Students who have completed degree studies in a non-cognate area, or equivalent as recognised by the School, must complete relevant conversion units up to the value of 24 points, as advised by the School.

 *unit is available in Semester 1 and Semester 2.*

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| **Year 1** |
| *Semester 1,**2024* | **CITS1401**Computational Thinking with Python**Note: Conversion Unit** | **STAT2401**Analysis of Experiments**Note: Conversion Unit** | **CITS4407**Open Source Tools and Scripting*Advisable prior study: CITS1401 or equivalent* | **OPTION** |
| *Semester 2,**2024* | **CITS1402**Relational Database Management Systems**Note: Conversion Unit** | **STAT2402**Analysis of Observations**Note: Conversion Unit** | **CITS4009**Computational Data Analysis | **OPTION** |
| **Year 2** |
| *Semester 1,**2025* | **CITS5504**Data Warehousing*Prereq: (CITS1401 AND CITS1402) OR (BUSN5101 AND INMT5526)* | **CITS5508**Machine Learning*Prereq: CITS1401 OR BUSN5101* | **STAT4064**Applied Predictive Modelling*Prereq: (STAT2401 and STAT2402) or STAT2062* | **OPTION** |
| *Semester 2,**2025* | **CITS5553**Data Science Capstone Project*Prereq: 24 points of L4/L5 units* | **STAT4066**Bayesian Computing and Statistics*Prereq: (STAT2401 and STAT2402) or STAT2062* | **CITS4012**Natural Language Processing*Prereq: CITS1401* | **OPTION** |

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| **Optional Units:** Students take units to the value of 24 points, including a minimum of 12 points at Level 5 from this group: |
| **BUSN5003** *Data Storytelling (S1, S2)**Prereq: enrolment in Master of Data Science.* | **GENG5505** Project Management and Engineering Practice (S1, S2)*Advisable prior study: ENSC1003.* |
| **CITS4402** *Computer Vision (S1)**Prereq: (CITS2401 or CITS1401) and MATH1012 (Note: Students must have the ability to program in a high-level programming language and the ability to reason in linear algebra and calculus).* | **INMT5526** Business Intelligence (S2)*Prereq: INMT5518 or BUSN5002 or BUS5101 or equivalent.* |
| **CITS4403** *Computational Modelling (S2)* – Not offered in 2024 | **MGMT5504** Data Analysis and Decision Making (S1, S2) |
| **CITS4404** Artificial Intelligence and Adaptive Systems (S1)*Prereq: (CITS1401 + CITS4009) or CITS2005 or CITS2002 or CITS2402 or ELEC3020.* | **PHYS4021** Frontiers in Quantum Computation (S1)*Prereq: MATH1012 or equivalent or higher.* |
| **CITS4419** Mobile and Wireless Computing (S1)*Prereq: 96 points and CITS3002 Computer Networks.* | **PUBH4401** Biostatistics I (S1, S2)*Advisable prior study: knowledge of basic algebra, familiarity with handheld calculators and familiarity with computing in the Windows environment.* |
| **CITS5014** Data Science Research Project Part 1 (S1, S2)*Prereq: 24 points of L4/L5 CITS and STAT units completed within the course with the equivalent of a UWA weighted average mark (WAM) of at least 70 percent across all Level 4/Level 5 CITS and STAT units completed. Note: Enrolment in the Data Science Research Project is by invitation only.* | **PUBH5769** Biostatistics II (S2)*Prereq: PUBH4401.**Advisable prior study: knowledge of basic algebra, familiarity with handheld calculators and familiarity with computing in the Windows environment.* |
| **CITS5015** Data Science Research Project Part 2 (S1, S2)*Prereq: CITS5014.* | **PUBH5785** Introductory Analysis of Linked Health Data (NSTP)*Advisable prior study: knowledge of basic algebraic equations and formulae, familiarity with handheld calculators and familiarity with computing in the Windows environment.* |
| **CITS5503** Cloud Computing (S2)*Prereq: CITS2002 OR CITS2005 OR CITS2200 OR CITS2402 OR (CITS1401 AND CITS4009) OR (BUSN5101 AND BUSN5002).* | **PUBH5802** Advanced Analysis of Linked Health Data (NA)*Prereq: PUBH5785 or equivalent training/experience.* |
| **CIT5505** Agile Web Development (S1)*Advisable prior study: CITS1401 and familiarity with the contents of CITS1402.* | **STAT4063** Computationally Intensive Methods in Statistics (S2)*Prereq: STAT3062 or STAT4064.* |
| **CIT5506** The Internet of Things (S2)*Advisable prior study: CITS1401.* | **STAT4065** Multilevel and Mixed-Effects Modelling (S1)*Prereq: (STAT2401 and STAT2402) or STAT2062.* |
| **CIT5507** High Performance Computing (S2)*Prereq: (CITS1401 + CITS4009) or CITS2005 or CITS2002 or CITS2200.* | **STAT5061** Statistical Data Science (S2)*Prereq: STAT2401 and STAT2402 or STAT2062.* |
| **CITS5017** Deep Learning (S2)*Prereq: CITS5508.* |  |

**Optional Specialisation Streams:**

If you prefer some level of coherence between the optional units, we suggest the following streams:

* **Business Intelligence Stream:** CITS5505 Agile Web Development; GENG5505 Project Management and Engineering Practice; INMT5526 Business Intelligence and MGMT5504 Data Analysis and Decision Making.
* **Population Health Stream:** PUBH4401 Biostatistics I; PUBH5769 Biostatistics II; PUBH5785 Introductory Analysis of Linked Health Data and PUBH5802 Advanced Analysis of Linked Health Data.
* **Advanced Statistics Stream + Research:** Data Science Research Project Part 1 and 2 [12 Points] and 12 points from: STAT4063 Computationally Intensive Methods in Statistics; STAT4065 Multilevel and Mixed-Effects Modelling; STAT5061 Statistical Data Science.
* **Artificial Intelligence Stream + Research:** Data Science Research Project Part 1 and 2 [12 Points] and 12 points from: CITS4402 Computer Vision; CITS4403 Computational Modelling; CITS4404 Artificial Intelligence and Adaptive Systems; CITS5507 High Performance Computing, CITS5017 Deep Learning.
* **Systems Stream + Research:** Data Science Research Project Part 1 and 2 [12 Points] and 12 points from: CITS4419 Mobile and Wireless Computing; CITS5506 The Internet of Things; CITS5507 High Performance Computing.

The Rules for the 62530 Master of Data Science can be found at: [**handbooks.uwa.edu.au/coursedetails?id=c1407#rules**](https://handbooks.uwa.edu.au/coursedetails?id=c1407&rules)

All units have a value of six points unless otherwise stated.

Information about unit availability should be checked at the beginning of each semester and can be found at: [**timetable.uwa.edu.au**](http://www.timetable.uwa.edu.au/) or [**Handbook**s.](https://handbooks.uwa.edu.au/) **Further Help!**

Refer to the UniStart website for your step-by-step guide on planning your enrolment: [**uwa.edu.au/unistart**.](https://www.uwa.edu.au/unistart) If you need to discuss your study plan further, please contact the

EMS Student Service and Engagement Office: **enquiries-ems@uwa.edu.au**