

Master of Science in **ENGINEERING MANAGEMENT**

The George Washington University (USA)

Degree Level: **Postgraduate**



**THE GEORGE
WASHINGTON
UNIVERSITY**
WASHINGTON, DC

 Qualification type	 Location	 Study mode	 Delivery Language	 Duration
Master's Degree	Main Campus	Full Time	English	Two Years

KEY FACTS

Accreditation



SDG



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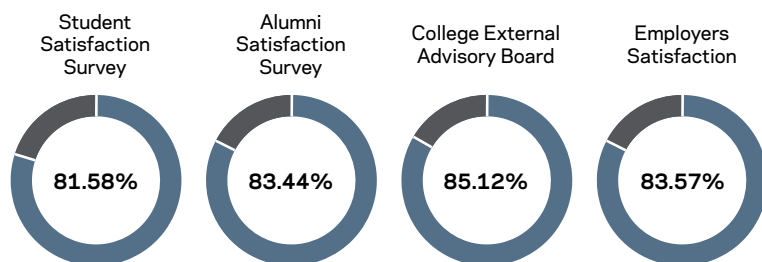
PROGRAMME OVERVIEW

Ahlia University hosts the Master of Science in Engineering Management (MSEM) in collaboration with the George Washington University (USA). The field of Engineering Management with focus in Engineering and Technology Management (E&TM) bridges the gap between engineering and management. It involves the overall management of organizations oriented to manufacturing, construction, engineering, technology, or production. E&TM enables engineers to function more effectively in the business environment. The MSEM Programme provides a technical-based alternative to a traditional Postgraduate Programme. Graduates of this programme will be specialized in areas including management of technology, product and process, quality, organizational management, operations management, program management or marketing and finance.

PROGRAMME AIMS

1. Work and lead effectively in the business environment by applying engineering management principles in the overall management of organizations oriented to manufacturing, construction, engineering, technology, or production.
2. Coordinate critical organizational functions-organizational management and behavior, operations, project management, marketing, cost and quality control, finance, staff, technical requirements, engineering contract management and supervise technical development while maintaining high performance.
3. Prepare to take the exam for certification as a Project Management Professional (PMP), offered by the Project Management Institute to further establish professional credentials.
4. To nurture an innovative and sustainable research culture that encourages learners to produce quality research outcomes in Engineering Management.
5. To equip learners with life-long learning skills and ethical behavior and to be professionally competent.

GENERAL STATISTICS



ENTRY REQUIREMENTS

Admission to the MSEM programme is based on the George Washington University Requirements Applicants applying for the MSEM Programme must meet the current entrance requirements of the School of Engineering and Applied Science (SEAS). Ideal candidates for the programs 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 12th course and the student's program requires 39 credit hours.
- Received a bachelor's degree in engineering, a physical science, mathematics, computer science, business administration, or information technology for a regionally 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 for completeness in line with Higher Education Council requirements prior forwarding it to GW for processing:

- Completed graduate application form with a non-refundable application fee.
- Official transcripts from all colleges and universities attended.
- Your 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 (TOFEL) or other appropriate English examinations.
- A personal interview is also required.

FEES

The Master of Science Degree in Engineering Management is consisted of 36 credit hours covering 10 courses and a dissertation. The program can be completed in 1.5 year.

The cost of one credit-hour is BD 265 and therefore one course (consisting of 3 credit-hours) costs BD 795.

Application Fee	BD 40
Registration Fee	BD 300
10 Courses - 30 Credit-hours (BD 265 per Credit-hour)	BD 7950
Dissertation - 6 Credit-hours (BD 265 per Credit-hour)	BD 1590
SUB TOTAL	BD 9880
Cost of EMSE 4197 Foundation course if required	BD 795

PROGRAMME CONTENT AND STRUCTURE

The curriculum of the MSEM Programme requires 11 courses totaling 36 American semester credit hours (144 NQF credits) including two types of course requirements: 4 core courses (12 credits) and 6 focus courses (18 credits) in addition to a research course EMSE 6995 (6 credits), where students are expected to utilize their knowledge and skills in writing a defendable dissertation in Engineering Management. While core courses must be taken by all students, students choose the focus courses from a set of specialized topics that, as a whole, provide the level of detail necessary for proficiency in particular areas. The research methods course EMSE 6992 is a prerequisite for the compulsory research course EMSE 6995.

