

# MASTER OF INFORMATION AND COMMUNICATIONS TECHNOLOGY/MASTER OF DATA SCIENCE (3780)

Western Sydney University Program Code: 3780

AQF Level: 9

CRICOS Code: 110877J

This program applies to students who commenced in 2021 or later.

The Master of Information and Communications Technology/Master of Data Science is an attractive double degree that provides students with a significant advantage in a growing information technology and data driven world. Combining Information and Communications Technology (ICT) with Data Science will ensure students have an innovative skillset to apply to issues at the intersection of traditional and emerging disciplines in both fields. Students will be engaged in practical, work integrated learning activities and will be required to complete a work experience component. Employment opportunities include working in data analytics and ICT areas, as a data scientist, data analyst, business analyst, ICT consultant, software engineer, project manager, system administrator, and system developer.

## Early Exit

Students may exit this program on completion of 40 credit points with a 3751 Graduate Certificate in Data Science (<https://hbook.westernsydney.edu.au/archives/2023-2024/programs/graduate-certificate-data-science/>) or on completion of 80 credit points with a 3701 Graduate Certificate in Information and Communications Technology (<https://hbook.westernsydney.edu.au/archives/2023-2024/programs/graduate-certificate-information-communications-technology/>) or a 3750 Graduate Diploma in Data Science (<https://hbook.westernsydney.edu.au/archives/2023-2024/programs/graduate-diploma-data-science/>) or on completion of 120 credit points with a 3700 Graduate Diploma in Information and Communications Technology (<https://hbook.westernsydney.edu.au/archives/2023-2024/programs/graduate-diploma-information-communications-technology/>)

## Study Mode

Three years full-time or six years part-time.

## Program Advice

Program Advice (CDMS@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 |

## Accreditation

Master of Information and Communications Technology / Master of Data Science is accredited at Professional Level by 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/](https://www.westernsydney.edu.au/currentstudents/current_students/services_and_facilities/international_student_support/working_in_australia/work_integrated_learning/))

## Admission

### Admission 2021 - 2022

This course has three Pathways (A, B and C) that vary in length and structure based on previous study.

#### Pathway A

Applicants must have successfully completed an undergraduate degree in a discipline other than computing, ICT or information systems.

#### Pathway B

Applicants must have successfully completed a Bachelors Honours or a Master qualification in a discipline other than computing, ICT or information systems.

#### Pathway C

Applicants must have successfully completed an undergraduate degree or higher in computing, ICT or information systems.

#### Additional information

Applicants seeking admission on the basis of work experience must support their application with a Statement of Service for all work experience listed on the application.

Statement of Service form ([https://www.westernsydney.edu.au/content/dam/digital/pdf/Statement\\_of\\_Service.PDF](https://www.westernsydney.edu.au/content/dam/digital/pdf/Statement_of_Service.PDF))

### Admission 2023

Applicants must have successfully completed:

An undergraduate degree or higher in any discipline

OR

An undergraduate degree in any discipline AND a Graduate Certificate or Graduate Diploma in any discipline.

#### Additional Information

- Applicants who have successfully completed an Australian Computer Society accredited (or equivalent) Bachelor's degree in Information and Communication Technologies (ICT), Computing or Information Systems OR an Honours degree or a Master degree

in any discipline may be eligible for up to 40 credit points of Credit for Prior Learning subject to approval by the relevant Directors of Academic Programs (DAP).

- Applicants who have successfully completed an Australian (or equivalent) Graduate Certificate in ICT may be eligible for up to 40 credit points of Credit for Prior Learning subject to approval by the relevant Directors of Academic Programs (DAP).
- Applicants who have successfully completed an Australian (or equivalent) Graduate Diploma in ICT may be eligible for up to 80 credit points of Credit for Prior Learning subject to approval by the relevant Directors of Academic Programs (DAP).

## Additional Information

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

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local and International 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/>  
<https://westernsydney.uac.edu.au/ws/>

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.

If you commenced in 2023 or later please refer to the relevant Sequence tab for details.

## Program Structure 2021 - 2022

The program length and structure varies based on the student's previous study background and level, and work experience.

Students are categorised into three Pathways based on their previous study background and work experience as indicated below and course structure and length is set accordingly. See individual sections for detailed program structure.

## Recommended Sequence 2021 - 2022

### Pathway A - Three years

Students who have been admitted with an undergraduate degree in a discipline other than computing, ICT or information systems are eligible to complete the three year Pathway below.

### Master of Communications Technology/Master of Data Science - Pathway A - 3 year program

Qualification for this award requires the successful completion of 240 credit points which include twenty core subjects and five alternate subjects

#### Full-time start-year intake

| Course                | Title                        | Credit Points |
|-----------------------|------------------------------|---------------|
| <b>Year 1</b>         |                              |               |
| <b>Autumn session</b> |                              |               |
| COMP 7024             | Programming for Data Science | 10            |

|           |                                                  |    |
|-----------|--------------------------------------------------|----|
| MATH 7016 | The Nature of Data                               | 10 |
| ENGR 7017 | Professional Practice and Communication          | 10 |
| INFS 7007 | Systems Analysis and Database Management Systems | 10 |

**Credit Points 40**

#### Spring session

|           |                         |    |
|-----------|-------------------------|----|
| COMP 7006 | Data Science            | 10 |
| COMP 7023 | Predictive Analytics    | 10 |
| COMP 7015 | Programming Proficiency | 10 |
| COMP 7013 | Network Technologies    | 10 |

