CAMBRIDGE ADVANCED NATIONALS

OCR
Oxford Cambridge and RSA

It's easy to join us

Moving to the new Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics from BTEC Level 3 in Information Technology

Are you currently teaching the BTEC Level 3 in Information Technology (first teaching September 2017)?

This guide will take a look at our Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics, show you how it compares to the BTEC Level 3 in Information Technology and how you can easily move to teaching our specification.

Developed with the support of teachers, our new Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics has a number of key benefits for teachers and students:

- teacher-friendly specification based on extensive research and engagement with the teaching community
- straightforward for teachers to deliver and accessible for students
- structure of the qualification can be tailored to suit your needs.

The unit grade awarded is based on the **total** number of achieved criteria for the unit. The total number of achieved criteria for each unit can come from achievement of any of the criteria (Pass, Merit or Distinction). This is **not** a 'hurdles-based' approach, so students do not have to achieve all criteria for a specific grade to achieve that grade (e.g. all Pass criteria to achieve a Pass).

We have designed our new specification to help students build real and relevant skills for the future.

Your students will develop:

- key knowledge, understanding and skills **relevant** to the subject
- their ability to think creatively, innovatively, analytically, logically and critically
- valuable **communication** skills through having to communicate ideas in different ways to different stakeholders, important in all aspects of further study and life
- a whole host of other **transferable skills** including time management, planning, presentation and research along with project-based working and reflective learning skills
- **independence** and **confidence** in applying their knowledge and skills, vital for progression to HE and relevant for the ICT Practitioners sector and more widely.

Our specification offers:

- **three mandatory units** that contain the fundamentals of data analytics
- **two externally assessed units** that focus on applied knowledge and skills in data analytics
- **five practical** non-examined assessment (NEA) units
- **optional** NEA units to provide flexibility.

About our support

We believe in developing specifications that help you bring the subject to life and inspire your students to achieve more.

We've created teacher-friendly specifications based on extensive research and engagement with the teaching community as well as representatives from higher education. The new specifications are designed to be straightforward and accessible so that you can tailor the delivery of the course to suit your needs. We've clarified the depth and breadth required throughout, and we've made the assessment criteria clearer.

We offer a range of support services to help you at every stage, from preparation to delivery and assessment:

- **free OCR resources** to help you plan your teaching and get your students ready for assessment
- an extensive **range of free professional development courses** covering everything from getting started to hands-on assessment practice. There are also regular Q&A opportunities with moderators and examiners. To find out more, visit our professional development page.
- Active Results: our **free results analysis service** to help you review the performance of individual students or whole school
- ExamBuilder: our **free question-building platform** that helps you to build your own tests using past OCR exam questions
- **expert Subject Advisors** who are part of their subject communities and here to support you with advice, updates on resources, and information about training opportunities.
- **textbooks and teaching and learning resources from leading publishers.**

To find out more about all of our support services, please visit Teach Cambridge.

At a glance specification comparison

	OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics	Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Structure	**Extended certificate (360 GLH):** There are five units of assessment. Students must complete three mandatory and two optional units to achieve the qualification. Two mandatory externally assessed units: • Unit F200 Fundamentals of data analytics • Unit F201 Big data and machine learning One mandatory internally assessed and externally moderated NEA unit: • Unit F202 Spreadsheet data modelling Two optional internally assessed and externally moderated NEA units from a choice of four: • Unit F203 Relational database design • Unit F204 Data and the Internet of Everything • Unit F205 Data visualisation • Unit F206 Data and digital marketing **Certificate (180 GLH):** One mandatory externally assessed unit: • Unit F200 Fundamentals of data analytics One mandatory internally assessed and externally moderated NEA unit: • Unit F202 Spreadsheet data modelling	**Extended certificate (360 GLH):** There are four units of assessment. Students must complete three mandatory units and one optional unit to achieve the qualification. Three units are mandatory: • Information Technology Systems • Creating Systems to Manage Information • Using Social Media in Business One optional unit from a choice of two: • Data Modelling • Website Development **Certificate (180 GLH):** Two mandatory units This qualification is also available as Foundation Diploma, Diploma and Diploma Extended levels.

	OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics	Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Grading	All results from each unit are awarded on the following scale: • Distinction (D) • Merit (M) • Pass (P) The unit grade awarded is based on the **total** number of achieved criteria for the unit. The total number of achieved criteria for each unit can come from achievement of any of the criteria (Pass, Merit or Distinction). This is **not** a 'hurdles-based' approach, so students do **not** have to achieve **all** criteria for a specific grade to achieve that grade (e.g. all Pass criteria to achieve a Pass). The overall qualification grades are awarded: • Distinction* (D*) • Distinction (D) • Merit (M) • Pass (P) • Unclassified (U)	All results from units are assessed on the following scale of: • Distinction (D), • Merit (M), • Pass (P), • Near Pass (N) • Unclassified (U) Qualifications in the suite are graded using a scale of: • P to D* • PP to D*D • PPP to D*D*D*
Assessment	**Extended certificate:** F200 Exam 1 hour 15 minutes F201 Exam 1 hour 30 minutes F202 NEA F203 optional NEA F204 optional NEA F205 optional NEA F206 optional NEA **Certificate:** F200 Exam 1 hour 15 minutes F202 NEA	**Extended certificate:** Unit 1 Exam 2 hours Unit 2 Set task 5 hours Unit 3 Internally assessed unit Unit 5 Internally assessed unit Unit 6 Internally assessed unit **Certificate:** Unit 2 Supervised assessment Set task 5 hours Unit 3 Internally assessed unit This qualification is also available as Foundation Diploma, Diploma and Diploma Extended levels.

	OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics	Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Administration	External assessments available twice a year, with opportunity to resit. Internal assessment with external moderation available in two assessment windows each year: January and June. The NEA assignments will be valid for 2 year(s). The dates for which they are live will be shown on the front cover. For external moderation, you must make unit entries for students before you can submit outcomes to request a visit. Students can resit the examined unit twice before they complete the qualification. Familiar administration for exam officers. See the specification for full administration information.	External assessments available twice a year, with opportunity to resit. Internal assessment with external standards verification. Centre must make arrangements for secure delivery of exams and supervised tasks. Single retake opportunity for internally assessed units. Retake can only be achieved at a pass.

Detailed comparison of units

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F200** **Fundamentals of Data Analytics** **OCR-set and marked** **60 marks** **75 GLH** **1 hour 15 minutes written examination**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 1: Understanding data	1.1	Data, information and knowledge	
	1.2	Big Data	Unit 10: Big Data and Business Analytics A1: Business Information
	1.3	Data and file formats	
	1.4	Data types and classifications	Unit 4: Programming A4 Constructs and techniques and their implementation in different languages Data types Unit 10: Big Data and Business Analytics A2 Types and storage of data
Topic Area 2: Managing data	2.1	Data lifecycle management (DLM) and the data analytics pipeline	
	2.2	Creation and capture	Unit 1: Information Technology Systems E3 Using and manipulating data Unit 10: Big Data and Business Analytics A2 Types and storage of data
	2.3	Storage	
	2.4	Data transformation	
	2.5	Usage and analysis	Unit 10: Big Data and Business Analytics A4 Types of business analytics
	2.6	Usage and visualisation	
	2.7	Archival	
	2.8	Destruction	

F200 comparison continues on next page.

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F200** **Fundamentals of Data Analytics** **OCR-set and marked** **60 marks** **75 GLH** **1 hour 15 minutes written examination**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 3: How data can be accessed and managed across platforms	3.1	Application Programming Interfaces (API)	Unit 8: Computer Games Development B2 Design documentation Unit 15: Customising and Integrating Applications A2 Purpose of and issues with customising and integrating applications Unit 19: The Internet of Things C2 Programming techniques and constructs
	3.2	User access controls	
	3.3	Permissions	Unit 1: Information Technology Systems D2 Protecting data
Topic Area 4: Legal considerations	4.1	Legislation and the role of the ICO when using data	Unit 1: Information Technology Systems F2 Legal issues Unit 11: Cyber Security and Incident Management A3 Legal responsibilities Unit 14: IT Service Delivery A3 Service identification Unit 16: Cloud Storage and Collaboration Tools A5 Legal requirements
Topic Area 5: Job roles, skills and attributes in data analytics	5.1	Job roles related to data analytics	
	5.2	Personal attributes	Unit 20: Enterprise in IT A1 Entrepreneurship and enterprise principles and characteristics
	5.3	Communication Skills	Unit 20: Enterprise in IT A1 Entrepreneurship and enterprise principles and characteristics

