

Handbook 2020

Coursecode

M1302

MASTER OF SYSTEMS MEDICINE (RESEARCH)

Murdoch University

Correct as at: 29 February 2020 at 6:14am

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Cancellation of Courses, Majors, Minors and Units

The University reserves the right to cancel, without notice, any course, major, minor or unit if the number of students enrolled falls below limits set by the University or in other unforeseen circumstances.

Alternative Formats

Handbook home page:

<http://handbook.murdoch.edu.au>

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Group	Course	Offerings
Graduate Research Degrees		
Systems Medicine	Master of Systems Medicine (Research) (MSysMed(Res))	• Not currently available to new admissions

SYSTEMS MEDICINE

MASTER OF SYSTEMS MEDICINE (RESEARCH) (MSYSMED(RES))

Graduate Research

Master of Systems Medicine (Research) (MSysMed(Res))

Course Codes: M1302

Restriction: All graduate courses are subject to restriction.

Duration: 2 years full-time (over 4 semesters) or part-time equivalent

Availability:

- Not currently available to new admissions

This 2-year research degree is designed to train students in omics science technologies and their application in healthcare. Students will gain extensive theoretical knowledge and practical experience from researchers at the forefront of systems medicine; and apply this new knowledge to undertake a real world health care related project. On completion of this course, graduates will have a high level of multidisciplinary expertise to meet the skills currently sought by employers in academia/industry/healthcare sectors. Students will undertake 12 points of taught coursework, 12 points of research preparation and a 24 points research dissertation.

Employment Prospects:

In research institutes, hospitals, industries within health care; scientific professional, technical professional and academia

Admission Requirements (Onshore):

A recognised Bachelor Degree (AQF Level 7) with a GPA of 3.5 or higher, including evidence of studies in either biochemistry or chemistry and either mathematics or statistics, or completion of the Graduate Certificate in Systems Medicine or Graduate Diploma in Systems Medicine with a course average of 65% or higher. Exceptional applicants with a lower GPA scores who also have research experience and/or relevant professional experience may also be considered.

Main Research Areas:

Phenomics, systems medicine, bioinformatics, clinical areas (aging, cancer, cardiometabolic diseases, maternal and early life), omics science

Course Structure - 48 credit points

Core Units - 42 credit points

BIO512 Introduction to Systems Medicine - 3 points
MURDOCH: S2-internal

BIO513 Introduction to bioinformatics and data science - 3 points
Not available this year

VLS683 Advanced Research Methods for Scientists - 3 points
MURDOCH: S1S-internal, S1S-external, S2N3-internal, S2N3-external

BIO510 Research design in systems medicine - 9 points
MURDOCH: S1-internal

BIO610 Thesis in Systems Medicine - 24 points
Not available this year

Specified Electives - 6 credit points

Select from the following:

BIO514 Systems Medicine in Maternal and Early Life - 3 points
Not available this year

BIO515 Systems Medicine in Cardiometabolic Disease - 3 points
Not available this year

BIO516 Systems Medicine in Brain Health and Neuropathology - 3

points

Not available this year

PREREQUISITES

Advanced Research Methods for Scientists (VLS683)

Enrolment in Honours or a graduate-level (AQF level 9) course or Bachelor Environmental Science.

Introduction to Systems Medicine (BIO512)

Enrolment in Master of Systems Medicine (Research), Graduate Certificate in Systems Medicine, Graduate Diploma in Systems Medicine.

Introduction to bioinformatics and data science (BIO513)

Enrolment in Master of Systems Medicine (Research), Graduate Certificate in Systems Medicine, Graduate Diploma in Systems Medicine.

Research design in systems medicine (BIO510)

Enrolment in Master of Systems Medicine (Research), or completion of Graduate Certificate in Systems Medicine with minimum scores of 65%.

Systems Medicine in Brain Health and Neuropathology (BIO516)

Enrolment in Graduate Certificate in Systems Medicine or Graduate Diploma in Systems Medicine or Master of Systems Medicine (Research)

Systems Medicine in Cardiometabolic Disease (BIO515)

Enrolment in Graduate Certificate in Systems Medicine or Graduate Diploma in Systems Medicine or Master of Systems Medicine (Research)

Systems Medicine in Maternal and Early Life (BIO514)

Enrolment in Graduate Certificate in Systems Medicine or Graduate Diploma in Systems Medicine or Master of Systems Medicine (Research).

Thesis in Systems Medicine (BIO610)

Enrolment in Master of Systems Medicine (Research), or completion of Graduate Diploma in Systems Medicine with a minimum score of 65%.