Graduate Diploma in Data Science
Welcome to the world of big data

The rise of big data has changed the way organisations do business. From data curation and management to processing and analysis – data scientists play a vital role in helping organisations understand massive amounts of data to get the information to solve real-world business problems. At Monash Online, we offer a Graduate Diploma in Data Science that puts you at the forefront of this exciting field through our world-class learning experience.

A unique online learning experience

- **100% online**: The Graduate Diploma in Data Science can be completed entirely online, so you can study around your schedule.
- **Dedicated support**: Get even more out of courses by connecting in real time with instructors and peers to share ideas and feedback.
- **Start straight away**: With six intakes throughout the year you can virtually start whenever you’re ready, helping you to get your qualification sooner.
- **Accelerated learning**: Monash Online is structured to help you obtain a fully accredited qualification sooner with six-week teaching periods, one unit at a time.

A world-class education

- **Top 100 university**: Monash University is 70th in the overall QS World University Ranking and ranked 83rd by the Times Higher Education World University Rankings (2014-15), so you can be confident that your education is among the best in the world.
- **Group of Eight member**: Monash is a founding member of the Group of Eight, a coalition of Australia’s most research-intensive universities. Our dedication to supporting high quality education and research ensures you get a qualification at the forefront of your chosen field.
- **Global reach**: As a Monash graduate, you’ll become a part of our global network of 280,000 alumni, dedicated to lifelong learning.

For more information, contact an enrolment advisor on 1300 652 134
Industry know-how

We are committed and connected to the growth of the data science industry. From data mining and visualisation and machine learning, to organisational and social informatics - the Faculty of IT explore all facets of this burgeoning field.

- Monash University is the largest academic Machine Learning & Data Mining group in the APAC region. We have a long history in the field. For instance, our academics co-ordinated the Encyclopedia of Machine Learning.
- The data science professors at Monash University are involved in key industry publications such as: WIREs Data Mining and Knowledge Discovery; Knowledge and Information Systems; Information Communication and Society; and Journal of Machine Learning Research.
- We have a Centre for Data Science, led by Professor Geoff Webb. He is an internationally recognised expert with established industry links, and is the programme chair of the KDD 2015 Conference – the premier academic conference for knowledge discovery and data mining.
- Monash is the largest academic Digital Curation & Social Informatics group in the APAC region – most recently hosting the Australian National Data Service (ANDS).

Career outlook

An estimated 2.5 billion quintillion bytes of data is created every day\(^1\), and companies around the world are eagerly searching for experts to manage this huge amount of information. From technology startups to global organisations, data scientists help companies investigate and analyse data to address real business problems as well as hard science.

As a Monash graduate, you will not only be equipped with the technical knowledge to impact business problems; you will also gain the skills to effectively communicate complex ideas at all levels.

\(^1\) IBM Research, 2015

Graduate Diploma in Data Science

Course code: C5003

Teaching periods: January, March, May, July, August, November

Duration: 1.4 years

Fees: 2017 domestic fee is $3,787.50 per unit (Fee-Help may be applicable)

Total number of units: 8
The Graduate Diploma in Data Science will put your analytical thinking and problem solving to the test. Whether you’ve developed your talent for understanding data through statistics, analytics, finance or economics, engineering, mathematics or physics – you will broaden the depth and creativity of your data analysis.

- Course lecturers have a wealth of experience across the broad data science field, including intelligent systems and probabilistic reasoning.
- The course offers a unique blend of machine learning, visualisation and digital curation that forms the core of the degree.
- Core statistical and computing theory is combined with experience on real industry tools and business problems.

Throughout the degree, you will cover the following units to make a total of 48 credit points.

<table>
<thead>
<tr>
<th>Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foundation Units (up to two)</strong></td>
</tr>
<tr>
<td>FIT9133 - Programming foundations in Python</td>
</tr>
<tr>
<td>FIT9132 - Introduction to Databases</td>
</tr>
<tr>
<td>MAT9004 - Mathematical Foundations for Data Science</td>
</tr>
<tr>
<td><strong>Core Units</strong></td>
</tr>
<tr>
<td>FITS145 - Introduction to Data Science</td>
</tr>
<tr>
<td>FITS196 - Data Wrangling</td>
</tr>
<tr>
<td>FITS197 - Modelling for Data Analysis</td>
</tr>
<tr>
<td><strong>Elective Units (three to five units)</strong></td>
</tr>
<tr>
<td>FITS146 - Data Curation and Management</td>
</tr>
<tr>
<td>FITS147 - Data Exploration and Visualisation</td>
</tr>
<tr>
<td>FITS148 - Distributed Databases and Big Data</td>
</tr>
<tr>
<td>FITS149 - Applied Data Analysis</td>
</tr>
<tr>
<td>FITS201 - Data Analysis Algorithms</td>
</tr>
<tr>
<td>FITS202 - Data Processing for Big Data</td>
</tr>
</tbody>
</table>

**Entry requirements**

For entry to the Graduate Diploma in Data Science, you will need to prove work experience or previous study in programming, databases or mathematics. This can be done if you possess:

- A bachelor’s degree in a cognate field at a recognised Australian institution

If you do not meet the course requirements but have a related bachelor’s degree or work experience, you can complete a maximum of two Foundation Units prior to commencing your core studies:

- A bachelor’s degree in business, engineering or science with at least one completed unit in Mathematics, plus two Foundation Units (Programming and Databases) or
- A non-cognate Grad Dip or Masters (example MBA) in any field at a recognised Australian institution and two years of professional experience in programming or databases, plus up to two Foundation Units in an area not related to your experience.

Minimum entrance requirements for admission to Monash University Australia also apply.

**How to apply:**

1) Create an account at: https://applicant.connect.monash.edu/connect/webconnect
2) Upload the following documents to support your application
   - Evidence of all previous tertiary study
   - Proof of citizenship/permanent residency with photo ID
   - Your CV
   - A statement of purpose
3) Obtain certified hard copies of all the above documents

If you have any questions, please contact your Monash Online enrolment advisor at admissions.online@monash.edu or call 1300 652 134

All information contained in this document is current at time of publication. Monash University reserves the right to alter this information at any time – please check the Monash University website for updates (www.monash.edu.au). Published December 2015.