

MSc in Accreditation Chemistry

*DEPARTMENT OF
CHEMISTRY*

*Full-time programme
(1 year)
or
Part-time programme
(2 years)*



香港中文大學理學院
FACULTY OF SCIENCE
THE CHINESE UNIVERSITY OF HONG KONG

Overview

The MSc in Accreditation Chemistry is a taught programme offered by the Department. It is designed by our core faculty members with expertise in analytical chemistry and environmental science, honorary professors who are recently retired professional staffs of the HK Government Laboratory, experienced accreditation officers and assessors of the HK Accreditation Service, and the managerial personnel of leading commercial testing laboratories. The prerequisites for enrolment are a recognized BSc degree in fields related to chemistry, as well as proficiency in English as required by our Graduate School.

Objective

The overarching objective of the Programme is to provide up-to-date and in-depth knowledge in quality assurance schemes adopted by modern commercial testing laboratories. This objective can be further delineated into four aspects:

1. to present a full-view of the development and implementation of chemical testing methodologies,
2. to elucidate the underlying principles of laboratory accreditation,
3. to train students in cutting-edge techniques for chemical analysis of foodstuffs, drugs, environmental pollutants, construction materials, office and household furniture, and consumer products, etc., and
4. to enhance students' familiarity of local and international regulations with regard to safety measures, and relevant protocols for import and export merchandise which require chemical testing. Students who aspire to careers in chemical testing or related industries will find the Programme useful and rewarding.

Director's Message

The curriculum of the Programme is composed of a wide array of courses covering areas ranging from accreditation and quality assurance to trace analysis and the use of modern analytical instruments, which are tailored for students with different background and interests. We are committed to provide quality education and training to our students and pave the way for their future advancement in careers in chemical testing and related industries. The Programme is attended by a mix of local and non-local students. All the lectures and laboratory sessions are held in easily accessible venues and scheduled at times for convenient attendance by working students both locally and those commuting across the border. We are pleased to see many of our graduates were able to find proper placements in Hong Kong, and other Mainland alumni of the Programme had secured up-scale positions in their hometowns. Such a reputable outcome fuels further impetus to the perpetuation of the Programme. We look forward to the enrolment of interested applicants.



Graduation Ceremony 2023

Course Details

Required Courses (Total 9 credits)

Laboratory Accreditation Based on ISO/IEC 17025

- provide comprehensive coverage of 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

Elective Courses (Total 18 credits)

**The elective offerings are subject to change.*

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

Admission Requirements

- A Bachelor degree in Science or related disciplines
- Fulfilment of the English Proficiency Requirement stipulated by Graduate School
- Experience in Chemical Testing Industry is preferable

For more details, please visit Graduate School Website at <http://www.gs.cuhk.edu.hk/admissions>

Applications will be processed on a rolling basis until all places have been filled. Therefore, early applications are strongly encouraged.

Online Application

https://www.gradsch.cuhk.edu.hk/OnlineApp/login_email.aspx



Programme Recognitions



Continuing Education Fund (CEF)

This course has been included in the list of reimbursable courses under the Continuing Education Fund. Graduates (both full-time and part-time) are eligible to apply for Tuition fees reimbursement under the CEF Scheme.

Name of Institution: The Chinese University of Hong Kong
CEF Institution Code: 002
CEF Course Title: Master of Science in Accreditation Chemistry
CEF Course Code: 42M135324



Hong Kong Association for Testing, Inspection and Certification (HKTIC)

Graduates of this MSc programme meet the course requirements[^] for the Certified Testing Professional[#] (CTP) under the following categories

- Chemical Testing
- Construction Material Testing
- Environmental Testing
- Food Testing

[^] Additional requirements applied

[#] Subject to the completion of selected elective courses.



Hong Kong Institution of Certified Auditors (HKICA)

Graduates of this MSc programme meet the requirements of the Hong Kong Institution of Certified Auditors (HKICA) for registration as

- Assistant Auditor (Laboratory Management)*
- Registered Quality Testing Engineers (QTE) *

* Subject to the completion of selected elective courses.

