

# MSC DATA ANALYTICS

## Institute of Business, Industry and Leadership

<b>Academic Level:</b>	7	<b>Credits:</b>	180
<b>UCAS Code:</b>	Not applicable		
<b>Awarding Body:</b>	University of Cumbria		
<b>Delivered by:</b>	Robert Kennedy College		
<b>Delivery Site:</b>	Distance Learning		
<b>Programme Length:</b>	Full-time: Standard – 12 months Part-time: Standard – 2 years Maximum Registration - 5 years		
<b>Mode of Delivery:</b>	Distance Learning with one optional residency (blended)		
<b>Pattern of Delivery:</b>	Full-time and Part-time		
	Total weeks of study:	52 weeks	
	Delivery pattern:	3 x 12 week semesters	
	Standard semester dates:	No	
<b>Programme Webpage:</b>	<a href="https://college.ch/online-msc-data-analytics">https://college.ch/online-msc-data-analytics</a>		

### Entry Criteria

We welcome applications from students who may not meet the formal entry criteria in full but who have relevant experience or the ability to pursue the course successfully.

The formal entry requirements are:

- An honours degree at 2:2 or above
- At least 2 years' relevant work experience
- English language at IELTS 6.5 (minimum of 5.5 in each component).

Applications are considered from candidates who do not meet the formal entry requirements but can provide evidence of equivalence and can demonstrate by interview the commitment to complete the programme successfully.

Examples of equivalence are:

- A wide range of professional qualifications and/or work experience
- Working or studying in English or an English-speaking environment.

## PROGRAMME AIMS AND OUTCOMES

### Programme Aims

Unlike an MBA, which is aimed at developing broader knowledge and understanding of various aspects of business operations, and is generally seen as the critical qualification for general management, an MSc is a more specialised qualification that focuses on a particular aspect of a business, such as operations or marketing. The MSc Data Analytics acknowledges the major changes in approaches to operations, risk management and marketing driven by “big data”, and the related internet and computerised technologies that support such evolutions, including AI and Industry 5.0, leading to roles such as Chief Data Officer. The overall aims of this programme are to:

1. further develop relevant statistical analysis, machine learning, business and technology knowledge, both academic and professional, in line with postgraduate standards/benchmarks;
2. develop critical reflection skills and engagement with organisational and professional theory to understand and, where appropriate, challenge existing individual and organisational perspectives and practices;
3. develop, and where appropriate apply, knowledge of new technologies, such as Artificial Intelligence, and applied skills to add value by enhancing organisational capability;
4. develop conceptual knowledge and understanding of how research methodologies enable the critical analysis, interpretation, synthesis and application of evidence within the student’s field of study and professional practice;
5. develop commitment to continuous personal and professional development, independence and reflective learning;
6. develop particular expertise and understanding of business and technical strategies for data analytics and the subsequent skills to implement solutions.

Successful students will be able to:

1. engage in effective individual research and demonstrate the ability to understand and apply management theory, and to make, when necessary, sound judgments under conditions of uncertainty;
2. exhibit improved independent research and time management skills, having undertaken a substantial self-managed research project which involved application of a variety of management and research practices, and demonstrate expertise and understanding of issues in data analytics;
3. demonstrate enhanced interpersonal and team skills, through working with others from different industry or cultural backgrounds;
4. continue to reflect on their existing experiences, and learn from and build on the experience of others;
5. develop into modern, well rounded and outward looking managers with a high concern for customers and colleagues, capable of taking responsibility for themselves, their people, their areas of responsibility and their organisation.

## Programme Outcomes – Knowledge and Understanding

The programme provides opportunities for you to develop and demonstrate the following:

**After 60 credits of study (PGCert) you will be able to demonstrate:**

- K1.** An understanding of the role and function of the technical, societal and management dimensions of automated systems, including the key drivers of change
- K2.** The ability to evaluate and critically assess systems (which may include software, devices, people, and so on), to recognise the individual components and to understand their interaction, to create systems, to improve them or to replace them
- K3.** Understand and be able to produce solid critical analyses of literature sources and produce effective and coherent discussions on advanced aspects of computer systems use.

**After 120 credits of study (PGDip) you will be able to demonstrate:**

- K4.** A systematic understanding of the professional, legal, social, cultural and ethical issues related to automation and an awareness of societal and environmental impact within a continuously evolving environment impacted by sustainability aspects
- K5.** An understanding of the core disciplines of information management, databases, machine learning/AI and statistical analysis in a global context, at middle/senior management level
- K6.** The application of critical thinking to the successful management of computerised systems, be it hardware or software, including a deep understanding of the processes of strategic problem-solving and decision-making, and the ability to communicate the conclusions clearly to specialist and non-specialist audiences.

