

**MSc Business Analytics**

This document provides a definitive record of the main features of the programme and the learning outcomes that a typical student may reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities provided. This programme specification is intended as a reference point for prospective students, current students, external examiners and academic and support staff involved in delivering the programme and enabling student development and achievement.

**Programme Information**

Programme Title	Business Analytics		
Award(s)	MSc		
Programme Code	N290T		
Awarding Institution	Imperial College London		
Teaching Institution	Imperial College London		
Faculty	Imperial College Business School		
Department	Imperial College Business School		
Main Location of Study	South Kensington Campus		
Mode and Period of Study	1 year full-time (12 months)		
Cohort Entry Points	Annually in September		
Relevant <a href="#">QAA Benchmark Statement(s)</a> and/or other external reference points	<a href="#">Master's Degrees in Business and Management</a>		
Total Credits	ECTS:	90	CATS: 180
<a href="#">FHEQ Level</a>	Level 7		
<a href="#">EHEA Level</a>	2 <sup>nd</sup> cycle		
External Accrator(s)	<a href="#">AMBA</a> Accreditation received: 1987 Accreditation renewal: 2018 <a href="#">EQUIS</a> Accreditation received: 2006 Accreditation renewal: 2015 <a href="#">AACSB International</a> Accreditation received: 2012 Accreditation renewal: 2018		

**Specification Details**

Student cohorts covered by specification	2019/20 entry
Person responsible for the specification	Veronica Russell, Assistant Director Education Quality
Date of introduction of programme	October 2015
Date of programme specification/revision	July 2019
<b>Programme Overview</b>	
<p>The MSc in Business Analytics is offered over 12 months full-time starting in September. The programme aims to enable graduates to understand the challenge of managing large data sets and to provide them with a skill set to meet this challenge. The programme combines academic rigour and practical relevance. There is a careful balance of teaching and learning, individual and group work. Case study methodology and class-based discussions are used to strengthen the conceptual, analytical and problem-solving skills of the participants in real situations. In addition, there are regular seminars by external expert speakers.</p> <p>The programme comprises 9 core modules, and a choice of 5 elective modules from a range of subject areas. These modules are taught over three academic terms. Over the summer, students have the choice to undertake either a Capstone Business Analytics Project or a Work Placement and write a Business Analytics Report or undertake an Individual Research Report.</p>	
<b>Learning Outcomes</b>	
<p>The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial College degree programme. The Graduate Attributes are available at: <a href="http://www.imperial.ac.uk/students/academic-support/graduate-attributes">www.imperial.ac.uk/students/academic-support/graduate-attributes</a></p>	
<p>Students who complete the programme successfully will be able to:</p> <ul style="list-style-type: none"> <li>• Create and manage large data sets;</li> <li>• Demonstrate the analytical skills to interrogate large data sets in a business environment;</li> <li>• Demonstrate a critical awareness of current issues in Business Analytics;</li> <li>• Demonstrate that they have obtained a set of personal development and lifelong learning skills applicable to the international business environment.</li> </ul> <p><b>Knowledge and Understanding:</b></p> <ul style="list-style-type: none"> <li>• Creating and Managing large data sets;</li> <li>• Analytical skills to interrogate large data sets in a business environment;</li> <li>• Critical awareness of current issues in business analytics;</li> <li>• The business contexts in which large data sets and analytics feature;</li> <li>• The broader macro environments in which the digital economy is emerging;</li> <li>• The role of business analytics in business and other organisations.</li> </ul> <p><b>Skills and other Attributes:</b></p> <ul style="list-style-type: none"> <li>• Integrate, analyse and evaluate new and/or abstract data and situations, using a wide range of appropriate techniques and transform such data and concepts into options and solutions;</li> <li>• Use conceptual, analytical and quantitative skills for decision making.</li> </ul>	

**Practical Skills:**

- Give professional presentations;
- Apply analytical techniques to the decision-making process in business, both systematically and creatively, and present analysis in a clear and persuasive manner;
- Produce creative and realistic solutions to complex problems;
- Use contemporary models and techniques to develop strategies;
- Participate in managerial decision processes using large data sets;
- Undertake literature searches;
- Demonstrate the management of large data sets.

**Transferable Skills:**

- Communicate effectively in context through oral presentations, computer processing, presentations and written reports;
- Critically review evidence including its reliability, validity and significance;
- Transfer techniques and solutions from one discipline to another;
- Use Information and Communications technology;
- Manage resources and time effectively in order to achieve intended goals;
- Learn independently with open-mindedness and critical enquiry;
- Work effectively as a team member which includes collaboration and formulating effective strategies for achieving goals when working with others;
- Understand individual behaviour in teams, team formation and team dynamics;
- Clearly identify criteria for success and evaluate his or her own performance against those criteria;
- Enhance lifelong learning skills and personal development so as to be able to work with self-direction and originality and contribute to business and society at large;
- Build a network of business professionals both through fellow students and the alumni organisation.