Contact Us

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香港中文大学 认证化学理学硕士

香港中文大学化学系

全日制课程 (1 年)
或
半日制课程 (2 年)



香港中文大學理學院
FACULTY OF SCIENCE
THE CHINESE UNIVERSITY OF HONG KONG

简介

认证化学硕士属中文大学化学系的授课型课程。本课程由多个领域的专业人员设计, 当中包括本系在分析化学和环境科学方面有专业知识的核心教师成员、近年退任香港政府化验所的专业人员、经验丰富的香港认可处官员和评估员, 以及行内检测实验所龙头的管理层。有意报读的申请者需拥有与化学相关领域和认可的理学士学位, 并且达到研究院列明的最低英语要求。

目标

本课程的首要目标是提供在现代商业检测实验所的品质保证计划中所采用的最新和深入的知识。这个目标可以进一步细分为下列四方面：

1. 呈现化学检测方法的发展和实施全貌
2. 阐明检测实验所认证的基本原则
3. 训练学生尖端的化学分析技术, 包括用于食品、药物、环境污染物、建筑材料、傢俱、消费品等
4. 提高学生对于本地和国际法规安全措施的认知程度, 以及各种进出口商品的检测及相关协议, 适合有意投身化学检测或相关行业的学生和在职人士修读。

课程主任的话

本课程提供一系列科目, 当中涵括从认证和质量保证到微量分析, 以及现代仪器分析技术和应用等各个领域, 这些科目专为具有不同背景和兴趣的学生所拟定。我们致力为学生提供优质教育和培训, 为他们未来在化学检测和相关行业的发展创造更有利条件。本课程欢迎本地和非本地学生报读。为了方便本地和深圳通勤的在职学生, 我们安排授课课堂和实验课在便捷的时间和地点进行。我们很高兴能见证多位毕业生在香港找到合适的工作, 大部分返回所住城市的内地毕业生, 也能开拓事业的晋升阶梯。毕业生获得如此丰硕成果, 乃是让课程延续下去的动力。我们期待更多有志求学者加入我们的认证化学课程。



2023 毕业典礼

课程详情

必修课程（总共9学分）

ISO/IEC 17025实验室认可

- 提供ISO/IEC 17025的国际认证标准要求的全面认识
- 重点理解品质保证的概念及其在实验室测试和管理中的实际应用
- 提供关于绩效管理的培训，包括审核计划、实验室的审核技巧，以及相关的后续工作
- 强调实验室管理系统在品质保证及实验室营运效率中的重要性

测量不确定度的评定

- 介绍各种统计分析方法的基础知识以及处理和分析数据的应用
- 认识相关的国际惯例对测量不确定度估计的处理
- 评估不同分析方法的测量不确定度及常规仪器校准的不确定度
- 考虑测量不确定度后处理和报告测试结果

检测方法的确认及品质控制

- 提供关于检测方法的认可和要求及培训和指导，以确保品质控制方法的可追溯性、可靠性和充分利用其性能
- 认识理解各种质量控制方法，以确保测试数据的质量
- 阐述分析实验室中各种常规仪器的技术规格及认可要求

选修课程（总共18学分）

*选修课程的提供可能会有所变动。

分析原子光谱学	鉴证科的化学应用
建筑材料的化学分析	消费品化学测验
表面处理与涂层的化学及分析方法	食水处理程序及水质测试
环境污染物、分析及监测	食品安全及分析
化学计量学	硕士论文
药物检测与分析	色谱及质谱法的原理和在分析科学中的运用
研究项目	化学检测实验室的风险管理

入学要求

- 理学士或相关学科的学士学位
- 达到研究院列明的最低英语要求
- 具有化学检测行业经验者优先考虑

更多详细资讯，请浏览研究院网站：<http://www.gs.cuhk.edu.hk/admissions>
申请将以按序审核方式进行处理，直到满额为止。建议有意报读者尽早完成申请程序。

在线申请

https://www.gradsch.cuhk.edu.hk/OnlineApp/login_email.aspx



课程认证



持续进修基金 (CEF)

本课程已纳入持续进修基金可获发还款项名单。认证化学专业硕士学位课程毕业生（全日制和兼职）可申请此计划发还部分学费。

机构名称：香港中文大学
CEF机构代码：002
CEF课程名称：认证化学硕士
CEF课程代码：42M135324



香港测检认证协会(HKTIC)

此硕士学位课程毕业生符合以下类别认证测试专业人员[#](CTP) 的课程要求[^]：

- 化学测试
- 建筑材料测试
- 环境测试
- 食品测试

[^] 附加要求适用

[#] 需完成指定选修课堂



香港专业审核师学会 (HKICA)

此硕士学位课程毕业生符合香港专业审核师学会（HKICA）注册以下专业资格的要求：

- 助理审核员（实验室管理）*
- 注册质量测试工程师（QTE）*

* 需完成指定选修课堂

联系我们

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