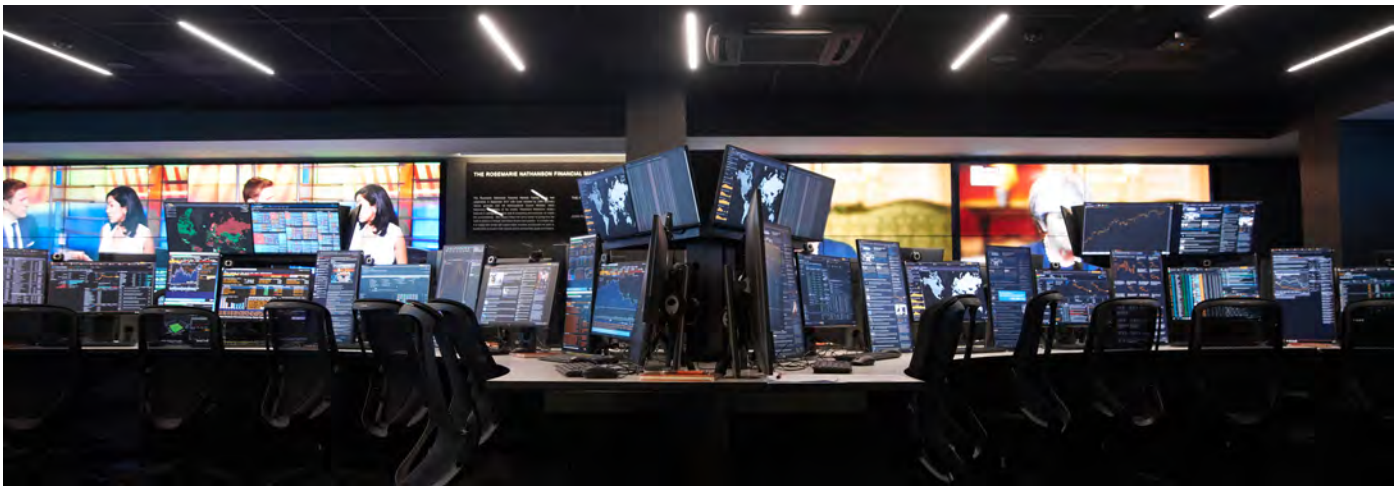
THE UNIVERSITY OF WESTERN AUSTRALIA

Data literacy skills

for business leaders

UWA Business School



In this course you will develop broad skills in the areas of data fundamentals, data analysis, data visualisation, data storytelling, and business decisions.

Why study with us

The UWA Business School is a world top 100 business school and one of the premier business schools in the Asia-Pacific region.*

We use world-class teaching, thought-leading research and corporate associations to provide real-world experience, hands-on learning and industry networking, giving students a career edge in their field.

We are one of only eight institutions in Australia to hold international accreditation from both EQUIS (the European Quality Improvement System) and AACSB (the Association to Advance Collegiate Schools of Business). This ensures our degrees are recognised by employers worldwide, and guarantees the quality of our teaching, research and other operational areas.

Deeply connected to industry

The UWA Business School has a network of more than 30 industry and corporate supporters including Wesfarmers, Woodside, KPMG, HBF, Chevron, the Reserve Bank, and many more.

Business School Board

Our Business School courses are influenced by a board of industry leaders who ensure content remains current and students are prepared for their chosen career when entering the workforce as well as giving a key insight into what employers are looking for when hiring graduates.

Chaired by Dr Diane Smith-Gander AO (AGL), the UWA Business School Board includes Jimmy Wilson (CBH Group), Dr Mark Barnaba AM (Reserve Bank of Australia), and Greg Lilleyman (Fortescue Metals Group). The data analytics board has industry experts from relevant disciplines and sectors important to the WA economy.

*Top 100 in Accounting and Finance (QS 2020) and for careers in consulting (QS MBA Career Specialisation Rankings 2021).

Data Fundamentals

Today's businesses have an increasing need to make sense of the large quantities of structured and unstructured data that are generated. Understanding how to integrate large and complex data sets, and how to transform such data into meaningful insights and actions, is vital for business success.

Fundamental skills are provided to progress in data analytics. Participants are able to identify business opportunities where quantitative analysis is beneficial, gain practical experience in the use of different sophisticated analytical tools and techniques, and identify appropriate analytical methods for business situations.

