

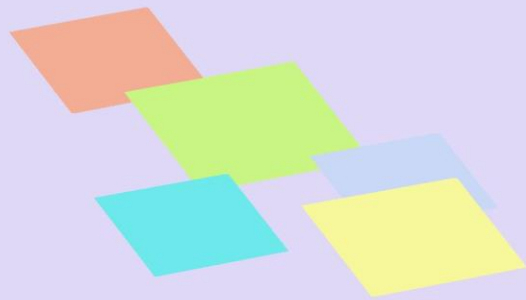
# Understanding and Interpreting the ICT Curriculum

CDI020131172

24 June 2013

# Senior Secondary Curriculum Guide

## 高中課程指引



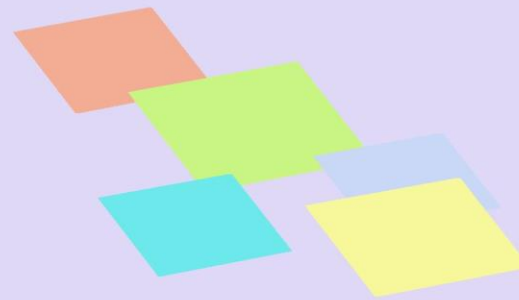
### Senior Secondary Curriculum Guide

The Future is Now :  
from Vision to Realisation  
(Secondary 4 – 6)



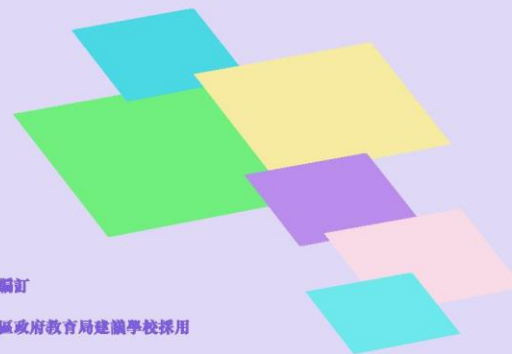
Prepared by  
the Curriculum Development Council

Recommended for use in schools by  
the Education Bureau  
HKSARG  
2009



### 高中課程指引

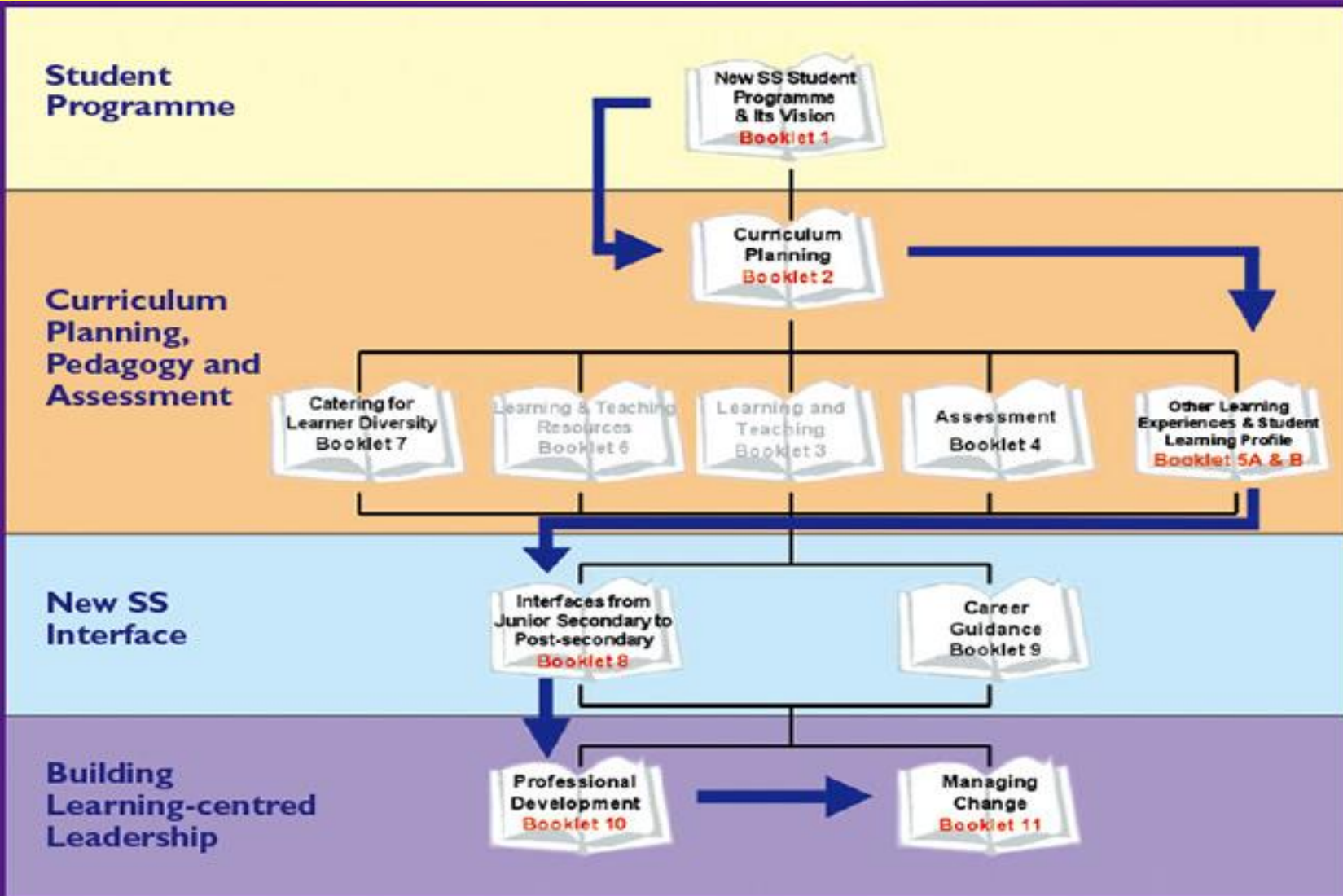
立足現在・創建未來  
(中四至中六)



