

Applied Learning (Senior Secondary Level)

2020-22 Cohort

Learning and Teaching

Subject 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) and eye-opening opportunities to experience the complexity of the context (e.g. visit to computer forensic organisation, 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. in-class exercise as computer forensic technicians to apply knowledge and technique of computer forensic tools).

Students are also encouraged to develop and apply conceptual, practical and reflective skills to demonstrate entrepreneurship and innovation (e.g. case studies to evaluate the impacts of the computer forensic technology on local society). Students are given opportunities to integrate the knowledge and skills acquired and consolidate their learning (e.g. in the computer forensic project, students have a learning opportunity to discover digital evidence by using appropriate computer forensic techniques and tools. In the process, students apply the knowledge and skills in collecting and preserving the digital evidence at industrial standard. Students are expected to demonstrate analytical and critical thinking skills in preparing and presenting the report according to the processing guidelines. During the project, students are also expected to demonstrate the positive values and attitudes in handling digital evidence).

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Curriculum Pillars of Applied Learning in Context – Computer Forensic Technology

Upon completion of the subject, students should be able to:

- describe the need, principles, roles, and requirements of computer forensics;
- describe individual stages of computer forensics process;
- explain the roles and importance of digital evidence in computer incident response;
- apply the procedures in collecting and preserving digital evidence by computer forensics technology;
- describe the social and ethical issues in computer forensics;
- demonstrate communication, collaboration and interpersonal skills in the field of computer forensics; and
- develop self-understanding for further studies and career development in the related field.

Through the specific contexts related to the subject, 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 in both verbal and visual forms through participation in report preparation, presentation and practical exercises;
- enhance information technology skills 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 working skills and concept of division of work through group projects and the practical exercises; and
- develop skills in interpersonal communication and interaction through exercises at industrial standard.

5. Values and Attitudes

- develop positive attitudes toward the social and ethical issues in computer forensics; and
- gradually develop self-confidence through successful completion of practical exercises with performance feedback by teachers.