



# Introduction to Computer Programming Using C++

(TECS1441)

<b>Introduction</b>	<p>This course introduces computer programming in C++. Students will learn the functional elements of a computer system, problem solving, creation of computer applications, and basic object-oriented programming concepts. Students will be able to apply these computing skills in various disciplines. This course also provides a foundation to further study in other computing topics.</p>		
<b>Programme Type / Level</b>	<p>Introductory Course in Computer Programming (<a href="#">Token-required</a>)</p>		
<b>Instructor(s)</b>	<p>Dr. Law Yat Chiu</p>		
<b>Pre-requisite</b>	<p>Basic computer skills in Windows or macOS</p>		
<b>Target Participants</b>		<ul style="list-style-type: none"> <li>➤ S1 – S3 HKAGE student members</li> <li>➤ Class size: 30</li> </ul>	
<b>Medium of Instruction</b>		<p>English with English handouts</p>	
<b>Certificate</b>		<p><b>E-Certificate</b> will be awarded to participants who have:</p> <ul style="list-style-type: none"> <li>❖ Attended <b>at least 5 sessions; AND</b></li> <li>❖ Completed all the assignments and the final test with <b>satisfactory performance</b></li> </ul>	
<b>Intended Learning Outcomes</b>		<p>Upon completion of the programme, participants should be able to:</p> <ol style="list-style-type: none"> <li>1. Write, understand, compile, and debug C++ programmes;</li> <li>2. Write programmes using the basic programming elements such as variables, data types, selection and looping control structures, and functions;</li> <li>3. Write applications using elementary data structures such as 1-D and 2-D arrays, etc.;</li> <li>4. Implement and instantiate classes, and invoke methods.</li> </ol>	
<b>Screening</b>		<p>Please answer the screening question in the online application form.</p> <p>*The screening question is designed to help the applicant understands the course level and the course content. The question must be answered by the student applicant and it can only be attempted once. The answer cannot be changed once the application is submitted. Selection is based on students' performance in answering the question. Only students who can demonstrate motivation and the basic knowledge of Computer Programming in the screening question can be enrolled in the programme.</p>	
<b>Application Deadline</b>	<b>12 Nov 2018</b>	<b>Application Result Release Date</b>	<b>23 Nov 2018</b>
<p>Student members may withdraw from the programme on or before the deadline. Otherwise, the token will be deducted.</p>			

## Schedule

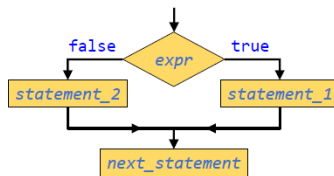


Session	Date	Time	Venue
1	5 Jan	10:00 a.m. – 1:00 p.m.	The Chinese University of Hong Kong (Classroom to be confirmed)
2	19 Jan		
3	9 Feb		
4	16 Feb		
5	2 Mar		
6	16 Mar		
<b>7</b>	<b>30 Mar</b>	10:00 a.m. – 1:00 p.m. <b>2:00 p.m. – 5:00 p.m.</b>	The Chinese University of Hong Kong (Classroom to be confirmed)

## Sample Examples for the Programme

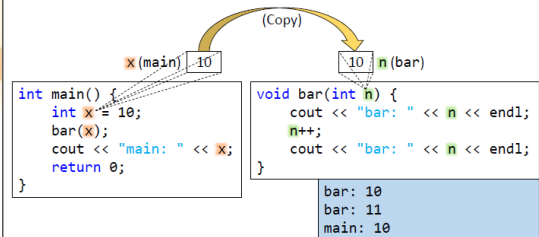
### if-else Statement: Syntax

```
if (expr)
    statement_1;
else
    statement_2;
next_statement;
```



- Allows us to conditionally perform one of two tasks

### Passing Parameter by Value



- $x$  and  $n$  have their own space in the memory
- During the function call, only the value of  $x$  is copied to  $n$ . Updating  $n$  does not affect  $x$

## Enquiries



For enquiries, please contact us at 3940 0101 after language selection, press "1".