

## MAI (Master of Artificial Intelligence) 120 and 180 points

(See [calendar](#) for precise information)

### Master of Artificial Intelligence 120 points

Requirements:

- (S1<sup>1</sup>) 60 points: COMPSCI 712, 713, 714 and INFOSYS 703 (these are the 4 core courses of the program, and they must be completed in S1)
- (S2<sup>2</sup>) At least 15 points from: COMPSCI 703, 764, 769 or COMPSYS 726
- (S2 30 points: COMPSCI 792 Research Project or COMPSCI 779 Internship or ENGGEN 794 Research Project
- (S2) Up to 15 points from: COMPSCI 705, 720, 732, 734, 750 –753, 760 –762, 765, 767, 773, COMPSYS 726, COMPSYS 731, 732, DIGIHLTH 701, 703, 704, 706, ELECTENG 722, ENGGEN 730, 743, ENGSCI 760, GEOG 761, INFOGOV 704, INFOSYS 722, PHIL 745, STATS 762, 769, 782, 784

### Master of Artificial Intelligence 180 points

Requirements:

- (S1 of Year 1) 60 points: COMPSCI 712, 713, 714 and INFOSYS 703 (these are the 4 core courses of the program, and they must be completed in S1 of Year 1)
- (S2 of Year 1 or S1 of Year 2) At least 15 points from: COMPSCI 703, 764, 769 or COMPSYS 726
- (S2 of Year 1 or S1 of Year 2) Up to 45 points from: COMPSCI 760, 761, 762, 765, 767, 773, COMPSYS 726, 731, 732, ELECTENG 722, ENGGEN 730 or 743

Either

- (S2 of Year 1 or S1 of Year 2) 15 points: ENGGEN 769
- (S1 of Year 2) 30 points: COMPSCI 792 Research Project or ENGGEN 794 Research Project
- (S2 of Year 1 or S1 of Year 2) A further 15 points from: COMPSCI 705, 720, 732, 734, 750-753, DIGIHLTH 701, 703, 704, 706, ENGSCI 760, GEOG 761, INFOGOV 704, INFOSYS 722, PHIL 745, STATS 762, 769, 782, 784

Or

- (S1 of Year 2) 30 points: COMPSCI 779 Internship
- (S2 of Year 1 or S1 of Year 2) A further 30 points from: COMPSCI 705, 720, 732, 734, 750-753, DIGIHLTH 701, 703, 704, 706, ENGSCI 760, GEOG 761, INFOGOV 704, INFOSYS 722, PHIL 745, STATS 762, 769, 782, 784

A student who must complete 180 points must achieve a Grade Point Average of 4.0 or higher in the first 120 points of taught courses taken for this degree, prior to enrolment in COMPSCI 779, COMPSCI 792 or ENGGEN 794. If this Grade Point Average is not achieved, enrolment in the Master of Artificial Intelligence cannot continue. See [calendar](#) for precise information.

---

<sup>1</sup> Semester 1

<sup>2</sup> Semester 2

List of courses and prerequisites for S2 2024 (students can also refer to the [DCO pages online](#) for the course descriptions)

Disclaimer: The prerequisites listed below are indicative only. Students should always check the up-to-date prerequisites on the [DCO page](#) of a course before enrolling in it.

*Available in S2 2024:*

- COMPSCI 705 Advanced Topics in Human Computer Interaction  
No prerequisites / Restriction: SOFTENG 702 / Recommended preparation: COMPSCI 345 or SOFTENG 350
- COMPSCI 750 Computational Complexity  
No prerequisites or restrictions / Recommended preparation: COMPSCI 320 or 350
- COMPSCI 753 Algorithms for Massive Data  
No prerequisites or restrictions / Recommended preparation: COMPSCI 320
- COMPSCI 760 Advanced Topics in Machine Learning  
Prerequisite: COMPSCI 361 or 762
- COMPSCI 761 Advanced Topics in Artificial Intelligence  
Prerequisite: COMPSCI 220 and 225, or COMPSCI 220 and MATHS 254, or COMPSCI 713 and 714, or COMPSCI 718  
Restriction: COMPSCI 367
- COMPSCI 764 Deep Learning  
Prerequisite: COMPSCI 361 or 762, or COMPSCI 713 and 714
- COMPSCI 769 Natural Language Processing  
Prerequisite: COMPSCI 361 or 762, or COMPSCI 713 and 714
- COMPSYS 726 Robotics and Intelligent Systems  
Prerequisite: 15 points from COMPSYS 302, 306, ENGSCI 331, MECHENG 313, SOFTENG 306  
Restriction: COMPSYS 406
- COMPSYS 731 Human-Robot Interaction  
Prerequisite: 15 points from COMPSYS 302, 306, ENGSCI 331, MECHENG 313, SOFTENG 306
- DIGIHLTH 703 New Zealand Health Data Landscape  
Restriction: HLTHINFO 725
- DIGIHLTH 704 Healthcare Decision Support Systems  
Restriction: HLTHINFO 730
- DIGIHLTH 706 Health Data Analytics  
No pre-requisites or restrictions
- ENGGEN 730 Management Skills for Project Professionals  
No pre-requisites or restrictions
- ENGGEN 769 Research Methods for Engineers  
Restriction: CHEMMAT 751, CIVIL 705, COMPSYS 700, ELECTENG 700, ENGGEN 721, ENGSCI 700, MECHENG 700, SOFTENG 700
- GEOG 761 Special Topic: Monitoring Change from Space with Machine Learning  
No pre-requisites or restrictions

