Master of Analytics Management

THE UNIVERSITY OF MELBOURNE

MELBOURNE BUSINESS SCHOOL

Designed for the future of business

GLOBAL. BUSINESS. LEADERS.

Melbourne Business School, The University of Melbourne

The University of Melbourne is one of the worlds truly outstanding universities. With a history dating back to 1853, it is a highly regarded institution of learning that makes significant distinctive contributions to global society.

The university has a rich tradition of success in countless fields of endeavor. It is universally respected for its research, teaching and knowledge transfer. Its strong links with a huge array of leading local and international institutions are testament to its status in the world.

As the graduate school of business and economics of the University of Melbourne, Melbourne Business School (MBS) is jointly established, owned and led by corporate Australia and the University – with ongoing involvement and support from the business community across all its programs.

Why a Master of Analytics Management?

In the age of big data, human insight is vital to understand how analytics is used and what it means for business. Rapid digitalisation means there is more information than ever before for organisations to base their decisions on, but the crucial factor for success will be knowing how and when to use it strategically.

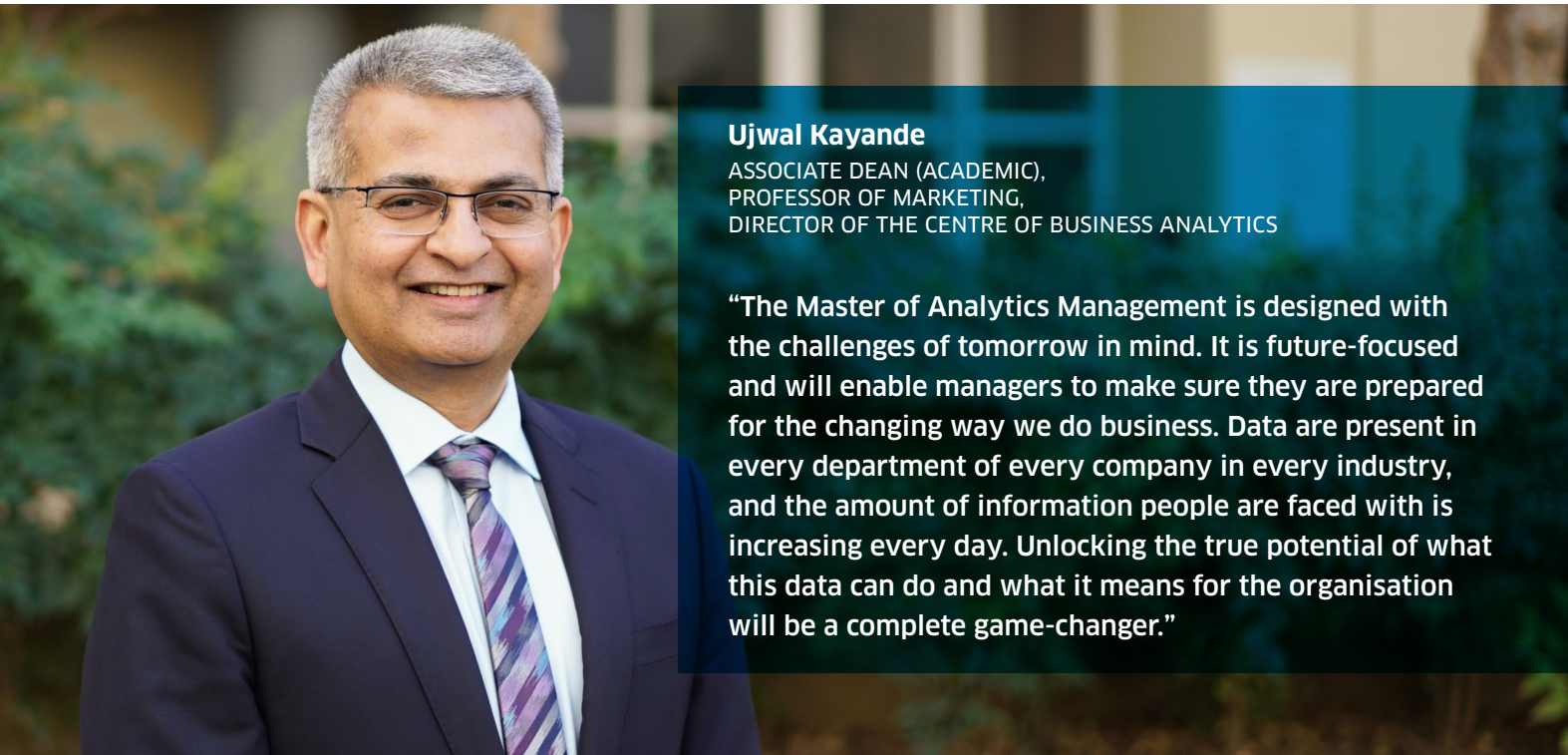
Melbourne Business School has designed the Master of Analytics Management program to give students the skills they need to become leaders in this environment. You will learn how to work with analysts to extract value from data and thrive in organisations where data are part of everyday decision-making.

