



# Master of Science (M.Sc.) in **Environmental Chemistry**



## **Contact Details:**

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# Program Overview

The Master's program in Environmental Chemistry has been developed to provide the society and industry with competent graduates having an interdisciplinary curriculum that fosters proficiency in solving the environmental issues and to contribute to the local and global job markets.

In this two years program, students will learn to address global environmental chemical challenges with knowledge, skills, and experience from an application-oriented and strongly interdisciplinary perspective.

The graduates of this program will be highly qualified for a wide range of positions in government and private institutions, administrative environmental agencies, consultancy companies, and the industry.



## Program Aims

- Provide graduates with adequate knowledge to solve environmental problems.
- Provide graduates with laboratory skills required by industries and other organizations.
- Enable graduates to develop the ability to carry out research independently.
- Enhance graduates competence in the design and execution of research ideas into the marketplace.

## Program Research Streams

- Air pollution and its control.
- Treatment of organic waste.
- Reuse and recycling of solid waste.
- Water purification and wastewater treatment.
- Environmental corrosion monitoring systems.
- Environmentally friendly and green products.

## Career Prospects

**This education makes you eligible for high-end work in the field of environmental chemistry in different aspects such as:**

- Environmental management and consulting.
- Chemical safety.
- Environmental protection.

**Graduates are sought for in various sectors such as:**

- Industries.
- Businesses.
- Research.
- Governments.

The Master's degree also qualifies for PhD studies for a possible academic career in advanced environmental chemistry.

## Admission Requirements

- Bachelor degree in Chemistry or Chemical Engineering or Biochemistry or Biology or Physics and related field.  
(Minimum GPA of 2.67/4)
- English Proficiency  
TOEFL (500) or IELTS (6).
- Interview



## How to Apply?

Application to the postgraduate studies is processed by the Deanship of Scientific Research and Graduate Studies through student information system (SIS).

Open the URL <http://sis.uob.edu.bh> and follow the steps.

# Program Structure

The M.Sc. in Environmental Chemistry consists of 33 Credit hours.

**Core Courses**  
(12 Credits Hours)

**Elective Courses**  
(12 Credits Hours)

**Thesis**  
(9 Credits Hours)

## First Year (18 Credits)

|            | Course Code | Course Title                            | Credits |
|------------|-------------|---|---------|
| Semester 1 | CHEMY 610   | Research Methodology and Seminars       | 3       |
|            | CHEMY 611   | Introduction to Environmental Chemistry | 3       |
|            | CHEMY 612   | Environmentally Benign Technology       | 3       |
| Semester 2 | CHEMY 613   | Environmental Analytical Techniques     | 3       |
|            | CHEMY xxx   | Elective 1                              | 3       |
|            | CHEMY xxx   | Elective 2                              | 3       |

## Second Year (15 Credits)

|            |           |                           |   |
|------------|-----------|---------------------------|---|
| Semester 1 | CHEMY xxx | Elective 3                | 3 |
|            | CHEMY xxx | Elective 4                | 3 |
| Semester 2 | CHEMY 622 | Research Project (Thesis) | 9 |

## Elective Courses

| Course Code | Course Title                                | Credits |
|-------------|---|---------|
| CHEMY 614   | Solid Waste Management                      | 3       |
| CHEMY 615   | Physicochemical Wastewater Treatment        | 3       |
| CHEMY 616   | Atmospheric Chemistry                       | 3       |
| CHEMY 617   | Organic Contaminants in the Environment     | 3       |
| CHEMY 618   | Corrosion and Environment                   | 3       |
| CHEMY 619   | Environmental Impacts of Energy             | 3       |
| CHEMY 620   | Nanomaterials for Environmental Remediation | 3       |
| CHEMY 621   | Industrial Effluents and Emission Analysis  | 3       |

Students will be eligible to exit with the award of Higher Diploma in Environmental Chemistry if they have successfully completed 18 credit hours course work. There is no thesis requirement for the award of Higher Diploma.

## Teaching Methods

Lectures | Seminars | Discussion groups | Lab experiments | Visits

## Program Details

| Campus | Credits  | Time           | Delivery         | Language | Fees               |
|--------|----------|----------------|------------------|----------|--------------------|
| Sakhir | 33 Hours | 4:00 – 7:30 pm | Once/Week/Course | English  | 140 BD/Credit Hour |