الجامعة الأهلية
Ahlia University

THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON, DC

MASTER OF SCIENCE IN

Degree Level: **Postgraduate**

# Engineering Management

in collaboration with **the George Washington University - USA**

| Qualification type | Delivery Mode | Study mode | Delivery Language | Duration |
|---|---|---|---|---|
| **Master of Science** | **Ahlia Main Campus** | **Full Time** | **English** | **18 Months** |

## KEY FACTS


**Contact Persons**

**Dr. Ammar Al Hawaj**
Program Coordinator
+(973) 17298566
international@ahlia.edu.bh

**Ms. Afrah Kadhem**
+(973) 17298989
akadhem@ahlia.edu.bh


## OVERVIEW

The Engineering Management and Systems Engineering (EMSE) Off-Campus programs office at the George Washington University (GW) in the US offers the Master of Science in Engineering Management (MSEM) in Bahrain at Ahlia University.

The program is designed with a focus on Engineering and Technology Management, providing students with an interdisciplinary understanding of leadership skills. Specifically, the skills needed to become effective managers in technology-driven organizations and government entities. Throughout the program, students acquire knowledge of technical engineering principles and engineering contracts within a management context.

Graduates of this program are equipped with the skills to effectively lead diverse engineering teams, oversee complex projects, implement innovative strategies, and drive organizational success. In addition, our graduates are prepared to take the Project Management Professional Examination (offered by the Project Management Institute) to receive the PMP certification.

The program consists of 12 courses (three credit hours each), totaling 36 required credit hours. Students can expect to graduate within 18 months upon enrollment. Students will benefit from the expertise of GW's leading faculty, with select courses delivered by GW approved faculty from Ahlia University. In this way, students in Bahrain and the region can gain access to one of GW's time-honored programs which is offered at a convenient location in the Middle East.

## PROGRAM LEARNING OBJECTIVES

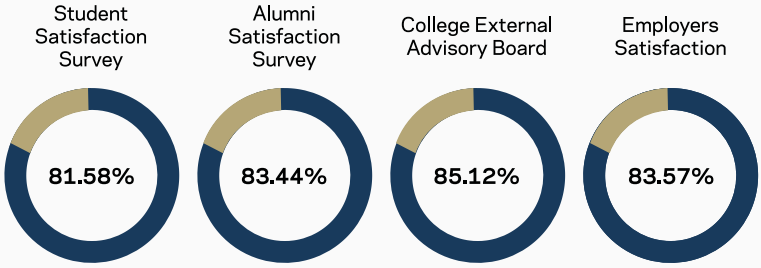
- Apply principles of engineering management effectively in a business setting, particularly in organizations focused on manufacturing, construction, engineering, technology, or production, to lead and work efficiently.
- Manage key organizational aspects—such as organizational management and behavior, operations, project management, marketing, cost and quality control, finance, personnel, technical requirements, and engineering contract management—and oversee technical progress while ensuring optimal performance.
- Prepare for the Project Management Professional (PMP) exam, a certification provided by the Project Management Institute, to enhance professional standing and credentials.

## EMPLOYABILITY & CAREER PATHWAYS

The MSEM degree combines core business analytical skills with specialist skills in engineering subfields including systems analysis and operations research. The degree produces graduates suitable for positions with technical organizations. Large manufacturing enterprises, increasingly relying on automated assembly lines, as well as resource extractive enterprises, would particularly value the skill mix afforded by newly minted MSEM graduates:

- Engineering Manager
- Technology Manager
- Product Development Manager
- Project Manager
- Systems Engineering Manager
- Operations Manager
- Hardware Engineer
- Quality Assurance Manager
- Process Improvement Manager
- Supply Chain Manager
- R&D (Research and Development) Manager
- Technical Program Manager

## GENERAL STATISTICS




## ENTRY REQUIREMENTS

Admission to the MSEM program is based on the George Washington University requirements. Applicants applying for the MSEM program must meet the current entry requirements of the School of Engineering and Applied Science (SEAS).