The degree is designed for leaders and managers who require an understanding of how to leverage data strategically, rather than analytics practitioners themselves who are catered to by the Master of Business Analytics program.

What will the Master of Analytics offer?

With an advanced qualification from The University of Melbourne and access to Melbourne Business School's vast network of professionals, this 1½ year part-time program will equip you with the skills to accurately evaluate information and interpret data from a business perspective.

With subjects including marketing analytics, supply chain analytics and financial analytics, this holistic program will ensure you have a competitive edge and are well-placed for further career progression with the ability to add value across the breadth of any business or organisation.



Ujwal Kayande
ASSOCIATE DEAN (ACADEMIC),
PROFESSOR OF MARKETING,
DIRECTOR OF THE CENTRE OF BUSINESS ANALYTICS

"The Master of Analytics Management is designed with the challenges of tomorrow in mind. It is future-focused and will enable managers to make sure they are prepared for the changing way we do business. Data are present in every department of every company in every industry, and the amount of information people are faced with is increasing every day. Unlocking the true potential of what this data can do and what it means for the organisation will be a complete game-changer."

Subject Information

PART 1: CERTIFICATE

Data Analysis

This subject provides the fundamental quantitative skills necessary you need to extract information from data to make better managerial decisions. You will become familiar with the tools of quantitative analysis, develop the necessary skills for analytical thinking and gain a quantitative mindset to measure performance.

Financial Management

This introduction to valuation and financial management is based on the principle that firms should be managed to increase the wealth of their shareholders, subject to fulfilling their contractual and legal obligations to other stakeholders. To this end, it focuses on valuing financial assets and selecting investment projects.

Marketing

The focus of this subject is the challenges that organisations face in managing demand and how to address them with optimal demand-side strategies. You will learn how (and which) marketing investments help develop market-based assets, how they translate into market outcomes, and how market outcomes help ensure an organisation's long-term survival and success.

Financial Accounting

This subject provides you with foundation knowledge about for-profit entities' external financial reporting – knowledge that is not only the basis for correctly interpreting and applying accounting information, provided for internal managerial decision-making, but also for financial statements, used to make externally-focused judgments and decisions (e.g., assessing a firm's intrinsic value or its strengths and weaknesses, relative to competitors).

Operations

In fiercely competitive global and dynamic environments, companies face increasing pressures to exceed customer expectations along multiple performance measures, such as cost, quality, flexibility and innovation. This subject deals with the design, management and continuous improvement of business processes, providing some of the core concepts that are essential for leveraging a firm's operational capabilities to achieve sustainable competitive advantage.

Managerial Economics

This subject provides the economic-reasoning tools to develop and evaluate strategic business options and make better choices. You will discuss and develop the fundamental economic concepts and analytical skills required in managerial and strategic decision-making, especially in situations of bargaining, price setting and analysing different market environments or asymmetric information.

PART 2: DIPLOMA

Business Analytics

This subject aims to teach you how to extract relevant information from data to make improved business decisions. You will learn which type of data to use for solving a business problem and how to influence an organisation to move from a 'decision-based, evidence-making' mode to an 'evidence-based, decision-making' mode.

Quantitative Decision Making & Optimisation

There are numerous mathematical methods used to obtain efficient solutions to a large variety of complex business problems. This subject provides students with the ability to formulate a business problem as a mathematical model, and then to use quantitative techniques to identify a solution to the model.

