Curriculum

Program Component	Courses	Credit Hours
Core Courses	4	12
Elective Courses	4	12
Research Dissertation	1	30
Total	**9**	**54**

Core Courses: 12 Credit Hours

Courses	Course Title	Credit Hours	Prerequisite(s)
DEN701	Advanced Probability and Stochastic Processes	3	Graduate Standing
DEN702	Advanced Research Communication	3	Graduate Standing
DEN703	Advanced Analysis and Computing	3	Graduate Standing
DEN795	Doctoral Seminar	3	DEN702

Elective Courses: 12 Credit Hours

Courses	Course Title	Credit Hours	Prerequisite(s)
DEN711	Advanced Project Management	3	Graduate Standing
DEN710	Advanced Decision-Making Models	3	DEN 701
DEN704	Advanced Quality Engineering	3	DEN 701
DEN706	Advanced Operations Research and Simulation	3	DEN 703
DEN709	Advanced Information Technology Management	3	DEN 703
DEN751	Advanced Operations and Supply Chain Management	3	Graduate Standing

PhD Research Dissertation: 30 Credit Hours

Courses	Course Title	Credit Hours	Prerequisite(s)
DEN799	PhD Research Dissertation	30	8 Credit Hours Completed

Online Delivery

The program will be delivered 80% face-to-face and 20% online. Courses that are delivered online are shown in below table:

Courses	Course Title	Credit Hours	Prerequisite(s)
DEN702	Advanced Research Communication	3	Graduate Standing
DEN703	Advanced Analysis and Computing	3	Graduate Standing

DOCTOR OF PHILOSOPHY IN

ENGINEERING MANAGEMENT

جامعة أبوظبي
Abu Dhabi University
College of Engineering

Program Overview

The PhD in Engineering Management aims to produce a new generation of leaders in the industry and academia who by combining advanced technical and managerial knowledge will address the novel national and global challenges posed by the new energy transition, circular economy, optimal material usage, and sustainable development. The program, which consists of a total of 54 credits, is based on a three-year study plan that includes four core and four elective courses, totaling 24 credits, and 30 credits of a PhD dissertation. The coursework will equip students with cutting-edge competencies that will enable them through the PhD dissertation's research to develop impactful technical and managerial solutions to the UAE and MENA economies, meriting publication in reputable, international journals.

Program Mission

The ADU program Doctor of Philosophy in Engineering Management aims to develop research and advanced skills to students in order to allow them to hold leadership positions in public and private organizations or academic positions. The mission of the program is to develop a new type of student that would be equipped with the knowledge and skills necessary to lead the innovation, technological, and managerial aspects of the current clean energy, sustainability, and circular economy transition in the economies of the UAE and the Gulf Region. The program will equip students with the ability to define, design, optimize, and manage complex projects/systems taking into account technological advancements, economic, sustainability, environmental, ethical and social, as well as health and safety aspects.

Program Educational Objectives (PEOs)

The Program Educational Objectives (PEOs) are to produce graduates who will:

1. Demonstrate expertise as engineering scholars by achieving significant technical, research, and leadership accomplishments that contribute to advancing knowledge in their field.
2. Engage in lifelong scholarly pursuits, including advanced research, interdisciplinary collaboration, and the dissemination of knowledge through professional and academic channels.
3. Contribute to the development of local and global communities, upholding the highest standards of ethical, social, and professional responsibility in research and innovation.

Program Learning Outcomes (PLOs)

The learning outcomes of the program (PLOs) are:

1. an ability to apply advanced research, critical analysis, and innovative thinking to solve complex engineering management challenges using specialized and interdisciplinary knowledge in engineering and management.
2. an ability to design and execute independent, original research that integrates knowledge from various fields of engineering and management, employing highly advanced cognitive and strategic decision-making skills.
3. an ability to communicate proficiently to present, defend, and critique complex ideas and findings in engineering management through scholarly writing, industry reports, and professional presentations.
4. an ability to recognize and navigate complex ethical, organizational, and professional responsibilities in engineering management and research contexts, making informed judgments that consider global, economic, environmental, and societal impacts.
5. an ability to contribute effectively in multidisciplinary and cross-functional environments, demonstrating autonomy, strategic leadership, and the capacity to foster team and self- professional development in engineering management contexts.
6. an ability to develop and implement data-driven decision-making strategies, analyze and interpret incomplete or ambiguous business and technical data, and apply sound managerial judgment to optimize engineering processes and innovations.
7. an ability to self-assess, acquire, and integrate new advanced knowledge in engineering management, demonstrating critical awareness of contemporary industry challenges, emerging technologies, and recent advancements in the field.