**After 180 credits of study (MSc) you will be able to demonstrate:**

- K7.** The range of research methods that can be applied to the study of advanced aspects of computer systems use
- K8.** A comprehensive theoretical foundation in the extensive area of computing and data analysis in an international environment given the global context, designed to develop entrepreneurial thinking and behaviour, complemented by a variety of analytical and personal skills
- K9.** A strong understanding of how your knowledge and skills may be employed efficiently within an organisational setting (with a particular focus on statistical analysis).

## Programme Outcomes – Skills and other Attributes

The programme provides opportunities for you to develop and demonstrate the following:

**After 60 credits of study (PGCert) you will be able to demonstrate:**

- S1.** self-direction and originality in tackling and solving problems.
- S2.** capability to understand and carry out elements needed in support of entrepreneurial activities.

**After 120 credits of study (PGDip) you will be able to demonstrate an ability to:**

- S2.** make decisions in complex and unpredictable situations, recognising the potential constraints of ethical and sustainability outcomes.
- S3.** act autonomously in planning and implementing tasks at a professional level.

**After 180 credits of study (MSc) you will be able to demonstrate an ability to:**

**S4.** critically reflect on personal knowledge, practice and skills, continually develop self-appraisal and insight into development plans and outcomes, and deal with complex issues both systematically and creatively.

**S5.** communicate your conclusions effectively to specialist and non-specialist audiences.

## PROGRAMME FEATURES

### Programme Overview

The programme is delivered 100% online and includes relevant input from the University directly in the module "Digital Marketing". Additionally, the new programme combines recorded lectures with live tutorials, hence benefits from the current state of the art technologies that replicate as close as possible the real classroom experience. While the programme can be taken entirely on-line, Robert Kennedy College also offers a residency, Corporate Strategy and Competitiveness, which can be taken as an alternative to the Internet of Things module. The Corporate Strategy and Competitiveness module is based on the "Microeconomics of Competitiveness" programme (MoC) developed by Professor Michael Porter using materials developed directly for a master's level programme at Harvard Business School and the Harvard Kennedy School of Government. This residential module will help you develop a better understanding of competitiveness, and what drives it, and how industrial clusters can help to improve competitiveness. It focuses especially on the role of business in driving competitiveness and economic prosperity. In modern international competition, the roles of key stakeholders, including companies, government, and NGOs, have shifted and expanded, and the traditional separation between them is seen as working against successful economic development. Moreover, the process of creating and sustaining an economic strategy for a nation or region is a daunting challenge. The course not only explores theory and policy, but also the organisational structures, institutional structures, and change processes required for sustained improvements in competitiveness. It is taught at a network of over 60 academic institutions worldwide, within which Robert Kennedy College is the only purely distance learning college approved to offer the MoC material.

Much of the learning and development on this programme is designed to encourage you to become an independent learner. The combined student experience is one of high-level participation and input. The main emphasis on the programme is on a strong practical and professional orientation, and the online work is developed and enhanced through the asynchronous discussion element, where the student experience is drawn together. Preceding this programme you should normally have at least two years' post-graduation work experience, and this programme will build upon your prior knowledge and skills gained within a wider organisational and contextual framework.

After successfully completing the programme you will acquire additional transferrable skills to enable you to critically reflect on personal knowledge, and practice and continually further self-appraisal and insight into development plans and outcomes, dealing with complex issues both systematically and creatively, and communicating your conclusions effectively to specialist and non-specialist audiences.

You will have the opportunity to enhance your team-working skills in a multi-cultural environment by conducting discussions and group activities in our OnlineCampus platform. The establishment of learning sets (through WhatsApp groups in modules) is instrumental in driving through the concept of reflective practitioner and is designed to encourage you to interact with other participants, both formally and informally, in seeking best practice and challenging existing practices. This programme benefits greatly from the internationality derived from recruiting students such as

yourself, from all the inhabited continents, and being able to draw on tutors with international experience who are well qualified in their field.

This programme builds on the strong and long-standing track record in online delivery developed by Robert Kennedy College. RKC's tailor-made, OnlineCampus, is a highly evolved all-encompassing, interactive and easy-to-use software designed to make studying online an enjoyable experience. It allows you to study anywhere using a browser or mobile device. Robert Kennedy College is an e-learning technological pioneer (the College was founded in 1998, the same year as Google!) so you are in safe hands when studying with us. We offer around-the-clock support via email and WhatsApp, so help is literally just one click away.

The shared delivery reinforces the strong partnership between the University and the College. With more than twenty-five years of experience in delivery of online programmes this is an excellent opportunity to give students the best of both worlds. You enjoy a true University of Cumbria teaching experience combined with the Swiss quality education offered by the College and its state-of-the-art online learning platform.

