

MASTER OF ARTIFICIAL INTELLIGENCE (3765)

Approved Abbreviation: MArtifIntel

Western Sydney University Program Code: 3765

AQF Level: 9

CRICOS Code: 0101783

This program applies to students who commenced in 2022 or later.

Students should follow the program structure for the session start date relevant to the year they commenced.

Commencement 2020 - 3765.1 Master of Artificial Intelligence (<https://handbook.westernsydney.edu.au/hbook/course.aspx?course=3765.1>)

The Master of Artificial Intelligence provides students with a broad range of Artificial Intelligence (AI) topics ranging from foundations to state-of-the-art technologies and applications. Students will learn how AI is driving digital disruption, how to work in this dynamic and fast evolving field, and how it is changing every facet of life and society. This course focuses on the most important and up to date AI topics and trends including but not limited to: intelligent agents, machine learning, knowledge representation and reasoning, natural language understanding and processing, AI ethics and governance as well as relevant specialisation areas in computing and data sciences.

Early Exits

Students may exit this program on completion of 40 credit points with a 3767 Graduate Certificate in Artificial Intelligence (exit only) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/graduate-certificate-artificial-intelligence-exit-only/>) or on completion of 80 credit points with a 3766 Graduate Diploma in Artificial Intelligence (exit only) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/graduate-diploma-artificial-intelligence-exit-only/>)

Study Mode

Two years full-time or four years part-time.

Program Advice

Professor Yan Zhang (Yan.Zhang@westernsydney.edu.au)

Prospective students should visit the following websites for general enquiries about this program.

Enquire about this program (<https://enquiry.westernsydney.edu.au/courseenquiry/>) | Local Admission (<https://www.westernsydney.edu.au/future/>) | International Admission (<https://www.westernsydney.edu.au/international/home/apply/admissions/>) |

Location

| Campus | Attendance | Mode | Advice |
|-----------------------------------|------------|----------|-----------|
| Parramatta Campus - Victoria Road | Full Time | Internal | See above |
| Parramatta Campus - Victoria Road | Part Time | Internal | See above |
| ATMC-Melbourne | Full Time | Internal | See above |

Accreditation Note

Accreditation of the Master of Artificial Intelligence will be sought from the Australian Computer Society in 2022 to coincide with the

completion of the degree by the first cohort of graduates. The program is designed to meet the guidelines of the Australian Computer Society.

Work Integrated Learning

Western Sydney University seeks to enhance student learning experiences by enabling students to engage in the culture, expectations and practices of their profession or discipline. This program includes a placement or other community-based unpaid practical experience.

There is a mandatory work component required for completion of this program. Please contact the Program Advisor listed above for information.

International students should also refer to the link below for more information and a link to the Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS).

Work Integrated Learning (WIL) for international students (https://www.westernsydney.edu.au/currentstudents/current_students/services_and_facilities/international_student_support/working_in_australia/work_integrated_learning/)

Admission

Minimum admission requirements to this course are:

- Undergraduate degree in Information Technology, Information Systems or Computer Science or equivalent. Degrees in other disciplines containing at least 8 units in Information Technology or other relevant disciplines such as data science, engineering, communications technology, may also be eligible.
- Undergraduate degree in any discipline AND at least one year full time equivalent work experience in Information Technology, Information Systems or Computer Science or other relevant work experience OR
- Graduate Certificate in Information Technology Information Systems or Computer Science or equivalent OR
- Graduate Diploma in any discipline AND at least two years full time equivalent in Information Technology, Information Systems or Computer Science or other relevant work experience

Additional Information

Applications from Australian and New Zealand citizens and holders of permanent resident visas may be made via the Universities Admissions Centre (UAC) or directly through the Western Portal. Use the links below to apply via UAC or Western Sydney University. Applications made directly to Western Sydney do not have an application fee.

<http://www.uac.edu.au/>
<https://westernsydney.uac.edu.au/ws/>

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to the University should also use the information provided on the UAC website.