- Recognise situations and opportunities where complex quantitative analysis will contribute to business innovations and decisions.
- Identify appropriate analytical approaches to enhance business operations and opportunities in the broad areas of accounting and finance, economics, marketing, and management.
- Analyse large and complex data sets using sophisticated analytical tools and techniques (such as R, Python).

Data Analysis

Business analysts equipped with basic programming skills will have greater awareness of the complexities of managing large data sets, the ability to converse with other technical experts (such as computer scientists), and the capacity to make meaning of the output given their business expertise.

Foundational programming concepts are taught and applied to business examples. Participants will engage with general-purpose programming languages (such as Python) to write basic programs, integrate data sets, analyse and manage data.

- Understand basic types of algorithms and the benefits of programs for automating various tasks.
- Develop, practise, test, and validate programs, understand how to avoid common coding errors, and perform individual and team program reviews.
- Use, implement, and evaluate fundamental data structures and associated algorithms.
- Create, implement, debug, and evaluate algorithms for solving business problems.

Data Storytelling

Data storytelling is the ability to provide informative, engaging and impactful explanations of the data analysis that are relevant to the audience.

This topic provides key competences to effectively present data and findings to a business audience. Participants will be able to identify appropriate data visualisations for different types of data, gain practical experience in the use of different sophisticated analytical tools and techniques to visualise and analyse data, and communicate analytical findings efficiently, effectively and in a non-technical way.

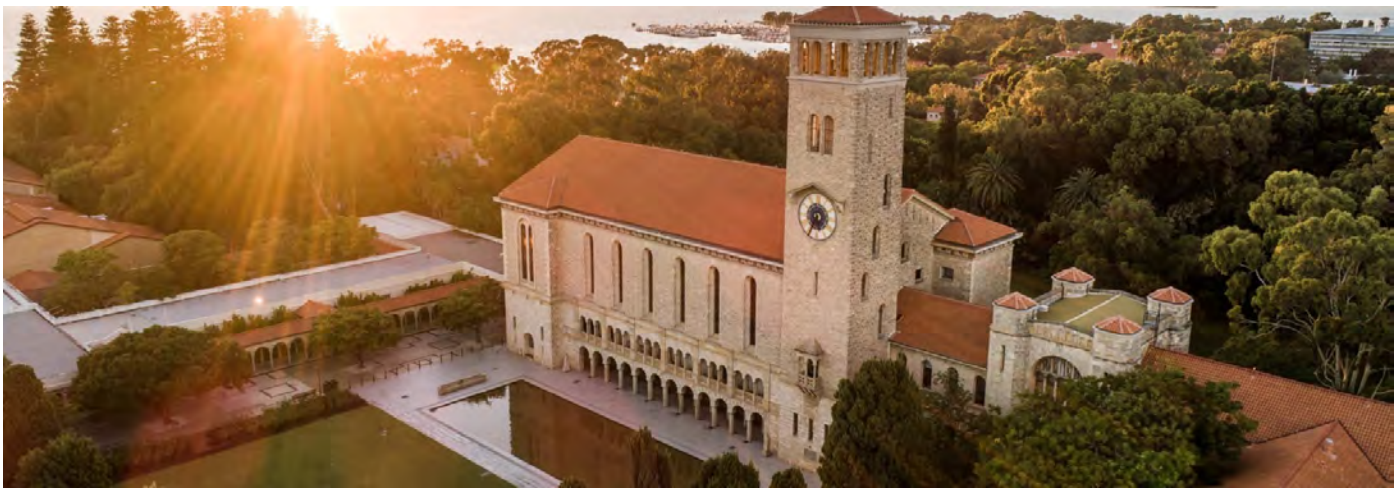
- Identify suitable data visualisations for various data types and sources.
- Produce high-quality data visuals (graphs, maps, dashboards, scorecards, interactive visuals) using a range of software packages (such as Tableau, PowerBI).
- Critically appraise data visualisations based on principles of graphical excellence.
- Demonstrate effective communication skills (verbal and written).

Business Decisions

To inform strategic decisions, and remain competitive, businesses must leverage the insights contained in the large volumes of data produced both within the business and in the broader business environment.

This topic focuses on translating key findings into action aligned to the business environment and business audience. Participants will be able to communicate analytical findings in a non-technical way, and translate these findings into business actions.

- Communicate complex analytical ideas and findings in a meaningful and easily understood way for a broad business audience.
- Communicate technical findings to non-technical audiences.
- Integrate business analytics into multiple levels of decision making (strategic, tactical, operational).



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