This programme has been designed with a certain degree of flexibility in mind; however, some of the modules need to be taken at certain times (e.g. you need to start with the non-credit Induction and your first module needs to be Information Management).

Several of the modules studied will be in classes with students from other programmes within the suite of masters offered by the university, including those with a sectoral theme (for example, Digital Marketing or Information Technology). This ensures that the students on this programme will benefit from the experience of, and discussions with, students with more focused management ambitions.

## Learning and Teaching

As a student at the University of Cumbria and Robert Kennedy College, you are part of an inclusive learning community that recognises diversity. You will have opportunities to learn by interacting with others in a collegiate, facilitative and dynamic learning environment. Teaching, assessment and student support will allow equal and equitable opportunities for you to optimise your potential and develop autonomy.

We seek to create a stimulating and innovative community of learning, even at a distance. Facilitated by our expert practitioner staff, you will experience a learning environment that is well equipped, flexible, and stimulating.

The teaching and learning methodologies applied will embed the principles of the aims of the programme, in terms of international development, global awareness and individual development for the workplace.

The promotion of inclusive practice across a range of learner types, utilising the appropriate learning technologies and the provision of active learning and social learning underlie the teaching principles applied.

In terms of workplace preparedness, workplace and professional learning necessary for the needs of the workplace entail applying problem solving under the interaction of theory and practice with strong emphasis on practical management and work-related activities.

Finally, the learning processes will emphasise the global perspective and internationalisation with strong emphasis on development of entrepreneurial skills. These principles are reinforced through research-informed teaching, supported by industry-based knowledge and expertise.

In common with all master's level programmes students are expected to draw insights from independent research into academic and practitioner sources to fully underpin their analysis, facilitated by access to electronic libraries at both the University of Cumbria and Robert Kennedy College.

RKC's teaching staff include academics with a wide range of backgrounds and experience in a variety of universities, including Cambridge, Oxford and Harvard, as well as practical expertise gained from working in a variety of international organisations.

## Assessment

### Summative and Formative Assessment

Intellectual and cognitive skills are assessed by means of written assignments, including reports and presentations, while quantitative skills, including the use of ICT, are assessed via worked exercises.

Assessment is focused on providing opportunities for both formative and summative assessment. For all modules, formative assessment is in an interim assignment, as well as on a continuous and on-going basis via the medium of the online forums, whereby tutors comment on ideas expressed, give feedback on the direction of the discussion, and recommend courses of action/lines of thought that might be taken.

Summative assessment is based on analysis and critical evaluation of case-study material to facilitate the real-world application of knowledge and integration of the often considerable expected experience of the students, as well as theoretical material.

## Graduate Prospects

Data is all around and there is an increasingly urgent necessity to collect and preserve whatever data is being produced, for the concern of missing out on something vital. Ever since the advent of the Internet, a huge amount of data is now floating around – and how it is used is what currently matters. Data Analytics has become an essential aid to improving business and decision making, particularly when it helps having the biggest edge over the competition; as such, professionals who are skilled in Data Analytics are highly sought after.



## MODULES

Code	Title	Credits	Status
MRKC7004	Information Management	20	Compulsory
MRKC7014	Digital Marketing	20	Compulsory
MRKC7041	Advanced Databases	20	Compulsory
MRKC7042	Data Analytics	20	Compulsory
MRKC7043	Artificial Intelligence	20	Compulsory
MRKC7005	Corporate Strategy and Competitiveness	20	Optional
MRKC7044	Internet of Things	20	Optional
MRKC7030	Dissertation	60	Compulsory
<p><b>Students exiting at this point with 180 credits would receive a MSc Data Analytics</b></p> <p><b>Students exiting with 60 credits would receive a PgC Information Management</b></p> <p><b>Students exiting with 120 credits would receive a PgD Information Management</b></p>			

### Additional Module Information

MRKC7005 (Corporate Strategy and Competitiveness) is an optional residential module in Zurich. Students wishing to take this module are responsible for costs associated with travel and accommodation for this, together with any associated visa requirements.

### Key to Module Statuses

Compulsory modules	Must be taken although it may be possible to condone/compensate as a marginal fail (within the limits set out in the Academic Regulations and provided that all core or pass/fail elements of module assessment have been passed).
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Optional modules	Are a set of modules from which you will be required to choose one to study. Once chosen, it may be possible to condone/compensate as a marginal fail (within the limits set out in the Academic Regulations and provided that all core or pass/fail elements of module assessment have been passed).
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Optional modules may be subject to availability and viability, and if we have insufficient numbers of students interested in an optional module in any given academic year it might not be offered. If an optional module will not be running, we will advise you as soon as possible and help you choose an alternative module. Optional modules are normally selected 3 - 5 months in advance.

