A CHANGE IN THE GRADUATE CURRICULUMS IN ENGINEERING A SUCCESSFUL CASE IN BRAZIL

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In 2002, the Brazilian Ministry of Educational homologated the new Curriculum Aims for the engineering courses, determining a deep and an ample change in all engineering graduate courses in the country. Since these recent circumstances, the College of Engineering of the Catholic University of Rio Grande do Sul, Brazil, began the project of curricular restructure of all its graduate courses in engineering. This project is situated in a College of Engineering with 44 years of tradition, serving more than three thousand students in eight graduate courses, inside PUCRS, an University with more than 32 thousand students, occupying, in our days, the first position in research among the private universities in Brazil.

The beginning of the work occurred in 1999, with the national discussion of the new Curriculum Aims, being concluded in 2003, with the implementation of the new graduate curriculums, serving the exigencies of the current moment of change, globally in touch with the educational movements that exist in the European Union – Bologna Declaration – and in North America – Accreditation and Nets.

The work shows the process developed during these four years, with an ample participation of teachers, students and national and international specialists in engineering learning, pedagogical methods and the managers of human resources. It is also reported the adopted proposal of a more general curriculum, with an integrated view and focus in the student.

The decision of modifying all the curriculums at the same time, determinant option of the College of Engineering of PUCRS to warranty its identity, has the objective of conceiving and constructing a new scenery for the engineering teaching and learning, where the profile of the future engineer, even coming from several courses of the same University, should pass through unique and essential vertebral elements, independent of the main areas, without losing the inherent speciality of each course.

Between the results achieved, can be mentioned, as fundamental, the reduction of the hours in class from 800 to 1000 hours in each course; the adjust of the fundamentals areas of Math, Physics, Chemistry to courses necessities; the valorization of the human sciences, ambient, economical and ethical; the proper number of vacancies offered in touch with the work market; the offering of professional disciplines since the beginning of the course; new modulations of disciplines (teacher/student); the introduction of new concepts: optional disciplines and complementary activities, decided only by the student; and other characteristics.

The curriculums of the graduate courses of Civil Engineering, Electric, Mechanic, Chemistry and Control and Automation are being changed since 2003, and are being implanting two new courses during this same period, following these same aims, Computer Engineering, and Production Engineering. The real experience presented in this article was considered pioneer in the country for incorporating the new National Curriculum Aims, and unique for proposing changes in all of its courses at the same time, which permitted the College of Engineering of PUCRS to be invited to present this theme in several universities in the country as a successful case, through the year of 2003.

500 words