課程發展議會編訂

香港特別行政區政府教育局建議學校採用  
二零零九年

# Suggested Entry Point for Principals, Vice-principals, New SS Co-ordinators and Members of the Senior Management



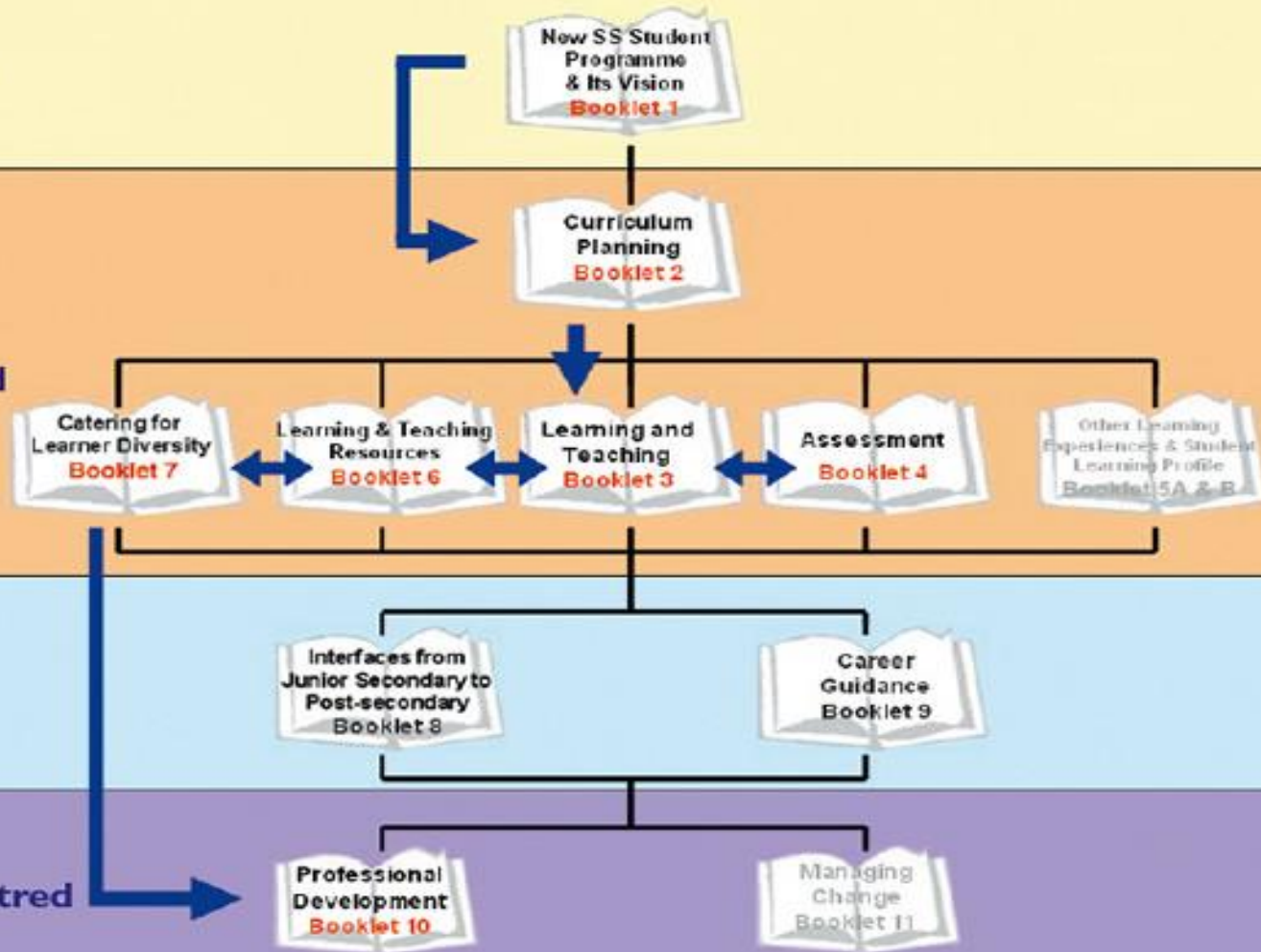
# Suggested Entry Point for KLA Heads and Teacher-librarians