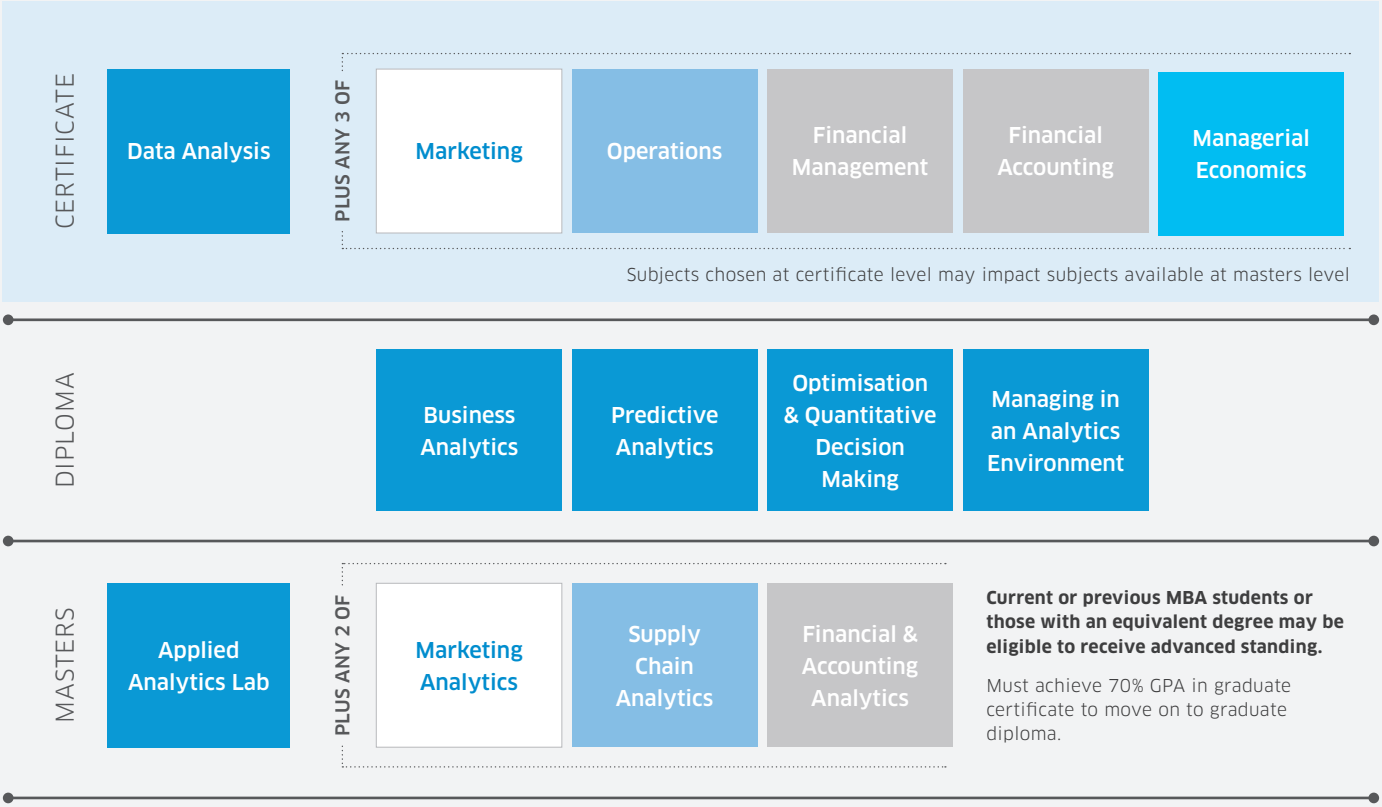
Predictive Analytics

This subject covers the main methods used to predict business variables, based on historical data. These include traditional regression, time series analysis, forecasting models, survival analysis, data mining, support vector machines and sentiment analysis. Throughout the subject, the focus will be on understanding how these methods are applied in various business problems, and identifying which predictive approach is the most appropriate to use, given a specific context.

Managing in an Analytics Environment

As organisations become more sophisticated in how they seek to use analytics to inform business decision making, managers face several challenges in how to facilitate the creation of the best environment in which to deploy analytics. This subject equips students with the necessary insights to formulate an organisation's vision and goals around the use of business analytics, along with specific tools to implement and manage the change processes required to achieve this.

Program Structure



PART 3: MASTERS

Marketing Analytics

It has become increasingly important to know how marketing actions translate into revenue and profit growth. The tools that enable this translation are part of a toolkit called 'marketing analytics'. Marketing analytics is a technology-enabled and model-supported approach to harness customer and market data to enhance marketing decision-making.

Finance & Accounting Analytics

Finance and Accounting Analytics examines how financial statement data, financial market data and non-financial metrics are associated with firm value and performance. The subject will explore how to use statistical modelling to determine the primary drivers of firm value and performance and the evolution of market prices. Topics include: performance analytics, valuation analytics, credit analytics, risk analytics, portfolio analytics and market analytics. The subject will also examine the use of prediction models to detect financial reports and transactions that may have been manipulated by managers.

