Code	MSC4105
Title	History and Philosophy of Computing
Type	Lectures and tutorials
ECTS credits	4
Pre-requisite study-units	MSC3105
Method of assessment	Assignment
Result	Percentage mark and grade
Attendance	Compulsory
Lecturer	Mario Camilleri & Mario Aloisio

Description

This unit closely follows the IFIP (International Federation for Information Processing) recommendations for the history component of undergraduate Computing courses. Additionally, it requires students to build a portfolio of teaching resources which they will use in class.

The unit investigates historical aspects of computation, such as the concepts of an algorithm and of a formal notation for expressing algorithms, hardware development, the development of programming languages starting with Zuse's Plankalkul, as well as social, cultural and ethical aspects and how these have changed over time. Philosophical issues concerning computability, and how popular perceptions of computers has changed over the years will also be discussed.

Topics covered include:

- The objectives of studying and teaching the history of science, and of computing in particular;
- early computational aids and their uses;
- early attempts at automation and algorithm coding;
- early business uses for computing machinery;
- formal systems and computability (Turing, Gödel);
- pre-war computing: the Atanassoff-Berry Computer, Vannevar Bush, Zuse;
- first generation computing technology, stored-program concept, commercialisation of computing;
- operating systems;
- programming languages;
- graphics;
- VLSI technology and personal computers;
- the Internet;
- computers in education.

Reading List

Campbell-Kelly, M. & Aspray, W. (1996) Computer: A History of the Information Machine. Basic Books.

Williams, M.R. (1997) A History of Computing Technology. IEEE CS press.

Ceruzzi, P.E. (1999) A History of Modern Computing. MIT Press.