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F201** **Big data and machine learning** **OCR-set and marked** **60 marks** **70 GLH** **1 hour 30 minutes written examination**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 1: The scope of managing big data	1.1	The six characteristics (6Vs)	Unit 10: Big Data and Business Analytics A2 Types and storage of data Unit 14: IT Service Delivery C2 Data in an organisation
	1.2	The evolution of big data	
	1.3	How big data is captured	Unit 1: Information Technology Systems A1 Digital devices, their functions and use
	1.4	The purpose, importance and use of big data analytics	
Topic Area 2: The infrastructure challenges of big data	2.1	Types of big data	Unit 10: Big Data and Business Analytics A2 Types and storage of data B1 Statistical techniques
	2.2	Data preparation and cleaning techniques for data mining	Unit 10: Big Data and Business Analytics C2 Evaluating a dataset and presenting the outcomes
	2.3	Data mining techniques	Unit 10: Big Data and Business Analytics A3 Analysing big data A4 Types of business analytics
	2.4	Big data infrastructure	Unit 10: Big Data and Business Analytics A2 Types and storage of data
	2.5	Data science and data analytics	
	2.6	Data analytic techniques	
Topic Area 3: Big data, machine learning and artificial intelligence	3.1	Artificial Intelligence and machine learning	

F201 comparison continues on next page.

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Unit F201 **Big data and machine learning** **OCR-set and marked** **60 marks** **70 GLH** **1 hour 30 minutes written examination**			
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 4: Legal and ethical issues in data management	4.1	Legal issues	
	4.2	Ethical issues	Unit 10: Big Data and Business Analytics A1 Business information
Topic Area 5: Environment and society	5.1	Environment	
	5.2	Society	

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F202** **Spreadsheet data modelling** **OCR-set assignment** **Centre-assessed and OCR-moderated** **75 GLH (15 GLH for set assignment)**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 1: Principles of spreadsheet modelling	1.1	Spreadsheet data modelling	Unit 5: Data Modelling A2 Spreadsheet features used to support data modelling
	1.2	Spreadsheet modelling development	Unit 5: Data Modelling A3 Using data modelling to consider alternatives A4 Evaluating models A5 Documenting and justifying decisions
Topic Area 2: Planning the design of a spreadsheet model	2.1	Design tools	Unit 5: Data Modelling B1 Functional specification
	2.2	Planning the design of a data model	Unit 5: Data Modelling B1 Functional specification
	2.3	Structure	Unit 5: Data Modelling C1 Developing a data model solution
	2.4	Inputs	Unit 5: Data Modelling C1 Developing a data model solution
	2.5	Calculations	Unit 5: Data Modelling C1 Developing a data model solution
	2.6	Planning testing	Unit 5: Data Modelling C2 Testing the data model solution
	2.7	Outputs	Unit 5: Data Modelling C1 Developing a data model solution
	2.8	Human computer interface (HCI) in data modelling	
Topic Area 3: Creating the spreadsheet model	3.1	Spreadsheet model creation	Unit 5: Data Modelling C1 Developing a data model solution
	3.2	Inputting formulae, functions and data	Unit 5: Data Modelling C1 Developing a data model solution
	3.3	Developing the outputs	Unit 5: Data Modelling C1 Developing a data model solution
	3.4	Testing the spreadsheet throughout its development	Unit 5: Data Modelling C2 Testing the data model solution

F202 comparison continues on next page.