## Student Programme

## Curriculum Planning, Pedagogy and Assessment

## New SS Interface

## Building Learning-centred Leadership



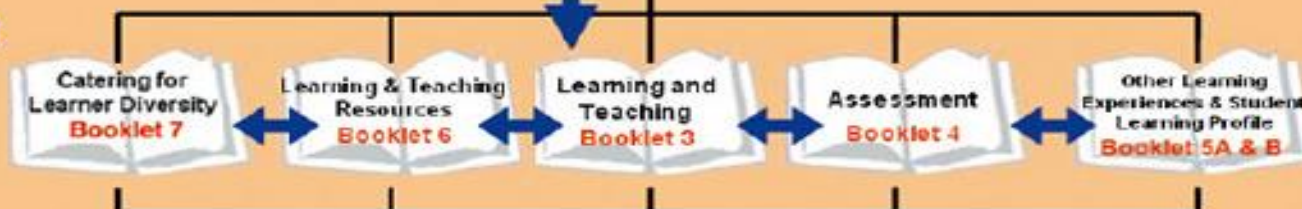


# Suggested Entry Point for Teachers

## Student Programme



## Curriculum Planning, Pedagogy and Assessment



## New SS Interface



## Building Learning-centred Leadership



# Technology Education

- How human beings **solve** their daily **problems**
- How the **processes** involved can be **replicated and transferred** to solve new problems
- Leading to a **quality life with positive attitude**



# ICT Curriculum and Assessment Guide

## 資訊及通訊科技課程及評估指引

Technology Education  
Key Learning Area

**Information and  
Communication Technology  
Curriculum and Assessment Guide  
(Secondary 4 - 6)**

Jointly prepared by the Curriculum Development Council and  
the Hong Kong Examinations and Assessment Authority

Recommended for use in schools by the Education and Manpower Bureau  
HKSARG  
2007

科技教育學習領域

**資訊及通訊科技  
課程及評估指引  
(中四至中六)**

課程發展議會與香港考試及評核局聯合編訂

香港特別行政區政府教育統籌局建議學校採用  
二零零七年

# The Importance of ICT

- Does not lie in the technology itself
- But its enabling function for
  - **Access** to knowledge and information
  - **Communication** in economic and social interaction



# Design Principles

- Students' prior knowledge/experiences/skills
- Balance between breath and depth
- Significance of both theoretical and applied learning
- Balance between essential and diversity
- Close alignment curriculum, pedagogy and assessment
- Multiple pathways leading to further studies and in workplace

# Curriculum Aims

- provide students with:
  - essential knowledge, concepts and applications of information, communication and computer systems
  - problem-solving and communication skills, and encourage them to think critically and creatively
  - competent, effective, discriminating, ethical and confident users of ICT, so as to support their lifelong learning
  - opportunities to appreciate the impact of ICT on our knowledge-based society, so as to nurture in them positive values and attitudes to this area