Course title	Credit hours
Core Courses	
The Management of Technical Organizations	3
Survey of Finance and Engineering Economics	3
Decision Making with Uncertainty	3
Systems Engineering I	3
Special Topics: Research Methods for the EM	3
Elective Courses (5 courses out of 8)	
Organizational Behavior for the Engineering Manager	3
Technical Enterprises	3
Marketing of Technology	3
Knowledge Management I	3
Techniques of Risk Analysis and Management	3
Logistics Planning	3
Program and Project Management	3
Quantitative Models in Systems Engineering	3
EMSE Research	
Research - Engineering Management	6
Total credit hours	36

Each semester the student is required to pay for the courses they register in as per the study plan.

For more information please visit our website
www.ahlia.edu.bh

EMPLOYABILITY AND LEARNING 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:

- Project Engineer / Project Manager / Engineering Project Manager
- Systems Manager
- Operations Manager
- Technical Manager
- Software (Applications) Engineer
- Structural Engineer
- Automation Engineer
- Hardware Engineer

Graduates from the MSEM programme could pursue professional certifications in relation to Project Management

PROGRAMME STRUCTURE

EMSE - FOUNDATION * (3 CREDITS)

COURSE	CODE	COURSE TITLE	LEC.	LAB	CRE.	PREREQUISITE
EMSE	197	SPECIAL TOPICS: QUANTITATIVE METHODS IN ENGINEERING MANAGEMENT	6	0	3	
TOTAL PER SEMESTER					3	

EMSE - FIRST YEAR (24 CREDITS)

FIRST SEMESTER

COURSE	CODE	COURSE TITLE	LEC.	LAB	CRE.	PREREQUISITE
EMSE	001	THE MANAGEMENT OF TECHNICAL ORGANIZATIONS	6	0	3	
EMSE	410	SURVEY OF FINANCE AND ENGINEERING ECONOMICS	6	0	3	
EMSE	020	DECISION MAKING WITH UNCERTAINTY	6	0	3	
EMSE	801	SYSTEMS ENGINEERING I	6	0	3	
TOTAL PER SEMESTER					12	

SECOND SEMESTER

COURSE	CODE	COURSE TITLE	LEC.	LAB	CRE.	PREREQUISITE
EMSE	I XXX	ELECTIVE I IN EMSE	X	X	3	
EMSE	II XXX	ELECTIVE II IN EMSE	X	X	3	
EMSE	III XXX	ELECTIVE III IN EMSE	X	X	3	
EMSE	992	SPECIAL TOPICS: RESEARCH METHODS FOR THE EM	6	0	3	
TOTAL PER SEMESTER					12	

EMSE - SECOND YEAR (12 CREDITS)

FIRST SEMESTER

COURSE	CODE	COURSE TITLE	LEC.	LAB	CRE.	PREREQUISITE
EMSE	IV XXX	ELECTIVE (IV) IN EMSE	X	X	3	
EMSE	V XXX	ELECTIVE (V) IN EMSE	X	X	3	
EMSE	995	RESEARCH	0	12	6	EMSE 992
TOTAL PER SEMESTER					12	

LIST OF MAJOR ELECTIVE COURSES

COURSE	CODE	COURSE TITLE	LEC.	LAB	CRE.	PREREQUISITE
EMSE	005	ORGANIZATIONAL BEHAVIOR FOR THE ENGINEERING MANAGER	6	0	3	
EMSE	026	TECHNICAL ENTERPRISES	6	0	3	
EMSE	035	MARKETING OF TECHNOLOGY	6	0	3	
EMSE	505	KNOWLEDGE MANAGEMENT I	6	0	3	
EMSE	770	TECHNIQUES OF RISK ANALYSIS AND MANAGEMENT	6	0	3	
EMSE	790	LOGISTICS PLANNING	6	0	3	
EMSE	820	PROGRAM AND PROJECT MANAGEMENT	6	0	3	
EMSE	850	QUANTITATIVE MODELS IN SYSTEMS ENGINEERING	6	0	3	