

Agendas for 21st century engineers [

Brandt, Caroline, editor Prescott, David (David Lochmohr), editor Cambridge Scholars Publishing, 2013 Libros electrónicos

Monografía

This book is for engineers of different disciplines, such as chemical, electrical, petroleum, mechanical and civil engineering, and will appeal both to the experienced professional engineer and to undergraduate or postgraduate engineering students. This singular volume presents selected articles on themes that arise at the interface between engineering and the different societies in which it is practised. Themes of current interest include ethics, gender balance, education, workplace preparation, communication, competencies, and the future of engineering. Original and thought-provoking articles on these themes are presented by authors who have achieved international recognition for their work in engineering research, practice and education, and who work in different capacities in industry or higher education around the world. Recognizing the pluralism that is characteristic of such themes, each chapter presents two articles reflecting distinct perspectives and contexts. This volume therefore provides ideal opportunities for readers who wish to develop their critical thinking capacities by contrasting and evaluating the different viewpoints. It also provides readers with writing that complements the technical discourse predominant in engineering workplaces and institutes. This book, therefore, while promoting professional literacy and thinking skills development, concurrently serves to cultivate the well-rounded and forward-looking engineers required by the international community to meet the multifaceted challenges of 21st century engineering. --

Título: Agendas for 21st century engineers recurso electrónico] edited by Caroline Brandt and David Prescott Editorial: Newcastle upon Tyne, United Kingdom Cambridge Scholars Publishing 2013 Descripción física: 1 online resource (249 pages) illustrations Variantes del título: Agendas for twenty-first century engineers Mención de serie: E-Libro **Contenido:** Chapter One: Reading Engineering Why Should Engineers Read Widely? / Caroline Brandt -- The Art of Reading: Evidence, Relevance and Detection / Roger Nunn -- Chapter Two: Engineering Education In With the Old: Sketching and Journaling Serve Engineering Students / Well Linda Schmidt -- Reforming Engineering Education to Meet the Needs of a Knowledgebased Economy / Brian Bielenberg -- Chapter Three: Competencies for Engineering An Australian Study of the Importance of Communication for Engineers / Sally Male -- On the Criticality of Communication and Team Skills for Modern Engineering Practice / David Bowen -- Chapter Four: Engineering and Gender A Wise Model for a WiSE Program / Nadia M. Alhasani -- Ways of Knowing: The Rationale for a Preliminary Study of Female Engineering Students in the UAE / Linda Schmidt and Caroline Brandt -- Chapter Five: Engineering Ethics Ethical Issues for Practicing Engineers / Tim Ross -- The Aspirational Ethics Project / Charles E. Harris Jr. -- Chapter Six: Preparing for the Engineering Workplace Preparation for Effective Workplace Participation / Bob Matthew and Jane Pritchard -- Preparing Engineers in the UAE for the Oil and Gas Engineering Workplace / Ghaniya S. Bin-Dhaaer Al-Yafei -- Chapter Seven: Engineering the Future Planning for the 21st Century / Lawrence Man -- Innovation in Education and Professional Development in Engineering / David Prescott -- Afterword / Caroline Brandt and David Prescott

ISBN: 1443847763 9781443847766 9781443868358 e-book)

Materia: Engineering

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