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An educational perspective on materials science

Souhaila F. Almutawa

Kuwait University, Kuwait

Abstract

The diversity in academic backgrounds of researchers in Materials Science is indicative of the recent advancements and applications in the field. Materials Science education has extended beyond its traditional Engineering domain and has become essential in areas such as medicine and environmental sciences. This demonstrates the truly multidisciplinary nature of the field and its scope of application. However, many conventional Materials Science courses taught in engineering colleges are slow in adapting to these changes. It is often the case whereby a large amount of the course remains focused on traditional topics such as metals and metallurgy. Although the latest editions of textbooks are updated with new chapters covering advanced materials such as ceramics and composites, there remains a lag in course content of what is taught in the classroom. For the field to progress, it is essential that a strong undergraduate foundation be laid. This presentation presents some obstacles to change and discusses future developments and challenges. The aim of the talk is to trigger a discussion among Materials Science educators to contribute positively in the development of their eventual successors.

Biography

Souhaila Almutawa has a Ph.D. in Mechanical Engineering from Syracuse University and an M.Sc. degree from the University of Rochester, New York, USA. She is a faculty member in the Mechanical Engineering Department, College of Engineering & Petroleum, at Kuwait University. She heads the “Materials Science and Manufacturing Teaching Area Group”. Her research extends to areas in manufacturing and technology transfer.