# Learning Targets

## Knowledge and Understanding

- interrelationship among hardware, software and data

## Skills

- use a range of applications software effectively, ethically and with discrimination to support information-processing and problem-solving
- demonstrate an understanding of methods for analysing problems, and planning and implementing solutions using ICT

## Values and Attitudes

- appreciate how information literacy and the sharing of knowledge using ICT influence decision-making and shape our society
- develop responsible and positive attitudes towards the use of ICT

# Curriculum Framework of ICT

## The Compulsory Part (165 hours)

A. Information Processing	(64 hours)	B. Computer System Fundamentals	(25 hours)
C. Internet and its Applications	(28 hours)	D. Basic Programming Concepts	(20 hours)
E. Social Implications	(28 hours)		



**School-based  
Assessment**  
(30 hours /  
To be decided)

## 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
-----------------	---	---	----------------------------

# Public Assessment

- Paper 1 (Compulsory part) 55%, 2 hours
- Paper 2 (Elective part) 25%, 1.5 hours
  - 2A Databases
  - 2B Data Communications & Networking
  - 2C Multimedia Production & Web Site Dev.
  - 2D Software Dev.
- School-based Assessment (SBA) 20%



# Information provided for each module

- **Introduction** provides an overview of the module/option approach
- **Learning Objectives** specify what extent/level students will learn
- **Topics** are numbered and sub-topics are included with suggested time allocation
- **Learning Outcomes** embody the essential contents of each learning topic in detail
- **Remarks** serve three purposes :
  1. provide further information such as the depth and breadth of the learning elements
  2. alert teachers to the opportunities for fostering the most dominant generic skills
  3. serve as teaching notes

# Action verbs to indicate the thinking or practical skills

## Examples of action verbs

Be aware of, know, define, write, list,  
relate, recognise, state

Discuss, describe, explain, identify,  
demonstrate, apply, convert

Distinguish, analyse, compare, evaluate,  
organise, prepare, test

Develop, plan, design, construct, process,  
integrate, implement

## Students need to demonstrate

The recall and understanding of specific  
terms or facts and simple concepts.

The application of declarative  
knowledge and practical skills in  
particular contexts.

The analysis of materials or systems into  
their constituent parts and the  
recognition of relationships between  
parts.

The synthesis of concepts and skills  
from different areas into a plan for  
solving a problem or reaching a  
conclusion, and the transfer of learned  
concepts and skills to new scenarios /  
situations.

# Example: Internet Services and Applications

- **Formulate** an **effective strategy** for searching for specific information on the Web by using search-engines, and **critically analyse** the sources of information

# Order and Organisation of Content

- The order of the modules and options is **arbitrary and immaterial**
- The organisation of individual module or option represents **one possible way** of organising the curriculum content
- Teachers may structure and design teaching schemes **according** to their **school situations, student needs, interests and abilities**

# Supports for ICT

- Glossary of Terms Commonly Used
- Reviewed Textbook (compulsory part) on Recommended Textbook List
- Teacher PD Programmes
- L&T Resource Packages for elective part & core part
- *Edblog* : [edblog.hkedcity.net/te\\_ict\\_e](http://edblog.hkedcity.net/te_ict_e)
- *e-platform*: [sfcs.edb.hkedcity.net](http://sfcs.edb.hkedcity.net)




# Glossary of Terms Commonly Used

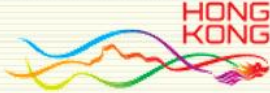
## 常用英漢及漢英辭彙

<http://www.edb.gov.hk>

Home > Curriculum Development > Key Learning Areas  
> Technology Education > References & Resources




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Home > Curriculum Development > Key Learning Areas > Technology Education > Technology Education - References & Resources

Print

### Technology Education - References & Resources



[TEKLA at Junior Secondary Level: Depository of Curriculum-based Learning and Teaching Resources](#)  
[TEKLA at Senior Secondary Level: Subject-based Strategies – Annotated Exemplars on Implementation Practices for the Senior Secondary Curriculum and Catering for Learner Diversity](#)

#### Business Subjects

Description	View or download
Learning and Teaching Resources	<a href="#">Read More</a>
Seminar & Workshop Handouts	<a href="#">Read More</a>
Reference Books	 (245KB)
Resources on Web	 (262KB)
Glossary	<a href="#">Read More</a>

#### Computer Education

Description	View or download
Learning and Teaching Resources	<a href="#">Read More</a>
Seminar & Workshop Handouts	<a href="#">Read More</a>
Reference Books	<a href="#">Read More</a>

