

# MOBILE AND NETWORK ENGINEERING

Degree Level: Undergraduate



COLLEGE OF ENGINEERING



Qualification type

Bachelor's Degree



Location

Main Campus



Study mode

Full Time



Duration

Four Years

## KEY FACTS

### Teaching Language

English

### Accreditation



مجلس التعليم العالي  
Higher Education Council

### NQF\*

NQF Placed (2018)  
Reference Q17-035 Level 8

### BQA\*\*

Full Confidence (2016)

### Study Abroad

Yes

### Internship

Yes

### Contact Person

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\*National Qualifications Framework

\*\*The Education and Training Quality Authority

## OVERVIEW

The Bachelor's Degree programme in Mobile and Network Engineering (BSMNE) is a broad-based programme that provides the student with the technical knowledge and skills required to plan, design, construct and maintain telecommunications networks, equipment and facilities. This programme emphasizes an in-depth understanding of the technologies that support the local and global broadband digital networking, and mobile communication systems that are required for tomorrow's broadband-interactive information transmission.

Through this programme, students acquire an in-depth knowledge in wireless and mobile communications, Computer networks, network design, Network switching and routing, mobile device programming, modern digital and analogue communication systems, and multimedia service convergences ensuring that graduates are fully prepared for employment within the sector. The several network courses embedded within the curriculum prepare students for professional certification such as Cisco CCNA and CCNP.

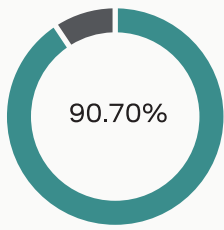
## PROGRAMME AIMS

The aim of the programme is to enable graduates to:

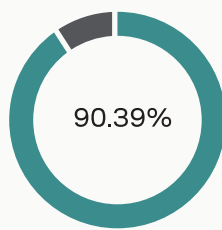
- Demonstrate a critical detailed knowledge and understanding of concepts and required theories of mathematics, science, and engineering essential for a specialization mobile and network engineering.
- Identify, formulate, and solve quantitatively engineering problems germane to mobile and network engineering.
- Design a network/component or process to meet desired needs within realistic engineering constraints.
- Use effectively the techniques, skills, and modern engineering tools necessary for engineering practice.
- Gain facility in the use of Hardware / software in conducting engineering experiments germane to mobile and network engineering.
- Analyze and evaluate specific mobile/network engineering solutions with a view to practical implementation in mobile and network engineering.
- Work effectively as a member/leader of a project team on a specialized topic in Mobile/ Network Engineering, taking on significant responsibility for the work of others.

## GENERAL STATISTICS

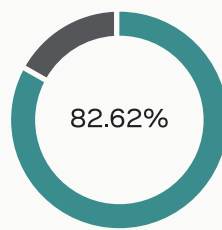
Employer Satisfaction



Student Internship Satisfaction



Graduate Satisfaction



## ENTRY REQUIREMENTS

Admission to Ahlia University (AU) is selective based on academic achievements. Applications are welcomed from all students regardless of race, colour, gender, religion, nationality, physical or learning disability. Admission is purely based on merit.

### General Requirements

To be eligible for consideration for admission to the undergraduate programmes, applicants must meet the following entry requirements set by the university in-line with Bahrain Higher Education Council requirements:

- The applicant must hold a recognised and endorsed secondary school certificate or its equivalent
- The applicant must be medically fit for the academic programme they wish to enrol in

### Specific Requirements

The applicants who meet the following programme specific admission requirements will be admitted to the programme:

Bachelor's Degree in Mobile and Network Engineering	Academic Score in the Secondary School Certificate (Tawjihia) or its Equivalent		
	Unconditional Acceptance	Conditional Acceptance; Passing An Interview	Tracks Accepted
	70%	60%	Science, Technical & General

### Orientation Programme

The Orientation Programme is a one-semester programme offered to full-time students who do not fully meet some of the admissions criteria ( eg. english proficiency) but intend to pursue their education at Ahlia University.

### Placement Tests

The university administers placement tests in English language and Mathematics. Students who pass these exams are exempted from the orientation programme.

## FEES

Structured around 134 credit-hours covering 45 courses. The duration of study for each course is fifteen weeks, covering approximately 45 lecture hours.

Application Fee	BD 20
Registration Fee	BD 200
Placement Tests Fee (if applicable)	BD 40
Orientation Courses (if applicable)	BD 1,200
100 Level Courses - 12 courses (BD 300 Per Course)	BD 3,600
200 Level Courses- 11 courses (BD 330 Per Course)	BD 3,630
300 Level Courses - 11 courses (BD 360 Per Course)	BD 3,960
400 Level Courses- 11 courses (BD 390 Per Course)	BD 4,290
<b>TOTAL</b>	<b>BD 16,840</b>

## STUDY PLAN

### First Year

Year one consists of the general (University and College) required courses and include the following courses:

Arabic, Academic English I, Introduction to Computers & IT, Calculus I, General Physics I, Academic English II, Modern History of Bahrain, Introduction to Computer Programmemeing, Calculus II, General Physics II, Introduction to Statistics, Principles of Human Rights.

### Second Year

Year two consists of the remaining college required courses and includes the following courses:

Electric Circuits, Digital Logic, MATLAB & Simulink, Object-Oriented Programmemeing I, Data Networks, Data Structures and Algorithms, Signals & Systems, Object-Oriented Programmemeing II, Calculus III.

### Third Year

Year three focuses on the courses required for the major and consists of the following courses:

Computer Architecture and Organisation, Communication Systems I, Interconnecting Network Devices I, Humanities/ Social Sciences, Free Elective I, Communication Systems II, Interconnecting Network Devices II, Mobile Information Device Programmemeing, Applied Probability, Humanities/ Social Sciences, Free Elective II.

### Fourth Year

Year four focuses on the remaining major courses and consists of the following courses:

Multimedia Communications Overview, Computer Security, Research Methods in IT and Engineering, Operating Systems, Digital Signal Processing, Network Design and Security, Wireless Communications, Distributed Systems, Work-place Internship, Final Project.