**Credit Points 40**

#### Year 2

##### Autumn session

|           |                                               |    |
|-----------|-----------------------------------------------|----|
| COMP 7003 | Big Data                                      | 10 |
| COMP 7016 | Visualisation                                 | 10 |
| INFO 7003 | Advanced Topics in User System Interaction    | 10 |
| NATS 7057 | Research Preparation in Post Graduate Studies | 10 |

**Credit Points 40**

##### Spring session

|                                                                                     |                              |    |
|-------------------------------------------------------------------------------------|------------------------------|----|
| INFO 7001                                                                           | Advanced Machine Learning    | 10 |
| MATH 7002                                                                           | Advanced Statistical Methods | 10 |
| INFO 7005                                                                           | IT Project Management        | 10 |
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists |                              | 10 |

**Credit Points 40**

#### Year 3

##### Autumn session

|                                                                                     |                                |    |
|-------------------------------------------------------------------------------------|--------------------------------|----|
| INFO 7016                                                                           | Postgraduate Project A         | 10 |
| COMP 7025                                                                           | Social Media Intelligence      | 10 |
| MATH 7017                                                                           | Probabilistic Graphical Models | 10 |
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists |                                | 10 |

**Credit Points 40**

##### Spring session

|                                                                                        |                        |    |
|----------------------------------------------------------------------------------------|------------------------|----|
| INFO 7017                                                                              | Postgraduate Project B | 10 |
| Select three subjects from Foundation, Specialised or Multi-disciplinary subject lists |                        | 30 |

**Credit Points 40**

**Total Credit Points 240**

#### Full-time mid-year intake

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

#### Year 1

##### Spring session

|           |                                                  |    |
|-----------|--------------------------------------------------|----|
| MATH 7016 | The Nature of Data                               | 10 |
| COMP 7024 | Programming for Data Science                     | 10 |
| INFS 7007 | Systems Analysis and Database Management Systems | 10 |
| ENGR 7017 | Professional Practice and Communication          | 10 |

**Credit Points 40**

##### Autumn session

|           |                                            |    |
|-----------|--------------------------------------------|----|
| COMP 7016 | Visualisation                              | 10 |
| COMP 7015 | Programming Proficiency                    | 10 |
| INFO 7003 | Advanced Topics in User System Interaction | 10 |

|                                                                                      |            |
|--------------------------------------------------------------------------------------|------------|
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists  | 10         |
| <b>Credit Points</b>                                                                 | <b>40</b>  |
| <b>Year 2</b>                                                                        |            |
| <b>Spring session</b>                                                                |            |
| COMP 7006 Data Science                                                               | 10         |
| INFO 7005 IT Project Management                                                      | 10         |
| COMP 7023 Predictive Analytics                                                       | 10         |
| COMP 7013 Network Technologies                                                       | 10         |
| <b>Credit Points</b>                                                                 | <b>40</b>  |
| <b>Autumn session</b>                                                                |            |
| COMP 7003 Big Data                                                                   | 10         |
| COMP 7025 Social Media Intelligence                                                  | 10         |
| NATS 7057 Research Preparation in Post Graduate Studies                              | 10         |
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists  | 10         |
| <b>Credit Points</b>                                                                 | <b>40</b>  |
| <b>Year 3</b>                                                                        |            |
| <b>Spring session</b>                                                                |            |
| MATH 7002 Advanced Statistical Methods                                               | 10         |
| INFO 7001 Advanced Machine Learning                                                  | 10         |
| INFO 7016 Postgraduate Project A                                                     | 10         |
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists  | 10         |
| <b>Credit Points</b>                                                                 | <b>40</b>  |
| <b>Autumn session</b>                                                                |            |
| MATH 7017 Probabilistic Graphical Models                                             | 10         |
| INFO 7017 Postgraduate Project B                                                     | 10         |
| Select two subjects from Foundation, Specialised or Multi-disciplinary subject lists | 20         |
| <b>Credit Points</b>                                                                 | <b>40</b>  |
| <b>Total Credit Points</b>                                                           | <b>240</b> |

Students may also complete one of the listed majors below.

Artificial Intelligence, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/artificial-intelligence-pg-testamur-major/>)

Cloud and Distributed Computing, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/cloud-distributed-computing-pg-testamur-major/>)

Cybersecurity, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/cybersecurity-pg-testamur-major/>)

Digital Futures, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/digital-futures-pg-testamur-major/>)

Health Informatics, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/health-informatics-pg-testamur-major/>)

Information Governance, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/information-governance-pg-testamur-major/>)

Innovation and Entrepreneurship, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/innovation-entrepreneurship-pg-testamur-major/>)

Management, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/management-ug-pg-testamur-major/>)

Networking, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/networking-pg-testamur-major/>)

Space Science, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/space-science-testamur-major/>)

Web and Mobile Computing, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/web-mobile-computing-pg-testamur-major/>)

## 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

MATH 7012 Programming for Data Science, replaced by COMP 7024 Programming for Data Science

MATH 7014 Social Media Intelligence, replaced by COMP 7025 Social Media Intelligence

## Pathway B - Two and a half years

Students who have been admitted with an Bachelors Honours or a Master qualification in a discipline other than computing, ICT or information systems are eligible to complete the two and a half year Pathway below.