# Glossary of Terms Commonly Used

## 常用英漢及漢英辭彙



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Insider's Perspectives

School Information

iPASS

E-APP

New Milestone of Kindergarten Education

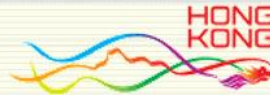
持續學習  
Continuous Education  
 lifelong Learning

### An English-Chinese and Chinese-English Glossary of Terms Commonly Used in the Teaching of Information and Communication Technology in Secondary Schools

中學  
資訊及通訊科技科  
常用英漢及漢英辭彙

Technology Education Section, Curriculum Development Institute  
Education Bureau, HKSARG  
2007



香港特別行政區政府教育局  
課程發展處科技教育組  
二零零七



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# e-platform: L&T resources

## 電子平台：學與教資源

e-pl  
ICT,  
Cur

Home » ICT\_MT\_01\_E

### C&A Guide

**ICT C&A Guide A. Databases**  
**Elective Part:**

**B. Data Communications and Networking**

**C. Multimedia Production and Web Site Development**

a. Multimedia Production  
b. Web Site Development  
Supplementary Materials  
Other Resources  
Forum & Exchange Corner

**D. Software Development**

**School-based Assessment**

**Seminars/Workshops**  
**Reference Materials**

**ASCA C&A Guide Computer Systems**

**Office & Internet Applications**

**Databases**

**SOHO Networking**

**ALPS C&A Guide Office &**

### C. Multimedia Production and Web Site Development

About the Resource Package

 [ICT\\_About](#)

Overview of the Package

 [ICT\\_TP\\_Overview](#)

Teaching Activity Summary

 [ICT\\_TPS\\_PartA](#)

#### a. Multimedia Production (Part A)

#### *i. Multimedia Applications (Chapter 1)*

#### Chapter 1.1 What is Multimedia

 [ICT\\_Ch1.1\\_Unit](#)

 [ICT\\_Ch1.1\\_Unit\\_animation\(WhatisMultimedia\)](#)

 [ICT\\_HO\\_Ch1.1](#)

 [ICT\\_HO\\_Ch1.1\\_video01](#)

 [ICT\\_HO\\_Ch1.1\\_video02](#)

 [ICT\\_RP\\_Ch1.1](#)


 [ICT\\_USA\\_Ch1.1](#)

# HKEAA Subject Information - ICT

## 考評局科目資訊——資訊及通訊科技

[www.hkeaa.edu.hk](http://www.hkeaa.edu.hk)

Home > HKDSE > Assessment Framework  
> Information and Communication Technology



香港考試及評核局  
Hong Kong  
Examinations and  
Assessment Authority

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**Section Focus**

**Inf'l Recognition**

HKDSE level 5\*\* awarded with UCAS Tariff Points

**HKDSE**

2013 HKDSE App

- About HKDSE
- Important Dates
- Examination Timetable
- Exam Registration
- Examination Fees
- Handbook for Candidates
- Exam Regulations
- Report on Exam Irregularities
- Exam Centres
- Participating Schools
- Circulars
- Assessment Framework
- Subject Information**
- Category A: New Senior Secondary

**Subject Information - Subject Overview**

HKDSE subjects are divided into three categories, including 24 new senior secondary subjects (4 core subjects and 20 elective subjects), Applied learning subjects and other language subjects.

**Category A: New Senior Secondary Subjects**

**Core Subjects**

<a href="#">Chinese Language</a>	<a href="#">English Language</a>	<a href="#">Mathematics</a>	<a href="#">Liberal Studies</a>
----------------------------------	----------------------------------	-----------------------------	---------------------------------

**Elective Subjects**

<a href="#">Chinese Literature</a>	<a href="#">Biology</a>	<a href="#">Business, Accounting and Financial Studies</a>
<a href="#">Literature in English</a>	<a href="#">Chemistry</a>	<a href="#">Design and Applied Technology</a>
<a href="#">Chinese History</a>	<a href="#">Physics</a>	<a href="#">Health Management and Social Care</a>
<a href="#">Economics</a>	<a href="#">Science: Integrated Science</a>	<a href="#">Information and Communication Technology</a>
<a href="#">Ethics and Religious Studies</a>	<a href="#">Science: Combined Science</a>	<a href="#">Technology and Living</a>
<a href="#">Geography</a>		<a href="#">Music</a>
<a href="#">History</a>		<a href="#">Visual Arts</a>
<a href="#">Tourism and Hospitality Studies</a>		<a href="#">Physical Education</a>