<http://www.uac.edu.au/>

All other International applicants must apply directly to the University via the International Office.

International students applying to the University through the International Office can find details of minimum English proficiency requirements and acceptable proof on their website.

International Office (<http://www.westernsydney.edu.au/international/>)

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and Western Sydney University.

Program Structure

If you commenced in Spring 2023 or later please refer to the Spring 2023 tabs for details.

Students must complete twelve 10 credit point core subjects (total of 120 credit points).

| Subject | Title | Credit Points |
|-----------|--|---------------|
| INFO 7002 | Advanced Topics in Artificial Intelligence | 10 |
| INFO 7015 | Applied Cybersecurity | 10 |
| COMP 7019 | Applied Machine Learning | 10 |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10 |
| COMP 7003 | Big Data | 10 |
| COMP 7007 | Information Security Management | 10 |
| COMP 7021 | Knowledge Representation and Reasoning | 10 |
| COMP 7022 | Natural Language Understanding | 10 |
| COMP 7013 | Network Technologies | 10 |
| INFO 7016 | Postgraduate Project A | 10 |
| INFO 7017 | Postgraduate Project B | 10 |
| COMP 7016 | Visualisation | 10 |

Additional Requirement

| Subject | Title | Credit Points |
|-----------|---------------|---------------|
| INFO 7004 | ICT Practicum | 0 |

Students must also choose between a program-specific testamur major, or complete 40 credit points of subjects selected from any major for a generic award (total 40 credit points).

Cybersecurity, Testamur Major (T003) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/cybersecurity-pg-testamur-major/>)

Data Analytics, Testamur Major (T004) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/data-analytics-pg-testamur-major/>)

Digital Futures, Testamur Major (T005) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/digital-futures-pg-testamur-major/>)

Networking, Testamur Major (T009) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/networking-pg-testamur-major/>)

Web and Mobile Computing, Testamur Major (T010) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/web-mobile-computing-pg-testamur-major/>)

Recommended Sequence

If you commenced in Spring 2023 or later please refer to the Spring 2023 tabs for details.

Qualification for this award requires the successful completion of 160 credit points which include the subjects listed in the recommended sequence below.

Autumn Intake

| Course | Title | Credit Points |
|-----------------------|--------------------------------|---------------|
| Year 1 | | |
| Autumn session | | |
| COMP 7016 | Visualisation | 10 |
| COMP 7022 | Natural Language Understanding | 10 |
| COMP 7019 | Applied Machine Learning | 10 |
| COMP 7003 | Big Data | 10 |

At this point, students can exit with a Graduate Certificate in Artificial Intelligence

| | |
|----------------------|-----------|
| Credit Points | 40 |
|----------------------|-----------|

| | | |
|-----------------------|--|----|
| Spring session | | |
| COMP 7013 | Network Technologies | 10 |
| INFO 7002 | Advanced Topics in Artificial Intelligence | 10 |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10 |

Select one subject from your Major or one Alternate subject from any specialisation for a generic award.

At this point, students can exit with a Graduate Diploma in Artificial Intelligence

| | |
|----------------------|-----------|
| Credit Points | 40 |
|----------------------|-----------|

| | | |
|-----------------------|---------------------------------|----|
| Year 2 | | |
| Autumn session | | |
| COMP 7007 | Information Security Management | 10 |
| INFO 7016 | Postgraduate Project A | 10 |

Select two subjects from your Major or two Alternate subjects from any specialisation for a generic award.

| | |
|----------------------|-----------|
| Credit Points | 40 |
|----------------------|-----------|

| | | |
|-----------------------|--|----|
| Spring session | | |
| COMP 7021 | Knowledge Representation and Reasoning | 10 |
| INFO 7015 | Applied Cybersecurity | 10 |
| INFO 7017 | Postgraduate Project B | 10 |

Select one subject from your Major or one Alternate subject from any specialisation for a generic award.