Ideal candidates for the program will meet the following requirements:

- Minimum grade point average of B (3.0 on a 4.0 scale) or higher in the last two years of undergraduate study.
- Grade of C or better in the two college calculus courses – this is a prerequisite to all graduate programs in the EMSE department. Applicants who do not meet this requirement in full but are otherwise qualified may be conditionally admitted and required to take an additional 3-credit hour course, EMSE 4197 – Special Topics: Quantitative Methods in Engineering Management, during the first year of graduate study at Ahlia University. If required, EMSE 4197 counts as the 13th course and the student's program then requires 39 credit hours.
- Bachelor's degree in engineering, a physical science, mathematics, computer science, business administration, or information technology from an accredited institution.

**Note:** GW considers a candidate's entire background, and all submitted materials when reaching an admission decision.

### Application Procedure

The following documents should be submitted to Ahlia University Admission and Registration Office in line with Higher Education Council requirements prior to forwarding it to GW for processing and final admission decision:

- Completed graduate application form with a non-refundable application fee.
- Official transcripts from all colleges and universities attended.
- Resume / CV
- Any evidence provided by applicants from countries where English is not the official language to demonstrate proficiency in English will be helpful; for example, scores on the Test of English as a Foreign Language (TOEFL) or other appropriate English examinations.
- A personal interview.

## FEES

The Master of Science Degree in Engineering Management consists of 36 credit hours covering 12 courses including a capstone project. The program is 1.5 years in duration.

The cost of one credit-hour is BD 285 and one course (consisting of 3 credit-hours) costs BD 855.

| | |
|---|---|
| *Application Fee* | *BD 40* |
| *Registration Fee* | *BD 300* |
| *HEC ID fees* | *BD 30* |
| *Tuition fees* ***( 12 Courses )*** | *BD 10,260* |
| **TOTAL** | ***BD 10,630*** |

Additional fees chargeable

| | |
|---|---|
| *Foundation Course* ***( if required )*** | *BD 855* |

## PROGRAM CONTENT AND STRUCTURE

The curriculum of the MSEM program consists of 12 courses totaling 36 American semester credit hours (144 NQF credits).

### Program structure

| Course Title | Credit Hrs | No. of Courses |
|---|---|---|
| Foundation Course **(If Required)** | 3 | 1 |
| Core Courses | 12 | 4 |
| Focus Courses | 18 | 6 |
| Research Courses | 6 | 2 |
| **Total** | **36** | **12** |

| Course Code | Course Title | Credit Hrs |
|---|---|---|
| **Core Courses** | | |
| EMSE 6001 | The Management of Technical Organizations | 3 |
| EMSE 6020 | Decision Making with Uncertainty | 3 |
| EMSE 6410 | Survey of Finance and Engineering Economics | 3 |
| EMSE 6801 | Systems Engineering I | 3 |
| **Total** | **Four Courses** | **12** |
| **Focus Courses** | | |
| EMSE 6992 | Negotiation and Conflict Resolution | 3 |
| EMSE 6005 | Organizational Behavior for the Engineering Manager | 3 |
| EMSE 6026 | Technical Enterprises | 3 |
| EMSE 6035 | Marketing Analytics | 3 |
| EMSE 6505 | Knowledge Management I | 3 |
| EMSE 6770 | Techniques of Risk Analysis and Management | 3 |
| EMSE 6790 | Logistics Planning | 3 |
| EMSE 6820 | Program and Project Management | 3 |
| EMSE 6850 | Quantitative Models in Systems Engineering | 3 |
| **Total** | **Six Of The Above Courses** | **18** |
| **Research Courses** | | |
| EMSE 6995 | Research | 3 |
| EMSE 6099 | Problems in Engineering Management & Systems Engineering | 3 |
| **Total Credit Hours** | | **36** |