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## Outcomes based education, PBL, and Kolb's Learning Cycle combine to help forest engineering students learn forest operations planning, project management, oral communications, and social interaction

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## Outcomes Based Education, PBL, and Kolb's Learning Cycle Combine to Help Forest Engineering Students Learn Forest Operations Planning, Project Management, Oral Communications, and Social Interaction

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The ability to 'design and analyze natural resource management plans at multiple scales while adhering to principles of sustainability' is one of the learning outcomes of the Forest Engineering Program at the University of New Brunswick. One dimension of this outcome is the ability to design and analyze multi year operating plans. The purpose of this paper is to describe the teaching and learning approach used to help students acquire and demonstrate this ability.

FE 5780, "Forest Operations Planning Project', is a year long, team taught capstone course taken in the final year of a student's program. Using an outcomes based approach and problem based learning, the course is structured so students cycle through Kolb's learning cycle several times to develop and demonstrate competence in forest operations planning, and 4 professional abilities including oral communication, project management, and social interaction. While students work in teams and submit group reports, they also demonstrate competence individually through written reports, tests, and oral exams.

The teaching approach used in this course has evolved over the past 15 years and we expect continued refinement.

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