

IMPLEMENTATION OF THE ACTION PLAN OF THE SECOND PHASE BOLOGNA PROCESS AT THE ENGINEERING FACULTY OF THE UNIVERSITY IN RIJEKA

This autumn a new Study Rulebook was adopted at the University in Rijeka. The enactment of this Rulebook introduces firmly standardized education according to the Bologna Process. Let us give a brief outline of what has been done in the first phase of the new transition in education, popularly called Bologna study. The old five year undergraduate university study is split into two studies, the undergraduate study lasting three and the graduate study lasting two years. New plan and program syllabi were defined and ECTS (European credit transfer system) credits were allotted. The weekly class schedule at the Faculty is comprised of 25 hours. Thus, these studies started in the academic years of 2005 and 2006.

Furthermore, the very spirit of Bologna inspires continuous lecturing and outcome monitoring evaluation. Bad issues are to be changed immediately whilst good ones must be kept and improved. Therefore, studying by the Bologna process is not only focused on giving significance to study division and ECTS credit allotment. Thus, after two years we have reached the second phase of the new way of learning.

In this phase, the success rate analysis of the first student generation enrolled in the study by Bologna has been carried out. At the Faculty there are 85 full time students enrolled in the third year of all studies. It is to be mentioned here that classes in the fields of engineering sciences, mechanical engineering, naval architecture and electrical engineering are held. This is a number we cannot at all be satisfied with, and which necessarily entails specific changes. Some of the changes will be taken in the next academic year and some instantly. Throughout December the manager counselors will be assigned to the students of the third year. They are obliged to give proper advisory help in fulfilling their student commitments and to direct their efforts throughout their study so as to accumulate the necessary credits for the current study and to satisfy all of the requirements necessary for enrollment in graduate studies.

The significant change will follow in the class that is to be performed in the sixth term, both in undergraduate university studies as well as in the vocational studies. Block module classes are foreseen so that classes will be held for 2 – 3 courses of a subject in a block lasting from 5 to 6 weeks. After finishing the lectures and tutorials, the exam is to be taken in the following week. This will at the same time be a pilot-project for the following academic year to see how classes can be organized in this way.

According to the new Study Rulebook, in the next academic year direct class lecturing will have been reduced. So, the current 25 hours weekly will be reduced to 20-21 class hours per week. In this connection, the student load of the respective courses of subject remains as a rule unchanged. This means that the classical (ex cathedra) lecturing will be so transformed that the student will have to study independently on his own. That

modification will give rise to several tier modifications referring to syllabus and curriculum.

It will be necessary to modify contents of some courses and consequently to clearly define the individual competences which the student achieves by attending and taking the course. It is also necessary, in accordance with past experience, to adapt credit allocations of the respective course to student load represented by ECTS credits. Let us throw light on what 1 ECTS credit actually represents. According to the present instruction calendar, classes are held over 15 weeks plus 4 weeks which are added to the regular examination period. This amounts to 19 weeks, which multiplied by 5 working days weekly comes to be a workload of 95 days. The average student load is every day equal to workload, i.e. 8 hours, totaling 760 working hours in a semester. For each semester are allotted 30 ECTS credits, consequently meaning that 1 ECTS credit corresponds to 25 working hours.

Being applied to particular subjects, if 5 ECTS credits are allotted to a course, it means that an average student can pass the exam with an average grade by dedicating 125 hours to this course.

This encompasses classes the student attends at the Faculty, research into literature, time necessary for doing homework, seminars and similar, and also time necessary for preparing for control tests and the final exam. Past experience has proven that while planning the study, the number of credits was not properly allotted, which surely has to be corrected in the second phase implementation.

Needless to say, that this type of study will not require four weeks for examination periods, and that exam will be taken only once after having attending the lectures, which is also one of the issues of the new Rulebook. Under exceptional circumstances, some less successful students will be permitted to defer the exam for another terminus. Perpetual studying will not be possible in future.

The obligations which are to be fulfilled by the student are precisely determined so that the student can realize his or her student rights. Each student who retains his right to study can enroll in courses which together amount to 60 ECTS credits. If the student has not passed the exam during the term, he has to reenroll it, rendering thus new course enrollment impossible. It implies that the classic academic year will disappear and the student will work his way up through the study according to his capabilities. This headway lasts not more than 4 years for both a three year undergraduate university and vocational studies, and three years for two year graduate studies respectively.

Also, as a part of the new Rulebook, and closely connected with examination, a new way of grading (marking) has to be mentioned. Besides marking used on a national level in the range from 5 (excellent) to 1 (insufficient), a new way of marking conforming with ECTS system with a scale from A to F is introduced. Accordingly, passing grades are A, B, C, D, and E and failing ones are (with the possibility of a makeup exam that is offered) also F. The achievement is graded

according to the size of study group. For the groups of 40 or more attendance relative grading (marking) will be employed, whereas for the groups with less attendance absolute grading (marking) may also be applicable. Certainly, you can go into details by reading the new Study Rulebook of the University in Rijeka.

One of the significant components of the action plan comprises also professional training of all the teaching staff members for employing the new Study Rulebook. Through various educational forms teaching staff has to know how to define the outcomes of their course of study and has to be acquainted with methodology and instrumentarium for student grading and of course its application. Moreover, teachers have to learn how to allot the proper credits for their course of study and a number of things to increasingly enhance the efficiency, i.e. student pass rate. Surely, this should not be done only (should not at all) by reducing criteria but also by qualitative transferring of selected knowledge of the respective course of study.

Among significant activities taking place in everyday life of the faculty, it is important to mention the introduction of the new undergraduate university study from the field computing. There is an extraordinary great demand for such professionals in economy, and along with all other transformations, the Faculty has the possibility to offer such a study.

The first generation should be enrolled the next academic year along with employment of Study Rule book and along with all here mentioned modifications and activities. So much for now about this new field of study and more is to be said in some other magazine editorial.

And in the end: why Bologna? In the first place to achieve more efficient learning. That is to say, shorter and accordingly more cost efficient learning. Our society indispensably needs good professionals especially educated in the field of engineering sciences. After three year undergraduate study, some go to work, to gain some experience and afterwards they may take up studying again. In the meantime they might have improved their material status. The others will finish all five years in one turn and with their gained knowledge they will get integrated into economy. To both of them is allowed, on the one hand, the entry into the third education cycle, i.e. doctoral studies, and on the other, the possibility of lifelong study which the Faculty offers at this very moment; and in future it intends to offer a wide range of educational areas with various fields of knowledge. Obviously, we have to come to terms with the fact that there would always be the unsuccessful ones, and it goes without saying that it is up to us to improve student achievements.

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