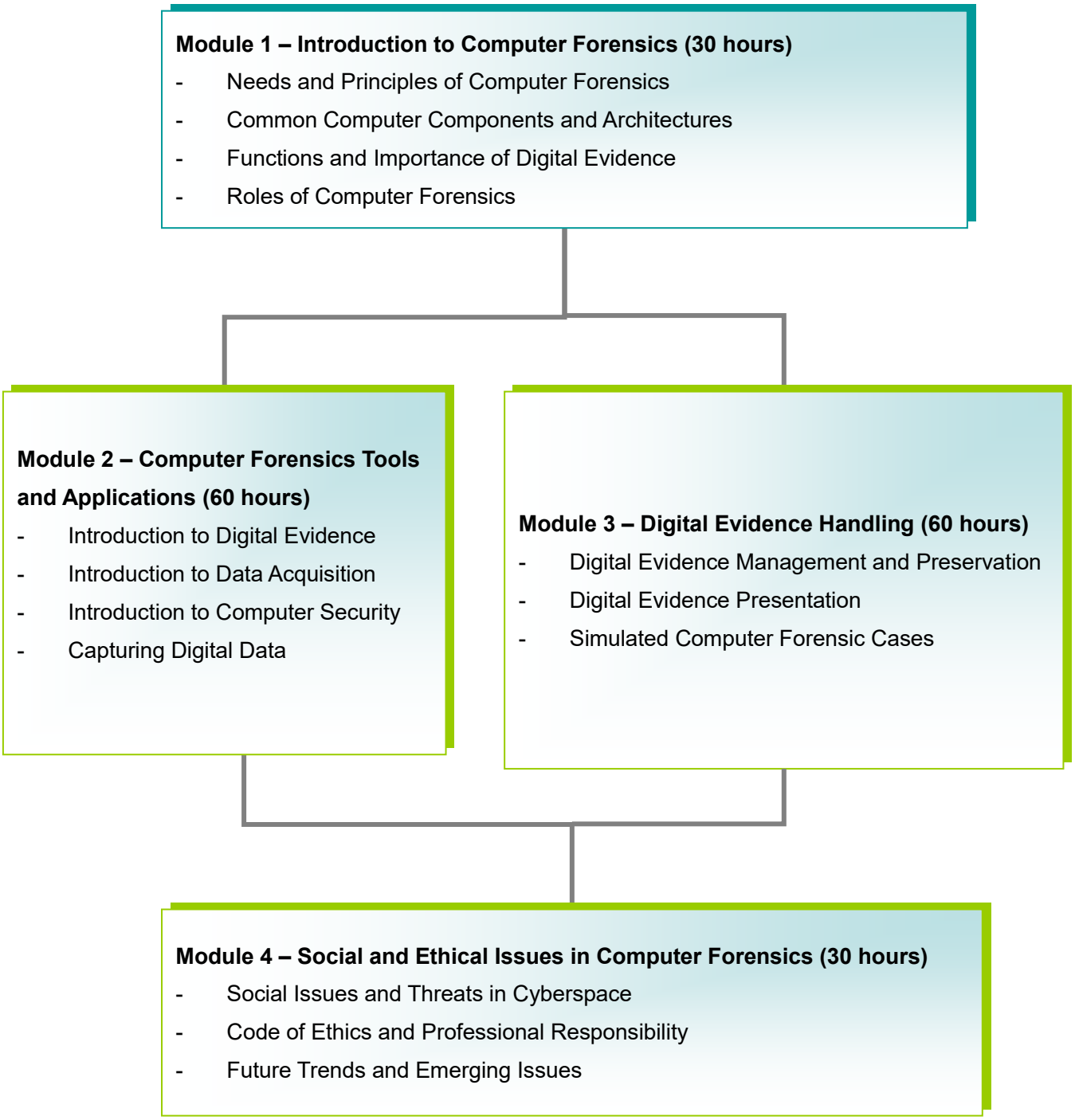
Applied Learning

2023-25 Cohort; 2025 HKDSE

Item	Description
1. Course Title	Computer Forensic Technology
2. Course Provider	School of Professional and Continuing Education, The University of Hong Kong
3. Area of Studies/ Course Cluster	Engineering and Production/ Information Engineering
4. Medium of Instruction	Chinese or English
5. Learning Outcomes	Upon completion of the course, students should be able to: (1) describe the needs, principles, roles and requirements of computer forensics; (2) describe individual stages of computer forensics process; (3) explain the roles and importance of digital evidence in computer incident response; (4) apply the procedures in collecting and preserving digital evidence by computer forensics technology; (5) describe the social and ethical issues in computer forensics; (6) demonstrate communication, collaboration and interpersonal skills in the field of computer forensics; and (7) develop self-understanding for further studies and career development in the related field.

