

4. Career Opportunities after Graduation :

- Analytical Technologists in Government Laboratory or Commercial Testing Laboratories
- Quality Assurance Chemists in Pharmaceutical & Traditional Chinese Medicine Industries
- Researchers in Biomedical and Industrial R & D Laboratories
- Instrument Specialist and Service Engineer
- Clinical Research Analyst
- Teacher

5. Chemistry Entrance Scholarship :

The Chemistry Department offers Entrance Scholarships to students who are admitted to BSc (Hons) in Chemistry; BSc (Hons) in Analytical and Testing Sciences under the following criteria:

- Achieving at least a 5** in any HKDSE science subjects including Extended Part of Mathematics (Module 1 or Module 2).
- Satisfactory academic performance in year 1 study.



香港浸會大學
HONG KONG BAPTIST UNIVERSITY



DEPARTMENT
of
CHEMISTRY

BSc (Hons) in Analytical and Testing Sciences 分析和檢測科學理學士 (榮譽)

[Bachelor of Science JUPAS code: JS2510]



Admissions Enquiries:

Admissions Section, Academic Registry
Hong Kong Baptist University
Kowloon Tong, Hong Kong
E-mail : 334jupas@hkbu.edu.hk
Website : www.hkbu.edu.hk/ar

Programme Curriculum Enquiries:

Department of Chemistry
Hong Kong Baptist University
Kowloon Tong, Hong Kong
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BSc (Hons) in Analytical and Testing Sciences

1. Programme Aims :

- To provide students with broad-based training in all major scientific disciplines for supporting their study in analytical science, which is a multi-disciplinary subject.
- To provide students with solid knowledge in a variety of laboratory techniques and to help them to develop an analytical mind and good problem-solving skills needed to solve the diversity of problems encountered in their career as a professional analyst.
- To equip students with a solid knowledge base in science to support their career developments and further education in this and related fields.

Upon successful completion of this programme, students should be able to:

1. explain the fundamental principles of analytical science from a multi-disciplinary perspective;
2. apply knowledge and practical skills of different scientific disciplines to solve real-world problems;
3. collect and interpret analytical testing laboratory data and communicate those findings effectively;
4. appraise the impact of analytical science in the research and development of selected industries (e.g. chemical testing, food, pharmaceutical & herbal products manufacturing, environmental abatement, novel materials manufacturing, biomedical industries etc);
5. work independently and collaboratively as part of a team.

2. Programme Features :

- Students are trained as analytical and testing scientists by adopting a multi-disciplinary approach.
- Relevant courses offered by the Departments of Biology, Chemistry and Physics equip students with strong, broad scientific knowledge.
- Modern analytical instruments housed in the Department of Chemistry provide students with ample hands-on experience to solve a wide scope of analytical problems.
- The capstone course "Chemical Testing Laboratory Management and Accreditation" provides students with solid knowledge base for employment in the Testing and Certification Industry.
- The one-year final year project engagement offers students with practical training in solving real-world challenges.

3. Programme Structure :

After gaining 13-16-units of basic science training in the common first-year curriculum of the Science Faculty, students can select the "Analytical and Testing Sciences" programme as their major in the second year of study. The Department of Chemistry is the hosting Department for this group of students. Students are required to complete 33-36 unit core courses offered by Biology, Chemistry and Physics Departments. In addition to providing the students with sufficient chemical knowledge through a number of chemistry core courses including analytical, organic, inorganic, physical chemistry, instrumental and advanced instrumental analysis, students will be exposed to "Foundation in Bioanalysis" course and "Instrumentation and Data Acquisition Laboratory" course offered by the Biology and Physics Departments, respectively. To provide students with essential knowledge in chemical and material testing industry, students are required to take "Materials Testing and Characterization" and "Chemical Testing Laboratory Management and Accreditation" courses. A variety of major elective courses targeting on different analytical cases will be offered. To sharpen their problem-solving skills, all students are required to undertake an independent research project in their final year of study.

- **Common Year 1 Curriculum.** Students are admitted on a Faculty basis. All science students will enrol in a Common Year 1 curriculum, which requires them to take at least 4 out of 5 introductory courses offered by each of the five departments within the Faculty, i.e., Biology, Chemistry, Computer Science, Mathematics and Physics. Such curriculum design is founded on the fact that the solution of most scientific problems today requires a multi-disciplinary approach, i.e., knowledge and techniques from these five major science disciplines. To this end, we also offer an integrated Science Laboratory course, which aims to demonstrate to students how to utilize knowledge learnt from different science disciplines to solve real-life problems.
- **Broad-Based Whole Person Education.** Students must complete a total of 128 units and gain an overall grade point average of at least 2.0 for graduation. Of the 128 units, 31 units are for General Education (GE) courses, 67 units are Major discipline core and 30 units elective courses. This design provides a broad-based whole person education while retaining a focus on a specific academic discipline in Analytical and Testing Sciences.

