The Master of Business Analytics builds advanced knowledge of the fundamental theories, concepts and practice of business analytics with specialised depth of knowledge in areas of practice.

The course requires 12 credit points of study - 8 credit points of core units and 4 credit points of unspecified electives. Students are able to choose elective units from any discipline area to gain depth (for example in data analytics) or sector expertise (for example in marketing, finance or health).

<table>
<thead>
<tr>
<th>Graduate Diploma of Business Analytics (1 year)</th>
<th>MIS761 Enterprise Information Management</th>
<th>MIS771 Descriptive Analytics and Visualisation</th>
<th>Elective</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS762 Data Warehousing</td>
<td>MIS772 Predictive Analytics</td>
<td>MIS781 Business Intelligence</td>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>Master of Business Analytics (1.5 years)</td>
<td>MIS782 Business Value of Information</td>
<td>MIS775 Decision Modelling for BusinessAnalytics</td>
<td>MIS779 Decision Analytics in Practice</td>
<td>Elective</td>
</tr>
</tbody>
</table>

* Students undertaking the Master of Business Analytics are also expected to attend an annual 2-day residential program, which is included in the program fees.

**UNIT OBJECTIVES**

<table>
<thead>
<tr>
<th>Core unit</th>
<th>Unit objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS761 Enterprise Information Management</td>
<td>Introduces students to the technologies, methodologies and concepts of enterprise information management. Students will develop skills in manipulating, managing and using different data types such as structured data, location-based data and big data.</td>
</tr>
<tr>
<td>MIS771 Descriptive Analytics and Visualisation</td>
<td>Demonstrates the importance of understanding data and the crucial role of statistical analysis in business decision-making. Content includes visualisation of data, hypothesis based data-driven decision making and experimental design based decision making.</td>
</tr>
<tr>
<td>MIS762 Data Warehousing</td>
<td>Covers knowledge skills and technologies associated with managing large scale data and Big Data Analytics.</td>
</tr>
<tr>
<td>MIS772 Predictive Analytics</td>
<td>Covers knowledge and skills required to build predictive models and use data mining tools in real business scenarios. Students will be given the opportunity to gain hands-on experience with one of the most widely used predictive analytics software tools globally.</td>
</tr>
<tr>
<td>MIS781 Business Intelligence</td>
<td>Develops the skills and knowledge required to conceptualise, design and develop business intelligence (BI) infrastructure, applications, tools and best practices. Content will include the BI lifecycle, performance management: business value of BI, and emerging trends.</td>
</tr>
<tr>
<td>MIS782 Business Value of Information</td>
<td>Focuses on how ICT investments including business analytics generates business value. Content includes positioning information as a business asset, understanding ICTs contribution to gaining competitive advantage and business cases of ICT investments.</td>
</tr>
<tr>
<td>MIS775 Decision Modelling for Business Analytics</td>
<td>Develops knowledge and skills to build complex decision models and use advanced quantitative modelling techniques to analyse and develop solutions to business problems. Topics covered includes problem structuring, risk analysis, optimisation and emerging trends.</td>
</tr>
<tr>
<td>MIS779 Decision Analytics in Practice (run by PwC)</td>
<td>This capstone project unit provides students with the opportunity to develop business analytics practice skills. Students will be able to gain hands-on experience by working on an authentic, large scale business problem in groups for an industry client.</td>
</tr>
</tbody>
</table>
BUSINESS ANALYTICS

‘We are on the cusp of a tremendous wave of innovation, productivity and growth, as well as new modes of competition and value capture - all driven by big data as consumers, companies, and economic sectors exploit its potential.’

Big data: The next frontier for innovation, competition and productivity. McKinsey Global Institute

BIG DATA - BIG OPPORTUNITIES

The technological advances of the information age have enabled organisations to capture and analyse masses of information about customers, competitors and day to day operations and transform this information into a key business asset. Combined with the mass adoption of social media and digital tools, information plays a key role in all aspects of work and life. Organisations that have the skills and tools to capture, store and use information strategically are getting ahead of the game.

Every business organisation wants to gain a competitive advantage by unlocking the hidden insights in their data and are looking for graduates with the right mix of skills to help them. Recent global industry reports allude to a growing skills shortage in business analytics, particularly managers who can use data to inform business decisions, and this message has been echoed by the analytics industry in Australia.

WHAT IS BUSINESS ANALYTICS?

Business analytics is an integrated discipline that brings together the skills, knowledge and technological tools of information management, statistics, data mining and management science.

Business analytics sits in the intersection between information technology and business, focusing on unlocking insights contained in data to improve operational efficiency, financial performance and strategic management.