**Assessment Framework of 24 new senior secondary subjects**



# HKEAA Subject Information - ICT

## 考評局科目資訊——資訊及通訊科技

HKALE

HKDSE

HKCEE

School-based  
Assessment

International  
Recognition

BCA/TSA

LPAT


Other Exams  
and  
Assessments

### Category A – HKDSE Elective Subjects: Information and Communication Technology

 [Assessment Framework](#)

 [Curriculum and Assessment Guide](#)


 [Samples of Candidates' Performance](#)

 [Practice Papers](#)

 [Sample Papers](#)

 [Level Descriptors](#)

 [Other Resources](#)

 [Frequently Asked Questions](#)

#### Section Focus

##### Int'l Recognition

HKDSE level 5\*\*\*  
awarded with UCAS  
Tariff Points

##### HKDSE

2013 HKDSE App

- [About HKDSE](#)
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- [Practice Papers](#)
- [School-based Assessment](#)
- [Release of Examination Results](#)
- [Marking and Processing of Marks](#)
- [Rechecking and Remarking](#)
- [Appeal Review](#)
- [Exam Report](#)



<http://www.edb.gov.hk>

Home > ... > Technology Education

> "Technology Education - Wisdom of Life"



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**Technology Education**

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- Health Management
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For enquires, please contact the relevant staff.

### Information and Communication Technology (ICT)

Citizens in the 21<sup>st</sup> century need to understand the principles and applications of information and communication technologies in order to function efficiently in the society. In order to maintain the competitive edge of the territory in the world, it is essential to develop students' interests and capabilities in information and communication technologies. Rapid advances in information and communication technologies do not only initiate economic changes and business restructuring, but also affect skills and employment, contributing significantly to economic growth and wealth creation.

The ICT curriculum prepares students with solid foundation for pathways into the workforce or further studies in the related fields. The subject also provides opportunities for the development of key generic skills such as critical thinking, communication, creativity and problem-solving in contextual and authentic settings that are relevant to students' life experiences.

- Learning ICT is fun.
- The application of information and communication technologies in daily life can improve the quality of living.

Miss CHOI Sin-man  
The 17<sup>th</sup> International Olympiad in Informatics Silver Medalist

Mr Arice POON  
Managing Director  
Oracle South China & Hong Kong

The ideal employee's attributes that corporate employers are looking for, can be found in students completing ICT.

11

12

Insider's Perspectives

Vacancy Situation

# Considerations in Curriculum Management and Planning

- Statistics on NSS ICT
- Learning Goals and Emphases of Curriculum Reform

# Statistics on NSS ICT

## S4 (2010/11, 2nd Cohort) (450 schools, 78330 students)

No. of schools offered	% of schools offered	No. of students enrolled	% of students enrolled	No. of groups offered
432	96.0%	11,950	15.3%	564

## S5 (2010/11, 1st Cohort) (453 schools, 74826 students)

No. of schools offered	% of schools offered	No. of students enrolled	% of students enrolled	No. of groups offered
437	96.5%	9,973	13.3%	580

# Statistics on NSS ICT

Elective Modules	No. of School offered*	Percentage (n=453)
Databases	67	14.8%
Data Communications and Networking	29	6.4%
Multimedia Production and Web Site Development	337	74.4%
Software Development	106	23.4%

\*Total no. of schools (offered in 2010/11 and planned to be offered in 2011/12)

# PDP for ICT Teachers (1)

- Understanding and Interpreting Curriculum
- Assessing Student Learning
  - Assessment Design and the Conduct of SBA
  - SBA Workshop
- Learning and Teaching Series
  - Teaching Programming in Computer Literacy (New)
  - Curriculum planning and effective use of resources in teaching Computer Literacy at the junior secondary level (New)
  - Curriculum Planning for Junior Secondary Computer Education (New)
  - NSS Learning and Teaching Strategies for the Information and Communication Technology Curriculum Series: (1) Catering for Learner's Diversity (Re-run)



# PDP for ICT Teachers (2)

- Enriching Knowledge
  - NSS Enriching Knowledge for the Information and Communication Technology Curriculum Series: (10) Database Applications, Development and Society (Re-run)
  - NSS Enriching Knowledge for the Information and Communication Technology Curriculum Series: (13) Recent Development in Systems Development (New)
- Curriculum Management and Leadership
- Other related PD programmes

# Thank you!