

WJEC GCSE in Computer Science – Computer Science – Microsoft IT Academy Mapping

1. Computer Systems		
<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
1.1 Identify and describe computer systems	Windows Server Administration Fundamentals: MTA Exam 98-365 <ul style="list-style-type: none"> Lesson 1 “Server Overview” 	n/a
1.2 Demonstrate an understanding of the Central Processing Unit (CPU)	Windows Server Administration Fundamentals: MTA Exam 98-365 <ul style="list-style-type: none"> Lesson 1 “Server Overview” 	n/a
1.3 Explain how performance is affected by functions	n/a	n/a
1.4 Describe the functions of different types of memory	Windows Server Administration Fundamentals: MTA Exam 98-365 <ul style="list-style-type: none"> Lesson 1 “Server Overview” 	n/a
1.5 Describe the functional characteristics of secondary storage technologies	n/a	n/a
1.6 Demonstrate an understanding of human-computer interaction	Windows Development Fundamentals: MTA Exam 98-362 <ul style="list-style-type: none"> Lesson 1 “Introducing Windows Applications” 	n/a

2. Data Representation		
<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
2.1 Identify and explain data representation systems	n/a	n/a
2.2 Describe the relationship between data	n/a	n/a

	storage units		
2.3	Use techniques to convert between number systems	n/a	n/a
2.4	Demonstrate how computers interpret instructions	n/a	n/a

3. Computer Software			
	<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
3.1	Identify and explain the functions of an Operating System (OS)	Please see Microsoft Digital Literacy : <ul style="list-style-type: none"> Computer Basics: Lesson 4 “Computer Operating Systems” 	n/a
3.2	Describe the functions of commonly used programs	Windows Server Administration Fundamentals: MTA Exam 98-365 <ul style="list-style-type: none"> Lesson 2 “Managing Windows Server 2008 R2” Lesson 4 “Monitoring and Troubleshooting Servers” 	n/a
3.3	Describe common application software	Please see Microsoft Digital Literacy : Productivity Programs: Lesson 1 “Introduction to Productivity Programs”	n/a

4. Networks			
	<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
4.1	Define: packets and protocols	Networking Fundamentals: MTA Exam 98-366 <ul style="list-style-type: none"> Lesson 1 “Understanding Local Area Networking” Lesson 2 “Defining Networks with the OSI Model” Lesson 3 “Understanding Wired and Wireless Networks” 	Networking Fundamentals : <ul style="list-style-type: none"> Module 1 “Understanding Local Area Networking” Module 2 “Defining Networks with the OSI Model” Module 3 “Understanding Wired and Wireless Networks”

	<ul style="list-style-type: none"> • Lesson 4 “Understanding Internet Protocol” • Lesson 5 “Implementing TCP/IP in the Command Line” • Lesson 6 “Working with Networking Services” • Lesson 7 “Understanding Wide Area Networks” 	<ul style="list-style-type: none"> • Module 4 “Understanding Internet Protocol” • Module 5 “Implementing TCP/IP in the Command Line” • Module 6 “Working with Networking Services” • Module 7 “Understanding Wide Area Networks”
4.2 Describe network topologies and connections and their advantages and disadvantages	Networking Fundamentals: MTA Exam 98-366 <ul style="list-style-type: none"> • Lesson 1 “Understanding Local Area Networking” • Lesson 2 “Defining Networks with the OSI Model” • Lesson 3 “Understanding Wired and Wireless Networks” • Lesson 4 “Understanding Internet Protocol” • Lesson 5 “Implementing TCP/IP in the Command Line” • Lesson 6 “Working with Networking Services” • Lesson 7 “Understanding Wide Area Networks” 	Networking Fundamentals: <ul style="list-style-type: none"> • Module 1 “Understanding Local Area Networking” • Module 2 “Defining Networks with the OSI Model” • Module 3 “Understanding Wired and Wireless Networks” • Module 4 “Understanding Internet Protocol” • Module 5 “Implementing TCP/IP in the Command Line” • Module 6 “Working with Networking Services” • Module 7 “Understanding Wide Area Networks”
4.3 Discuss network security techniques and network policies	Networking Fundamentals: MTA Exam 98-366 <ul style="list-style-type: none"> • Lesson 8 “Defining Network Infrastructures and Security” 	Networking Fundamentals: <ul style="list-style-type: none"> • Module 8 “Defining Network Infrastructures and Security”