**Entry Requirements**

Academic Requirement	Normally a 2:1 UK Bachelor's Degree with Honours in Business, Economics, Engineering, Computer Science, Mathematics, Statistics, Physics or a quantitative social science (or a comparable qualification recognised by the College).
Non-academic Requirements	Two references
English Language Requirement	<a href="#">Higher requirement</a> IELTS 7.0 with no element below 6.5 (or equivalent).

The programme's competency standards documents can be requested from the Business School's Education Quality Office.

**Learning & Teaching Strategy**

Scheduled Learning & Teaching Methods	<ul style="list-style-type: none"> <li>• Lectures</li> </ul>
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	<ul style="list-style-type: none"> <li>• Practical classes and field work</li> <li>• Equipment/technique demonstrations (e.g. Bloomberg, Datastream)</li> <li>• Seminars</li> <li>• Workshops</li> <li>• Case studies</li> <li>• Group work exercises</li> <li>• Formal presentations</li> </ul>				
E-learning & Blended Learning Methods	<ul style="list-style-type: none"> <li>• Pre-programme VLE modules</li> <li>• On-line discussion forums</li> <li>• On-line lecture materials</li> <li>• Interactive content including video and module quizzes</li> </ul>				
Project and Placement Learning Methods	<ul style="list-style-type: none"> <li>• Work Placement Opportunity</li> </ul>				
<b>Assessment Strategy</b>					
Assessment Methods	<ul style="list-style-type: none"> <li>• Written Examinations</li> <li>• Multiple Choice Tests Essays</li> <li>• Formal Presentations</li> <li>• Reports</li> <li>• Case Studies</li> </ul>				
<b>Academic Feedback Policy</b>					
<p>The School aims to provide feedback to students on coursework within two weeks and to provide provisional examination marks six weeks from the examination date. With each returned coursework assignment, a written evaluation will be provided. General feedback to the cohort is provided on examination performance. Students will be provided with a percentage mark. All percentage marks received during the year are deemed provisional until confirmed by the External Exam Board.</p>					
<b>Re-sit Policy</b>					
<p>The College's Policy on Re-sits is available at: <a href="http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/">http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/</a></p>					
<b>Mitigating Circumstances Policy</b>					
<p>The College's Policy on Mitigating Circumstances is available at: <a href="http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/">http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/</a></p>					
<b>Programme Structure</b>					
Full-time	Pre-session	Autumn Term	Spring Term	Summer Term	Summer Vacation
Core Modules	1	7	2	0	0

Elective Modules	0	0	5		0
Projects	0	0	0	1	1
<b>Assessment Dates &amp; Deadlines</b>					
Written Examinations	October, December, March, June				
Coursework Assessments	Continuous (Autumn/Spring) June/July				
Project Deadlines	August				
Practical Assessments	Continuous				
<b>Assessment Structure</b>					
Programme Module Groups	ECTS		% Weighting		
<b>Core Modules</b> 9 x core modules (equally weighted) AND 1 x pre-session module (pass/fail)	50		50%		
<b>Electives Modules</b> 5 x elective modules (equally weighted)	25		36%		
<b>Report Modules</b> Capstone Business Analytics Project (50%) AND Final Report (50%) OR Work Placement (50%) AND Final Report (50%) OR Individual Research Report (100%)	15		14%		
Total	90		100%		
<b>Assessment Scheme</b>					
<p><b>All modules are equally weighted.</b> There are three module groups:</p> <ul style="list-style-type: none"> <li>• Core Modules Group</li> <li>• Elective Modules Group</li> <li>• Report Modules Group</li> </ul> <p><b>Pass</b></p> <ul style="list-style-type: none"> <li>• An aggregate mark of 50% or greater across the programme as a whole</li> <li>• An average of 50% or above in each module group</li> <li>• At least 40% in each examination</li> <li>• At least 50% in each module in the Report Modules Group</li> <li>• At least 50% in all modules assessed by coursework only*</li> </ul> <p><b>Merit</b></p> <ul style="list-style-type: none"> <li>• An aggregate mark of 60% or greater across the programme as a whole</li> <li>• An average of 60% or above in each module group</li> <li>• At least 40% in each examination</li> <li>• At least 50% in each module in the Report Modules group</li> </ul>					

- At least 50% in all modules assessed by coursework only\*

**Distinction**

- An aggregate mark of 70% or greater across the programme as a whole
- An average of 70% or above in each module group
- At least 40% in each examination
- At least 50% in each module in the Report Module' group
- At least 50% in all modules assessed by coursework only\*

\*Analytics in Business, Logistics and Supply-Chain Analytics, Workforce Analytics, Healthcare and Medical Analytics, Retail and Marketing Analytics, Digital Marketing Analytics, Digital Economics and Digital Strategy, Energy Analytics, Energy Economics and Strategy, Strategy Implementation, Data Management & Ethics, Capstone Business Analytics Project, Work Placement, Individual Research Report and Business Analytics Report.

