

What are the aims and intentions of this curriculum?

The OCR Level 3 Alternative Academic Qualification Cambridge Advanced National in IT: Data Analytics (Certificate) is for students aged 16-19 years old. It will develop knowledge, understanding and skills that will help prepare students for progression to undergraduate study when taken alongside other qualifications and are relevant to the information technology sector.

Term	Topics	Knowledge and key terms	Skills developed	Assessment
Autumn 1	Unit F202 – Spreadsheet data modelling	In this unit students will learn how to communicate with a client to identify the information and data which must be gathered to solve a problem. They will also learn how to use a range of tools and techniques used in spreadsheets to develop inputs and complete processes to produce outputs. Students will use these tools and techniques to design and develop solutions to a client's problems. They will also test their models thoroughly to ensure that they meet a client's needs. Topic Areas 1 Principles of spreadsheet modelling 2 Planning the design of a spreadsheet model 3 Creating the spreadsheet model 4 Delivering the outcomes 5 Evaluation	Students develop and understanding of: The purposes of spreadsheet modelling. The purpose of spreadsheet models in different contexts. How types of spreadsheet models can be used in different contexts. Suitability of spreadsheet model types in different data modelling contexts. The benefits and limitations of spreadsheet modelling for organisations. Technological developments affecting spreadsheet modelling.	NEA Spreadsheet data modelling assignment.
Autumn 2	Unit F202 – Spreadsheet data modelling	In this unit students will learn how to communicate with a client to identify the information and data which must be gathered to solve a problem. They will also learn how to use a range of tools and techniques used in spreadsheets to develop inputs and complete processes to produce outputs. Students will use these tools and techniques to design and develop solutions to a client's problems. They will also test their models thoroughly to ensure that they meet a client's needs.	Stages of the spreadsheet modelling development cycle. Stages of the decision-making process. Challenges of spreadsheet data modelling development. Planning the design of a spreadsheet model. Testing spreadsheet models. The Human computer interface (HCI) in data modelling. Creating spreadsheet models. Inputting formulae, functions and data.	NEA Spreadsheet data modelling assignment.

		Topic Areas 1 Principles of spreadsheet modelling 2 Planning the design of a spreadsheet model 3 Creating the spreadsheet model 4 Delivering the outcomes 5 Evaluation	Testing the spreadsheet throughout its development. Technical and user documentation. Evaluating a spreadsheet model.	
Spring 1	Unit F200 - Fundamentals of Data Analytics	In this unit, students will learn about data, including an introduction to big data, and the different data formats that can be used. They will learn about how data is gathered, including the importance of data assurance, and data lifecycle management. Students will learn about the different methods of gathering, storing, analysing and accessing data and the legislation that needs to be complied with when working with data across platforms. The results of data analysis need to be presented to a target audience and you will learn about the different methods of data visualisation and presentation. They will learn about the range of job roles that are involved in the gathering, maintenance and analysing of data and how these relate to the data pipeline.	Data, information and knowledge. What is Big Data? Data and file formats. Data types and classifications. Data lifecycle management (DLM) and the data analytics pipeline. Data creation and capture. Data storage. Data usage and visualization. Archiving data. Data destruction. How data can be accessed and managed across platforms. Application Programming Interfaces (API). User access control and permissions. Data and legal considerations. Job roles, skills and attributes in data analytics.	This unit is assessed by an exam. The exam is 1 hour and 15 minutes and has 60 marks in total. All questions in the exam are compulsory.

Spring 2	Unit F200 - Fundamentals of Data Analytics	In this unit, students will learn about data, including an introduction to big data, and the different data formats that can be used. They will learn about how data is gathered, including the importance of data assurance, and data lifecycle management. Students will learn about the different methods of gathering, storing, analysing and accessing data and the legislation that needs to be complied with when working with data across platforms. The results of data analysis need to be presented to a target audience and you will learn about the different methods of data visualisation and presentation. They will learn about the range of job roles that are involved in the gathering, maintenance and analysing of data and how these relate to the data pipeline.	Data storage. Data usage and visualization. Archiving data. Data destruction. How data can be accessed and managed across platforms. Application Programming Interfaces (API). User access control and permissions. Data and legal considerations. Job roles, skills and attributes in data analytics.	This unit is assessed by an exam. The exam is 1 hour and 15 minutes and has 60 marks in total. All questions in the exam are compulsory.
Summer 1	Unit F200 - Fundamentals of Data Analytics	In this unit, students will learn about data, including an introduction to big data, and the different data formats that can be used. They will learn about how data is gathered, including the importance of data assurance, and data lifecycle management. Students will learn about the different methods of gathering, storing, analysing and accessing data and the legislation that needs to be complied with when working with data across platforms. The results of data analysis need to be presented to a target audience and you will learn about the different methods of data visualisation and presentation. They will learn about the range of job roles that are involved in the gathering, maintenance and analysing of data and how these relate to the data pipeline.	Exam Preparation: Questions to assess Performance Objectives 1, 2, and 3. PO1: these questions will require students to recall generic knowledge and understanding. PO2: these questions will require students to apply knowledge and understanding. PO3: these questions will require students to analyse and evaluate knowledge, understanding and performance in relation to the scenario. Question types: Forced choice/controlled response questions. • Short answer, closed response questions. • Extended constructed response questions with points-based marks schemes. • Extended constructed response questions with levels of response marks schemes. • One six mark and one nine mark extended constructed response question with a levels of response marks scheme. Questions relating to each Topic Area:	This unit is assessed by an exam. The exam is 1 hour and 15 minutes and has 60 marks in total. All questions in the exam are compulsory.

			Content will be sampled from all topic areas, with at least one question or part question relating to each topic area.	
Summer 2	Unit F201 – Big data and machine learning	In this unit students will learn about the challenges of managing big data. They will also learn about data analytics, artificial intelligence (AI) and machine learning (ML). It will lead to big innovations in the future. Finally, students will learn about the legal and ethical issues in data management and how big data can be used in environmental work and social developments.	The scope of managing big data. The six characteristics (6Vs) of data. The Six steps for analysing big data. The evolution of big data. How big data is captured. The purpose, importance and use of big data analytics. Types of big data. Data preparation and cleaning techniques for data mining. Data mining techniques. Big data infrastructure. Data science and data analytics. Data analytic techniques. Big data, machine learning and artificial intelligence. Legal and ethical issues in data management. Data the environment and society.	Trail Examination paper for Unit F201.