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Unit F202 Spreadsheet data modelling OCR-set assignment Centre-assessed and OCR-moderated 75 GLH (15 GLH for set assignment)			
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 4: Delivering the outcomes	4.1	Analysis of the processed data	
	4.2	Technical and user documentation	

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F203** **Relational database design** **OCR-set assignment** **Centre-assessed and OCR-moderated** **75 GLH (15 GLH for set assignment)**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 1: Relational database concepts	1.1	Databases	Unit 2: Creating Systems to Manage Information A1 Relational database management systems
	1.2	Database fundamentals	Unit 2: Creating Systems to Manage Information A1 Relational database management systems
Topic Area 2: Plan relational database solutions	2.1	User requirements	
	2.2	Planning database structures	Unit 2: Creating Systems to Manage Information A3 Normalisation B2 Design documentation
	2.3	Planning data input	Unit 2: Creating Systems to Manage Information B2 Design documentation
	2.4	Planning data processing and automation	Unit 2: Creating Systems to Manage Information B2 Design documentation
	2.5	Planning data outputs	Unit 2: Creating Systems to Manage Information B2 Design documentation
Topic Area 3: Create relational databases	3.1	Database software tools and techniques	Unit 2: Creating Systems to Manage Information C1 Producing a database solution
Topic Area 4: Testing relational database solutions	4.1	Testing solutions	Unit 2: Creating Systems to Manage Information C2 Testing and refining the database solution
Topic Area 5: Evaluate database solutions	5.1	Evaluating solutions	Unit 2: Creating Systems to Manage Information D1 Database design evaluation D2 Evaluation of database testing
	5.2	Evaluating the effectiveness of planning	Unit 2: Creating Systems to Manage Information D1 Database design evaluation D2 Evaluation of database testing

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F204** **Data and the Internet of Everything (IoE)** **OCR-set assignment** **Centre-assessed and OCR-moderated** **75 GLH (15 GLH for set assignment)**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 1: IoE ecosystem	1.1	Sectors that use the IoE	Unit 19: The Internet of Things A1 Purpose and applications of systems and services that make up the IoT
	1.2	The four pillars infrastructure of the IoE	
Topic Area 2: Data collection, processing and storage methods and devices	2.1	Data collection devices	Unit 19: The Internet of Things A2 Principles that underpin IoT systems and services B2 Machine-to-machine (M2M) system and device architecture
	2.2	Power considerations for data collection devices	Unit 19: The Internet of Things A3 Characteristics of systems and services that make up the IoT B2 Machine-to-machine (M2M) system and device architecture
	2.3	Data processing	Unit 16: Cloud Storage and Collaboration Tools A2 Cloud computing models
	2.4	Data storage	
Topic Area 3: Connectivity and data transmission	3.1	Types of connectivity	Unit 19: The Internet of Things B2 Machine-to-machine (M2M) system and device architecture
	3.2	Connectivity methods	
	3.3	Transmission considerations	Unit 19: The Internet of Things B4 M2M system and device communication requirements
Topic Area 4: Human computer interfaces (HCIs)	4.1	Output	Unit 19: The Internet of Things B2 Machine-to-machine (M2M) system and device architecture
	4.2	Information formats	
	4.3	HCI Principles for IoE solutions	

F204 comparison continues on next page.

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F204** **Data and the Internet of Everything (IoE)** **OCR-set assignment** **Centre-assessed and OCR-moderated** **75 GLH (15 GLH for set assignment)**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 5: Securing IoE devices	5.1	Device security	Unit 19: The Internet of Things B5 Security of IoT systems and devices
	5.2	Connection security	Unit 19: The Internet of Things B5 Security of IoT systems and devices
	5.3	Legal and ethical considerations	
Topic Area 6: Documentation and audience communication	6.1	Presenting solutions	
	6.2	Feedback	
	6.3	IoE solution proposal	Unit 19: The Internet of Things B1 IoT system or device design process and documentation
	6.4	Stakeholder considerations	Unit 19: The Internet of Things B1 IoT system or device design process and documentation
	6.5	Technical documentation	Unit 19: The Internet of Things B1 IoT system or device design process and documentation

