

Long term planning grid IT

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 12	<p>Understand computer hardware Unit I Fundamentals of IT</p> <p>Duration: 16 Lessons</p> <p>What students will learn:</p> <p>1.1 Computer hardware, i.e.: <ul style="list-style-type: none"> • input devices • output devices • communications devices • benefits (e.g. integrated devices make portable devices simpler to use) • limitations (e.g. voice recognition performs poorly in noisy environments) • uses (e.g. membrane keyboard could be used in harsh physical environments) </p> <p>1.2 Computer components, i.e.: <ul style="list-style-type: none"> • processors • motherboards </p>	<p>Understand computer software Unit I Fundamentals of IT</p> <p>Duration: 14 Lessons</p> <p>What students will learn:</p> <p>2.1 Types of software, i.e.: <ul style="list-style-type: none"> • open source • closed source • off the shelf • bespoke • shareware • freeware • embedded • characteristics • use </p> <p>2.2 Applications software, i.e.: <ul style="list-style-type: none"> • productivity software (i.e. word processor, spreadsheet, database, email) • development tools (i.e. compiler, debugger, translator, integrated design environment) • business software (i.e. MIS, multimedia, collaboration, project </p>	<p>Understand business IT systems Unit I Fundamentals of IT</p> <p>Duration: 12 Lessons</p> <p>What students will learn:</p> <p>3.1 Types of servers, i.e.: <ul style="list-style-type: none"> • file/print • application • database • web • mail • hypervisor </p> <p>3.2 Virtualisation, i.e.: <ul style="list-style-type: none"> • server • client • storage • cloud • hybrid • benefits and limitations </p> <p>3.3 Networking characteristics, i.e.: <ul style="list-style-type: none"> • peer to peer • client server (i.e. DNS) • bus/star/ring/mesh </p>	<p>Understand employability and communication skills used in an IT environment Unit I Fundamentals of IT</p> <p>Duration: 114 Lessons</p> <p>What students will learn:</p> <p>4.1 Communication skills, i.e.: <ul style="list-style-type: none"> • interpersonal skills (i.e. eye contact, body language) • questioning techniques • verbal (i.e. meetings, telephone, group discussions) • written (i.e. reports, letters, emails, social networking) • non-verbal (i.e. body language) • barriers (i.e. language, distraction, noise, lack of concentration) • appropriate use of language (i.e. formal, informal, </p>	<p>Understand ethical and operational issues and threats to computer systems Unit I Fundamentals of IT</p> <p>Duration: 12 Lessons</p> <p>What students will learn:</p> <p>5.1 Ethical issues, i.e.: <ul style="list-style-type: none"> •whistle blowing •disability/gender/sexuality discrimination •use of information •codes of practice •staying safe online •bias </p> <p>5.2 Operational issues, i.e.: <ul style="list-style-type: none"> •security of information •health and safety •disaster planning and recovery •organisational policies (i.e. acceptable use policy, code of conduct, etc.) •change management •scale of change: <ul style="list-style-type: none"> ○drivers (i.e. change in business </p>	

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	<ul style="list-style-type: none"> • storage (i.e. hard drive, solid state, flash, internal, removable, SAS, SCSI, portable, Cloud) • ports (i.e. USB, Firewire, SATA, Network, Fibre Channel) • memory (i.e. RAM, ROM, cache) <p>Assessment:</p> <p>Students will complete Assessment Test 1</p>	<p>management, manufacturing, CAD/CAM, publishing, expert systems, healthcare)</p> <p>2.3 Utility software (i.e. backup, anti-virus, compression)</p> <ul style="list-style-type: none"> • purpose • advantages and disadvantages <p>2.4 Operating systems, i.e.:</p> <ul style="list-style-type: none"> • single user/multiuser • single processor/multiprocessor • off the shelf/open source/bespoke <ul style="list-style-type: none"> • Functions • Benefits and limitations <p>2.5 Communication methods, i.e.:</p> <ul style="list-style-type: none"> •SMS •email •messaging software •social networking/social media •VoIP •personal assistants (e.g. Siri, Cortana) •teleconference 	<ul style="list-style-type: none"> • addressing (i.e. default gateway, IP address, subnet mask) • diagrammatical representation <p>Assessment:</p> <p>Students will complete Assessment Test 3</p>	<p>4.2 Communication technology, i.e.:</p> <ul style="list-style-type: none"> • presentation software • word processing • email • web • blogs/vlogs • instant messaging • use <p>4.3 Personal attributes (i.e. self-motivation, leadership, respect, dependability, punctuality, problem solving, determination, independence, time management, team working, written numerical and verbal skills, planning and organisation skills)</p> <p>4.4 Ready for work, i.e.:</p> <ul style="list-style-type: none"> • dress (i.e. appropriate clothing depending on situation) 	<p>o needs (i.e. improved networking, remote access for employees)</p> <p>5.3 Threats, i.e.:</p> <ul style="list-style-type: none"> • phishing • hacking • virus • Trojan • interception • eavesdropping • data theft • social engineering <p>5.4 Physical security, i.e.:</p> <ul style="list-style-type: none"> • locks • biometrics • RFID • tokens • privacy screens • shredding • characteristics <p>5.5 Digital security, i.e.:</p> <ul style="list-style-type: none"> • anti-virus • firewalls • anti-spyware • username/passwords • permissions • encryption • characteristics 	
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		<ul style="list-style-type: none"> •video conference •cellular/satellite •instant messaging •characteristics •purpose •advantages and disadvantages <p>2.6 Software troubleshooting, i.e.:</p> <ul style="list-style-type: none"> •common faults (i.e. unexpected softwarebehaviour, software freeze, unexpected rebooting) •troubleshooting tools to investigate a problem (i.e.logs, installable tools, baselines) •documentation (i.e. types of documentation) <p>2.7 Protocols, i.e.:</p> <ul style="list-style-type: none"> •popular protocols <ul style="list-style-type: none"> ○IP (Internet Protocol) ○TCP (Transmission Control Protocol) ○UDP (User Data Protocol) ○SMTP (Simple Mail Transfer Protocol) ○FTP (File Transfer Protocol) ○HTTP (Hyper Text Transfer Protocol) 		<ul style="list-style-type: none"> • presentation (i.e. personal grooming, appearance etc.) • attitude (i.e. can do attitude, responsive) <p>4.5 Job roles, i.e.:</p> <ul style="list-style-type: none"> • Network manager • IT technician • Programmer • Web designer • Animator • Key skills required for each (i.e. technical and non- <p>4.6 Professional bodies (e.g. BCS)</p> <ul style="list-style-type: none"> •purpose •benefits and limitations <p>4.7 Industry certification</p> <ul style="list-style-type: none"> •benefits to individual and employer •current vendors (e.g. CompTia ®, Cisco ®) <p>Assessment:</p> <p>Students will complete Assessment Test 4</p>	<p>5.6 Safe disposal of data and computer equipment, i.e.:</p> <ul style="list-style-type: none"> • legislation • overwrite data • electromagnetic wipe • physical destruction <p>Assessment:</p> <p>Students will complete Assessment Test 5</p>	
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