## Master of Information and Communication Technology/Master of Data Science - Pathway B - 2.5 Year program

Qualification for this award requires the successful completion of 200 credit points which include twenty core subjects and one alternate subject

### Full-time start-year intake

| Course                | Title                                            | Credit Points |
|-----------------------|--------------------------------------------------|---------------|
| <b>Year 1</b>         |                                                  |               |
| <b>Autumn session</b> |                                                  |               |
| COMP 7024             | Programming for Data Science                     | 10            |
| MATH 7016             | The Nature of Data                               | 10            |
| ENGR 7017             | Professional Practice and Communication          | 10            |
| INFS 7007             | Systems Analysis and Database Management Systems | 10            |
| <b>Credit Points</b>  |                                                  | <b>40</b>     |
| <b>Spring session</b> |                                                  |               |
| COMP 7006             | Data Science                                     | 10            |
| COMP 7023             | Predictive Analytics                             | 10            |
| COMP 7015             | Programming Proficiency                          | 10            |
| COMP 7013             | Network Technologies                             | 10            |
| <b>Credit Points</b>  |                                                  | <b>40</b>     |
| <b>Year 2</b>         |                                                  |               |
| <b>Autumn session</b> |                                                  |               |
| COMP 7003             | Big Data                                         | 10            |
| COMP 7016             | Visualisation                                    | 10            |
| INFO 7003             | Advanced Topics in User System Interaction       | 10            |

|                      |                                               |           |
|----------------------|-----------------------------------------------|-----------|
| NATS 7057            | Research Preparation in Post Graduate Studies | 10        |
| <b>Credit Points</b> |                                               | <b>40</b> |

**Spring session**

|                      |                              |           |
|----------------------|------------------------------|-----------|
| INFO 7001            | Advanced Machine Learning    | 10        |
| MATH 7002            | Advanced Statistical Methods | 10        |
| INFO 7005            | IT Project Management        | 10        |
| INFO 7016            | Postgraduate Project A       | 10        |
| <b>Credit Points</b> |                              | <b>40</b> |

**Year 3****Autumn session**

|                                                                                     |                                |            |
|-------------------------------------------------------------------------------------|--------------------------------|------------|
| COMP 7025                                                                           | Social Media Intelligence      | 10         |
| MATH 7017                                                                           | Probabilistic Graphical Models | 10         |
| INFO 7017                                                                           | Postgraduate Project B         | 10         |
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists |                                | 10         |
| <b>Credit Points</b>                                                                |                                | <b>40</b>  |
| <b>Total Credit Points</b>                                                          |                                | <b>200</b> |

**Full-time mid-year intake**

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

**Year 1****Spring session**

|                      |                                                  |           |
|----------------------|--------------------------------------------------|-----------|
| MATH 7016            | The Nature of Data                               | 10        |
| COMP 7024            | Programming for Data Science                     | 10        |
| INFS 7007            | Systems Analysis and Database Management Systems | 10        |
| ENGR 7017            | Professional Practice and Communication          | 10        |
| <b>Credit Points</b> |                                                  | <b>40</b> |

**Autumn session**

|                      |                                               |           |
|----------------------|-----------------------------------------------|-----------|
| COMP 7016            | Visualisation                                 | 10        |
| COMP 7015            | Programming Proficiency                       | 10        |
| INFO 7003            | Advanced Topics in User System Interaction    | 10        |
| NATS 7057            | Research Preparation in Post Graduate Studies | 10        |
| <b>Credit Points</b> |                                               | <b>40</b> |

**Year 2****Spring session**

|                      |                       |           |
|----------------------|-----------------------|-----------|
| COMP 7006            | Data Science          | 10        |
| INFO 7005            | IT Project Management | 10        |
| COMP 7023            | Predictive Analytics  | 10        |
| COMP 7013            | Network Technologies  | 10        |
| <b>Credit Points</b> |                       | <b>40</b> |

**Autumn session**

|                      |                                |           |
|----------------------|--------------------------------|-----------|
| COMP 7003            | Big Data                       | 10        |
| MATH 7017            | Probabilistic Graphical Models | 10        |
| COMP 7025            | Social Media Intelligence      | 10        |
| INFO 7016            | Postgraduate Project A         | 10        |
| <b>Credit Points</b> |                                | <b>40</b> |

**Year 3****Spring session**

|           |                              |    |
|-----------|------------------------------|----|
| MATH 7002 | Advanced Statistical Methods | 10 |
| INFO 7001 | Advanced Machine Learning    | 10 |
| INFO 7017 | Postgraduate Project B       | 10 |

|                                                                                     |            |
|-------------------------------------------------------------------------------------|------------|
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists | 10         |
| <b>Credit Points</b>                                                                | <b>40</b>  |
| <b>Total Credit Points</b>                                                          | <b>200</b> |

**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

**Pathway C - Two and a half years**

Students who have been admitted with an undergraduate degree or higher in computing, ICT or information systems are eligible to complete the two and a half year Pathway below.