- INFOGOV 704 Artificial Intelligence Regulation (only available in Quarter Three 2024)  
Prerequisite: INFOGOV 700
- STATS 769 Advanced Data Science Practice  
Prerequisite: 15 points from STATS 220, 369, 380 and 15 points from ENGSCI 314, STATS 201, 207, 208, 707
- STATS 782 Statistical Computing  
Prerequisite: 15 points from ENGSCI 314, STATS 201, 208, 707

*Not available in S2 2024:*

- COMPSCI 703 Generalising Artificial Intelligence (not available in S2 2024, only taught in S1 2024)  
Prerequisite: 15 points from COMPSCI 361, 367, 761, 762, or COMPSCI 713 and 714
- COMPSCI 720 Advanced Design and Analysis of Algorithms (not available in S2 2024, only taught in S1 2024)  
No pre-requisites or restrictions
- COMPSCI 732 Software Tools and Techniques (not available in S2 2024, only taught in S1 2024)  
Restriction: SOFTENG 750
- COMPSCI 734 Web, Mobile and Enterprise Computing (not timetabled for S2 2024)  
Prerequisite: Approval of the Academic Head or nominee / Recommended preparation: COMPSCI 335
- COMPSCI 751 Advanced Topics in Database Systems (not available in S2 2024, only taught in S1 2024)  
Restriction: COMPSCI 351, SOFTENG 351 / Recommended preparation: COMPSCI 220, 225 or COMPSCI 718
- COMPSCI 752 Big Data Management (not available in S2 2024, only taught in S1 2024)  
No pre-requisites or restrictions / Recommended preparation: COMPSCI 220, 351
- COMPSCI 762 Foundations of Machine Learning (not available in S2 2024, only taught in S1 2024)  
Prerequisite: COMPSCI 713 and 714, or COMPSCI 718, or 15 points from DATASCI 100, STATS 101, 108 and COMPSCI 220 or 717 and COMPSCI 225 or MATHS 254 / Restriction: COMPSCI 361
- COMPSCI 765 Modelling Minds (not available in S2 2024, only taught in S1 2024)  
No pre-requisites or restrictions / Recommended preparation: COMPSCI 367
- COMPSCI 767 Intelligent Software Agents (not timetabled for S2 2024)  
Prerequisite: Approval of the Academic Head or nominee / Recommended preparation: COMPSCI 367
- COMPSCI 773 Intelligent Vision Systems (not available in S2 2024, only taught in S1 2024)  
No pre-requisites or restrictions / Recommended preparation: COMPSCI 373 and 15 points at Stage II in Mathematics
- COMPSYS 732 Mobile Autonomous Robotics (not available in S2 2024, only taught in S1 2024)  
Prerequisite: 15 points from COMPSYS 302, 306, ENGSCI 331, MECHENG 313, SOFTENG 306
- DIGIHLTH 701 Principles of Digital Health (not available in S2 2024, only taught in S1 2024)  
Restriction: HLTHINFO 728
- ELECTENG 722 Modern Control Systems (not available in S2 2024, only taught in S1 2024)  
Prerequisite: ELECTENG 303 or 331 or 332 / Restriction: ELECTENG 422, MECHENG 720, 724

- ENGGEN 743 Applied Creative Thinking (not available in S2 2024, only taught in S1 2024)  
Restriction: ENGGEN 722
- ENGSCI 760 Algorithms for Optimisation (not available in S2 2024, only taught in S1 2024)  
Prerequisite: 15 points from COMPSCI 101, ENGGEN 131, MATHS 162, 199, and 15 points from COMPSCI 120, ENGSCI 111, STATS 125
- INFOSYS 722 Data Mining and Big Data (not available in S2 2024, only taught in S1 2024)  
No pre-requisites or restrictions
- PHIL 745 Philosophy of Mind 1 (not available in 2024)  
No pre-requisites or restrictions
- STATS 762 Regression for Data Science (not available in S2 2024, only taught in S1 2024)  
Prerequisite: 15 points from STATS 210, 225, 707, and 15 points from ENGSCI 314, STATS 201, 207, 208  
Restriction: STATS 330
- STATS 784 Statistical Data Mining (not available in 2024)  
Prerequisite: 15 points from STATS 210, 225, and 15 points from STATS 330, 762

Note: Availability of courses for S1 2025 will be confirmed at the end of 2024. Students can check the availability of the courses on the [DCO pages](#) then.

