



DEPARTMENT OF  
APPLIED BIOLOGY  
AND CHEMICAL  
TECHNOLOGY

PROGRAMME CODE

**12456**

PROGRAMME LEADER

**Dr Kim-hung Lam**

林劍虹博士

BSc, PgD(Ed), MBA, MPhil,  
PhD

HEAD & PROFESSOR

**Prof. Samuel Lo**

盧俊立教授

BSc, PhD

NORMAL DURATION

2 years

CREDITS REQUIRED  
FOR GRADUATION

At least 63 credits

TYPE OF FUNDING

Government-funded

MODE OF STUDY

Full-time

INTAKE QUOTA

32

# BSc (Hons) in Analytical Sciences for Testing and Certification

檢測及認證分析科學(榮譽)理學士學位



## Programme Aims & Characteristics

This programme aims to produce well-trained and competent professionals for chemical analysis as well as accreditation officers, which are currently in strong demand in the local testing and certification industry including commercial and Government laboratories, plus the quality assurance/ control units of any manufacturing organizations and professional assessor for accreditation and certification bodies. Through studying this articulation programme, the graduates (applicants are holders of Associate Degree/ Higher Diploma in science disciplines) will acquire the knowledge and techniques of up-to-date chemical sciences and allied disciplines plus the essential management skills pertaining to testing and certification industry in order to be professional executives. This programme offers a broad-based and balanced training in analytical and chemical sciences and the management skills for quality assurance, auditing and accreditation.



## Intended Programme Learning Outcomes

Upon graduation from the programme, students will be able to :

- Demonstrate knowledge and understanding on fundamental principles of analytical sciences;
- Design and conduct experiments, as well as critically analyze and interpret experimental results;
- Recognize the principles in testing, inspection and certification;
- Identify and solve problems in analytical sciences and related fields;
- Integrate methods, skills and techniques necessary for professional practice;
- Recognize and adopt professional, ethical and social responsibility;
- Think independently, analytically and critically and resolve problems in creative ways;
- Communicate effectively in both English and Chinese;
- Make independent judgment on contemporary issues in a regional and global context;
- Function effectively in multi-disciplinary teams;
- Engage in life-long learning and appreciate culture.

These outcomes will be achieved by using different teaching/ learning methods and various assessment tools as well as a set of criterion-referenced assessment grades in each subject.





## Programme Structure & Content

In the 2-year programme, all students will be required to complete at least 9 credits of the General University Requirements (GUR) and 54 credits of the Discipline Specific Requirements (DSR). The GUR includes service learning, Clustered Area Requirements (CAR), etc.

DSR for the first year of study will include the basic knowledge in chemical principle and analytical chemistry with laboratory skills training. In Year Two, the study will cover the advanced analytical methods in testing industry and essential management skills pertaining to testing and certification. Students are also required to complete a Capstone Project in which they tackle a problem related to analytical sciences.

## Discipline-Specific Core Subjects (51 credits)

Subjects	No. of Credits
Chemical Principles for Testing and Analysis	3
Experimental Techniques in Chemistry	1
Introductory Cell Biology and Biochemistry	3
Organic Chemistry	3
Analytical Spectroscopy	3
Chromatographic Analysis	3
Chromatographic Analysis Laboratory	1
Materials Science and Analysis	3
Environmental, Medicinal, Food and Other Commodities Testing	3
Advanced Analytical Techniques	3
Advanced Analytical Techniques Laboratory	1
Test Method and Measurement Uncertainty	3
Metrology and Calibration	3
Inspection and Certification	3
Quality Management and Laboratory Accreditation	3
Microbiology and Toxicology	3
Microbiological Techniques	2
Capstone Project	3
Chinese Communication for Science Professionals	2
English for Scientific Communication	2

## Discipline-Specific Elective Subjects (3 credits)

Subjects	No. of Credits
Medicinal Chemistry	3
Food Chemistry	3
Polymer Chemistry and Nanotechnology	3
Natural Product Chemistry	3

## Entrance Requirements

- An Associate Degree or a Higher Diploma in a relevant discipline (e.g. Science, Chemistry, Chemical Technology), or the equivalent.
- The University will consider other qualifications as being equivalent to the specified entrance requirements on their individual merits.
- Mature applicants (aged 25 or above) who do not meet the minimum entrance requirements may be admitted on an individual and exceptional basis with the approval of the Faculty Board.
- Applicants may be required to attend interviews, if deemed necessary.

Important: This leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website [www.polyu.edu.hk/study](http://www.polyu.edu.hk/study) for the latest information.

## Enquiry 查詢詳情

MS CAROL TSANG  
Tel 電話 3400 8689  
Email 電郵 [carol.tsang@polyu.edu.hk](mailto:carol.tsang@polyu.edu.hk)

URL 網址 [www.polyu.edu.hk/abct](http://www.polyu.edu.hk/abct)

