Problem-based learning in telecommunications: internship-like course bridging the gap between the classroom and industry

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References:

Abstract:
Engineering is about dealing with open-ended and/or ill-structured problems. During their studies, engineering students are expected to handle well-defined problem solving confidently but they should be faced with ill-structured problem solving as well in order to prepare for the workplace. The objective of the internship-like course that we have designed and implemented is to provide students with a workspace simulation environment where they will be exposed to ill-structured engineering problems. This scheme has been found to enhance students’ problem solving and soft skills, and students reported a significant increase in their self-confidence. In this article we describe the experience of three courses conducted in 2010/2011 and 2011/2012 at the School of Electrical Engineering of the University of Belgrade. We report on the issues and challenges of the learning experiences, students’ perception of the course benefits and their motivation to attend it.

Keywords:
engineering education; engineering practice; ill-structured problems; problem-based learning