Review of the book: Crawley E. F., Malmqvist J., Östlund S., Brodeur D. R., Edström K. (2014) Rethinking Engineering Education: The CDIO Approach. 2nd ed. New York: Springer

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The book describes in detail the CDIO approach, which has been developed since the year 2000 as an international open collaborative initiative to renew the way engineering educational programs are developed and implemented. It is organized in 11 chapters that cover the various components of the CDIO approach including the Standards and the Syllabus.

The twelve Standards, that are non-prescriptive best practices to engineering curriculum reform are well synthesized and provide guiding principles to the implementation from a practitioner point of view.

The book is very well written and carefully crafted to provide guidance and concrete examples of implementation in various universities. In this second edition, the examples are numerous and varied to give the new collaborator as well as the experienced faculty members concrete descriptions of implementations in various disciplines and national contexts.

The CDIO Syllabus presented in its version 2.0 is comprehensive in its coverage of professional, inter-personal and product/process/system development skills. This updated version of the Syllabus, includes life-cycle, environmental, leadership and entrepreneurial dimensions of the engineering education. The level of detail provided is very useful to properly understand each of the 14 specific skills that comprise the core structure of the Syllabus. This content is particularly useful to guide the implementation of a new or modified curriculum or even a complete set of programs for a University.

The outcomes-based methodology is presented in detail and provides a well-documented and broad perspective on the educational content of engineering education. Each chapter on its own can used to implement a specific dimension of the Approach.

Questions to guide the implementation and references are included in each of the main chapters. I found that these concrete questions are particularly useful to kick-start a team working on curriculum reform or development.

The book also provides a comprehensive support for program evaluation and clearly demonstrates that the CDIO Syllabus effectively represents a super-set of technical and professional skills of national standards for the evaluation of engineering programs.

In chapter 11, an outlook to the future is given and I found the possible extension of the approach to other disciplines and research based programs particularly important for the future of the CDIO initiative.