

# YEAR 11

## COMPUTER SCIENCE



**SRI KDU**  
International  
School  
SUBANG JAYA

### PROGRAMME OF STUDY - TERM 1

#### TERM 1.1 AUTOMATED AND EMERGING TECHNOLOGIES

- **Automated Systems:**
  - Understand the use of sensors, microprocessors, and actuators in automated systems.
  - Evaluate the advantages and disadvantages of using automated systems in various scenarios.
- **Robotics:**
  - Define robotics and understand what is meant by robotics.
  - Learn the characteristics of a robot.
  - Explore the roles, advantages, and disadvantages of robots.
- **Artificial Intelligence:**
  - Define artificial intelligence (AI) and understand what is meant by AI.
  - Learn the main characteristics of AI.
  - Understand the basic operation and components of AI systems to simulate intelligent behavior.

#### TERM 1.2 DATABASES – BOOLEAN LOGIC

- **Design and Use of Single Table Databases:**
  - Understand and identify fields and records.
  - Learn about validation methods for data input.
- **Use of Basic Data Types:**
  - Understand and use various data types, including:
    - Text/alphanumeric
    - Character
    - Boolean
    - Integer
    - Real
    - Date/time
- **Primary Keys:**
  - Identify the purpose and use of primary keys in databases.
- **SQL Scripts:**
  - Learn to use SQL scripts to query data stored in a single table database.
- **Standard Logic Gates:**
  - Identify, define, and understand the symbols and functions of standard logic gates: NOT, AND, OR, NAND, NOR, and XOR.

- **Creating Logic Circuits:**

- Use logic gates to create logic circuits from:
  - A given problem.
  - A logic expression.
  - A truth table.

- **Completing Truth Tables:**

- Complete truth tables from:
  - A given problem.
  - A logic expression.
  - A logic circuit.

- **Writing Logic Expressions:**

- Write logic expressions from:
  - A given problem.
  - A logic circuit.
  - A truth table.