

1c. Curriculum Overview: Vocational and Computer Studies



SAINTS PETER AND PAUL
CATHOLIC HIGH SCHOOL

Year 10 Vocational and Computer Studies

Refer to	Term 1 – September to December	Term 2 – January to March	Term 3 – April to July
10 VOC	<p><u>R081: Pre-production skills</u></p> <ul style="list-style-type: none"> • Purpose, content and use of <ul style="list-style-type: none"> ○ Mood boards ○ Mindmaps ○ Visualisation diagrams ○ Storyboards ○ Scripts ○ H&S ○ Target audience ○ User requirements ○ Production schedules ○ Hardware & software ○ File formats and compression ○ Research ○ Review • LP5; audience and purpose • LP5; systems/product life cycle. • LP2; compression and image file formats • LP1; file management • PK; use of scripts from other subjects such as English and Drama • PK; experience of playing and watching games/films and relating to how the ideas for their creation came about. • PK; research skills and experience of looking at sources of information from subjects like History and their own experience e.g. fake news feeds on social media. 	<p><u>R082: Graphical image</u></p> <ul style="list-style-type: none"> • Key knowledge concepts • Stickability links 	<p><u>Topic</u></p> <ul style="list-style-type: none"> • Key knowledge concepts • Stickability links



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<p>10 CS</p>	<p><u>J276/01: Units 1 – 5</u></p> <ul style="list-style-type: none"> • Purpose & function of the CPU • Von Neumann architecture • Components of the CPU & their functions • Factors affecting CPU performance • Embedded systems • Purpose of RAM & ROM • Virtual memory • Flash memory • Need for secondary storage • Capacity • Calculation of capacity • Common storage technologies • Characteristics of secondary storage • Types of network • Factors affecting network performance • Client server model • P2P model • Hardware in a LAN • The internet • DNS • Hosting • Cloud computing • Virtual networks • Star and Mesh topologies • WIFI • Encryption • Ethernet protocol • IP addresses • MAC addresses • Layers and their associated protocols • Packet switching • LP2; binary and machine code. • LP6; networking, data transfer and cloud storage 	<p><u>J276/01: Units 6 – 8 & J276/02: Units 1 – 3</u></p> <ul style="list-style-type: none"> • Key knowledge concepts • Stickability links 	<p><u>J276/02: Units 4 – 7</u></p> <ul style="list-style-type: none"> • Key knowledge concepts • Stickability links
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	<ul style="list-style-type: none">• PK; Entry Level CS studied memory and storage in full.• PK; uses of the internet and how they stream and online game at home.		
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Year 11 Vocational and Computer Studies

Refer to	Term 1 – September to December	Term 2 – January to March	Term 3 – April to July
11 VOC	<p><u>Component 2: A, B, C & Component 3: A1& 2</u></p> <ul style="list-style-type: none"> • Data modelling • Formulas used in data models • How to import a data set • How to build a data model • How to manipulate a data model. • Interpreting data and drawing conclusions. • Evaluation. • Modern technologies <ul style="list-style-type: none"> ○ Communication technologies ○ Cloud storage ○ Cloud computing ○ Platforms and services of cloud technologies ○ Merging cloud & traditional systems ○ Implications for organisations • Impact of modern technologies <ul style="list-style-type: none"> ○ Changes to modern teams ○ Managing modern teams ○ Communication ○ inclusivity and accessibility ○ Impact on organisations ○ Impact on individuals • Cyber security <ul style="list-style-type: none"> ○ Threats to data ○ External threats ○ Internal threats ○ Impact of breaches • Prevention and management of threats <ul style="list-style-type: none"> ○ User access restrictions ○ Data level protection 	<p><u>Component 3: B1 &2, C1 &2, D</u></p> <ul style="list-style-type: none"> • Key knowledge concepts • Stickability links 	<p><u>Course complete</u></p> <ul style="list-style-type: none"> • Key knowledge concepts • Stickability links

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<p>11 CS</p>	<ul style="list-style-type: none"> ○ Improving security ○ Policies • Responsible use of systems <ul style="list-style-type: none"> ○ Shared data ○ Environmental • Legal & Ethical <ul style="list-style-type: none"> ○ Equal access ○ Net neutrality ○ Acceptable use policies • LP5; System security and threats to data • LP6; networking and structures for sharing data. • PK; Use of the cloud for online gaming and storing files. <p>PK; threats to an individuals data as they will have experience settings changes on social media to fall in line with GDPR etc.</p> <p><u>J276/03: NEA & J276/01: Units 1 & 2</u></p> <ul style="list-style-type: none"> • Decomposition • Abstraction • Developing success criteria for a program • Pseudocode • Flow charts • Algorithm design • Test strategy & planning • Programming techniques: <ul style="list-style-type: none"> ○ Sequence ○ Selection ○ Iteration ○ Variables ○ Constants ○ Data types ○ String manipulation 	<p><u>J276/01: Units 3, 4, 5, 6 & J276/02: Units 1, 2, 3</u></p> <ul style="list-style-type: none"> • Key knowledge concepts • Stickability links 	<p><u>J276/01: Units 7 & 8 & J276/02: Units 4, 5, 6, 7</u></p> <ul style="list-style-type: none"> • Key knowledge concepts • Stickability links
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	<ul style="list-style-type: none">○ Files handling; read, write and append○ Sub-programs● Testing a program● Evaluation● Purpose & function of the CPU● Von Neumann architecture● Components of the CPU & their functions● Factors affecting CPU performance● Embedded systems● Purpose of RAM & ROM● Virtual memory● Flash memory ● LP3; programming techniques of sequence, selection & iteration ● PK; these topics will have been covered in year 10 by the students and they will be drawing on this knowledge to re-cap, revise, practice exam techniques and embed further knowledge.		
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