5. Internet & Communications		
<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
5.1 Describe how Internet transmissions work	Networking Fundamentals: MTA Exam 98-366 <ul style="list-style-type: none"> • Lesson 4 “Understanding Internet Protocol” 	Networking Fundamentals: <ul style="list-style-type: none"> • Module 4 “Understanding Internet Protocol”
5.2 Describe and explain Internet communication protocols	Networking Fundamentals: MTA Exam 98-366 <ul style="list-style-type: none"> • Lesson 4 “Understanding Internet Protocol” 	Networking Fundamentals: <ul style="list-style-type: none"> • Module 4 “Understanding Internet Protocol”

5.3 Use and demonstrate an understanding of HTML	Web Development Fundamentals – MTA EXAM 98-363 <ul style="list-style-type: none"> Lesson 1 “Creating a Web Page” Software Development Fundamentals – MTA EXAM 98-361 <ul style="list-style-type: none"> Lesson 4 “Understanding Web Applications” 	Software Development Fundamentals: <ul style="list-style-type: none"> Module 4 “Web Applications”
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6. Algorithms		
<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
6.1 Demonstrate an understanding of algorithms	Software Development Fundamentals – MTA EXAM 98-361 <ul style="list-style-type: none"> Lesson 1 “Introduction to Programming” 	Software Development Fundamentals: <ul style="list-style-type: none"> Module 1 “General Software Development”
6.2 Use algorithms	Software Development Fundamentals – MTA EXAM 98-361 <ul style="list-style-type: none"> Lesson 1 “Introduction to Programming” 	Software Development Fundamentals: <ul style="list-style-type: none"> Module 2 “Core Programming”

7. Programming		
<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
7.1 Define and describe programming tools and terms	Software Development Fundamentals – MTA EXAM 98-361 <ul style="list-style-type: none"> Lesson 1 “Introduction to Programming” 	Software Development Fundamentals: <ul style="list-style-type: none"> Module 2 “Core Programming”
7.2 Describe and explain translators	Software Development Fundamentals – MTA EXAM 98-361 <ul style="list-style-type: none"> Lesson 1 “Introduction to Programming” Microsoft.NET Fundamentals: MTA EXAM 98-372 <ul style="list-style-type: none"> Lesson 4 “Understanding Code Compilation and Deployment” 	Software Development Fundamentals: <ul style="list-style-type: none"> Module 2 “Core Programming”
7.3 Describe and explain programming errors	Software Development Fundamentals – MTA EXAM 98-361	Software Development Fundamentals: <ul style="list-style-type: none"> Module 1 “General Software Development”

	<ul style="list-style-type: none"> Lesson 1 “Introduction to Programming” Lesson 3 “Understanding General Software Development” Web Development Fundamentals – MTA EXAM 98-363 <ul style="list-style-type: none"> Lesson 1 “Troubleshooting and Debugging Web Applications” Microsoft.NET Fundamentals: MTA EXAM 98-372 <ul style="list-style-type: none"> Lesson 3 “Understanding Events and Exceptions” 	<ul style="list-style-type: none"> Module 2 “Core Programming”
7.4 Describe and use programming constructs	Software Development Fundamentals – MTA EXAM 98-361 <ul style="list-style-type: none"> Lesson 1 “Introduction to Programming” Microsoft.NET Fundamentals: MTA EXAM 98-372 <ul style="list-style-type: none"> Lesson 2 “Understanding Data Types and Collections” 	Software Development Fundamentals: <ul style="list-style-type: none"> Module 2 “Core Programming”
7.5 Demonstrate an understanding of and use programming	Software Development Fundamentals – MTA EXAM 98-361 <ul style="list-style-type: none"> Lesson 1 “Introduction to Programming” Lesson 3 “Understanding General Software Development” Lesson 4 “Understanding Web Applications” Lesson 5 “Understanding Desktop Applications” 	Software Development Fundamentals: <ul style="list-style-type: none"> Module 1 “General Software Development” Module 2 “Core Programming” Module 3 “Object-Oriented Programming” Module 4 “Web Applications” Module 5 “Desktop Applications”

8. Practical Investigation		
<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
8.1 Plan a practical investigation and develop and implement a solution to a given brief	n/a	n/a
8.2 Test the solution	n/a	n/a
8.3 Modify the solution according to test	n/a	n/a

results		
8.1 Produce a report of the investigation	n/a	n/a
8.4 Evaluate your solution	n/a	n/a

9. Ethical, Social, and Legal Aspects		
<i>Objective</i>	<i>MOAC course and lesson(s)</i>	<i>MVA course and module(s)</i>
9.1 Explain the importance of conforming to professional standards	n/a	n/a
9.2 Use computer systems responsibly and effectively	n/a	n/a