

Scope and Sequence Document for: IGCSE Computer Science

Tutor	Ruth Benjamin Marvin		
Tutor Profile:	BSc (hons), MBA(Lond), PGCE (Sussex University)	Exam:	IGCSE Computer Science CAiE 0478
Resources required:	www.testandtrack.io – login credentials received from your tutor www.repl.it – for coding / classroom Specification - https://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-igcse-computer-science-0478/ Optional Text-books: Cambridge IGCSE Computer Science Coursebook, (2015) Sarah Lawrey and Donald Scott, ISBN – 9781107518698, CUP; Cambridge IGCSE Computer Science Programming Book for Python, (2017), Chris Roffey, ISBN – 9781316617823, CUP.		

*A = Assignment due, Q = Quizzes due

Lesson No.	NSW week No.	Week beginning Monday the:	Contents of study
1	1	04/09/23	Introduction to CS and Programming (2 intro lessons)
2	2	11/09/23	Zero to Pro in Python Part 2 (2 lessons)
A			Ensure you have sent your tutor Python programs created from the last four lessons.
Q			Complete all the relevant quizzes
3	3	18/09/23	Python Beginner – 3 Simple Programs
4	4	25/09/23	Python Programming – 4 Mini Projects
A			Send through a minimum of 4 mini projects/programs that you have created in Python
5	5	02/10/23	Python Beginner Concepts
Q			Complete relevant quizzes on Python
6	6	09/10/23	Create a Dating app
A			Assignment due before next lesson. Submit Dating App attempt
7	7	16/10/23	Python Intermediate Concepts Part 1
	8	23/10/23	Half Term
8	9	30/10/23	Python Intermediate Concepts Part 2
Q			Complete all the relevant quizzes for Python Intermediate
9	10	06/11/23	Python Programming (4 mini projects) Part 2
A			Send through at least 2 mini projects
10	11	13/11/23	Python Challenges – Do it yourself
A			Submit your Python Challenges
11	12	20/11/23	Binary to Decimal, Binary Additional, Hexadecimal, Number Systems
Q			Complete the relevant lesson/topic quiz

12	13	27/11/23	Text, Sound, and Image Representation
Q			Complete the relevant lesson/topic quiz
13	14	04/12/2023	Binary Shifts and Twos Complement
Q			Complete the relevant lesson/topic quiz
14	15	11/12/2023	Data Storage and Compression
Q			Complete the relevant lesson/topic quiz
	16	18/12/2023	Christmas Holiday
	17	25/12/2023	Christmas Holiday
	18	01/01/2024	Christmas Holiday

15	19	08/01/2024	Past Papers
Q			Complete the relevant lesson/topic quiz
16	20	15/01/2024	Packet Switching – the technology behind the Internet
Q			Complete the relevant lesson/topic quiz
17	21	22/01/2024	Types of Data Transmission
Q			Complete the relevant lesson/topic quiz
18	22	29/01/2024	Error Detection
Q			Complete the relevant lesson/topic quiz
19	23	05/02/2024	Encryption
Q			Complete the relevant lesson/topic quiz
20	24	12/02/2024	Past Papers
A			Submit Past Papers
	25	19/02/2024	Half Term
21	26	26/02/2024	CPU, Von Neumann, Functions, Core, Cache, Clock
Q			Complete the relevant lesson/topic quiz
22	27	04/03/2024	Fetch Execute Cycle
Q			Complete the relevant lesson/topic quiz
23	28	11/03/2024	Embedded Systems, Input, Output and Sensors
Q			Complete the relevant lesson/topic quiz
24	29	18/03/2024	Data Storage and Memory
Q			Complete the relevant lesson/topic quiz
25	30	25/03/2024	Network Hardware
Q			Complete the relevant lesson/topic quiz

