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Educating Next Generation of Engineers

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Abstract

Many engineering schools have been customizing their undergraduate curriculum based on the input they receive from their constituencies, including faculty, members of the advisory board, potential employers, and many others with a vested interest in the program. Within the minimum credit hours required by accreditation entities to satisfy graduation requirements, institutions have full freedom to design and implement a curriculum that would be more appealing to their constituencies. Ability to communicate effectively, understand the ethical issues in practicing engineering, work in teams where their membership represents diversity in gender, and cultural ethnicity, among many others, have been the most demanding issues in redesigning the engineering curriculum. Many international branch campuses of the United States institutions have successfully incorporated the above listed requirements into their curriculum. Many engineering degree programs in the US have focused on these issues and developed courses that address the above mentioned required directly. The admission standards at most of the international campuses of the US institutions are identical or comparable with their home campuses and are based on the respectable scores earned in the standards test such as the ACT or SAT. However, building and strengthening their English communications, understanding their ethical responsibilities, and the ability to fully function is a team with a group with diverse backgrounds are often paramount.

Biographies

Albertus Retnanto is a Professor of Petroleum Engineering at Texas A&M University at Qatar and has been in the Petroleum Engineering program since 2009. He received his Ph.D. degree in Petroleum Engineering from Texas A&M University. He teaches undergraduate courses in well testing, petroleum production systems, production engineering, petroleum technical presentation, natural gas engineering, and integrated asset development and makes significant curriculum enhancements to several courses. He held a Principal position with Schlumberger and has more than 18 years of experience worldwide in both technical and management positions in well testing, field development, and production enhancement.

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Boback Parsaei is a Senior Consultant with Integrated Technology Systems, Inc. He holds undergraduate and master's degrees in Civil Engineering from Texas Tech University and Texas A&M University, respectively. He has delivered short courses in Project Management, Team Building, and Leadership to a variety of companies. He is currently pursuing a Ph.D. degree in Civil Engineering at Texas A&M University.