| | |
|----------------------|-----------|
| Credit Points | 40 |
|----------------------|-----------|

| | | |
|----------------------------|------------|--|
| Total Credit Points | | |
| Total Credit Points | 160 | |

Additional Requirement

| Subject | Title | Credit Points |
|-----------|---------------|---------------|
| INFO 7004 | ICT Practicum | 0 |

Spring Intake

| Course | Title | Credit Points |
|-----------------------|--|---------------|
| Year 1 | | |
| Spring session | | |
| COMP 7013 | Network Technologies | 10 |
| INFO 7002 | Advanced Topics in Artificial Intelligence | 10 |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10 |

Select one subject from your Major or one Alternate subject from any specialisation for a generic award.

At this point, students can exit with a Graduate Diploma in Artificial Intelligence

| | |
|----------------------|-----------|
| Credit Points | 40 |
|----------------------|-----------|

Autumn session

| | | |
|-----------|--------------------------------|----|
| COMP 7016 | Visualisation | 10 |
| COMP 7022 | Natural Language Understanding | 10 |
| COMP 7019 | Applied Machine Learning | 10 |
| COMP 7003 | Big Data | 10 |

At this point, students can exit with a Graduate Certificate in Artificial Intelligence

| | |
|----------------------|-----------|
| Credit Points | 40 |
|----------------------|-----------|

Year 2**Spring session**

| | | |
|--|--|----|
| COMP 7021 | Knowledge Representation and Reasoning | 10 |
| INFO 7015 | Applied Cybersecurity | 10 |
| INFO 7016 | Postgraduate Project A | 10 |
| Select one subject from your Major or one Alternate subject from any specialisation for a generic award. | | 10 |

| | |
|----------------------|-----------|
| Credit Points | 40 |
|----------------------|-----------|

Autumn session

| | | |
|--|---------------------------------|----|
| COMP 7007 | Information Security Management | 10 |
| INFO 7017 | Postgraduate Project B | 10 |
| Select two subjects from your Major or two Alternate subjects from any specialisation for a generic award. | | 20 |

| | |
|----------------------|-----------|
| Credit Points | 40 |
|----------------------|-----------|

| | |
|----------------------------|------------|
| Total Credit Points | 160 |
|----------------------------|------------|

Additional Requirement

| Subject | Title | Credit Points |
|-----------|---------------|---------------|
| INFO 7004 | ICT Practicum | 0 |

Alternate Subjects for Generic Award

| Subject | Title | Credit Points |
|-----------|--|---------------|
| INFO 7014 | Advanced Topics in Cybersecurity | 10 |
| COMP 7002 | Advanced Topics in Networking | 10 |
| INFO 7003 | Advanced Topics in User System Interaction | 10 |
| COMP 7004 | Cloud Computing | 10 |
| INFO 7018 | Cloud Systems Development | 10 |
| HUMN 7012 | Cyber Justice (PG) | 10 |
| COMP 7006 | Data Science | 10 |
| COMM 7003 | Foundations of Media Arts Production (PG) | 10 |
| CULT 7004 | Global Digital Futures | 10 |
| COMP 7008 | Internet of Things | 10 |
| COMP 7009 | Mobile Computing | 10 |
| COMM 7009 | Mobile Media | 10 |
| COMP 7011 | Multimedia Communication Systems | 10 |
| COMP 7024 | Programming for Data Science | 10 |
| COMM 7011 | Researching Convergent Media | 10 |
| COMP 7025 | Social Media Intelligence | 10 |
| INFS 7006 | Software Testing and Automation | 10 |
| INFS 7008 | Systems and Network Security | 10 |
| MATH 7016 | The Nature of Data | 10 |
| COMP 7017 | Wireless Networking | 10 |
| INFO 7013 | Web Engineering | 10 |

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.

