# CURRICULAR MODERNIZATION OF THE ENGINEERING PROGRAMS OF UNIVERSIDAD DEL NORTE

## Authors:

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***Abstract*** *— This documen t presents the process of curricular modernization carried out in six engineering programs (mechanical, systems, civil, industrial, electric and electronic) its antecedents, phases, the methodology used, the results and phases following the implementation of the new curricula.*

*The curricular modernization of the six engineering programs aimed at designing curricula that respond to the demands of the contemporary society, taking into account the characteristics of the regional, national and international con text, as well as the national and international referents and tendencies still valid for the education in each of the above mentioned branches of instruction, our own vision and that of the national and international professional organizations of the engin eer of the 21st century, and the institutional mission with its respective institutional development plans and also that of the Engineering Division for the five -year period of 2003 -2007.*

*The development of the new curricula was directed by the institution al guidelines relating to the conceptualization of modernity and social responsibility of the curriculum, professional profile formulation by the general competence corresponding to the component of the basic education and the specific competence correspon ding to the component of the branch of instruction, and the preparation of a curricular design characterized by the flexibility, meaning the quality as well as the metrics.*

*The preparation of the new curricula was the result of a collective work where the prevailing keys were the collaboration, participation and team work. The team was made up of the dean, the academic director and the directors of each program. In turn , the latter formed teams in their own branch of instruction, where the professors of th e respective branches participated actively and even of other branches when it was pertinent, students, graduate students, and employers and experts for specialized topics.*

*As a result of this process the new curricula were formulated for each branch of th e engineering teaching, which were evaluated by academic peers, both internal and external, and by academic -administrative authorities of the University and they were approved by the high authorities corresponding to the Institutional Academic Council.*

*Sta rting from the first semester of 2004 the first implementation stage of the new curricula with the first semester students began, and from the second semester of this year it will be done with the remaining students. Also, the evaluation and measuring syst em of the education process of the students in each of the branches of engineering is being formulated.*

*As important contributions of this project it can be highlighted the profile formulation based on the professional competence, which is a component requ ired for the curricular design and the process being implemented, a new one in our environment, which is the formulation of the evaluation and measuring system of the education processes of our engineering students.*

***Index Terms*** *— curricular modernization, engineering, professional competence, curricular design.*