	31	01/04/2024	Easter Holiday
	32	08/04/2024	Easter Holiday
	33	15/04/2024	Easter Holiday
26	34	22/04/2024	, Past Papers
A			Submit Past Papers
27	35	29/04/2024	System and Application Software
Q			Complete the relevant lesson/topic quiz
28	36	06/05/2024	Operating Systems and Interrupts
Q			Complete the relevant lesson/topic quiz
29	37	13/05/2024	High, Low Level, Assembly Language
Q			Complete the relevant lesson/topic quiz
30	38	20/05/2024	Compiler, Interpreter, IDEs
Q			Complete the relevant lesson/topic quiz
	39	27/05/2024	Half Term
31	40	03/06/2024	Past Papers
A			Submit Past Papers
32	41	10/06/2024	Internet and WWW
Q			Complete the relevant lesson/topic quiz
33	42	17/06/2024	Web and DNS + HTML + Cookies
Q			Complete the relevant lesson/topic quiz
34	43	24/06/2024	Digital Currency
Q			Complete the relevant lesson/topic quiz
NSW Summer holiday period – 1 July – 30 August 2024			
35	1	02/09/2024	Cyber Security
Q			Complete the relevant lesson/topic quiz
36	2	09/09/2024	Past Papers
A			Submit Past Papers
37	3	16/09/2024	Sensors, Microprocessors, Actuators, Automated Systems
Q			Complete the relevant lesson/topic quiz
38	4	23/09/2024	Robotics

Q			Complete the relevant lesson/topic quiz
39	5	30/09/2024	Artificial Intelligence
Q			Complete the relevant lesson/topic quiz
40	6	07/10/2024	Research Project and Revision
A			Submit Research Project / Revision Notes
41	7	14/10/2024	Systems Life Cycle and Designing
Q			Complete the relevant lesson/topic quiz
42	8	21/10/2024	Diagrams, Flowcharts, Pseudocode
Q			Complete the relevant lesson/topic quiz
9		28/10/2024	Half Term
43	10	04/11/2024	Sorting, Finding, Counting Algorithms
Q			Complete the relevant lesson/topic quiz
44	11	11/11/2024	Validation and Verification
Q			Complete the relevant lesson/topic quiz
45	12	18/11/2024	Test Data and Testing
Q			Complete the relevant lesson/topic quiz
46	13	25/11/2024	Trace Tabling and Debugging
Q			Complete the relevant lesson/topic quiz
47	14	02/12/2024	Past Papers
A			Submit Past Papers
48	15	09/12/2024	Programming Recap 1
16		16/12/2024	Christmas Holiday
17		23/12/2024	Christmas Holiday
18		30/12/2024	Christmas Holiday
49	19	06/01/2025	Programming Recap – Loops, Maintainability, Library Routines and more
Q			Complete the relevant lesson/topic quiz
50	20	13/01/2025	Programming Recap – String Manipulation, Arrays and File Handling
Q			Complete the relevant lesson/topic quiz
51	21	20/01/2025	Past Papers #1
A			Submit Past Papers (and mark yourself using mark scheme)
52	22	27/01/2025	Past Papers #2
A			Submit Past Papers (and mark yourself using mark scheme)
53	23	03/02/2025	Databases basics, primary keys, data types

Q			Complete the relevant lesson/topic quiz
54	24	10/02/2025	SQL
Q			Complete the relevant lesson/topic quiz
	25	17/02/2025	Half Term
55	26	24/02/2025	Past Papers
A			Submit Past Papers (and mark yourself using mark scheme)
56	27	03/03/2025	Introduction to Boolean Logic
Q			Complete the relevant lesson/topic quiz
57	28	10/03/2025	Truth tables and logic circuits
Q			Complete the relevant lesson/topic quiz
58	29	17/03/2025	Logic Gates
Q			Complete the relevant lesson/topic quiz
59	30	24/03/2025	Past Papers
A			Submit marked Past Papers
	31	31/03/2025	Easter Holiday
	32	07/04/2025	Easter Holiday
	33	14/04/2025	Easter Holiday
60	34	21/04/2025	Exam Revision #1
61	35	28/04/2025	Exam Revision #2