

THE NEW AIMS FOR BRAZILIAN CURRICULUMS IN ENGINEERING COURSES

Eduardo Giugliani, M.Sc., giugliani@pucrs.br José A. dos Reis Parise, parise@mec.puc-rio.br

National Committee Members of Curriculum Aims of ABENGE, Brazil	National Committee Members of Curriculum Aims of ABENGE, Brazil
Dean of College of Engineering	Dean of College of Engineering
Catholic University of Rio Grande do Sul	Catholic University of Rio de Janeiro
PUCRS, Brazil	PUC-Rio, Brazil

The Curriculum Aims proposed by the National Committee of ABENGE – Brazilian Association in the Teaching of Engineering – bring to discussion new concepts and principles related with the elaboration of the engineering courses curriculum project. The proposal presented establish the philosophical basis and point to the direction that must be adopted in the moment of defining the engineering courses curriculums, being an essential support for the development of a modern and a consistent pedagogical view that opposed the existent one. It is, important to emphasize that the Curriculum Aims allow each university to keep the present basis of its curriculum projects, besides permitting them to developed new projects, with the objective of bringing improvements to the graduate engineering courses.

The challenge that it is faced to the teaching of engineering in Brazil is a global scenery that demands the intensive use of the science and the technology and that requires professionals very qualified. Concepts such as Interdiscipline, Reengineering, Total Quality and Planning are being more demanded from the engineering professionals with the proposal of them to adapt to the new characteristics of modern society. Not adjusting to this scenery means to be late into the developed process.

Important to the advance of the engineering graduate courses and to its place in the scientific and technological development of the country, this aims indicate that the curriculum flexibility and the diversity in the professional profile are essential purposes to be incorporated in the curriculum derived from them.

To establish Curriculum Aims, to project and to implement new curriculums for the engineering graduate courses solicit, therefore, that such documents must be elaborated into this view: a philosophical basis with the emphasis in the competence and the ability; a pedagogical view centered in the student; an emphasis in the synthesis and in the multidiscipline; a concern with the valorization of the human being; preservation of the environment; a social and political integration of the professional; direct articulations possibilities with the pos-graduate and a strong link between theory and practice.

As a beginning of the view presented in the proposed Curriculum Aims, it is necessary to define, in a clear and complete form, what is really 'Curriculum', because its term gets confused with 'Curriculum Grid'. This one represents the collection of disciplines of a course with their pre-requirements, period, contents and schedules. However, the term Curriculum is a much larger concept that can be translated by the definition: "...all the assemblage of learning experiences that the student incorporates during the participate process of development, in an educational institution, a study program integrated in a coherent form...".

The article proposes to present, step by step, the deep changes that were incorporated in the new Brazilian Engineering Curricular Aims text, operating since the year 2002, and the resultant consequences in an expressive collection of the main Colleges of Engineering in Brazil, because of the necessary curriculum changes of all of their graduate courses, and this has been serving of a concrete experience for many others Latin-American countries.