

## Engineering grand challenges in scholar programs

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20508263&lokasi=lokal>

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### Abstrak

This book explains how Taylors University implemented a curriculum in their engineering program that prepares students to address challenges facing the world. Aim is to enable Engineers put their knowledge into application to meet the 14 challenges of the century as outlined by the National Academy of Engineering (NAE) of the United States.

The research groups are organized around the 14 grand challenges for engineering The structure of their syllabi is organized in a way that they address the 5 core competencies: Research Experience, Entrepreneurship, Service Learning, Interdisciplinary Curriculum, Global Dimension. It uses the CDIO educational framework, a project-based learning approach that provides students with the big picture of engineering. Through this method, students are able to:

Master a deeper working knowledge of the fundamentals of engineering

Lead in the creation and operation of new products and system Understand the importance and strategic value of research work