**LEC 1**

* Number systems
  + Binary addition/subtraction, two’s complement, overflow, hexadecimal
* Bit = single 0/1
* Nibble = 1 hex digit = 4 bits
* Byte = 2 hex digits = 8 bits
* Word
  + 32-bit architecture – 4 bytes
  + 64-bit architecture – 8 bytes
* ASCII – American standard code for information interchange
* Unicode – 110,000 characters from 100 scripts/languages
* **MIPS** – set of 18 different 32-bit instructions encoded in 2 basic instruction formats