## Timetables

Modules span twelve weeks and are split into six units. Discussions are asynchronous, allowing students to take part at times that suit their own locations and work schedules. Live online tutorials are planned in advance to facilitate student participation and are recorded for subsequent access.

The academic year is split into three main twelve-week terms, beginning in January, May and September, but some modules, such as Information Management, may be offered outside of the main terms. The dissertation can be started once the mandatory preparatory week, Advanced Research Methods for Dissertation Excellence, has been completed.

The standard structure is designed so that students can complete the programme within two years, with one taught module in each term. The mandatory dissertation preparatory week will be offered to students once they have completed two modules so that they will be able to start their dissertation in time for the two-year target. Faster completion is possible by undertaking more than one module per term, while students who require longer time will be able to apply for an extension or, exceptionally, intercalation provided that they have suitable evidence to support the request.

## ADDITIONAL INFORMATION

### Student Support

You will study the greater part of your award online with Robert Kennedy College (RKC), and most of your support will be provided directly by RKC, although you will also have access to the University of Cumbria learning support network, including the online library.

#### Induction

Students receive a comprehensive induction both to RKC's virtual learning environment (VLE), OnlineCampus, and the various University of Cumbria regulations through the online module "Induction". This non-credit module covers various introductory issues such as: Motivation, Understanding the Programme Handbook, Registering and Withdrawing from a Module, Academic Writing, Academic Malpractice, and Grading Policy. The module is composed of these six main units and each unit includes a video and audio tutorial. Students are also introduced to the concept of online asynchronous communications via the OnlineCampus forums. Continuous monitoring of the module by RKC faculty members ensures a prompt resolution of any questions well before the start of the first credit-bearing module. The induction module is ongoing: there is no end-date and students can always refer to it or post questions in the relevant forum at any stage of the programme.

#### Library and Academic Support

In principle all modules will provide all the necessary learning resources (e.g. in PDF format) to complete the course successfully. Some modules might require the purchase of a physical textbook and students will be notified of this requirement well in advance. To conduct their academic research students will have access to dedicated University of Cumbria online library services via <https://my.cumbria.ac.uk/rkc>

In terms of academic skills support, students should contact their module tutor at Robert Kennedy College.

#### IT and Technical Support

Given the distance learning/online nature of the course students are expected to have a certain familiarity with basic IT systems and internet access. Through the "OnlineCampus" app provided by the college students are also able to access course material and download it to their online devices.

For IT matters related to the College students have access to support via email, telephone and chat via the StudentCare assistance.

#### StudentCare Assistance

RKC operates an online student support system "StudentCare". The StudentCare assistance facility features an online Live Support function via instant messaging where students are able to get instant answers to general questions. This is in addition to a dedicated phone line, an online forum and a problem-solving ticketing system, and Live Support has several representatives ready to provide assistance. This means that the most common issues students may experience can usually be solved in a few minutes.

## Data Protection

In any online community data protection is paramount. Personal data is kept completely confidential by both RKC and the university. However, it is important that you engage with the wider student community within your cohort. Students are usually known to each other by a name of their choice, which in some cases is their actual first name or surname, while others can choose a nickname. Students can provide a profile of themselves if desired, covering aspects such as location, background, interests, family situation, and photographs. This is encouraged by the students themselves, to give them a better idea of their colleagues but it is important to emphasise to you that uploading of any personal information is completely voluntary, to ensure that the privacy of individual students is maintained at all times.

## Students with Disabilities

Provided that students can operate a keyboard, or otherwise communicate via a computer, there are no restrictions due to disability in taking part in the course. Indeed, the asynchronous nature of the classroom means that students who need a long time to formulate a response are not disadvantaged in any way. Students will have access to University of Cumbria disability advisors via email.

## Course Costs

### Tuition Fees

Course fees can be found at <https://www.rkc.swiss/chf>

The following course-related costs are included in the fees:

- Attendance at the graduation ceremony in Carlisle.

### Additional Costs

The following course-related costs are not included in the fees:

- Attendance at the Corporate Strategy and Competitiveness residency
- Costs associated with attending the Graduation Ceremony.

## Exceptions to the Academic Regulations

This programme operates in accordance with the University's Academic Regulations and Academic Procedures and Processes.

## External and Internal Benchmarks

QAA Subject Benchmark Statement: Master's Degrees in Business and Management (March, 2023)

UoC Strategic Plan

UoC Learning, Teaching and Assessment Strategy

UoC Academic Regulations and Academic Procedures and Processes

## Disclaimer

This programme has been approved (validated) by the University of Cumbria as suitable for a range of delivery modes, delivery patterns, and delivery sites. This level of potential flexibility does not reflect a commitment on behalf of the University or Robert Kennedy College to offer the programme by all modes/patterns and at all locations in every academic cycle. The details of the programme offered for a particular intake year will be as detailed on the programme webpage.