香港浸會大學
HONG KONG BAPTIST UNIVERSITY
Department of Chemistry

Short Courses in MSc (Analytical Chemistry)

(2023-2024)

To meet with the demand of chemical analysis in a number of important value-added areas, such as environmental analysis, forensic science, biotechnology/bioanalysis, materials and foods, in Hong Kong as well as in the Greater China region, increasingly sophisticated analytical techniques are employed both in quality control and in research and development. Analytical chemists need to constantly upgrade their knowledge to meet this challenge.

Eight courses selected from our popular MSc in Analytical Chemistry programme will be offered to professionals in the field who need to enhance their knowledge and yet are too busy to commit two-year of their time to engage in the complete MSc programme. A certificate will be issued to those who have completed the lecture course(s) and perform satisfactorily in the course assessment.

COURSES OFFERED

Semester One

*Lecture dates are subject to change

Course	Duration *	Assessment	Contents
CHEM 7240 Analytical Spectroscopy (2 units)	24 lecture hours (12 weeks) Start date: 6 Sep 2023 19:00 – 20:50 (Wed)	Continuous assessment and 3 hours examination in Dec 2023	Principles and instrumentation for atomic and molecular spectroscopy and their applications in chemical analysis
CHEM 7280 Surface Analysis (1 unit)	12 lecture hours (6 weeks) Start date: 12 Sep 2023 19:00 – 20:50 (Tue)	Continuous assessment and 2 hours examination in Apr/May 2024	Detailed treatment of surface analytical techniques, such as XPS, AES,SEM and EDX; applications of these techniques in the studies of heterogeneous catalysis polymer, semi-conductor, and material corrosion
CHEM 7380 Food Safety Analysis (2 units)	24 lecture hours (12 weeks) Start date: 5 Sep 2023 19:00 – 20:50 (Tue)	Continuous assessment and 3 hours examination in Dec 2023	Principles and applications of various analytical tools in food safety analysis; most up-to-date analytical techniques for food safety monitoring with local relevance
CHEM 7420 Mass Spectrometric Analysis (1 unit)	12 lecture hours (6 weeks) Start date: 11 Sep 2023 19:00 – 20:50 (Mon) **No class on 2 Oct & 23 Oct 2023	2 hours examination in Dec 2023	Principles of mass spectrometry and design of mass spectrometers including methods of ionization, tandem mass spectrometry and hyphenated mass spectrometric techniques

Semester Two

Course	Duration *	Assessment	Contents
CHEM 7250 Laboratory Management (2 units)	24 lecture hours (12 weeks) Start date: 11 Jan 2024 19:00 – 20:50 (Thu) **No class on 15 Feb & 4 Apr 2024	Term paper and presentation at the end of the course	Introduction to Laboratory Management, Quality Assurance, Computer-Assisted Laboratory Information Management System
CHEM 7350 Sample Pretreatment Methods (1 unit)	12 lecture hours (6 weeks) Start date: 8 Jan 2024 19:00 – 20:50 (Mon) **No class on 12 Feb 2024	2 hours examination in Apr/May 2024	Principles and applications of traditional and modern sample pretreatment methods, including Soxhlet extraction, microwave extraction, pressurized liquid extraction, supercritical fluid extraction and solid-phase extraction
CHEM 7380 Food Safety Analysis (2 units)	24 lecture hours (12 weeks) Start date: 9 Jan 2024 19:00 – 20:50 (Tue) **No class on 13 Feb & 2 Apr 2024	Continuous assessment and 3 hours examination in Apr/May 2024	Principles and applications of various analytical tools in food safety analysis; most up-to-date analytical techniques for food safety monitoring with local relevance

Course	Duration *	Assessment	Contents
CHEM 7390 Separation Science (3 units)	36 lecture hours (12 weeks) Start date: 10 Jan 2024 19:00 – 21:50 (Wed) **No class on 14 Feb & 3 Apr 2024	Continuous assessment and 3 hours examination in Apr/May 2024	Basic principles of separation by chromatographic techniques, Gas Chromatography, High Performance Liquid Chromatography, Capillary Electrophoresis
CHEM 7490 Nanomaterial Analysis (1 unit)	12 lecture hours (6 weeks) Start date: 9 Jan 2024 19:00 – 20:50 (Tue) *No class on 13 Feb & 2 Apr 2024	Case study and 2 hours examination in Apr/May 2024	Analytical techniques used in nanomaterial analysis

APPLICATION DEADLINE

11 August 2023
[For enrollment of the course(s) in Semester 1 ***OR*** Semesters 1 & 2]

15 December 2023
[For enrollment of the course(s) in **Semester 2 ONLY**]

APPLICATION

Application form can be obtained by **e-mail to: analchem@hkbu.edu.hk**

COURSE FEE #

HK$5,100 each course
(CHEM 7420, CHEM 7280, CHEM 7350, CHEM 7490)

HK$10,200 each course
(CHEM 7240, CHEM 7380, CHEM 7250)

HK$15,300 each course
(CHEM 7390)

Subject to Faculty's approval in August 2023

Updated on 25 July 2023