

Industry Oriented Advanced Software Engineering Education Curriculum

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Abstract

Software engineering is the fastest-evolving engineering discipline and most of the tasks of software development organizations are diverse in nature. Various studies have shown that there is a wide gap between software industry needs and education for prospective software engineers. It is the responsibility of Software engineering education to prepare SE professionals by providing them with the skills to meet the expectations of the software industry. SE curriculum should correspond to the industry needs, and only then can Universities produce highly skilled professionals, who can meet the needs of software industry. During the last decade, software engineering education (SEE) has been emerging as an independent and mature discipline. Accordingly, various studies are being conducted to provide guidelines for SEE curriculum design. This paper summarizes the need for software industry related courses and discusses the significance of industry oriented software engineering education to meet the educational objectives of all stakeholders. The software industry oriented curriculum for undergraduate and graduate levels is discussed. An industry oriented graduate level (master's level) software engineering course which includes foundational and applied courses to provide effective training for future software engineers is also proposed. This will lead to an increase in their employment prospects in the industrial and allied sectors.