St John's Senior School

Subject: Computer Science **Form: 4th**
Teacher: Mr. Zampekos **Term: Autumn**

WEEK	WEEK BEGINNING	TOPIC
1	2nd September	Fundamentals of algorithms: Algorithms (flowcharts – pseudocode)
2	9th September	Programming recap: Python – IDLE – variables – operations
3	16th September	Programming: Boolean logic, Programming structures
4	23rd September	Programming: Programming structures
5	30th September	Programming: Programming structures
6	7th October	**MINI - TEST**
7	14th October	Programming: Data structures
		HALF - TERM
8	28th October	Programming: Data structures
9	4th November	Programming: String handling operations in python
10	11th November	Programming: Subroutines (procedures and functions)
11	18th November	Revision
12	25th November	**END OF TERM EXAM**
13	2nd December	Programming: Random number generation, File handling
14	9th December	Programming: Structured programming, Robust and secure programming (data validation, authentication, test data)

St John's Senior School

Subject: Computer Science **Form: 4th**
Teacher: Mr. Zampekos **Term: Spring**

WEEK	WEEK BEGINNING	TOPIC
1	6th January	Programming: Programming languages – translators
2	13th January	Fundamentals of data representation: Numeric systems (decimal, binary, hexadecimal). Converting between number bases
3	20th January	Fundamentals of data representation: Binary arithmetic, Character encoding
4	27th January	Fundamentals of data representation: Representing images, sound
5	3rd February	**MINI - TEST**
6	10th February	Fundamentals of data representation: Data compression
		HALF – TERM
7	24th February	Fundamentals of data representation: Converting between number bases Programming: Putting it all together
8	2nd March	Computer systems: Hardware and software, Boolean logic + logic circuits
9	9th March	Computer systems: Software classification, Systems architecture (CPU, memory, secondary storage, embedded systems)
10	16th March	Computer systems: Systems architecture (CPU, memory, secondary storage, embedded systems)
11	23rd March	Fundamentals of computer networks: Computer networks – types, Network protocols

St John's Senior School

Subject: Computer Science **Form: 4th**
Teacher: Mr. Zampekos **Term: Summer**

WEEK	WEEK BEGINNING	TOPIC
1	20th April	Fundamentals of computer networks: Network security Programming: Putting it all together
2	27th April	Fundamentals of computer networks: TCP/IP model Programming: Putting it all together
3	4th May	Fundamentals of cyber security: Security threats, Social engineering, Malicious code
4	11th May	Fundamentals of cyber security: How to detect and prevent cyber security threats
5	18th May	Ethical, legal and environmental impacts & issues of privacy: Ethical, legal and environmental impacts and risks of digital technology on society. Data privacy
		HALF – TERM
6	1st June	Revision
7	8th June	**END OF YEAR EXAM**
8	15th June	Aspects of software development: Design, implementation, testing, evaluation
9	22nd June	Aspects of software development: Design, implementation, testing, evaluation
10	29th June	Software development: Putting it all together
11	6th July	GCSE project