Supply Chain Analytics

Rapid advancements in technology (particularly the internet), combined with fast and cheap computing power, have enabled firms to radically transform their industries by developing business models and reengineering their supply chains. This subject provides students with the ability to use appropriate tools and techniques to analyse strategic, tactical and operational decisions pertaining to inventory management, facility location, logistics and other supply chain management related decisions. In addition, students will be exposed to how real-world logistics and supply chain decisions have been made through relevant case studies.

CAPSTONE SUBJECT

Applied Analytics Lab

This subject involves completion of a 10-week project using real data from an industry setting. The subject integrates academic learning, practical challenges in implementing data analytics in an organisation, employability skills and attributes and an improved knowledge of how analytics can be implemented within organisations. The assessment week of the subject will involve the completion of the report for the subject and a project presentation. This is an individual project.

Our Faculty

For over 50 years, Melbourne Business School has taken great pride in the quality and diversity of our educators and partners. The faculty for the Master of Analytics Management program has been carefully assembled to ensure students will hear and learn from subject matter experts across various fields relevant to this program.

We teach using a variety of techniques, including case studies, simulations and practical projects. These techniques allow you to work in a team, tackle real data, think critically and articulate your findings.

Worapree (Ole) Maneesoonthorn
Assistant Professor (Statistics and Econometrics)
PhD (Monash)

William Ho
Associate Professor (Operations Management)
Department of Management and Marketing
PhD (PolyU)

Lusheng Shao
Senior Lecturer (Operations)
Department of Management and Marketing
PhD (USyd)

Chris Lloyd
Professor (Statistics)
PhD (Melb)

Hugh Williams
Distinguished Fellow
PhD (RMIT)

Michael Smith
Chair of Management (Econometrics)
PhD (UNSW)

Awarded for Analytics Excellence

Melbourne Business School is internationally recognised for leadership in the field of analytics. The Master of Business Analytics, our pre-experience degree aimed at data practitioners, was first offered in 2014 and is already recognised as the #1 Business Analytics program outside the US and the #5 Business Analytics program in the world.

Our analytics programs are supported through partnership with the Centre for Business Analytics, which was founded to address the worldwide demand for analytics research and knowledge. With a mission to be a key catalyst in helping Australian businesses gain a distinctive competitive advantage through harnessing the trilingual insights of business, mathematics and technology; it achieves this by creating collaboration amongst students, faculty and industry leaders to deliver both academic and business impact.

CENTRE FOR BUSINESS ANALYTICS

#5 Business Analytics program in the world

QS 2018 Masters in Business Analytics rankings

How to Apply

How do we select students?

We want to provide you with the educational experience that will support you in fulfilling your personal goals and ambitions. To achieve this, we take a holistic approach when assessing applications. Not only do we take your academic background into account, to assess how you are likely to perform in the classroom, we look for evidence of your ability to contribute to class learning as well as your leadership potential.

Current or previous MBA students or those with an equivalent degree may be eligible to receive advanced standing. This means eligible students can gain a graduate diploma in just 6 months of part-time study or a masters degree in 12 months of part-time study.

To apply, you should have:

- An undergraduate degree in any discipline*
- Two years' full-time work experience
- An excellent command of English

Apply online via our website at **apply.mbs.edu.** You will be asked to provide the following information that will assist us in assessing your suitability to the program:

- Your personal, education and work history.
- Responses to four questions that explore what you hope to achieve with your studies and how you can contribute to the class learning experience. These statements should be between 100 and 300 words in length.
- The names and contact details of two professional referees. When you submit your application, an email will automatically be sent to these referees and ask for their feedback on your suitability for the program.
- Electronic copies of your supporting documentation
  - Academic transcript(s) of any tertiary education, showing all subjects undertaken and results achieved. If you do not have an undergraduate transcript, you may be required to provide your GMAT score report.
  - CV.
  - Proof of citizenship (birth certificate, citizenship certificate or passport with visa).
  - Evidence of English language proficiency (IELTS or TOEFL report) if your undergraduate degree was not taken in the English language.
- Please attach any other supporting documentation that you believe will enhance your application.

Upon admission, you will need to provide us with certified copies of these documents.

