

Department of Chemistry

認證化學碩士課程

MSc in Accreditation Chemistry

One-Year Full Time

or

Two-Year Part-Time

Taught Programme

Quality Assurance

Proficiency Testing

Metrology

Method Validation

Traceability



The Chinese University of Hong Kong

Overview

This programme is offered by the Department of Chemistry of The Chinese University of Hong Kong. It is formulated and taught by experts in the education, testing and accreditation sectors, including professors of the University, former professional staff of the Government Laboratory, ex-accreditation officers and experienced assessors of the Hong Kong Accreditation Service and managerial staff of testing laboratories. The programme aims at giving graduates with a relevant Bachelor of Science degree a thorough understanding of the concepts of quality assurance in laboratory operations and is intended to develop their technical expertise in various fields of chemical testing. Upon successful completion of the programme, graduates are expected to acquire the knowledge and skills for the development and implementation of a quality management system required for a chemical testing laboratory, and understand the requirements for laboratory accreditation. The programme will also cover local regulatory requirements related to testing. International trade protocols will be discussed where relevant. The programme will also offer specific courses for chemical testing of foods, environment pollutants, construction materials, toys and consumer goods. Those who wish to pursue a career in chemical testing or related industries will find the programme useful and rewarding.

About the Department

The Department of Chemistry is one of the largest and best equipped departments in the University. The four-year undergraduate programme provides students with training in all disciplines of modern chemistry. Being one of the best research departments in the University, the articulated MPhil-PhD programme involves course work and a thesis embodying the results of original research. The present MSc taught programme in Accreditation Chemistry is intended to provide training to graduates, in an integrated approach, on chemical testing, laboratory management, quality assurance and concepts and requirements for laboratory accreditation.



Course Details

Core:

- ★ **Laboratory Accreditation Based on ISO/IEC 17025**
 - provide a comprehensive coverage on the requirements of the international accreditation standard based on ISO/IEC 17025
 - focus on understanding the concepts of quality assurance and their implementation in laboratory testing and management
 - provide training on performance management, including planning of audit and the auditing skills to be used in laboratory audit, and relevant follow-up action
 - emphasize the importance of the laboratory management system in quality assurance and effectiveness of laboratory operation

- ★ **Measurement Uncertainty**
 - provide fundamental knowledge of various statistical tools for treatment of analytical data
 - realize the estimation of measurement uncertainty based on relevant international practices
 - apply various approaches in evaluation of uncertainty of measurement for different analytical methods and uncertainty of in-house calibration of general equipment
 - report test results and compliance taking into consideration of measurement uncertainty

- ★ **Method Validation and Quality Control in Analytical Laboratory**
 - provide training and guidance on method validation requirements to ensure traceability, reliability and adequacy in performance of the method developed
 - give a comprehensive coverage on various quality control practices to ensure the quality of test data
 - focus on equipment qualification of general equipment used in analytical laboratories

Electives:

- ★ Food Safety and Testing
- ★ Environmental Pollutants, Analysis and Monitoring
- ★ Analytical Atomic Spectroscopy
- ★ Principle and Practice of Chromatography and Mass Spectrometry in Analytical Sciences
- ★ Risk Management in Chemical Testing Laboratory
- ★ Metrology in Chemistry
- ★ Chemical Testing of Consumer Products
- ★ Chemical Testing of Construction Materials
- ★ Pharmaceutical Testing and Analysis
- ★ Drinking Water Treatment Processes and Testing of Water Quality
- ★ Chemistry and Analytical Methods of Surface Finishing and Coatings
- ★ MSc Thesis
- ★ Research Project in Method Development

Admission

- ◆ A Bachelor degree in Science or related disciplines
- ◆ Fulfilment of the English Proficiency Requirement stipulated by Graduate School (visit Graduate School Website at <http://www.gs.cuhk.edu.hk> for more information)
- ◆ Experience in Chemical Testing Industry is preferable but not mandatory

Application Procedure

- ◆ Submit online application via the Graduate School website <http://www.gs.cuhk.edu.hk>.
- ◆ Send supporting documents to MSc in Accreditation Chemistry, Department of Chemistry, Room G55, Ma Lin Building, Science Center, South Block, CUHK, Shatin, N.T. Applicants should quote the "Application No." generated for their application on the documents. The required supporting documents include:
 1. Official Transcripts*
 2. Copies of Degree Certificates
 3. Documents showing the applicant has fulfilled the Graduate School's English Language Proficiency Requirement
 4. Confidential Recommendations from two referees*
 5. Application Fee Receipt
 6. Copies of Identity card or Passport

** Official Transcripts and Confidential Recommendations must reach the Programme office (specified below) directly from the University and referees, or in sealed envelopes and sent by the applicant with other supporting documents.*

- ◆ Applications will be processed on a rolling basis until all places are filled. Therefore, early applications are recommended.

Contact Us

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<http://www.cuhk.edu.hk/chem/acchem>