**Master of Communications Technology/Master of Data Science - Pathway C -2.5 yr program**

Qualification for this award requires the successful completion of 200 credit points which include seventeen core subjects and four alternate subjects

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

**Year 1****Autumn session**

|                      |                                         |           |
|----------------------|-----------------------------------------|-----------|
| COMP 7024            | Programming for Data Science            | 10        |
| MATH 7016            | The Nature of Data                      | 10        |
| COMP 7013            | Network Technologies                    | 10        |
| ENGR 7017            | Professional Practice and Communication | 10        |
| <b>Credit Points</b> |                                         | <b>40</b> |

**Spring session**

|                      |                                               |           |
|----------------------|-----------------------------------------------|-----------|
| COMP 7006            | Data Science                                  | 10        |
| COMP 7023            | Predictive Analytics                          | 10        |
| INFO 7005            | IT Project Management                         | 10        |
| NATS 7057            | Research Preparation in Post Graduate Studies | 10        |
| <b>Credit Points</b> |                                               | <b>40</b> |

**Year 2****Autumn session**

|                                                                                     |                           |           |
|-------------------------------------------------------------------------------------|---------------------------|-----------|
| COMP 7003                                                                           | Big Data                  | 10        |
| COMP 7016                                                                           | Visualisation             | 10        |
| COMP 7025                                                                           | Social Media Intelligence | 10        |
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists |                           | 10        |
| <b>Credit Points</b>                                                                |                           | <b>40</b> |

**Spring session**

|                                                                                     |                              |           |
|-------------------------------------------------------------------------------------|------------------------------|-----------|
| INFO 7001                                                                           | Advanced Machine Learning    | 10        |
| MATH 7002                                                                           | Advanced Statistical Methods | 10        |
| INFO 7016                                                                           | Postgraduate Project A       | 10        |
| Select one subject from Foundation, Specialised or Multi-disciplinary subject lists |                              | 10        |
| <b>Credit Points</b>                                                                |                              | <b>40</b> |

**Year 3****Autumn session**

|           |                                |    |
|-----------|--------------------------------|----|
| MATH 7017 | Probabilistic Graphical Models | 10 |
| INFO 7017 | Postgraduate Project B         | 10 |

|                                                                                      |            |
|--------------------------------------------------------------------------------------|------------|
| Select two subjects from Foundation, Specialised or Multi-disciplinary subject lists | 20         |
| <b>Credit Points</b>                                                                 | <b>40</b>  |
| <b>Total Credit Points</b>                                                           | <b>200</b> |

### 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

### Additional Completion Requirements

Students must complete a four week full-time or part-time equivalent industry placement as a Work Integrated Learning (WIL) component and must enrol in the ICT Practicum unit to receive recognition for WIL.

INFO 7004 ICT Practicum

### Foundation Subjects

Note: Subjects in this list may be included in the program structure as Core Subjects and cannot be selected as one of the list subjects

| Subject   | Title                                            | Credit Points |
|-----------|--------------------------------------------------|---------------|
| INFO 7003 | Advanced Topics in User System Interaction       | 10            |
| INFS 7004 | Content Management Systems and Web Analytics     | 10            |
| INFO 7005 | IT Project Management                            | 10            |
| COMP 7013 | Network Technologies                             | 10            |
| ENGR 7017 | Professional Practice and Communication          | 10            |
| COMP 7015 | Programming Proficiency                          | 10            |
| NATS 7057 | Research Preparation in Post Graduate Studies    | 10            |
| INFS 7008 | Systems and Network Security                     | 10            |
| INFS 7007 | Systems Analysis and Database Management Systems | 10            |
| INFS 7009 | Web Technologies                                 | 10            |

### Specialised Subjects

Note: Subjects in this list may be included in the course structure as Core Subjects and cannot be selected as one of the list subjects.

| Subject   | Title                                            | Credit Points |
|-----------|--------------------------------------------------|---------------|
| COMP 7018 | Advanced Cloud Computing                         | 10            |
| PUBH 7001 | Advanced Health Classifications and Coding       | 10            |
| INFS 7001 | Advanced Healthcare Data Environments            | 10            |
| INFS 7002 | Advanced Healthcare Software and Systems         | 10            |
| INFO 7001 | Advanced Machine Learning                        | 10            |
| INFO 7002 | Advanced Topics in Artificial Intelligence       | 10            |
| INFO 7014 | Advanced Topics in Cybersecurity                 | 10            |
| INFS 7003 | Advanced Topics in ICT                           | 10            |
| COMP 7002 | Advanced Topics in Networking                    | 10            |
| INFO 7015 | Applied Cybersecurity                            | 10            |
| COMP 7019 | Applied Machine Learning                         | 10            |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10            |
| COMP 7004 | Cloud Computing                                  | 10            |
| INFO 7018 | Cloud Systems Development                        | 10            |
| COMP 7028 | Hands-on Quantum Computing                       | 10            |
| COMP 7007 | Information Security Management                  | 10            |

|           |                                        |    |
|-----------|----------------------------------------|----|
| COMP 7008 | Internet of Things                     | 10 |
| COMP 7021 | Knowledge Representation and Reasoning | 10 |
| COMP 7009 | Mobile Computing                       | 10 |
| COMP 7011 | Multimedia Communication Systems       | 10 |
| COMP 7022 | Natural Language Understanding         | 10 |
| COMP 7012 | Network Management                     | 10 |
| INFO 7017 | Postgraduate Project B                 | 10 |
| INFS 7006 | Software Testing and Automation        | 10 |
| INFO 7013 | Web Engineering                        | 10 |
| COMP 7017 | Wireless Networking                    | 10 |

### Multi-disciplinary Subjects

A maximum of four subjects are allowed from this list.