Visit apply.mbs.edu

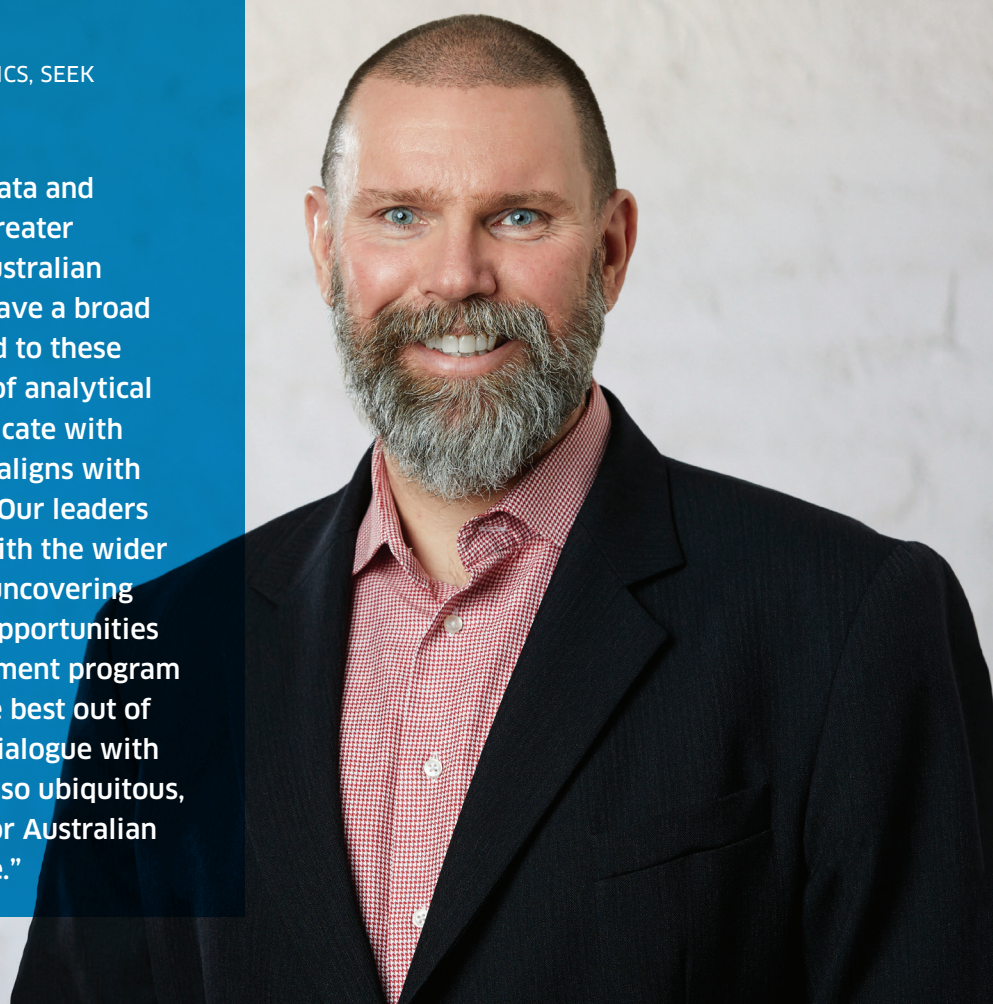
* If you don't have an undergraduate degree, you may still be eligible for entry into the Master of Analytics Management by completing the General Management Admissions Test (GMAT) and achieving a score of 600 or higher.

Emma Gray
CHIEF DATA OFFICER, ANZ
MBA (HARVARD)

"Many companies have great data at their fingertips; however the real value comes from an ability to use that data to drive great outcomes for the customer, for business fundamentals, be they in risk or fraud reduction, streamlining the supply chain, or taking low value time and effort out of core business processes. At ANZ we value managers who can direct their data analysts effectively – they can walk in their shoes, understand the data being used, and most importantly know what questions to ask and how to guide their teams for valuable insights and actions. The Masters of Analytic Management at MBS is the perfect programme for managers who want to improve their ability to extract value from the data process. I think that means it's critical for ALL managers!"

Antony Ugoni
DIRECTOR, GLOBAL MATCHING AND ANALYTICS, SEEK
MASTER OF STATISTICS (LA TROBE)

"SEEK is an organisation that sees data and analytics as enablers to providing greater efficiency and opportunity in the Australian employment marketplace, and we have a broad range of projects and staff dedicated to these causes. Key to leading these teams of analytical experts is knowing how to communicate with and manage the team in a way that aligns with their skill sets and wider strengths. Our leaders are also required to communicate with the wider business about the insights we are uncovering and where new and unanticipated opportunities lie. The Master of Analytics Management program will give our leaders skills to get the best out of their teams and create productive dialogue with our colleagues. With data becoming so ubiquitous, such a program will be invaluable for Australian managers to stay ahead of the game."



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AACSB ACCREDITED

EFMD EQUIS ACCREDITED

Information is correct at time of printing and subject to change. Printed August 2018