1. Record Nr. UNINA9910156338703321 Autore Abdulwahed Mahmoud Titolo Engineering and Technology Talent for Innovation and Knowledge-Based Economies [[electronic resource]]: Competencies, Leadership, and a Roadmap for Implementation / / by Mahmoud Abdulwahed. Mazen O. Hasna Cham: .: Springer International Publishing: .: Imprint: Springer. . Pubbl/distr/stampa 2017 [1st ed. 2017.] Edizione Descrizione fisica 1 online resource (XVIII, 225 p. 37 illus. in color.) Disciplina 502.3 Soggetti Engineering—Vocational guidance Science education Learning Instruction Management Industrial management Job Careers in Science and Engineering Science Education Learning & Instruction Innovation/Technology Management Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references at the end of each chapters. Nota di contenuto Engineering and Technology for Innovation and Knowledge Based Economies (iKBEs), Book Objectives and Overview -- Literature Review of iKBE Competencies & Systemic Modelling -- Leadership: Models, Competencies, and the Emergence of Engineering Leadership -- On Industry - Academia Collaboration for iKBE -- On the Response for iKBE Development: Excellence in Technology' Innovation & Entrepreneurship. and a Proposed Structure -- Methodology, Tools, and Systemic Framework for iKBE Competencies Investigation -- Empirical National Case Study: Current and Future Engineering Skills Needs, and

AND Future Developments for iKBEs.

Engineering Education System Necessities in Qatar -- Main Highlights

Sommario/riassunto

This book introduces and analyzes the models for engineering leadership and competency skills, as well as frameworks for industryacademia collaboration and is appropriate for students, researchers, and professionals interested in continuous professional development. The authors look at the organizational structures of engineering education in knowledge-based economies and examine the role of innovation and how it is encouraged in schools. It also provides a methodological framework and toolkit for investigating the needs of engineering and technology skills in national contexts. A detailed empirical case study is included that examines the leadership competencies that are needed in knowledge-based economies and how one university encourages these in their program. The book concludes with conceptual modeling and proposals of specific organizational structures for implementation in engineering schools, in order to enable the development of necessary skills for future engineering graduates.