## Examples of pathways for students starting in S1 2024 – Research Projects

### Master of Artificial Intelligence 120 points

#### Semester 1 2024 (60 points)

- COMPSCI 712 AI Agency, Ethics and Society (15 points)
- COMPSCI 713 AI Fundamentals (15 points)
- COMPSCI 714 AI Architecture and Design (15 points)
- INFOSYS 703 Managing with Artificial Intelligence (15 points)

#### Semester 2 2024 (60 points)

- Either COMPSCI 792 Research Project or ENGGEN 794 Research Project (30 points)
- COMPSCI 764 Deep Learning (15 points)
- COMPSCI 750 Computational Complexity (15 points)

### Master of Artificial Intelligence 180 points

#### Semester 1 2024 (60 points)

- COMPSCI 712 AI Agency, Ethics and Society (15 points)
- COMPSCI 713 AI Fundamentals (15 points)
- COMPSCI 714 AI Architecture and Design (15 points)
- INFOSYS 703 Managing with Artificial Intelligence (15 points)

#### Semester 2 2024 (60 points)

- ENGGEN 769 Research Methods for Engineers (15 points)
- COMPSCI 764 Deep Learning (15 points)
- COMPSCI 760 Advanced Topics in Machine Learning (15 points) (if prerequisites met)
- COMPSYS 731 Human-Robot Interaction (15 points) (if prerequisites met)

#### Semester 1 2025 (60 points)

- COMPSCI 792 Research Project (30 points)
- COMPSCI 703 Generalising Artificial Intelligence (15 points)
- COMPSCI 720 Advanced Design and Analysis of Algorithms (15 points)

OR

#### Semester 1 2024 (60 points)

- COMPSCI 712 AI Agency, Ethics and Society (15 points)
- COMPSCI 713 AI Fundamentals (15 points)
- COMPSCI 714 AI Architecture and Design (15 points)
- INFOSYS 703 Managing with Artificial Intelligence (15 points)

#### Semester 2 2024 (60 points)

- COMPSCI 769 Natural Language Processing (15 points)
- ENGGEN 769 Research Methods for Engineers (15 points)
- COMPSCI 764 Deep Learning (15 points)

- COMPSCI 760 Advanced Topics in Machine Learning (15 points) (if prerequisites met)

#### Semester 1 2025 (60 points)

- COMPSCI 792 Research Project (30 points)
- COMPSCI 773 Intelligent Vision Systems (15 points) (if prerequisites met)
- ENGSCI 760 Algorithms for Optimisation (15 points) (if prerequisites met)

OR

#### Semester 1 2024 (60 points)

- COMPSCI 712 AI Agency, Ethics and Society (15 points)
- COMPSCI 713 AI Fundamentals (15 points)
- COMPSCI 714 AI Architecture and Design (15 points)
- INFOSYS 703 Managing with Artificial Intelligence (15 points)

#### Semester 2 2024 (60 points)

- COMPSCI 769 Natural Language Processing (15 points)
- ENGGEN 769 Research Methods for Engineers (15 points)
- COMPSCI 764 Deep Learning (15 points)
- COMPSCI 761 Advanced Topics in Artificial Intelligence (15 points)

#### Semester 1 2025 (60 points)

- COMPSCI 792 Research Project (30 points)
- COMPSCI 765 Modelling Minds (15 points)
- INFOSYS 722 Data Mining and Big Data (15 points)

#### Notes about Research Project and Internship:

- Students who wish to continue to a PhD at UoA must complete the research project component:
  - The research project is to be carried out under the guidance of a supervisor appointed by Senate or its representative. See <https://www.auckland.ac.nz/en/science/our-research/finding-your-supervisor.html> for COMPSCI792.
  - The topic of the research project must be approved by the Academic Head or nominee prior to enrolment.
  - The research project is to be completed and submitted in accordance with the General Regulations – Masters Degrees.
- Students are not allowed to enrol into COMPSCI 779 Internship unless they have been provided an offer and the internship project must be approved by the Academic Head or nominee prior to enrolment. (Students who carry out an internship component will not be eligible for further PhD studies.)