MATH 7011 Predictive Analytics, replaced by COMP 7023 Predictive Analytics

Specialisations

Cybersecurity, Testamur Major (T003) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/cybersecurity-pg-testamur-major/>)

Data Analytics, Testamur Major (T004) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/data-analytics-pg-testamur-major/>)

Digital Futures, Testamur Major (T005) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/digital-futures-pg-testamur-major/>)

Networking, Testamur Major (T009) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/networking-pg-testamur-major/>)

Web and Mobile Computing, Testamur Major (T010) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/web-mobile-computing-pg-testamur-major/>)

Exit Awards

Students may exit with the 3766 - Graduate Diploma in Artificial Intelligence (80 credit points) or 3767 - Graduate Certificate in Artificial Intelligence (40 credit points) on completion of the relevant subjects as specified in the program structure. Please refer to the links below for details.

Graduate Diploma in Artificial Intelligence (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/graduate-diploma-artificial-intelligence-exit-only/>)

Graduate Certificate in Artificial Intelligence (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/graduate-certificate-artificial-intelligence-exit-only/>)

Replaced Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2020 or earlier.

Core subjects

ENGR 7014 Master Project 1, no longer offered as part of this program
ENGR 7015 Master Project 2, no longer offered as part of this program

Program Structure

This structure applies to students who commenced in Spring 2023 or later. If you commenced prior to Spring 2023 please refer to the Structure 2022 - Autumn 2023 tab for details.

Students must complete twelve (10 credit points) core units (total of 120 cps).

| Subject | Title | Credit Points |
|-----------|--|---------------|
| INFO 7002 | Advanced Topics in Artificial Intelligence | 10 |
| INFO 7015 | Applied Cybersecurity | 10 |
| COMP 7019 | Applied Machine Learning | 10 |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10 |
| COMP 6003 | Computer Vision | 10 |
| COMP 7007 | Information Security Management | 10 |
| COMP 7021 | Knowledge Representation and Reasoning | 10 |
| COMP 7022 | Natural Language Understanding | 10 |

| | | |
|-----------|------------------------|----|
| COMP 7013 | Network Technologies | 10 |
| INFO 7016 | Postgraduate Project A | 10 |
| INFO 7017 | Postgraduate Project B | 10 |
| COMP 7016 | Visualisation | 10 |

Total Credit Points 120

Additional Requirements

| Subject | Title | Credit Points |
|-----------|---------------|---------------|
| INFO 7004 | ICT Practicum | 0 |

Students must also choose between a specialisation-specific award or complete 40 credit points of units selected from any specialisation for a generic award (total 40cps).

Cybersecurity, Testamur Major (T003) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/cybersecurity-pg-testamur-major/>)

Data Analytics, Testamur Major (T004) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/data-analytics-pg-testamur-major/>)

Digital Futures, Testamur Major (T005) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/digital-futures-pg-testamur-major/>)

Networking, Testamur Major (T009) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/networking-pg-testamur-major/>)

Web and Mobile Computing, Testamur Major (T010) (<https://hbook.westernsydney.edu.au/archives/2022-2023/majors-minors/web-mobile-computing-pg-testamur-major/>)

Recommended Sequence

This sequence applies to students who commenced in Spring 2023 or later. If you commenced prior to Spring 2023 please refer to the Sequence 2022 - Autumn 2023 tab for details.

Qualification for this award requires the successful completion of 160 credit points as per the recommended sequence below.

Autumn Intake

| Course | Title | Credit Points |
|-----------------------|--------------------------------|---------------|
| Year 1 | | |
| Autumn session | | |
| COMP 7016 | Visualisation | 10 |
| COMP 7022 | Natural Language Understanding | 10 |
| COMP 7019 | Applied Machine Learning | 10 |
| COMP 7013 | Network Technologies | 10 |

At this point, students can exit with a Graduate Certificate in Artificial Intelligence

Credit Points 40

Spring session

| | | |
|-----------|--|----|
| COMP 6003 | Computer Vision | 10 |
| INFO 7002 | Advanced Topics in Artificial Intelligence | 10 |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10 |

Select one subject from your Major or one Alternate subject from any specialisation for a generic award.

