

Session 3

Injecting an Entrepreneurial Dimension into Science & Engineering Education: The Experience of National University of Singapore

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Singapore has achieved remarkable economic growth in the past via a strategy of leveraging foreign direct investment. In recent years, however, Singapore is rapidly moving towards a knowledge-based strategy for future growth, with increasing public policy prominence being given to the role of Singapore's universities in stimulating economic growth through industrially-relevant research, technology commercialization, high-tech spin-offs, attracting foreign talents, developing new and cross-disciplinary fields of learning, and inculcating entrepreneurial mindsets. At the same time, increasing globalization of competition is putting pressure on public universities to become more responsive to market forces. This presentation highlights how the leading university in Singapore, the National University of Singapore (NUS), is responding to these national and global challenges by seeking to inject an entrepreneurial dimension to her science and engineering education. After a review of the overall trends in tertiary science & engineering manpower outputs in Singapore in recent years, the presentation will highlight the key challenges facing tertiary S&T education in Singapore in the next decade. We will then focus on how NUS is responding to one aspect of these challenges – the need to inculcate an entrepreneurial and innovative mindset and global orientation among S&T students – by adopting a new visioning of herself as a “global knowledge enterprise”, and introducing a number of new educational initiatives to achieve this new vision. We will briefly describe some of these new educational initiatives, including the Singapore-MIT Alliance Program, the NUS Overseas College Program, the Technopreneurship Minor Program, and the Masters programs in Technology Management, IP Management and Design Management. The challenges encountered in implementing these educational programs and linking them to the university's research and technology commercialization/spin-off promotion programs are discussed, and the lessons learned and implications for other universities are highlighted.