

APPLICATION OF THE ANALYTIC NETWORK PROCESS (ANP) TO ESTABLISH WEIGHTS IN ORDER TO RE-ACCREDIT A PROGRAM OF A UNIVERSITY

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ABSTRACT

Colombian higher education institutions have an interest in obtaining recognized high quality standards. This recognition is obtained by an accreditation granted by the Colombian Government. The *Consejo Nacional de Acreditación* (CNA) is the academic body responsible for coordinating such process. This paper is based on the re-accreditation process of the industrial engineering undergraduate program at the *Universidad de los Andes* in *Bogotá*. The paper focuses on the process for weighing the components (factors) and criteria (characteristics) established by the CNA. For this process, the Industrial Engineering Department organized a workshop where academics deliberated about the weights they had to assign to each component and criteria. Due to the fact that many of the criteria are related to each other, we proposed to use the ANP for establishing the weights. The ANP model we built was complex because the network was dense and also because it was necessary to consider a high number of criteria for its construction. The results obtained were significantly different from those obtained at the workshop. The ANP model results indicate that the source components of the network had the higher weights, whereas the sink components had the lowest weights. In the source components the proportion of criteria within the component that influences on other criteria is greater than the influences they receive; the same argument works for the sink components. The construction of the ANP model was essential because the weights obtained were used to make the self-assessment of the program.

Keywords: Analytic Network Process, Accreditation, Education

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