Computer

Complete the following:

1. Understand the difference between hardware and software in computer systems.

2. Understand the function of hardware in computer systems, e.g. input/output device, and main/secondary storage device.

3. Understand the function of system software and application software, and the relationship between hardware, system software, application software and user.

4. Understand the methodology of internet connection, including wireless and broadband, and have a basic understanding of how data is transferred on the Internet.

5. Understand the impacts of Internet development on different activities of the society. Compare the pros and limitations between the Internet and traditional information transfer methods. Know the pros and cons of freedom of information on the Internet.

6. Know how to install and use different kinds of filtering softwares, and filter out websites that are not suitable for children and adolescents to avoid exposure to objectionable materials.

7. Complete the practical training of either (A) or (B):

(A) Website Development

   (i) Know the essential factors of consideration in web development;
   (ii) Show basic understanding of the concept and technologies of internet connection and operation, including the roles of service providers, the types of connection and access, the use of domain names and domain name servers;

(iii) Understand the needs and general requirements of setting up the computer network at home, school or troop; and

(iv) Design a website with a particular theme, including dynamic web pages with interactive and special effects, and upload onto the World Wide Web. (The organization of information should be taken into consideration during website design, including the ease of navigation, appropriate placement of links/tables/ frames/multimedia elements, colour combinations, background design, font size and style, for easier browsing.)

(B) Software Programming

(i) Understand the importance of good programming habits, such as use of meaningful variables, comments, annotations, space and indentations;

(ii) Have a basic understanding of the Boolean logic (AND, OR, NOT) and truth tables;

(iii) Understand the procedures of problem solving (problem identification, problem analysis, designing an algorithm, developing a solution, debugging and testing, and documentation); and

(iv) Use one of the computer languages, with variables, operator and flow control, etc, to design a specific programme (input and output function should be included).

Completion of this Badge, including a total of six months or above in lecture or practicum, would be counted as an equivalent of relevant item under Skills Section of the Hong Kong Award for Young People Bronze Award.