintenance activities (aircraft maintenance staff licensing, maintenance logistic, etc.)

B) Master study

Master study programs follow previous bachelor studies and are divided into following branches of study of study:

Transport Technique and Technology – students can choose one of four specialisations according to selected study subjects:

Rail Transport – aimed at the development of rail transport infrastructure

Road Transport – aimed at the development of road transport infrastructure

Air Transport – aimed at the development of air transport infrastructure

Transport technology – aimed at applying the fundamental subjects of the conditions of transport and transport vehicles, their construction, operating and also their influence on the environment by development of rail transport infrastructure.

Following decision of the management of the Faculty of Mechanical Engineering all students are required to undergo common three - semester studies during which they acquire knowledge of fundamental subjects of mechanical engineering studies. Branch studies establish on common studies and they also persist three semester.

The branch of study *Transport Technologies* studies establish on fundamentals of *Mechanical Engineering* studies. Here the students also may become familiar with diagnostics and maintenances of transport means, transport technique and traffic economy. There are also required abilities in working with information.

Branches of study are designed so that the graduates could use their knowledge in praxis as soon as possible. Emphasis is given to the ability for decisions – making, team – working, creativity or flexibility. The graduates may find their job employment at transport companies of rail, road, municipal and also air transport as traffic engineers. They can work as technician at maintenance of transport vehicles too.

The branch of study *Transport Technologies* also establish on fundamentals of *Mechanical Engineering* studies and applies the knowledge of fundamental subjects on conditions of transport and transit. The students may select on of the following two specialisations:

Specialisation “Ground transport” prepares students for operating activities, traffic business and forwarding activities, including their economic appreciation on the basis of transport technology or transit technology and logistics. The graduates may find employment at all types of traffic companies and transport subdivisions of Czech or foreign firms and companies and also in the public administration.

Specialisation “Air Transport” enables the students to tie up with the bachelor study for improving their knowledge in the field of international commercial air transport. The students can orientate themselves to problems and activities related to specific problems of airline operation. All the study content conforms to the JAR (European Joint Aviation Rules) standards, which enables the students to apply for employment in all JAA (Joint Aviation Authorities) member states.

The branch of study *“Transport technique and technology”* enables successful students to continue to study in some of four specialisations, which are focused more on particular types of transport and their combinations. In all these specialisations there are common subjects extending theoretical knowledge of bachelors. Moreover the students from similar types of bachelor studies may enrol on these studies after passing appropriate differential examinations.

1.3. Problems of the new forms of studies

The implementation of new study programmes always entails a lot of problems and troubles and must be always supervised by experts. The most essential and progressive ideas must be included into generated drafts as quick as possible. Now when the global system of university education is changing, and step by step coming into existence in our country we expect essentially more remarks and drafts. Therefore it is useful even now at the beginning of implementation the whole system of studies to carry out critical appraisal and to assemble findings to improve curriculum on.

The first objection we can raise may refer to the duration of the first part of studies – three years. It may be very difficult to form student's profile in such a short time considering the fact that there are the first three semesters of studies which are common and compulsory – in my opinion it is not very wise resolution of the Faculty's management. Specialised department then can only work with students not until the fourth semester that means when they actually should have started to prepare topics for their bachelor theses. Consequently the students will have no special motivation for choosing the topic of their theses and will lack any operating practice as well, even if only short one.