At this point, students can exit with a Graduate Diploma in Artificial Intelligence

Credit Points 40

Year 2

Autumn session

| | | |
|-----------|---------------------------------|----|
| COMP 7007 | Information Security Management | 10 |
| INFO 7016 | Postgraduate Project A | 10 |

Select two subjects from your Major or two Alternate subjects from any specialisation for a generic award.

Credit Points 40

Spring session

| | | |
|-----------|--|----|
| COMP 7021 | Knowledge Representation and Reasoning | 10 |
| INFO 7015 | Applied Cybersecurity | 10 |
| INFO 7017 | Postgraduate Project B | 10 |

Select one subject from your Major or one Alternate subject from any specialisation for a generic award.

Credit Points 40

Total Credit Points 160

Additional Requirement

| Subject | Title | Credit Points |
|-----------|---------------|---------------|
| INFO 7004 | ICT Practicum | 0 |

Spring Intake

| Course | Title | Credit Points |
|--------|-------|---------------|
|--------|-------|---------------|

Year 1

Spring session

| | | |
|-----------|--|----|
| COMP 6003 | Computer Vision | 10 |
| INFO 7002 | Advanced Topics in Artificial Intelligence | 10 |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10 |

Select one subject from your Major or one Alternate subject from any specialisation for a generic award.

At this point, students can exit with a Graduate Diploma in Artificial Intelligence

Credit Points 40

Autumn session

| | | |
|-----------|--------------------------------|----|
| COMP 7016 | Visualisation | 10 |
| COMP 7022 | Natural Language Understanding | 10 |
| COMP 7019 | Applied Machine Learning | 10 |
| COMP 7013 | Network Technologies | 10 |

At this point, students can exit with a Graduate Certificate in Artificial Intelligence

Credit Points 40

Year 2

Spring session

| | | |
|-----------|--|----|
| COMP 7021 | Knowledge Representation and Reasoning | 10 |
| INFO 7015 | Applied Cybersecurity | 10 |
| INFO 7016 | Postgraduate Project A | 10 |

Select one subject from your Major or one Alternate subject from any specialisation for a generic award.

Credit Points 40

Autumn session

| | | |
|-----------|---------------------------------|----|
| COMP 7007 | Information Security Management | 10 |
| INFO 7017 | Postgraduate Project B | 10 |

| | |
|--|------------|
| Select two subjects from your Major or two Alternate subjects from any specialisation for a generic award. | 20 |
| Credit Points | 40 |
| Total Credit Points | 160 |

Graduate Diploma in Artificial Intelligence (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/graduate-diploma-artificial-intelligence-exit-only/>)

Graduate Certificate in Artificial Intelligence (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/graduate-certificate-artificial-intelligence-exit-only/>)

Additional Requirement

| Subject | Title | Credit Points |
|-----------|---------------|---------------|
| INFO 7004 | ICT Practicum | 0 |

Alternate Subjects for Generic Award

| Subject | Title | Credit Points |
|-----------|--|---------------|
| INFO 7014 | Advanced Topics in Cybersecurity | 10 |
| COMP 7002 | Advanced Topics in Networking | 10 |
| INFO 7003 | Advanced Topics in User System Interaction | 10 |
| COMP 7004 | Cloud Computing | 10 |
| INFO 7018 | Cloud Systems Development | 10 |
| HUMN 7012 | Cyber Justice (PG) | 10 |
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| CULT 7004 | Global Digital Futures | 10 |
| COMP 7008 | Internet of Things | 10 |
| COMP 7009 | Mobile Computing | 10 |
| COMM 7009 | Mobile Media | 10 |
| COMP 7011 | Multimedia Communication Systems | 10 |
| COMP 7024 | Programming for Data Science | 10 |
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| INFS 7006 | Software Testing and Automation | 10 |
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| MATH 7016 | The Nature of Data | 10 |
| COMP 7017 | Wireless Networking | 10 |
| INFO 7013 | Web Engineering | 10 |

Specialisations

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