

## The following modules are included in the ICT Certification program:

**Module 1 Code: ITSE**

Credit hours: 3

Purpose: Knowledge of Information and communication Technology and its impact on society and education.

Learning objective: Participants will be able to describe the role of technology in society, its impact, dangers and opportunities for the future.

**Module 2 Code: PCHS**

Credit hours: 5

Purpose: This module deals with the most vital parts of computers.

Learning objective: Participants will be able to show mastery in assembling a computer, describe the different parts and understand the importance of software and know the difference between operating systems and application software.

**Module 3 Code: AITE**

Credit hours: 5

Purpose: This module deals with how to use technology for instruction purposes.

Learning objective: Participants will be able to use existing technology in their classrooms, select the right instruction technology for their target group(s) and implement a technology rich environment for effective instruction and learning. They will have the knowledge and skills to stimulate and guide students in collaborative learning using technology.

**Module 4 Code: CNAC**

Credit hours: 5

Purpose: This module deals with hardware and software for networking purposes (sharing content and devices).

Learning objective: Participants will be able to setup a simple computer network and use this same concept for (online) sharing content and devices as if it is a Local Area Network.

**Module 5 Code: ASAA**

Credit hours: 3

Purpose: This module deals with how devices are connected, selection of software that must be installed, and to keep a computer system healthy.

Learning objective: Participants know how to setup connectivity between the different devices, wiring computers to peripherals, execute system (software) updates for keeping a computer (network) healthy; this includes system security, firewall, anti-virus etc.

<b>Module 6 Code:</b>	<b>WDES</b>
Credit hours:	3
Purpose:	This module deals with web site development via coding.
Learning objective:	Participants should be able to develop a website from scratch using HTML, CSS, Jscript, JQuery and Vue.js.
<b>Module 7 Code:</b>	<b>WDTE</b>
Credit hours:	5
Purpose:	This module deals with (web) Database development via coding using Ms. Access and following by PHP and MYSQL.
Learning objective:	Participants should be able to develop a (web) related database with the capability of doing (online) input, amendments, queries and selection.
<b>Module 8 Code:</b>	<b>POEN</b>
Credit hours:	5
Purpose:	This module deals with the concept of engineering, were hardware and software meet each other.
Learning objective:	Participants should be able to develop a solution for a problem using Arduino or Little Bits. This is important, to develop critical thinking by students to resolve problems or to find solution for a need combining hardware and software.
<b>Module 9 Code:</b>	<b>AADD</b>
Credit hours:	5
Purpose:	This module deals with App development via coding.
Learning objective:	Participants should be able to develop their own Android Apps to resolve a problem or to meet a specific need. This is important, to develop critical thinking by students to resolve problems or to find solution for a need using Mobile devices.
<b>Module 10 Code:</b>	<b>TEPD</b>
Credit hours:	5
Purpose:	This module deals with the own development of the participant in using technology, his/her professional development and to develop and implement technology rich assessment for his/her target group(s).
Learning objective:	Participants should be able to develop and implement assessment strategies for their target group(s); understands the need for lifelong personal development and in keeping abreast with technological advancement, related to education.
<b>Module 11 Code:</b>	<b>MAPR</b>
Credit hours:	6
Purpose:	This module deals with the practical implementation experience of the participants.
Learning objective:	The participant must use the acquired knowledge, insight and skills to proof mastery in implementing technology in instruction and learning. Participants must make choices on when and how to use technology during topics to maximize students' learning experience and to assess if student's comprehension relates to the (effective) use of technology. Participants should use collaboration strategies to affect students' learning outcomes.