



Introduction to the Course

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Course Outcomes

- Given a small section of code you should be able to:
 - Trace through and predict it's output.
 - Describe, in plain English, what it does.
- Write a small python program some, or all, of the fundamentals you will learn in the course.
- Beginner and intermediate spreadsheet operations.
- Beginner level understanding of how the internet works and how to write basic HTML documents.

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- **High Level Definition:** A series of instructions that a computer carries out.

Where did this all come from?

Early “Computers”

The Difference Engine

Alan Turing, Alonzo Church, and Turing Machines

- 1 **Church-Turing thesis** - Any effective calculation can be performed by a mechanical computer (e.g., a Turing Machine).
- 2 **Turing Machines** - An abstract, mathematical model of a machine that moves up and down a strip of paper, one step at a time, and performs operations based on a set of rules (Figure 1).