Indicative Module List											
Code	Title	Core/ Elective	L&T Hours	Ind. Study Hours	Place- ment Hours	Total Hours	% Written Exam	% Course- work	% Practical	FHE Q Level	ECTS
BUSI97178	Plagiarism Awareness	Core	10	15	0	25	Not assessed			7	0
BUSI97588	Career & Professional Development Workshops	Optional	25	12.5	0	37.5	Not assessed			7	0
BUSI97370	Accounting, Maths and Finance Primers for Business Analytics	Core	48	77	0	125	0%	100%	0%	7	5
BUSI97286	Maths and Statistics Foundations for Analysis	Core	22	103	0	125	50%	50%	0%	7	5
BUSI97284	Data Structures and Algorithms	Core	24	101	0	125	50%	50%	0%	7	5
BUSI97267	Analytics in Business	Core	20	105	0	125	0%	100%	0%	7	5
BUSI97268	Statistics and Econometrics	Core	30	95	0	125	50%	50%	0%	7	5
BUSI97269	Optimisation and Decision Models	Core	27	98	0	125	50%	50%	0%	7	5
BUSI97270	Fundamentals of Database Technologies	Core	22	103	0	125	50%	50%	0%	7	5
BUSI97271	Network Analytics	Core	22	103	0	125	50%	50%	0%	7	5
BUSI97272	Machine Learning	Core	22	103	0	125	50%	50%	0%	7	5
BUSI97273	Visualisation	Core	22	103	0	125	50%	50%	0%	7	5
BUSI97274	Logistics and Supply-Chain Analytics	Elective	20	105	0	125	0%	100%	0%	7	5

Indicative Module List											
Code	Title	Core/ Elective	L&T Hours	Ind. Study Hours	Place- ment Hours	Total Hours	% Written Exam	% Course- work	% Practical	FHE Q Level	ECTS
BUSI97275	Digital Marketing Analytics	Elective	20	105	0	125	0%	100%	0%	7	5
tbc	Energy Analytics	Elective	20	105	0	125	0%	100%	0%	7	5
BUSI97276	Workforce Analytics	Elective	20	105	0	125	0%	100%	0%	7	5
BUSI97528	Health and Environment	Elective	21.5	116	0	137.5	60%	40%	0%	7	5.5
BUSI97088	Managing Change and Innovation in Healthcare	Elective	20	117.5	0	137.5	0%	100%	0%	7	5.5
BUSI97277	Financial Analytics	Elective	22	103	0	125	50%	50%	0%	7	5
BUSI97278	Healthcare and Medical Analytics	Elective	20	105	0	125	0%	100%	0%	7	5
BUSI97279	Retail and Marketing Analytics	Elective	20	105	0	125	0%	100%	0%	7	5
BUSI97252	Strategy Implementation	Elective	10	77.5	0	87.5	0%	100%	0%	7	3.5
BUSI97253	Digital Economics and Digital Strategy	Elective	10	77.5	0	87.5	0%	100%	0%	7	3.5
BUSI97254	Energy Economics and Strategy	Elective	10	77.5	0	87.5	0%	100%	0%	7	3.5
BUSI97287	Advanced Machine Learning	Elective	22	103	0	125	50%	50%	0%	7	5
BUSI97424	Data Management & Ethics	Elective	20	117.5	0	137.5	0%	100%	0%	7	5.5
BUSI97416	Service Analytics	Elective	24	76	0	100	0%	100%	0%	7	4.0



Indicative Module List											
Code	Title	Core/ Elective	L&T Hours	Ind. Study Hours	Place- ment Hours	Total Hours	% Written Exam	% Course- work	% Practical	FHE Q Level	ECTS
BUSI97280	Capstone Business Analytics Project	Core Choice	2	185.5	0	187.5	0%	100%	0%	7	7.5
BUSI97281	Work Placement	Core Choice	2	185.5	0	187.5	0%	100%	0%	7	7.5
BUSI97282	Business Analytics Report	Core Choice	2	185.5	0	187.5	0%	100%	0%	7	7.5
BUSI97266	Individual Research Report	Core Choice	2	373	0	375	0%	100%	0%	8	15

## Supporting Information

The Programme Handbook is available at:

<http://wwwf.imperial.ac.uk/business-school/programmes/programme-information/>

<http://wwwf.imperial.ac.uk/business-school/programmes/programme-information/>

The College's entry requirements for postgraduate programmes can be found at:

[www.imperial.ac.uk/study/pg/apply/requirements](http://www.imperial.ac.uk/study/pg/apply/requirements)

The College's Quality & Enhancement Framework is available at:

[www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance](http://www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance)

The College's Academic and Examination Regulations can be found at:

<https://www.imperial.ac.uk/about/governance/academic-governance/regulations>

Imperial College is an independent corporation whose legal status derives from a Royal Charter granted under Letters Patent in 1907. In 2007 a Supplemental Charter and Statutes was granted by HM Queen Elizabeth II. This Supplemental Charter, which came into force on the date of the College's Centenary, 8th July 2007, established the College as a University with the name and style of "The Imperial College of Science, Technology and Medicine".

<http://www.imperial.ac.uk/admin-services/secretariat/college-governance/charters-statutes-ordinances-and-regulations/>

Imperial College London is regulated by the Office for Students (OfS)

[www.officeforstudents.org.uk/advice-and-guidance/the-register/](http://www.officeforstudents.org.uk/advice-and-guidance/the-register/)

## Modification