Curriculum Renewal on Senior Secondary

Information and Communication Technology

2020 June

# Implementation

**2022/23**   Updated ICT Curriculum will be implemented gradually starting from S4

**2025**   First DSE on Updated ICT Curriculum

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# Curriculum Framework

● Current Curriculum Framework (Before 2025 HKDSE)

| The Compulsory Part (145 hours) | | | |
|---|---|---|---|
| A. Information Processing | (52 hours) | B. Computer System Fundamentals | (25 hours) |
| C. Internet and its Applications | (22 hours) | D. Basic Programming Concepts | (24 hours) |
| E. Social Implications | (22 hours) | | |

**+**

| The Elective Part (75 hours) (Choose one only) | | | |
|---|---|---|---|
| A. Databases | B. Data Communications and Networking | C. Multimedia Production and Web Site Development | D. Software Development |

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# Curriculum Framework

- Proposed Curriculum Framework (2025 HKDSE onward)

| The Compulsory Part (144 hours) | | | |
|---|---|---|---|
| A. Information Processing | (37 hours) | B. Computer System Fundamentals | (20 hours) |
| C. Internet and its Applications | (31 hours) | D. Computational Thinking and Programming | (48 hours) |
| E. Social Implications | (8 hours) | | |

**+**

| The Elective Part (76 hours) (Choose any two) | | |
|---|---|---|
| A. Databases | B. Web Application Development | C. Algorithm and Programming |

# Core Part

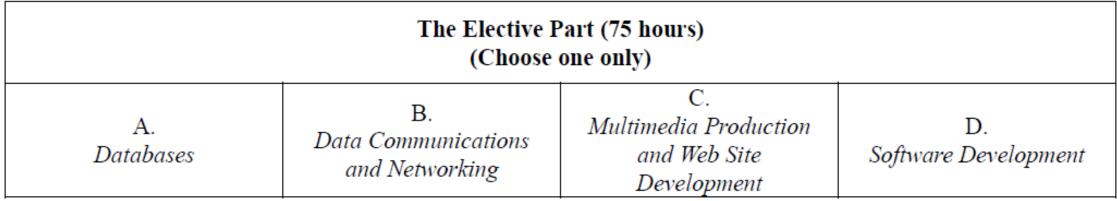| The Compulsory Part (145 hours) | | |
|---|---|---|
| A. Information Processing (52 hours) | B. Computer System Fundamentals (25 hours) | |
| C. Internet and its Applications (22 hours) | D. Basic Programming Concepts (24 hours) | |
| E. Social Implications (22 hours) | | |

| The Compulsory Part (144 hours) | | |
|---|---|---|
| A. Information Processing (37 hours) | B. Computer System Fundamentals (20 hours) | |
| C. Internet and its Applications (31 hours) | D. Computational Thinking and Programming (48 hours) | |
| E. Social Implications (8 hours) | | |

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# Core Part

- Lesson Time
  - Total lesson time decreases from 145 hours to 144 hours

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# Core Part

- Major Changes in Learning Content
  - Module A - Information Processing
    - *Content related to word processing and presentation of information is removed*
    - *Content related to spreadsheets and databases is kept*

  - Module C - Internet and its Applications
    - *Topics related to Internet Security are moved from the following areas to this module*
      - Core Part - Module E
      - Elective Part - Option B Data Communications and Networking

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# Core Part

- Major Changes in Learning Content
  - Module D - Basic Programming Concepts
    - *The module is renamed as "Computational Thinking and Programming"*
    - *Implementation of programming is required, including*
      - Program Development
      - Program Testing and Debugging
    - *Lesson time increases from 24 hours to 48 hours*

  - Module E - Social Implications
    - *A topic Technological Innovations is added for practical experience on new technology (e.g. AI, AR and VR)*

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# Elective Part

| The Elective Part (75 hours) (Choose one only) | | | |
|---|---|---|---|
| A. Databases | B. Data Communications and Networking | C. Multimedia Production and Web Site Development | D. Software Development |

| The Elective Part (76 hours) (Choose any two) | | |
|---|---|---|
| A. Databases | B. Web Application Development | C. Algorithm and Programming |

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# Elective Part

- Lesson Time
  - Total lesson time increases from 75 hours to 76 hours

- Structure
  - From selecting one option among four (1/4) to selecting two options among three (2/3)

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# Elective Part

- Major Changes in Learning Content
  - Option A (Databases)
    - *Two topics "Introduction to Databases" and "Database Applications, Development and Society" are removed*

  - Option C (Algorithm and Programming)
    - *Two topics "Programming Languages" and "Systems Development" are removed*
    - *A new topic "Applications of Programming in Real Life" is added*

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# Elective Part

- Major Changes in Learning Content
  - Option B (Web Application Development)
    - *Content is extracted from Option B (Data Communications and Networking) and C (Multimedia Production and Web Site Development)*
    - *Content related to Multimedia is removed*
    - *Content on networking is maintained at the level on setting ad-hoc/home wifi/wired network*
    - *Implementation on coding/programming in web application development is required*

