Overview

Database management systems (DBMSs) provide essential infrastructure for handling the large volumes of data required by modern enterprises: corporate, government, scientific and educational. How database systems are applied can critically affect the success of an organisation. In the future, the management of very large volumes of organisational data will be an essential component of the livelihood and growth of every organisation.

Since databases are so widely used, potential employers include any organisation that relies on the effective management of data. Obvious examples of large organisations with significant data management needs are financial institutions, telecommunications companies, manufacturing enterprises, and government departments. However, employment is not limited to such organisations, since data management is also critical in medium and small enterprises, such as scientific research labs and small businesses.

The Database Systems stream in the Computer Science program exposes students both to the foundations of DBMS architecture (essential knowledge for database administrators) as well as to the principles behind leading edge applications of databases, such as e-Commerce, data warehousing, and data mining.
<table>
<thead>
<tr>
<th><strong>Faculty</strong></th>
<th>Faculty of Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School</strong></td>
<td>School of Computer Science and Engineering</td>
</tr>
<tr>
<td><strong>Study Level</strong></td>
<td>Undergraduate</td>
</tr>
<tr>
<td><strong>Minimum Units of Credit</strong></td>
<td>96</td>
</tr>
<tr>
<td><strong>Specialisation Type</strong></td>
<td>Major</td>
</tr>
</tbody>
</table>
Available in Program(s)

Program(s) in which this major is available

Bachelor of Science - BSc
3778 Computer Science
Faculty: Faculty of Engineering
Campus: Kensington
Units of Credit: 144
Typical Duration: 3 Years
**Specialisation Structure**

Students must complete 96 UOC.

**Core Courses**

Students must take 72 UOC of the following courses.

- **COMP1511 | 6 UOC**
  Programming Fundamentals

- **COMP1521 | 6 UOC**
  Computer Systems Fundamentals

- **COMP1531 | 6 UOC**
  Software Engineering Fundamentals

- **COMP2511 | 6 UOC**
  Object-Oriented Design & Programming

- **COMP2521 | 6 UOC**
  Data Structures and Algorithms

- **COMP3311 | 6 UOC**
  Database Systems

- **COMP3900 | 6 UOC**
  Computer Science Project

- **COMP4920 | 6 UOC**
  Management and Ethics

- **MATH1081 | 6 UOC**
  Discrete Mathematics

One of the following:
MATH1131 | 6 UOC
Mathematics 1A

MATH1141 | 6 UOC
Higher Mathematics 1A

One of the following:
MATH1231 | 6 UOC
Mathematics 1B

MATH1241 | 6 UOC
Higher Mathematics 1B

One of the following:
COMP3121 | 6 UOC
Algorithms and Programming Techniques

COMP3821 | 6 UOC
Extended Algorithms and Programming Techniques

Computing Elective

Students must complete 6 UOC of Computing courses (COMP3xxx or higher)

- any level 3 Computer Science course
- any level 4 Computer Science course
- any level 6 Computer Science course
- any level 9 Computer Science course

Database Systems Prescribed Electives

Students must take at least 18 UOC of the following courses.

COMP6714 | 6 UOC
Information Retrieval and Web Search
<table>
<thead>
<tr>
<th>Course Code</th>
<th>UOC</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP9313</td>
<td>6</td>
<td>Big Data Management</td>
</tr>
<tr>
<td>COMP9315</td>
<td>6</td>
<td>Database Systems Implementation</td>
</tr>
<tr>
<td>COMP9318</td>
<td>6</td>
<td>Data Warehousing and Data Mining</td>
</tr>
<tr>
<td>COMP9319</td>
<td>6</td>
<td>Web Data Compression and Search</td>
</tr>
</tbody>
</table>

**Enrolment Disclaimer**

Unless advised otherwise by your program authority, you should follow the rules for the handbook for the year you commenced your program. You are also responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements.
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
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Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179