| Subject   | Title                                          | Credit Points |
|-----------|------------------------------------------------|---------------|
| BUSM 7018 | Contemporary People Management                 | 10            |
| HUMN 7012 | Cyber Justice (PG)                             | 10            |
| ECON 7001 | Economics                                      | 10            |
| BUSM 7028 | Entrepreneurial Management Capabilities        | 10            |
| ACCT 7015 | Financial Reports for Decision Making          | 10            |
| COMM 7003 | Foundations of Media Arts Production (PG)      | 10            |
| CULT 7004 | Global Digital Futures                         | 10            |
| BUSM 7040 | Governance, Ethics and Social Entrepreneurship | 10            |
| LAWS 7015 | Information and Data Governance Law and Policy | 10            |
| BUSM 7048 | Innovation, Creativity and Foresight           | 10            |
| BUSM 7046 | Innovation for New Markets                     | 10            |
| BUSM 7045 | Innovation Through Digital Technology          | 10            |
| MKTG 7019 | Marketing Systems                              | 10            |
| COMM 7009 | Mobile Media                                   | 10            |
| COMM 7013 | Ideate, Develop: Makerspace 1                  | 10            |
| BUSM 7072 | New Venture Finance                            | 10            |
| COMM 7011 | Researching Convergent Media                   | 10            |
| BUSM 7084 | Start-up                                       | 20            |
| BUSM 7086 | Strategic Business Management                  | 10            |
| BUSM 7099 | Understanding Contemporary Organisations       | 10            |

### Replaced Subjects

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

ENRG 7018 - Research Preparation in Post Graduate Studies, replaced by NATS 7057 Research Preparation in Post Graduate Studies

COMM 7007 - Media Project Proposal, replaced by COMM 7013 Ideate, Develop: Makerspace 1

## Recommended Sequence 2023

This sequence applies to students who commenced in 2023. If you commenced prior to 2023 please refer to the Sequence 2021 - 2022 tab for details.

Qualification for this award requires the successful completion of 240 credit points as per the recommended sequence below.

### Full-time start-year intake

| Course                | Title                        | Credit Points |
|-----------------------|------------------------------|---------------|
| <b>Year 1</b>         |                              |               |
| <b>Autumn session</b> |                              |               |
| COMP 7024             | Programming for Data Science | 10            |

|                      |                                                  |           |
|----------------------|--------------------------------------------------|-----------|
| MATH 7016            | The Nature of Data                               | 10        |
| ENGR 7017            | Professional Practice and Communication          | 10        |
| INFS 7007            | Systems Analysis and Database Management Systems | 10        |
| <b>Credit Points</b> |                                                  | <b>40</b> |

**Spring session**

|                      |                         |           |
|----------------------|-------------------------|-----------|
| COMP 7006            | Data Science            | 10        |
| COMP 7023            | Predictive Analytics    | 10        |
| COMP 7015            | Programming Proficiency | 10        |
| COMP 7013            | Network Technologies    | 10        |
| <b>Credit Points</b> |                         | <b>40</b> |

**Year 2****Autumn session**

|                      |                                               |           |
|----------------------|-----------------------------------------------|-----------|
| COMP 7003            | Big Data                                      | 10        |
| COMP 7016            | Visualisation                                 | 10        |
| INFO 7003            | Advanced Topics in User System Interaction    | 10        |
| NATS 7057            | Research Preparation in Post Graduate Studies | 10        |
| <b>Credit Points</b> |                                               | <b>40</b> |

**Spring session**

|                                                                                   |                              |           |
|-----------------------------------------------------------------------------------|------------------------------|-----------|
| INFO 7001                                                                         | Advanced Machine Learning    | 10        |
| MATH 7002                                                                         | Advanced Statistical Methods | 10        |
| INFO 6001                                                                         | IT Project Management        | 10        |
| Select one subject from your Major, Alternate or Multi-disciplinary subject pools |                              | 10        |
| <b>Credit Points</b>                                                              |                              | <b>40</b> |

**Year 3****Autumn session**

|                                                                                   |                                |           |
|-----------------------------------------------------------------------------------|--------------------------------|-----------|
| INFO 7016                                                                         | Postgraduate Project A         | 10        |
| COMP 7025                                                                         | Social Media Intelligence      | 10        |
| MATH 7017                                                                         | Probabilistic Graphical Models | 10        |
| Select one subject from your Major, Alternate or Multi-disciplinary subject pools |                                | 10        |
| <b>Credit Points</b>                                                              |                                | <b>40</b> |

**Spring session**

|                                                                                    |                        |           |
|------------------------------------------------------------------------------------|------------------------|-----------|
| INFO 7015                                                                          | Applied Cybersecurity  | 10        |
| INFO 7017                                                                          | Postgraduate Project B | 10        |
| Select two subjects from your Major, Alternate or Multi-disciplinary subject pools |                        | 20        |
| <b>Credit Points</b>                                                               |                        | <b>40</b> |

**Total Credit Points 240****Full-time mid-year intake**

| Course                | Title                                            | Credit Points |
|-----------------------|--------------------------------------------------|---------------|
| <b>Year 1</b>         |                                                  |               |
| <b>Spring session</b> |                                                  |               |
| MATH 7016             | The Nature of Data                               | 10            |
| COMP 7024             | Programming for Data Science                     | 10            |
| INFS 7007             | Systems Analysis and Database Management Systems | 10            |
| ENGR 7017             | Professional Practice and Communication          | 10            |
| <b>Credit Points</b>  |                                                  | <b>40</b>     |
| <b>Autumn session</b> |                                                  |               |
| COMP 7016             | Visualisation                                    | 10            |
| COMP 7015             | Programming Proficiency                          | 10            |

|                                                                                   |                                            |           |
|-----------------------------------------------------------------------------------|--------------------------------------------|-----------|
| INFO 7003                                                                         | Advanced Topics in User System Interaction | 10        |
| Select one subject from your Major, Alternate or Multi-disciplinary subject pools |                                            | 10        |
| <b>Credit Points</b>                                                              |                                            | <b>40</b> |

