

1. Record Nr.	UNINA9910350303603321
Titolo	Engineering Grand Challenges in Scholar Programs [[electronic resource]] / / edited by Ghafour Amouzad Mahdiraji, Edwin C.Y. Chung, Satish Narayana Namasivayam, Mohammad Hosseini Fouladi
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-3579-6
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (84 pages)
Disciplina	620.0071
Soggetti	Engineering Technical education Job Careers in Science and Engineering Engineering/Technology Education
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	The Taylor's Grand Challenges Scholars Program: Preparing for tomorrow's solutions by engaging with students today -- The Design Spine: the core design modules behind Taylor's School of Engineering project-based learning -- Project-based learning and why it works: a student perspective -- Implementation of Facilitated Learning in a Project-Based Curriculum -- Engineering Fair: Going beyond the classroom -- Capstone Project at Taylor's University School of Engineering -- The Final Year Engineering Project's impact on students' learning experience -- Samples of Final Year Projects Addressing Engineering Grand Challenges .
Sommario/riassunto	This book explains how Taylor's 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 systems Understand the importance and strategic value of research work As the only programme of its kind outside North America, it offers the brightest minds the opportunity to face real-world issues and places them on the cutting edge of the engineering world.