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*Before*

B. Data Communications and Networking (75)

   a. Data Communications and Networking Basics (38)

   b. Network Design and Implementation (26)

   c. Network Management and Security (11)

C. Multimedia Production and Web Site Development (75)

   a. Multimedia Production (25)

   b. Web Site Development (50)

*After*

**B. Web Application Development (38)**

   a. Network Services and Implementation (14)

   b. Web Programming and Applications (24)

Core Part
Section C Internet and its Applications

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# Programming Languages

| Core & Elective C (Algorithm & Programming) | ◆ (2025-2027 DSE) Pascal, C++ and Python<br>◆ (2028 DSE onward) C++ and Python |
|---|---|
| Core & Elective A (Databases) | ◆ SQL |
| Elective B (Web Application Development) | ◆ PHP |

- Reserved Word Lists for Programming Languages will be provided in due course

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# Information and Communication Technology Curriculum Supplementary Notes

https://www.edb.gov.hk/en/curriculum-development/kla/technology-edu/resources/index.html

Home > Curriculum Development > Key Learning Areas > Technology Education > Technology Education - References & Resources
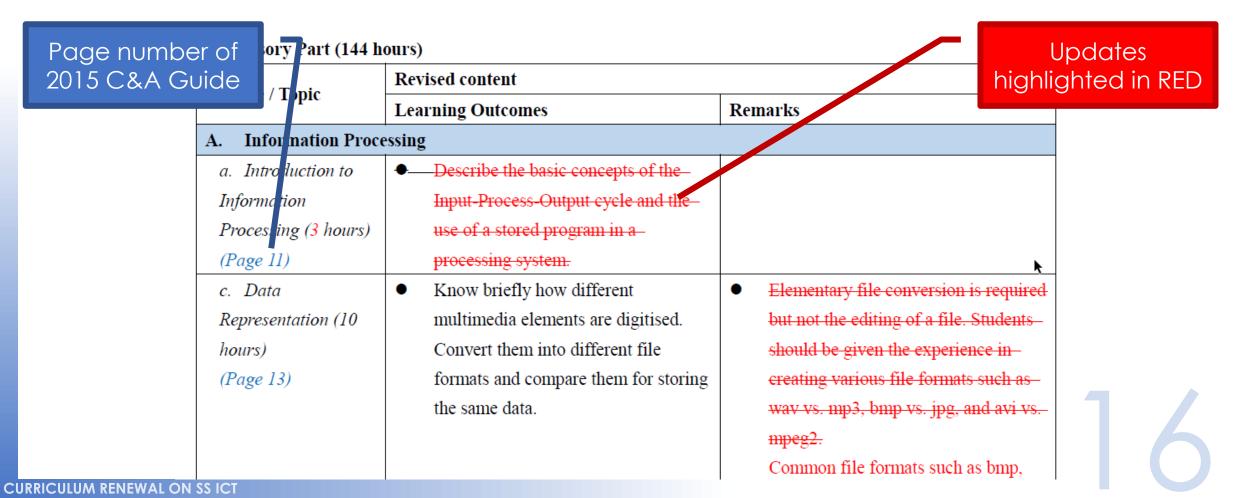
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## 2. Changes on the curriculum

Changes are highlighted in RED and applicable to the 2025 HKDSE examination and onwards.

Page number highlighted in BLUE denotes the page number in the booklet Information and Communication Technology Curriculum and Assessment Guide (Secondary 4-6) (2015) (URL: https://334.edb.hkedcity.net/doc/chi/curriculum2015/ICT_CAGuide_e_2015.pdf ).

**Page number of 2015 C&A Guide**

**Updates highlighted in RED**

...sory Part (144 hours)

| ... / Topic | Revised content | |
|---|---|---|
| | **Learning Outcomes** | **Remarks** |
| **A. Information Processing** | | |
| a. Introduction to Information Processing (3 hours) (Page 11) | • ~~Describe the basic concepts of the Input-Process-Output cycle and the use of a stored program in a processing system.~~ | |
| c. Data Representation (10 hours) (Page 13) | • Know briefly how different multimedia elements are digitised. Convert them into different file formats and compare them for storing the same data. | • ~~Elementary file conversion is required but not the editing of a file. Students should be given the experience in creating various file formats such as wav vs. mp3, bmp vs. jpg, and avi vs. mpeg2.~~ Common file formats such as bmp, |

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# Upcoming Measures

- Sample Paper

- L&T Resources
  - Developing programming concepts through Python
  - Developing programming concepts through C++
  - …

- Professional Development Programmes
  - Programming with Python (2019 Jun)
  - Programming with C++ (2020 Jul)
  - …

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# Enquiry

Mr Wilfred HO

✉     cdote24@edb.gov.hk

☎     3698 3131

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