**Year 2****Spring session**

|                      |                       |           |
|----------------------|-----------------------|-----------|
| COMP 7006            | Data Science          | 10        |
| INFO 6001            | IT Project Management | 10        |
| COMP 7023            | Predictive Analytics  | 10        |
| COMP 7013            | Network Technologies  | 10        |
| <b>Credit Points</b> |                       | <b>40</b> |

**Autumn session**

|                                                                                    |                                               |           |
|------------------------------------------------------------------------------------|-----------------------------------------------|-----------|
| COMP 7003                                                                          | Big Data                                      | 10        |
| COMP 7025                                                                          | Social Media Intelligence                     | 10        |
| NATS 7057                                                                          | Research Preparation in Post Graduate Studies | 10        |
| Select one subject from your Major, Alternate or Multi-disciplinary subject pools. |                                               | 10        |
| <b>Credit Points</b>                                                               |                                               | <b>40</b> |

**Year 3****Spring session**

|                      |                              |           |
|----------------------|------------------------------|-----------|
| MATH 7002            | Advanced Statistical Methods | 10        |
| INFO 7001            | Advanced Machine Learning    | 10        |
| INFO 7016            | Postgraduate Project A       | 10        |
| INFO 7015            | Applied Cybersecurity        | 10        |
| <b>Credit Points</b> |                              | <b>40</b> |

**Autumn session**

|                                                                                    |                                |           |
|------------------------------------------------------------------------------------|--------------------------------|-----------|
| MATH 7017                                                                          | Probabilistic Graphical Models | 10        |
| INFO 7017                                                                          | Postgraduate Project B         | 10        |
| Select two subjects from your Major, Alternate or Multi-disciplinary subject pools |                                | 20        |
| <b>Credit Points</b>                                                               |                                | <b>40</b> |

**Total Credit Points 240****Alternate Subjects**

| Subject   | Title                                            | Credit Points |
|-----------|--------------------------------------------------|---------------|
| COMP 7018 | Advanced Cloud Computing                         | 10            |
| PUBH 7001 | Advanced Health Classifications and Coding       | 10            |
| INFS 7001 | Advanced Healthcare Data Environments            | 10            |
| INFS 7002 | Advanced Healthcare Software and Systems         | 10            |
| INFO 7001 | Advanced Machine Learning                        | 10            |
| INFO 7002 | Advanced Topics in Artificial Intelligence       | 10            |
| INFO 7014 | Advanced Topics in Cybersecurity                 | 10            |
| INFS 7003 | Advanced Topics in ICT                           | 10            |
| COMP 7002 | Advanced Topics in Networking                    | 10            |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10            |
| COMP 7004 | Cloud Computing                                  | 10            |
| INFO 7018 | Cloud Systems Development                        | 10            |
| INFS 7004 | Content Management Systems and Web Analytics     | 10            |
| COMP 7028 | Hands-on Quantum Computing                       | 10            |
| COMP 7007 | Information Security Management                  | 10            |
| COMP 7008 | Internet of Things                               | 10            |
| COMP 7021 | Knowledge Representation and Reasoning           | 10            |
| COMP 7009 | Mobile Computing                                 | 10            |

|           |                                  |    |
|-----------|----------------------------------|----|
| COMP 7011 | Multimedia Communication Systems | 10 |
| COMP 7022 | Natural Language Understanding   | 10 |
| COMP 7012 | Network Management               | 10 |
| INFS 7006 | Software Testing and Automation  | 10 |
| INFS 7008 | Systems and Network Security     | 10 |
| INFO 7013 | Web Engineering                  | 10 |
| INFS 7009 | Web Technologies                 | 10 |

## Multi-disciplinary Subjects

A maximum of four subjects are allowed from this list

| Subject   | Title                                          | Credit Points |
|-----------|------------------------------------------------|---------------|
| BUSM 7018 | Contemporary People Management                 | 10            |
| HUMN 7012 | Cyber Justice (PG)                             | 10            |
| ECON 7001 | Economics                                      | 10            |
| BUSM 7028 | Entrepreneurial Management Capabilities        | 10            |
| ACCT 7015 | Financial Reports for Decision Making          | 10            |
| COMM 7003 | Foundations of Media Arts Production (PG)      | 10            |
| CULT 7004 | Global Digital Futures                         | 10            |
| BUSM 7040 | Governance, Ethics and Social Entrepreneurship | 10            |
| LAWS 7015 | Information and Data Governance Law and Policy | 10            |
| BUSM 7048 | Innovation, Creativity and Foresight           | 10            |
| BUSM 7046 | Innovation for New Markets                     | 10            |
| BUSM 7045 | Innovation Through Digital Technology          | 10            |
| MKTG 7019 | Marketing Systems                              | 10            |
| COMM 7009 | Mobile Media                                   | 10            |
| COMM 7013 | Ideate, Develop: Makerspace 1                  | 10            |
| BUSM 7072 | New Venture Finance                            | 10            |
| COMM 7011 | Researching Convergent Media                   | 10            |
| BUSM 7084 | Start-up                                       | 20            |
| BUSM 7086 | Strategic Business Management                  | 10            |
| BUSM 7099 | Understanding Contemporary Organisations       | 10            |

## Majors

Students may also complete one of the listed majors below.

