KS4 COMPUTER SCIENCE

Immanuel COMPUTER SCIENCE
Building the world, one line at a time

IMMANUEL COLLEGE

Y10

LOGICAL OPERATORS
TYPES OF ERRORS
VARIABLES & CONSTANTS
ANALYSE, UNDERSTAND & SOLVE PROBLEMS
TRUTH TABLES

TERM 1

INPUTS & OUTPUTS
DATA STRUCTURES
FOLLOW & WRITE ALGORITHM
BENEFITS
PYTHON PROGRAMMING
DECOMPOSITION & ABSTRACTION

DATA REPRESENTATION
PROGRAM INSTRUCTIONS
CONVERSIONS
ENCODING CHARACTERS
LIMITATIONS & CONSTRAINTS
SOLVE PROBLEMS

TERM 2

BINARY
PYTHON PROGRAMMING
REPRESENTING & MANIPULATING INTEGERS
POSITIVE BINARY PATTERNS
LOGICAL & ARITHMETIC SHIFTS
BINARY REPRESENTATION

CREATING PROGRAMS
SOFTWARE DEVELOPMENT
EMBEDDED SYSTEMS
DATA CAPACITY
BINARY MULTIPLES
HARDWARE & SOFTWARE

TERM 3

Y11

IDENITFYING VULNERABILITIES
PURPOSES & FUNCTIONS
ROLES OF STORAGE
CONSTRUCT EXPRESSIONS
PYTHON PROGRAMMING
DATA STORAGE & COMPRESSION

NETWORKS / NETWORK SECURITY
CHARACTERISTICS & PURPOSES
INTERNET STRUCTURES
NETWORK SPEEDS

TERM 1

PROGRAMMING LANGUAGE
PYTHON PROGRAMMING
INTERPRETER & COMPILER
CONNECTIVITY IMPACT & PERFORMANCE
IDENITFYING VULNERABILITIES

FUNCTIONS & PROCEDURES
LOGICAL & GLOBAL VARIABLES
READING & WRITING PROGRAMS
ARTIFICIAL INTELLIGENCE, MACHINE LEARNING & ROBOTICS
COLLECTION & USE OF DATA
CYBER SECURITY

TERM 2

EXTERNAL FILES
PROTECTION
THREATS
UNDERSTAND METHODS
PYTHON PROGRAMMING
ENVIRONMENTAL, ETHICAL & LEGAL ISSUES

TERM 3 - EXAM PREPARATION