

Handbook 2020

Coursecode

B1317A

Murdoch University

Correct as at: 14 December 2019 at 5:32am

Correct as at: 14 December 2019 at 5:32am

The information contained within this publication was correct as at the generated date shown above but is subject to amendment without notice. Enquiries concerning its contents should be addressed to:

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TEQSA Number PRV12163; CRICOS Provider Code: 00125J

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

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ISSN 0815-9068

Published by

University Secretary's Office

Murdoch University



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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.

Group	Course	Offerings
Biological Sciences	Biological Sciences (BSc)	<ul style="list-style-type: none"> • Murdoch campus (internal) • Some units only; Murdoch campus (external)

BIOLOGICAL SCIENCES

BIOLOGICAL SCIENCES (BSC)

Employment Prospects:

Graduates find employment with Federal, state and local agencies dealing with nature conservation and the Department of Agriculture and Food, hospitals and medical laboratories, in teaching and in the private sector. Employment prospects are broadened by taking a double major, or a major and one or more minors.

Bachelor of Science (BSc) in Biological Sciences

Duration: 3 years full-time or part-time equivalent

Admission Requirements (Onshore):

As per normal undergraduate admission requirements. There are no prerequisites for admission but it is highly desirable for students to have undertaken TEE Chemistry or WACE Chemistry 3A/3B and at least TEE Discrete Mathematics or WACE Mathematics 2C/2D.

Main Research Areas:

Animal and plant biology and conservation, molecular biology, plant pathology, microbiology, fisheries biology, plant/fungal interactions, plant tissue culture, behavioural ecology.

Special Requirements:

Students will not be required to kill any vertebrate animal, although they may be required to work with vertebrate tissues or products. Some collection of invertebrate specimens is required.

Environmental Science

The Biological Sciences major aims to produce biologists with wide-ranging training and experience in a broad area of biology. It adopts an integrated approach to the major themes of biology, from the molecular and cellular levels to the whole organism and community levels. This is achieved by examining the common features and differences in the biochemistry, genetics, ecology and behaviour of micro-organisms, plants and animals.

In addition, students may select electives to place emphasis on animal biology, biochemistry, conservation biology, ecology, fisheries science, microbiology and molecular biology.

Availability:

- Murdoch campus (internal)
Some units only: Murdoch campus (external)

Murdoch's Bachelor of Science is a flexible degree which gives you the opportunity to build deep understanding and practical experience as well as to supplement your studies by engaging with industry and the community on relevant problems. You can even undertake studies through another discipline to broaden your understanding of the way in which science operates in relation to social, business, health and policy environments.

Course Codes: B1317 B1317A

Recommended Double Majors:

Animal Health; Conservation and Wildlife Biology; Environmental Management and Sustainability; Environmental Science; Genetics and Molecular Biology; Marine Science

Major Prerequisites

Chemistry Background

Students who achieved a final scaled score of 50 percent or more in Chemistry 3A/3B or Chemistry ATAR within the past three years should seek an exemption from their Academic Chair for CHE140 Fundamentals of Chemistry. Students who have completed previous chemistry not stated above should also consult their Academic Chair for clarification of their enrolment requirements.

Course Structure - 72 credit points

Part I - 24 credit points

Year 1 - 24 credit points

Transition Unit - 3 credit points

BSC100 Building Blocks for Science Students - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

Breadth Unit for Degree - 3 credit points

MSP100 Career Learning: Managing Your Career - 3 points
MURDOCH: S1-external, S2-external

Core Units - 15 credit points

BIO103 Environmental Biology - 3 points
MURDOCH: S1-internal, S1-external

CHE140 Fundamentals of Chemistry - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

BIO152 Cell Biology - 3 points
MURDOCH: S1-internal (quota of 180 places), S2-internal

CHE144 Foundations of Chemistry - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

MAS183 Statistical Data Analysis - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

General Electives - 3 credit points

Select from any 100-level units offered by the University, subject to individual unit prerequisites. Students are advised to consider using General Elective points to meet the requirements of a second major or minor. Any recommended double majors and minors will be included in the major's description.

Part II - 48 credit points

University-Wide Breadth Units - 6 credit points

Select from the prescribed list of University-Wide Breadth Units. A unit cannot be used to satisfy both this Breadth Unit requirement and the requirements of a major or minor. If taken at 100 level the unit(s) will be attributed to Part I. Note that no more than 30 credit points at Part I may be credited towards course completion requirements.

Year 2 - 21 credit points

Research Skills Unit - 3 credit points

The Research Skills unit to be taken will depend on the student's Primary Major enrolment. Select from the following.

For Primary Major in Cognitive Neuroscience and Health Psychology

BSC201 Psychology: Measurement, Design and Analysis - 3 points
MURDOCH: S1-internal

For Primary Majors in the Health Sciences, as listed

Primary Major in Chiropractic Science, Exercise Physiology, Movement Science, or Sport and Health Science:

BSC206 Introduction to Research Methodology and Evidence Based Practice - 3 points
MURDOCH: S2-internal

For All Other Primary Majors excluding Information Technology

Select from the Research Skills Unit List recommended for each major. A unit cannot be used to satisfy both this Research Skills Unit requirement and the requirements of a major or minor. If taken at 100 level the unit(s) will be attributed to Part I. Note that no more than 30 credit points at Part I may be credited towards course completion requirements.

