OVERVIEW

MSEM, a master program offered by Industrial Engineering department at the School of Applied Technical Sciences (SATs), is a degree that bridges the gap between the fields of engineering, technology, business management, and innovation. It involves the application of advanced business methods, engineering techniques, and innovation tools to design, manage, and improve complex systems and achieve organizational objectives.

MSEM is aimed at attracting ambitious engineers who aspire to obtain a senior role in their organizations in which they integrate technical and management responsibilities with innovation to support business growth and new organizational trends. It is ideal for recent graduates hoping to make their first move into engineering and innovation management, as well as established professional engineers who aspire for a higher management role and wish to extend their knowledge beyond their specific technical field.

MSEM graduates can work as engineering managers, quality managers, innovation and technology managers, project managers, operations managers, as well as in planning and strategic management to lead their organizations.

OBJECTIVES

Graduates of the MSEM program will be able to achieve the following objectives:

• Apply engineering and management knowledge and techniques to analyze complex decisions and design complex engineering systems.
• Establish successful engineering management careers in public and private sector that will contribute to the development of Jordan and the region.
• Successfully manage technological innovation through developing the strategies, structures, and systems needed for the effective commercialization of new products and services, business systems and production processes.
• Develop competitive skills in problem solving techniques, interdisciplinary teamwork, and critical analysis of engineering management problems.
• Develop profound understanding of global economic and technological aspects to meet the changing needs of a knowledge-based economy by adapting and responding to changes.
• Engage in service to professional societies and communities through practicing engineering systems management with professionalism and ethics.

UNIQUE FEATURES

• Market-ready managers.
• Faculty members with excellent academic credentials and industrial experience.
• Well-designed curriculum considering academic and professional body of knowledge and related-software implementation.
• Theoretical and practical learning through hands-on research and industry linked projects.
• Interdisciplinary education focusing on both system and subsystem levels.
• German dimension including professors and students exchange.

STRUCTURE

• 34 credits hours
• Thesis and non-thesis tracks
• Entry assessment exam on engineering statistics and economics (If not taken in BCs)

CORE COURSES

• Operations & Supply Chain Management
• Quality Engineering & Management
• Innovation & Entrepreneurship
• Project Management
• Operations Research & Simulation
• Strategic Management & Leadership