Artificial Intelligence, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/artificial-intelligence-pg-testamur-major/>)

Cloud and Distributed Computing, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/cloud-distributed-computing-pg-testamur-major/>)

Cybersecurity, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/cybersecurity-pg-testamur-major/>)

Digital Futures, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/digital-futures-pg-testamur-major/>)

Health Informatics, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/health-informatics-pg-testamur-major/>)

Information Governance, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/information-governance-pg-testamur-major/>)

Innovation and Entrepreneurship, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/innovation-entrepreneurship-pg-testamur-major/>)

Management, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/management-ug-pg-testamur-major/>)

Networking, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/networking-pg-testamur-major/>)

Space Science, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/space-science-testamur-major/>)

Web and Mobile Computing, Testamur Major (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/web-mobile-computing-pg-testamur-major/>)

## Additional Completion Requirements

Students must complete at least 120 hours full-time or part-time equivalent industry placement as a Work Integrated Learning (WIL) component and must enrol in the ICT Practicum unit to receive recognition for WIL

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

## Recommended Sequence 2024

This sequence applies to students who commenced in 2024. If you commenced prior to 2024 please refer to the relevant Sequence tab for details.

Qualification for this award requires the successful completion of 240 credit points as per the recommended sequence below.

## Full-time start-year intake

| Course                | Title                                            | Credit Points |
|-----------------------|--------------------------------------------------|---------------|
| <b>Year 1</b>         |                                                  |               |
| <b>Autumn session</b> |                                                  |               |
| COMP 7024             | Programming for Data Science                     | 10            |
| MATH 7016             | The Nature of Data                               | 10            |
| ENGR 7017             | Professional Practice and Communication          | 10            |
| INFS 7007             | Systems Analysis and Database Management Systems | 10            |
| <b>Credit Points</b>  |                                                  | <b>40</b>     |
| <b>Spring session</b> |                                                  |               |
| COMP 7006             | Data Science                                     | 10            |
| COMP 7023             | Predictive Analytics                             | 10            |
| COMP 7015             | Programming Proficiency                          | 10            |
| COMP 7013             | Network Technologies                             | 10            |
| <b>Credit Points</b>  |                                                  | <b>40</b>     |
| <b>Year 2</b>         |                                                  |               |
| <b>Autumn session</b> |                                                  |               |
| COMP 7003             | Big Data                                         | 10            |
| COMP 7016             | Visualisation                                    | 10            |
| INFO 7003             | Advanced Topics in User System Interaction       | 10            |
| NATS 7057             | Research Preparation in Post Graduate Studies    | 10            |
| <b>Credit Points</b>  |                                                  | <b>40</b>     |
| <b>Spring session</b> |                                                  |               |
| INFO 7001             | Advanced Machine Learning                        | 10            |
| MATH 7002             | Advanced Statistical Methods                     | 10            |
| INFO 6001             | IT Project Management                            | 10            |

Select one subject from your Major, Alternate or Multi-disciplinary subject pools

**Credit Points 40**

### Year 3

#### Autumn session

INFO 6002 Postgraduate Capstone Project

COMP 7025 Social Media Intelligence 10

MATH 7017 Probabilistic Graphical Models 10

Select one subject from your Major, Alternate or Multi-disciplinary subject pools 10

**Credit Points 30**

#### Spring session

INFO 7015 Applied Cybersecurity 10

INFO 6003 Postgraduate Research Project

Select two subjects from your Major, Alternate or Multi-disciplinary subject pools 20

**Credit Points 30**

**Total Credit Points 220**

## Full-time mid-year intake

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

### Year 1

#### Spring session

MATH 7016 The Nature of Data 10

COMP 7024 Programming for Data Science 10

INFS 7007 Systems Analysis and Database Management Systems 10

ENGR 7017 Professional Practice and Communication 10

**Credit Points 40**

#### Autumn session

COMP 7016 Visualisation 10

COMP 7015 Programming Proficiency 10

INFO 7003 Advanced Topics in User System Interaction 10

Select one subject from your Major, Alternate or Multi-disciplinary subject pools 10

**Credit Points 40**

### Year 2

#### Spring session

COMP 7006 Data Science 10

INFO 6001 IT Project Management 10

COMP 7023 Predictive Analytics 10

COMP 7013 Network Technologies 10

**Credit Points 40**

#### Autumn session

COMP 7003 Big Data 10

COMP 7025 Social Media Intelligence 10

NATS 7057 Research Preparation in Post Graduate Studies 10

Select one subject from your Major, Alternate or Multi-disciplinary subject pools. 10

**Credit Points 40**

### Year 3

#### Spring session

MATH 7002 Advanced Statistical Methods 10

INFO 7001 Advanced Machine Learning 10

INFO 6002 Postgraduate Capstone Project

INFO 7015 Applied Cybersecurity 10

**Credit Points 30**

#### Autumn session

MATH 7017 Probabilistic Graphical Models 10

INFO 6003 Postgraduate Research Project

Select two subjects from your Major, Alternate or Multi-disciplinary subject pools 20

