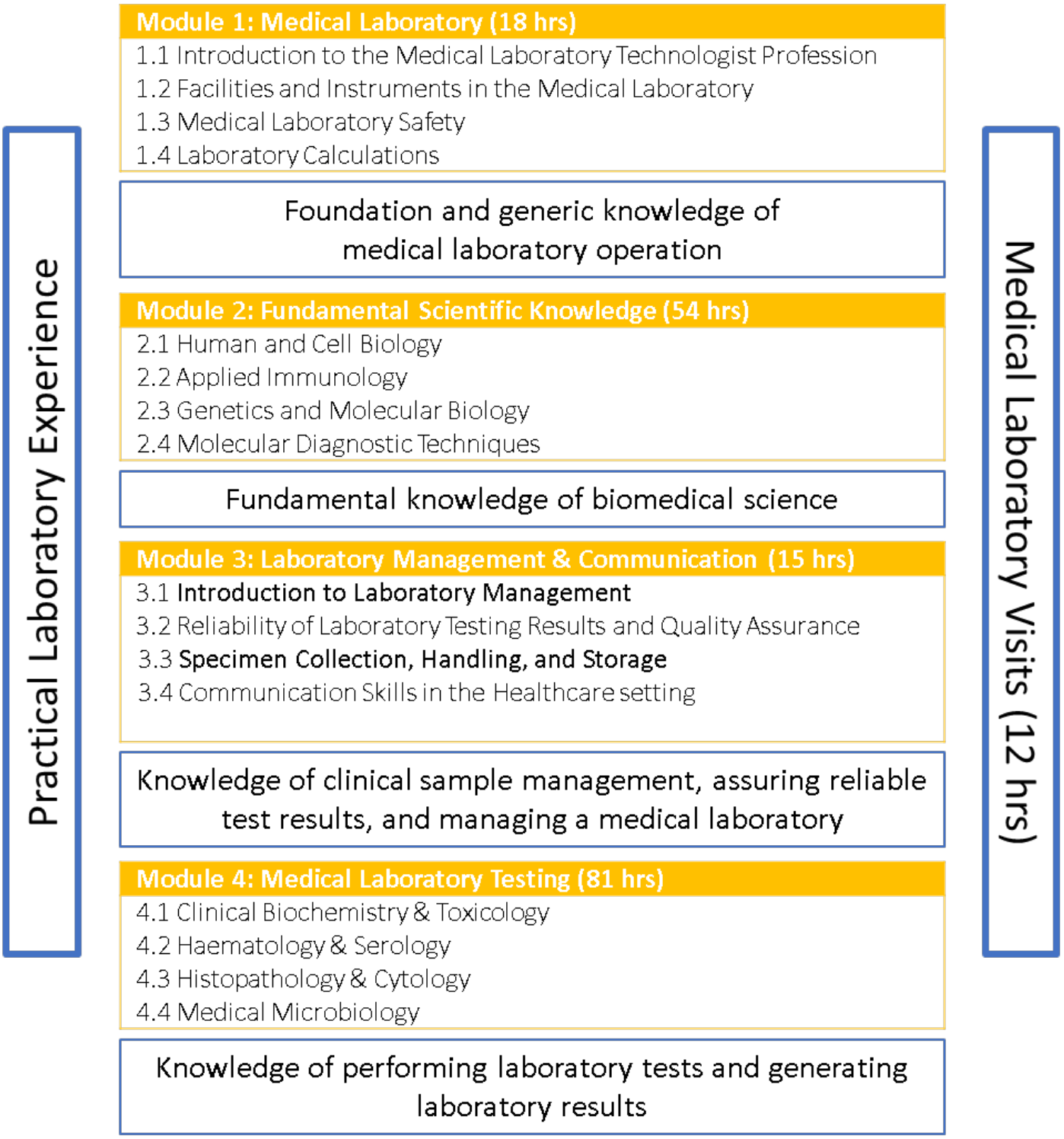
Applied Learning

2026-28 Cohort; 2028 HKDSE

Item	Description
1. Course Title	Medical Laboratory Science
2. Course Provider	School of Professional and Continuing Education, The University of Hong Kong
3. Area of Studies/ Course Cluster	Applied Science/ Medical Science and Health Care
4. Medium of Instruction	Chinese or English
5. Learning Outcomes	Upon completion of the course, students should be able to: (i) describe the roles and functions of different clinical specialties of a medical laboratory; (ii) apply practical skills and problem-solving skills in medical laboratory practice; (iii) correlate specific laboratory test result to health conditions; (iv) describe the work ethics and demonstrate understanding of safety precautions in medical laboratory practice; (v) recognise the importance of quality assurance in medical laboratory practice; and (vi) enhance self-understanding and explore directions on further studies and career pursuits.

6. Curriculum Map – Organisation and Structure



7. The Context

- The information on possible further study and career pathways is provided to enhance students' understanding of the wider context of the specific Applied Learning course.
- The recognition of Applied Learning courses for admission to further studies and career opportunities is at the discretion of relevant institutions. Students who have successfully completed Applied Learning courses have to meet other entry requirements as specified by the institutions.