The analytical capabilities of software tools now available to businesses and innovation in underlying technologies over recent years have changed analytics from being a highly specialised and technical discipline, formally the exclusive domain of data scientists, to being accessible to a broad range of business professionals.

The demand for business decision makers who understand the value-addr of analytics and are able to use analytics tools to shape their decisions, continues to grow across the globe.

Deakin’s Master of Business Analytics aims to build knowledge and skills across three areas:

- Enterprise information management - the capture, transformation and storage of the information to be analysed.
- Descriptive, predictive and prescriptive analytics - statistical analysis, visualisation of data, data mining, decision modelling and optimisation.
- The business value of analytics - business intelligence and value realisation.

Big data concepts, practice perspectives and emerging trends in business analytics are integrated across the core curriculum. Students are able to add more breadth or depth to their academic program through a range of elective units. Elective streams available include finance, marketing, economics, accounting, health sciences, human resources, information systems and computer science.

PRACTICE FOCUS

Deakin’s business analytics program has been designed and developed in partnership with industry. It is one of the most practice focused and industry-aligned business analytics courses available. Industry practitioners have a direct role in the course to ensure the curriculum is current and relevant, and graduates of the program are in high demand. Course partners of the program include IBM, Microsoft, SAS, Accenture, Altimet Consulting, Deloitte, Ernst & Young, PwC Group and PwC.

A quarter of the core curriculum is delivered by industry practitioners in the form of practice modules, expert lectures, analytics case studies and projects. The capstone project, MIS779 Decision Analytics in Practice is developed and run entirely by PriceWaterhouseCoopers as a master class in analytics practice.

CAREERS IN BUSINESS ANALYTICS

Analytics has always been in fashion for the best performing organisations that recognise the influence data can have in improving decision making. Transitioning from hindsight to foresight assists future operations planning, removes cost and improves customer service and supply chains, says Doug Campbell, Chairman of the Institute of Analytics Professionals of Australia (IAPA), the professional body for the discipline.

New analytical technologies coupled with advances in computing power have helped enormously but analytical skills coupled with business process improvement are the key to unlocking the value from this data, says Campbell, who is also a Director of Deloitte Insight Solutions.

IAPA was established in 2006 as a not-for-profit organisation to support and encourage analytics professionals. From a modest membership of just 300, IAPA has grown rapidly to over 2,500 members with a strong focus on membership engagement, with the annual membership doubling over the last 18 months.

The top 20 organisations by volume of IAPA membership are some of Australia’s best known organisations who rely on this skillset for taking significant decisions behind their business processes. Individuals who have become experts and trainers in this field either from a practitioner or business engagement perspective will be in high demand from the top commercial, public sector, service providers and software houses locally and globally.

‘Daredevilingly, successful businesses will be those that excel at collecting, managing and analysing the proliferation of data to deliver insights that constantly improve business performance,’ says Campbell. ‘With the digital universe now measured in zettabytes, and predictions of a 50 fold increase in data inflows, those in analytical positions are already in high demand—a trend that’s predicted to see 65 percent more positions than can be filled by 2018.’

An analytics career can provide a wide variety of industry application with IAPA members involved in diverse areas, including sports performance enhancement, digital channel behaviours, cross channel cost management, pricing, lead identification, salesforce effectiveness, credit risk, forecasting, process optimisation, equitable distribution of resources for government, workforce planning, quality assurance, safety and customer insight.

INNOVATIVE AND FLEXIBLE DELIVERY MODEL

Deakin’s business analytics program is offered at our Melbourne Campus at Burwood and via Cloud (online) study. The course is designed for professionals in full-time work and hence is delivered after hours in modular format across three periods of study (Trimesters) each year. Students can study between 1-4 units each Trimester and vary their study load across Trimesters as needed.

Core units are delivered from 6-9pm AST at Deakin’s Melbourne Campus and webinar using an interactive webinar tool that enables students to engage with the lecture online. These sessions are also recorded and made available with other learning resources on CloudDeakin, Deakin’s learning environment. Online collaborative and communication tools will also be used across many units enabling off-campus students to engage with the Faculty and peers. Students enrolled in off-Campus mode are welcome to attend on-Campus classes anytime and academic staff are available for consultation online or on-Campus.

Each unit of study is divided into three modules with each module delivered over three weeks. This delivery model limits on-campus attendance to three 3-week blocks and also gives students dedicated time during the Trimester to consolidate knowledge and complete assignments. There are no exams – most units of study will have a mix of individual and group assignments.

THE DEAKIN PROGRAM