**Credit Points 30**

**Total Credit Points 220**

## Alternate Subjects

| Subject   | Title                                            | Credit Points |
|-----------|--------------------------------------------------|---------------|
| COMP 7018 | Advanced Cloud Computing                         | 10            |
| PUBH 7001 | Advanced Health Classifications and Coding       | 10            |
| INFS 7001 | Advanced Healthcare Data Environments            | 10            |
| INFS 7002 | Advanced Healthcare Software and Systems         | 10            |
| INFO 7001 | Advanced Machine Learning                        | 10            |
| INFO 7002 | Advanced Topics in Artificial Intelligence       | 10            |
| INFO 7014 | Advanced Topics in Cybersecurity                 | 10            |
| INFS 7003 | Advanced Topics in ICT                           | 10            |
| COMP 7002 | Advanced Topics in Networking                    | 10            |
| COMP 7019 | Applied Machine Learning                         | 10            |
| COMP 7020 | Artificial Intelligence Ethics and Organisations | 10            |
| COMP 7003 | Big Data                                         | 10            |
| COMP 7004 | Cloud Computing                                  | 10            |
| INFO 7018 | Cloud Systems Development                        | 10            |
| INFS 7004 | Content Management Systems and Web Analytics     | 10            |
| COMP 7006 | Data Science                                     | 10            |
| COMP 7028 | Hands-on Quantum Computing                       | 10            |
| COMP 7007 | Information Security Management                  | 10            |
| COMP 7008 | Internet of Things                               | 10            |
| COMP 7021 | Knowledge Representation and Reasoning           | 10            |
| COMP 7009 | Mobile Computing                                 | 10            |
| COMP 7011 | Multimedia Communication Systems                 | 10            |
| COMP 7022 | Natural Language Understanding                   | 10            |
| COMP 7012 | Network Management                               | 10            |
| COMP 7023 | Predictive Analytics                             | 10            |
| COMP 7024 | Programming for Data Science                     | 10            |
| MATH 7017 | Probabilistic Graphical Models                   | 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 7016 | Visualisation                                    | 10            |
| INFO 7013 | Web Engineering                                  | 10            |
| INFS 7009 | Web Technologies                                 | 10            |
| INFO 5001 | Workflow Management for Business Solutions       | 10            |

## Multi-disciplinary Subjects

A maximum of four subjects are allowed from this list

| Subject   | Title                                                                    | Credit Points |
|-----------|--------------------------------------------------------------------------|---------------|
| BUSM 7018 | Contemporary People Management                                           | 10            |
| HUMN 7012 | Cyber Justice (PG)                                                       | 10            |
| ECON 7001 | Economics                                                                | 10            |
| BUSM 7028 | Entrepreneurial Management Capabilities                                  | 10            |
| ACCT 7015 | Financial Reports for Decision Making                                    | 10            |
| COMM 7003 | Foundations of Media Arts Production (PG)                                | 10            |
| CULT 7004 | Global Digital Futures                                                   | 10            |
| BUSM 7040 | Governance, Ethics and Social Entrepreneurship                           | 10            |
| LAWS 7015 | Information and Data Governance Law and Policy                           | 10            |
| BUSM 7048 | Innovation, Creativity and Foresight                                     | 10            |
| BUSM 7046 | Innovation for New Markets                                               | 10            |
| BUSM 7045 | Innovation Through Digital Technology                                    | 10            |
| MKTG 7019 | Marketing Systems                                                        | 10            |
| COMM 7009 | Mobile Media                                                             | 10            |
| COMM 7013 | Ideate, Develop: Makerspace 1                                            | 10            |
| BUSM 7072 | New Venture Finance                                                      | 10            |
| COMM 7011 | Researching Convergent Media                                             | 10            |
| BUSM 7084 | Start-up                                                                 | 20            |
| BUSM 7086 | Strategic Business Management                                            | 10            |
| BUSM 7099 | Understanding Contemporary Organisations                                 | 10            |
| HUMN 4001 | Researcher Development 1: Reading, Writing, and the Business of Research | 10            |
| HUMN 4002 | Researcher Development 2: Proposing and Justifying Research              | 10            |

Web and Mobile Computing, Testamur Major (T010) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/web-mobile-computing-pg-testamur-major/>)

## Additional Completion Requirements

Students must complete at least 120 hours full-time or part-time equivalent industry placement as a Work Integrated Learning (WIL) component and must enrol in the ICT Practicum subject to receive recognition for WIL

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

## Majors

Students may also complete one of the listed majors below.

Artificial Intelligence, Testamur Major (T002) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/artificial-intelligence-pg-testamur-major/>)

Cloud and Distributed Computing, Testamur Major (T121) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/cloud-distributed-computing-pg-testamur-major/>)

Cybersecurity, Testamur Major (T003) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/cybersecurity-pg-testamur-major/>)

Digital Futures, Testamur Major (T005) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/digital-futures-pg-testamur-major/>)

Health Informatics, Testamur Major (T007) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/health-informatics-pg-testamur-major/>)

Information Governance, Testamur Major (T122) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/information-governance-pg-testamur-major/>)

Innovation and Entrepreneurship, Testamur Major (T008) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/innovation-entrepreneurship-pg-testamur-major/>)

Management, Testamur Major (T043) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/management-ug-pg-testamur-major/>)

Networking, Testamur Major (T009) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/networking-pg-testamur-major/>)

Space Science, Testamur Major (T030) (<https://hbook.westernsydney.edu.au/archives/2023-2024/majors-minors/space-science-testamur-major/>)