

Organization of engineering studies in English and in Russian at Riga Technical University (RTU)

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To secure sufficient quality of engineering education, very special attention should be paid to knowledge of mathematics and language skills of potential students. Priorities are different for students studying in English and in Russian:

- when international students apply for programmes in English, one of the entry requirements is to have sufficient TOEFL or IELTS score. Sometimes, if the score is slightly lower than the required level, students *are still invited* to come to the RTU and to start the preparatory course and at the same time study parts of the basic subjects of the engineering programme. A frequently occurring problem is “missing chapters” in mathematics due to the setup of the corresponding national education programme. In that case the preparation course is adapted to the specific needs of each international student;
- for students studying in Russian (in most cases these are adult students of the Russian minority in the Baltic countries and elsewhere, studying in corresponding programmes) it is essential to diminish fear when taking up studies again. This refers to mathematics and Latvian. For one semester additional classes and consultations are offered in these two subjects.

The very success of such preparatory or additional courses is characterized by a relatively lower than average RTU rate of students withdrawing from their studies after the first year. The proposed study programmes are for Russian speaking students from CIS and EU, Israel and other countries, or for students studying in English and coming from Europe, the Middle East or from South Asia. Usually students are 17-35 years of age.

At the moment there are 120 students in Russian programmes, 75 in English programmes.

The process of enrolment is as follows: all students for programmes in English and in Russian are enrolled through the Department of Foreign Students of the RTU which arranges interviews with individual students to determine whether they satisfy the formal entry requirements. In the case of undergraduate programmes the Department requires the students to pass a test in mathematics. Depending on the result, the student gets a proposal or study plan for the organization of her/his initial studies and a schedule of classes adapted to individual needs. It is expected that all students are able to follow the regular engineering programme after one semester of such individualized initial studies. To secure study process, the following methodological tools are applied:

- individual intensive consultations;
- seminars with intensive use of computers;
- short study trips.

Within a short time period of time RTU published several textbooks written by RTU professors involved in the teaching process of international students. Most successful are “Latvian” I, II, III (for English speaking students) and “Computers for engineering economics students” (in Russian).

Two basic results of such activities are:

1. Higher motivation of students to continue their education and to be successful in engineering studies.
2. More efficient work for university professors, who are dealing with a homogeneous group of students in terms of their level of knowledge.
3. A more or less equal level of initial knowledge of students is a strong contribution to create team spirit in the students group.

Constraints: In order to get more efficient results and to involve more students into international programmes by Riga Technical University, one should mention two Latvian national laws:

- The Law on Institutions of Higher Education – the language of instruction in state education institutions is restricted **only to** Latvian. According to the law any possibilities to study in a language other than Latvian are not clearly defined.
- The Latvian Immigration Law requires that students coming from most non-EU countries have to undergo an interview in one of the Latvian embassies. Several students face serious problems in reaching the nearest embassy (e.g. there are only two Latvian embassies in Asia and none in Africa or Latin America).

The Latvian university system has to face growing external and internal competition. In addition to that such problems have a negative impact on the internationalization process of Latvian universities and weaken Latvia’s position within the European Higher Education Area.

The Introduction of the previously described highly individualized approach and the international experience applied to the CHAGAL student group, bring about a twofold benefit:

- for programmes in Russian: a contribution to the integration of Russian speaking minorities into Latvian society;
- for programmes in English: the provision of high quality engineering education for non-EU students from Asia and Africa, coming from middle and low income families.