Possible further study and career pathways

Further studies

- e.g. courses related to biological science, biomedical science, food science and nutrition, environmental science, pharmaceutical science, health product management, nursing studies

Career development

- e.g. assistant technicians in medical/food/environmental/microbiology/pharmaceutical testing labs, sales executives for medical and laboratory equipment

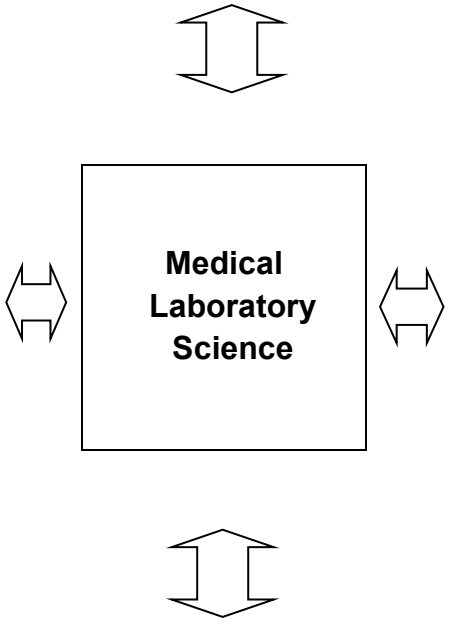
Complementarity with core subjects and other elective subjects

Enhancing and enriching**,** e.g.

- the application of the knowledge and concepts of this course, **Biology** and **Chemistry** can reinforce the understanding of the application of science to disease diagnosis and control

Expanding horizons**,** e.g.

- students taking **Economics** can broaden their view and enhance their understanding of the importance of medical laboratory testing in disease diagnosis and management



Relations with other Areas of Studies/ courses of Applied Learning

e.g.

Services *and* ***Applied Science***

- students who have also taken **Hotel Operations**, **Fundamental Cosmetology, Foundation in Chinese Medicine** and **Health Care Practice** can apply the safety principles in the workplace

Foundation knowledge developed in junior secondary education

The course is built upon the foundation knowledge students acquired in, e.g.

- **Chinese Language Education** and **English Language Education** – verbal and written communication
- **Mathematics Education** – data handling, measures, and calculation
- **Technology Education** – use of information technology
- **Science Education** – basic science knowledge

8. Learning and Teaching

In this course, student-centred learning and teaching activities are designed to enable students to understand fundamental theories and concepts, develop their generic skills, and address their career aspirations in medical laboratory science.

Different modes of activities are employed to provide students with a systematic understanding about the context (e.g. lectures introducing the fundamental knowledge of medical laboratory science) and eye-opening opportunities to experience the complexity of the context (e.g. visits to medical laboratories and talks by medical laboratory science practitioners).

Students acquire an understanding of the requirements, fundamental knowledge and skills essential for further learning within the area through learning-by-practising opportunities in an authentic or near-authentic environment (e.g. practical work and workshops using professional grade equipment).

Students are given opportunities to consolidate their learning and demonstrate entrepreneurship and innovation (e.g. when developing a new testing method for the diagnosis of a disease, students need to define the target, review the testing method, apply or modify diagnostic techniques to detect the target and devise quality assurance procedures for the new testing method).

9. Curriculum Pillars of Applied Learning

Through related contexts, students have different learning opportunities, for example:

(i) Career-related Competencies

- develop an awareness of the value of scientific investigation to health and disease management;
- enhance the knowledge on the development trend of the medical laboratory science profession through laboratory visits and talks by medical laboratory science practitioners;
- describe the roles and functions of different clinical specialties of a medical laboratory; and
- enhance the understanding of the medical laboratory science profession competency requirements and standards.

(ii) Foundation Skills

- strengthen communication skills both in verbal and written forms through working on laboratory reports, and project reports and presentations;
- strengthen information technology skills through information collection for assignments and projects; and
- develop mathematical skills through data interpretation and laboratory result calculation.

(iii) Thinking Skills

- develop critical thinking skills and analytical skills through interpretation of laboratory data and test results;
- develop problem-solving skills, creativity and decision-making skills through group project on developing a new or adopting an alternative testing method for the diagnosis of a specific disease; and
- integrate knowledge from different areas such as biology, chemistry and mathematics.

(iv) People Skills

- demonstrate team spirit through collaboration with team members in group work and project;
- establish concept of division of work through understanding of the roles and functions of different health care practitioners in the context of medical laboratory practice; and
- develop self-management skills through practice in a simulated laboratory environment with prescribed procedures and guidelines.

(v) Values and Attitudes

- develop honesty and integrity in the process of scientific investigation;
- demonstrate a basic understanding of the importance of professional ethics and confidentiality of patients' information through case studies;
- develop the motivation and willingness to improve through experience sharing by medical laboratory science practitioners; and
- develop the concern for safety of patients and co-workers through visit to laboratory and practical work.