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F205** **Data visualisation** **OCR-set assignment** **Centre-assessed and OCR-moderated** **75 GLH (15 GLH for set assignment)**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 1: The value and importance of data visualisation	1.1	Impact of data on organisations and individuals	Unit 10: Big Data and Business Analytics A1 Business information A3 Analysing big data A4 Types of business analytics
	1.2	Data dashboards	
Topic Area 2: Planning for data dashboards	2.1	Initial plans	
	2.2	Planning data preparation	
	2.3	Planning the layout of data dashboards	
	2.4	Planning the functionality and manipulation of data dashboards	
	2.5	Planning the outputs from data dashboards	
Topic Area 3: Techniques for creating a data dashboard	3.1	Preparing data for visualisation	
	3.2	Creating data dashboards	
Topic Area 4: Communicating information and interpreting data	4.1	Communicating information	
	4.2	Interpreting data	Unit 19: The Internet of Things C1 M2M integrated system or device operations
Topic Area 5: Evaluating the effectiveness of visualisation solutions	5.1	Evaluating data preparation	
	5.2	Evaluating the effectiveness of data dashboards	

OCR Level 3 Cambridge Advanced National (AAQ) in IT: Data Analytics **Unit F206** **Data and digital marketing** **OCR-set assignment** **Centre-assessed and OCR-moderated** **75 GLH (15 GLH for set assignment)**			Pearson BTEC Level 3 in Information Technology (first teaching September 2017)
Topic Area title	**Teaching content reference**	**Teaching content title**	**Comparable teaching content**
Topic Area 1: Digital marketing fundamentals	1.1	Role of digital marketing	Unit 20: Enterprise in IT A1 Entrepreneurship and enterprise principles and characteristics
	1.2	Digital marketing tools	
	1.3	Marketing strategies and the digital marketing lifecycle	
Topic Area 2: Data driven digital marketing	2.1	Data collection	
	2.2	Data analysis	
	2.3	Data use	Unit 20: Enterprise in IT A1 Entrepreneurship and enterprise principles and characteristics
Topic Area 3: Planning digital marketing content	3.1	Planning digital marketing campaigns	Unit 20: Enterprise in IT B1 Select a product or service idea to market for an IT enterprise
	3.2	Planning the marketing mix	
	3.3	Digital marketing funnel	
Topic Area 4: Creating content for digital marketing campaigns	4.1	Content format	
	4.2	Content purpose	
	4.3	Content style	
Topic Area 5: Communicating to stakeholders	5.1	Communicating the proposal	Unit 20: Enterprise in IT C3 Create and present a start-up plan for an IT enterprise
Topic Area 6: Reflection and evaluation of working processes	6.1	Ways to reflect	

Next steps

If you are an OCR-approved centre, all you need to do is download the specification and start teaching. Your exams officer can complete an intention to teach form which enables us to provide appropriate support. When you're ready to enter your students, you just need to speak to your exams officer.

1. Get to know the specification, sample assessment materials and teaching resources on our Cambridge Advanced National (AAQ) in IT: Data Analytics website.
2. Sign up to receive subject updates by email.
3. Sign up to attend a training event or take part in a webinars on specific topics running throughout the year and our Q&A webinar sessions every half term.

To find out more about all of our support services, please visit Teach Cambridge.

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on
01223 553998

Alternatively, you can email us on
support@ocr.org.uk

For more information visit
ocr.org.uk/qualifications/resource-finder
ocr.org.uk
facebook.com/ocrexams
twitter.com/ocrexams
instagram.com/ocrexaminations
linkedin.com/company/ocr
youtube.com/ocrexams

We really value your feedback

Click to send us an autogenerated email about this resource. Add comments if you want to. Let us know how we can improve this resource or what else you need. Your email address will not be used or shared for any marketing purposes.

I like this **I dislike this**

Please note – web links are correct at date of publication but other websites may change over time. If you have any problems with a link you may want to navigate to that organisation's website for a direct search.

CAMBRIDGE
UNIVERSITY PRESS & ASSESSMENT