

УДК 378.1

Ігор Луців, Роман Лещук, Володимир Кобельник

Тернопільський національний технічний університет імені Івана Пулюя, Україна

РОЗРОБКА НАВЧАЛЬНИХ ПЛАНІВ З МЕХАНІЧНОЇ ІНЖЕНЕРІЇ В ТЕРНОПІЛЬСЬКОМУ НАЦІОНАЛЬНОМУ ТЕХНІЧНОМУ УНІВЕРСИТЕТІ ІМЕНІ ІВАНА ПУЛЮЯ

Ihor Lutsiv, Roman Leshchuk, Volodymyr Kobelnyk

Ternopil Ivan Puluj National Technical University, Ukraine

MECHANICAL ENGINEERING CURRICULA DEVELOPMENT IN TERNOPIL IVAN PULUJ NATIONAL TECHNICAL UNIVERSITY

Quality assurance is undoubtedly at the very heart of the higher education reforms in Ukraine. The origins of these reforms go back to the Bologna process which combines the introduction of the new Bachelor-Master-PhD degree structure with a credit system and the certification system of the new programs quality. In this way all the different aspects of this process are closely interrelated: that is curricula reform, credit system, comparability, recognition of degrees, quality assurance.

The process of higher education TNTU training in the “13.Mechanical Engineering” field of studies combines the system of the three main cycles that are undergraduate, graduate and post graduate studies. According to the Law on Higher Education the Bachelor degree is the level of higher education and can be provided to the persons who obtain this level on the basis of a complete general secondary education. In their turn all Master students obtain a complete higher education on the base of a Bachelor degree. In a similar way those who need PhD degree have to complete the Master Studies. The most importance in the student studies is being paid to the duration of training in different studies. For example access to the second (Master) mainly 2-year cycle requires successful completion of the first (Bachelor) cycle studies, lasting four years. In its turn the Post graduate cycle needs 4 years. All these transformations at any rate would help to bring the TNTU students training in Mechanical Engineering to the educational standards of Ukraine and European Higher Educational Institutions.

Additionally in this way the important role is given to the implementation of the European Credit Transfer System (ECTS). Such a system first of all provides the facilities of student mobility and international curriculum development. The ECTS stands not only as a transfer system but also becomes an accumulation system. In this aspect an ECTS credit corresponds to approximately 25 hours of a student work load. Taking this into account the structure of a Mechanical Engineering students training standards provides that undergraduate degree should carry up to 240 ECTS credits

equaling 4 year full-time study. Master degree program carry from 90 to 120 ECTS credits equaling a year and a half (or two year) full-time study as well. There seems to be a deep conviction that such higher education qualification to be awarded meets all modern Bachelor and Master Degree recommendations and is valid.

Three-level training (or other words Multi-level education) in the trend and field of studies of Mechanical engineering is implemented according to the curricula which include the mastering of habits and skills which are so necessary for the future professional activity. Students are to possess a fundamental and special knowledge toward a general object (mechanical engineering) of their future employment - the knowledge which is sufficient for the implementation of their professional tasks.

To achieve this goal the Bachelor degree study comprises the social and humanity sciences curricula part of 30 ECTS credits, the basic mechanical engineering sciences part of 120 ECTS credits and the part of professional training – of 90 ECTS credits. The same curricula components at the Master level are 10, 20 and 60 ECTS credits as well or even more as for the full two years studies.

The development of modern curriculum and study programs became much more relevant after approval of the State standards in the “13.Mechanical engineering” field of studies. Herewith the task of these developments lies in the sphere of making the curricula filled of modern content and creativity. To achieve the target learning and qualification function it is necessary to implement the multi stage scheme: design engineer – engineer researcher – scientist.

In this way the generation of perspective curricula in the ranks of Bachelor-Master-PhD degree programs is the basis of rational organizing studies process. These educational products are to be oriented to the best examples of the European and world universities and to consider the regional needs and university scientific school traditions. The awarding of Bachelor degree as a result of the presentation Diploma Bachelor Thesis as well as the awarding of Master degree based on the presentation of Qualification Master Thesis is needed.

The results of such higher education study construction are the steady university departments functioning, good student achievements as well as their preparation to the future business and science activity.