

DESIGN METHODOLOGY COURSES IN THE MECHANICAL ENGINEERING DEPARTMENT OF ESCOLA POLITÉCNICA - USP

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Abstract: *Design methodology courses help the skill development to approach and to solve badly defined problems, common in every day work of design and operational engineers. This ability and knowledge to work with diffuse and non-structured problems is highly desirable. This paper shows how teaching of design methodology is treated in the Mechanical Engineering habilitation of Escola Politécnica - USP. There are two disciplines about this subject: Design Methodology I in fifth semester and Design Methodology II in seventh semester. The first one shows the basic concepts of design and students develop a project of a new product. The second one deals with the project management, and it is based on teamwork in groups with about fifteen to twenty students. The students are submitted to several common difficulties in design process, for example: lack of information, unclear authority, open problems and others. The observed result is the increase of important skills for design engineers: communication, people management, problem definitions, analysis, solution synthesis and research.*