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. Students who have successfully completed Applied Learning courses have to meet other entry requirements as specified by the institutions.
- The recognition of Applied Learning courses for admission to further studies and career opportunities is at the discretion of relevant institutions.

Possible further study and career pathways

Further studies

- e.g. information technology, computer science, information security or cyber security related courses

Career development

- to monitor and protect the computer network, e.g. junior network administrator
- to recover the data in computer, e.g. data recovery specialist

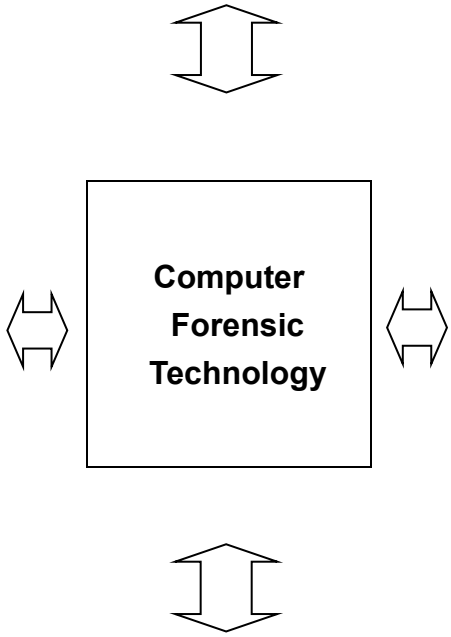
Relations with core subjects and other elective subjects

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

- enhancement of students' learning in understanding and application of **Mathematics** through solving encrypted digital data related problems and apply to experimental practices

Expanding horizons**,** e.g.

- students taking **Humanities subjects** can broaden their knowledge in information technology and engineering industry



Relations with other areas of studies/ courses of Applied Learning

e.g.

Business, Management and Law

- enhance students' understanding of the social and ethical issues from the impact of technology

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 and calculation
- **Technology Education** – use of information technology
- **Science Education** – importance of evidence in forming conclusions

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Learning and Teaching

Course Title : **Computer Forensic Technology**
Area of Studies : **Engineering and Production**
Course Provider : **School of Professional and Continuing Education, The University of Hong Kong**

In Computer Forensic Technology, 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 computer forensic technology.

Different modes of activities are employed to provide students with a systematic understanding about the context (e.g. lectures to introduce the overview and tools in computer forensic industry) and eye-opening opportunities to experience the complexity of the context (e.g. visit to computer forensic organisations, and sharing by industry professionals to widen students' horizon and to develop appreciation of computer forensic technology).

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. students will have a better understanding in the professional knowledge required to work as computer forensic technicians and techniques of using computer forensic tools through simulated case studies and related exercises).

Students are also encouraged to develop and apply conceptual, practical and reflective skills to demonstrate entrepreneurship and innovation. Students are given opportunities to integrate the knowledge and skills acquired and consolidate their learning (e.g. case studies to explore and evaluate the impacts of the computer forensic technology in daily life. In the computer forensic project, students have learning opportunities of using appropriate computer forensic techniques and tools. In the process, students are required to collect and preserve digital evidence by computer forensics technology at industry standard. Students are expected to demonstrate analytical and critical thinking skills in preparing the report, and demonstrate the positive values and attitudes in handling digital evidence).

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Curriculum Pillars of Applied Learning in Context – Computer Forensic Technology

Through the specific contexts related to the course, students have different learning opportunities, for example:

1. **Career-related Competencies**
   - observe the legal and ethical principles related to computer forensics industry;
   - explain the practice in collecting and preserving digital data;
   - utilise the computer forensics principles and tools to analyse the digital evidence;
   - discuss the aptitudes and abilities required in computer forensic technology and plan a personal roadmap to different levels of qualifications;
   - understand the future development trend of the computer forensic industry through visits and lectures by industry practitioners; and
   - enhance understanding of industry competency requirements through practical exercises which are set according to the industry standard.

2. **Foundation Skills**
   - enhance communication skills both in verbal and visual forms through participation in report writing, presentation and practical exercises;
   - enhance application skills of information technology through doing research and information collection for assignments and projects; and
   - enhance mathematical skills through exercises in computer forensics.

3. **Thinking Skills**
   - develop critical thinking and analytical skills through discussions on real life cases and practical exercises which will stimulate students' thinking and further understanding of the computer forensics; and
   - understand the social and ethical issues in computer forensics.

4. **People Skills**
   - develop self-management skills through individual practical exercises and group work;
   - enhance team work and concept of division of work through group projects and the practical exercises; and
   - develop skills in interpersonal communication and interaction through exercises at industry standard.

5. **Values and Attitudes**
   - discuss social and ethical issues in computer forensics; and
   - gradually develop self-confidence through successful completion of practical exercises under guidance of teachers.