

Summary report

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This report summarizes the most important observations and comments received during the expert team's visits of the following eight educational programs from December 10 to 14, 2012:

Kaunas University of Technology: Telecommunications, Bachelor degree

Kaunas University of Technology: Telecommunications Systems, Master degree

Kaunas University of Technology: Telecommunications, Master degree

Vilnius College: Professional Bachelor of Telecommunications Engineering

Vilnius Gediminas Technical University: Bachelor of Telecommunication Engineering

Vilnius Gediminas Technical University: Master of Telecommunications Engineering

Vilnius University: Bachelor of Electronics Engineering

Vilnius University: Master of Electronics Engineering

Programme aims and learning outcomes

In general the expert team finds that the quality of the telecommunication programmes visited is very sound and solid and many of them are comparable to state-of-the-art at other international telecommunication educational institutes. The educations are also quite adapted to the needs in the Lithuanian society. Almost all employers the team met are very satisfied with the candidates and most of the students the team met are also satisfied with the programmes. But as always, there are room for improvements.

Curriculum design

In the bachelor programmes, general university study subjects take up a considerable fraction of the whole programme. It is appreciated that such courses provide some added value to the students and it is understood that their inclusion is dictated by rules and laws for higher education in Lithuania. However, given the amount of telecommunications and electronics subjects that are not covered in the programmes, some reduction in these courses should be considered. Very few international curriculums in telecommunication programmes have such courses. Moreover, subjects like Management, Business of Law and Introduction to Psychology might be better placed in, for example, a subsequent 1 year evening business education, taken when the candidates work in a company and have become more mature and better motivated for such subjects.

Several of the programmes could benefit from placing greater emphasis on Wireless Communications, Optical Communications, Photonics, Nanophotonics and Multimedia Communications at the expense of other courses that are less central for telecommunications. The programmes should also be more based on international cutting edge research activities. Judging from a number of Bachelor and Master theses provided for evaluation the programmes cannot be said to reflect the latest achievements in science and technologies. To achieve such a demanding goal much more international research activities would have to form the basis for the thesis work; the expert team recognizes this would entail some serious economic challenges but none the less efforts should be made to strengthen the research. Although partly out of scope we add that larger Ph.D. program activities would be helpful in this respect.

Some of the programmes have a rather low number of students. Although this is a regrettable trend seen in some other countries the issue should be addressed by making the programme more attractive; clearer profile, better labs, larger research base, better cooperation with companies, larger visibility and stronger internationalization are some of the means that might be helpful.

In general a vision for the future development of the programmes and for the future international labour market should be developed.

Internationalization

Almost all faculties have some teachers who deliver their lectures in English, but many more teachers should be encouraged to do so, especially the young faculty professors, and more English textbooks should be used. Moreover, the level of international mobility and exchange should be improved both for faculty and students. Especially the ERASMUS mobility programme offers good opportunities for international mobility for both students and teachers. Indeed active student mobility was found in many cases, but measures should be taken to establish more active involvement of also teachers in the programme.

Facilities and learning resources

Very good lab facilities including modern equipment were found in many cases. However, some laboratories were found outdated; in several cases fiber-optic equipment turned out to be rather limited and with great need to be expanded and updated. In particular equipment for experiments with core networks (transmission, aggregation and service delivery platforms) and optical access networks (fiber to the x, passive optical networks) should be established.

Update of the equipment relies to some extent on the industrial partners. This is a very good sign of cooperation between the universities and the companies, but may prove insufficient to accommodate the latest developments. Efforts should be made to have the latest technological equipment in the laboratories; applications to structural funds of the European Union could be intensified and larger participation in EU research projects should be encouraged.

Study process and students' performance assessment

Students' satisfaction with the study programme is systematically monitored via questionnaires, although the participation in the process is too low in most cases and should be improved. The electronic procedures seem to discourage the participation while one institute had success by simply collecting questionnaires manually and confidentially at the end of the course.

Many students have part-time or even full-time jobs in companies. This has obvious positive and negative sides but seems to be a necessity for economical reasons and the educational institutes are doing the right thing by trying to accommodate the students' work habits by teaching also in evenings. However, it is recognized that such an organization of the studies may harm the internationalization process needed in the programmes.

The institutes carefully monitor the inner study quality and it is appreciated some have implemented efficient international education quality ensuring standards.

Acknowledgement

Finally, the expert team wishes to thank SKVC Lithuania and the higher educational institutes for hosting the very interesting and pleasant visits, and we wish all institutes the best of luck in their constant endeavours to further develop the telecommunication educations in Lithuania.

Agreed and signed on behalf of the expert team,



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Professor, Dr. Palle Jeppesen

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