

Engineering trends to the XXI Century: The approach of Rio de Janeiro Federal
University Polytechnical School

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Abstract:

Engineering has deeply changed in the latest decades. Today's Profession is quite different from the former standard, and so the engineers' formation is quite distinct now. Besides the involvement with design activities, engineers are also responsible for managing, scheduling and scientific assets.

Among the several factors that interfere with this process, the changes in the production pattern are the most important one. The introduction of new technologies with a high scientific content in the companies, the increasing complexity of products and the market globalization are some of the issues that must shape the pedagogical project of a XXI Century engineer.

The advent of new socially more attractive professions is an issue to be taken into account when analysing engineering perspectives for the future. All engineering schools must consider that their constant updating and their effort to teach the "state of the art" is a key issue to guarantee a good formation for their students.

The Rio de Janeiro Federal University Polytechnical School, the oldest engineering school in Latin America, is completely involved in graduating an outstanding professional, capable to face all challenges placed by the global market. Companies increasingly spread worldwide and project development is now being shared between companies and suppliers, and this justifies the opportunity of integrating student interchange programs into current engineering education.

This paper enhances the role played by international agreements involving studying mobility. Double diploma with high level Engineering Schools and new engineering courses reflecting regional needs and opportunities are available in the Polytechnical School. The work also discusses these issues regarding international activities and their influence in the quality of the engineers being formed in the country.