Core Units - 12 credit points

BIO245 Plant Evolution, Radiation and Adaptation - 3 points
MURDOCH: S1-internal

BIO244 Animal Diversity - 3 points
MURDOCH: S2-internal

Plus two of the following three units:

BIO246 Microbiology - 3 points
MURDOCH: S1-internal

BIO247 Biochemistry - 3 points
MURDOCH: S2-internal

ENV241 Ecology - 3 points
MURDOCH: S2-internal, S2-external

General Electives - 6 credit points

Select from any 200- to 400-level units offered by the University, subject to individual unit prerequisites. Students are advised to consider using General Elective points to meet the requirements of a second major or minor. Any recommended double majors and minors will be included in the major's description.

Year 3 - 21 credit points

Research Skills Unit - 3 credit points

The Research Skills unit to be taken will depend on the student's Primary Major enrolment. Select from the following.

For Primary Major in Cognitive Neuroscience and Health Psychology

BSC302 Advanced Quantitative Research Methods - 3 points
MURDOCH: S2-internal

For Primary Majors in the Health Sciences, as listed

Primary major in Chiropractic Science, Movement Science, Sport and Health Science:

BSC306 Research and Evidence Based Practice - 3 points
MURDOCH: S1-internal

For All Other Primary Majors excluding Information Technology

Select from the Research Skills Unit List recommended for each major. A unit cannot be used to satisfy both this Research Skills Unit requirement and the requirements of a major or minor. If taken at 100 level the unit(s) will be attributed to Part I. Note that no more than 30 credit points at Part I may be credited towards course completion requirements.

Core Units - 6 credit points

BIO356 Genetics and Evolution - 3 points
MURDOCH: S1-internal

BIO379 Evolutionary Analysis - 3 points
MURDOCH: S2-internal

General Electives - 12 credit points

Select from any 200- to 400-level units offered by the University, subject to individual unit prerequisites. Students are advised to consider using General Elective points to meet the requirements of a second major or minor. Any recommended double majors and minors will be included in the major's description.

Research Skills Unit List

Animal Health Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO282 Molecular Biology - 3 points
MURDOCH: S1-internal

BIO394 Genetic Engineering - 3 points
MURDOCH: S1-internal

ENV303 GIS for Environmental Management and Planning - 3 points
MURDOCH: S2-internal (quota of 70 places), S2-external (quota of 20 places)

COM103 Foundations of Communication - 3 points
MURDOCH: S2-internal, S2-external

BMS317 Human Pharmacology - 3 points
MURDOCH: S1-internal

Animal Science Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO246 Microbiology - 3 points
MURDOCH: S1-internal

BMS316 Parasitology: People, Pets and Wildlife - 3 points
MURDOCH: S2-internal

ENV303 GIS for Environmental Management and Planning - 3 points
MURDOCH: S2-internal (quota of 70 places), S2-external (quota of 20 places)

BIO282 Molecular Biology - 3 points
MURDOCH: S1-internal

BIO394 Genetic Engineering - 3 points
MURDOCH: S1-internal

COM103 Foundations of Communication - 3 points
MURDOCH: S2-internal, S2-external

Crop and Pasture Science

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

ENV303 GIS for Environmental Management and Planning - 3 points
MURDOCH: S2-internal (quota of 70 places), S2-external (quota of 20 places)

BMS316 Parasitology: People, Pets and Wildlife - 3 points
MURDOCH: S2-internal

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO246 Microbiology - 3 points
MURDOCH: S1-internal

BIO257 Australian Biodiversity - 3 points
MURDOCH: S2-internal

BIO282 Molecular Biology - 3 points
MURDOCH: S1-internal

BIO394 Genetic Engineering - 3 points
MURDOCH: S1-internal

Biological Sciences Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

ENV303 GIS for Environmental Management and Planning - 3 points
MURDOCH: S2-internal (quota of 70 places), S2-external (quota of 20 places)

BMS316 Parasitology: People, Pets and Wildlife - 3 points
MURDOCH: S2-internal

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO282 Molecular Biology - 3 points
MURDOCH: S1-internal

BIO394 Genetic Engineering - 3 points
MURDOCH: S1-internal

BIO377 Marine Ecology - 3 points
MURDOCH: S1-internal

BIO388 Forensic Science and Miscarriages of Justice - 3 points
MURDOCH: W-internal

CHE207 Chemical Analysis - 3 points
MURDOCH: S1-internal, S1-external

BIO393 Tropical Marine Biology - 3 points
MURDOCH: W-internal (quota of 40 places)

Conservation and Wildlife Biology Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

ENV303 GIS for Environmental Management and Planning - 3 points
MURDOCH: S2-internal (quota of 70 places), S2-external (quota of 20 places)

BIO246 Microbiology - 3 points
MURDOCH: S1-internal

BMS316 Parasitology: People, Pets and Wildlife - 3 points
MURDOCH: S2-internal

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO282 Molecular Biology - 3 points
MURDOCH: S1-internal

BIO394 Genetic Engineering - 3 points
MURDOCH: S1-internal

BIO377 Marine Ecology - 3 points
MURDOCH: S1-internal

ENV328 Environmental Policy and Law - 3 points
MURDOCH: S1-internal, S1-external

SUS305 Economics of Sustainability - 3 points
MURDOCH: W-internal, W-external

COD302 Creative Ways to Work with Community - 3 points
MURDOCH: S2-internal, S2-external

BIO247 Biochemistry - 3 points
MURDOCH: S2-internal

ENV332 Managing Wetlands and Water - 3 points
MURDOCH: S2-internal, S2-external

BIO393 Tropical Marine Biology - 3 points
MURDOCH: W-internal (quota of 40 places)

Environmental Management and Sustainability Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO393 Tropical Marine Biology - 3 points
MURDOCH: W-internal (quota of 40 places)

MAS182 Applied Mathematics - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

MAS353 Statistical Design and Data Analysis - 3 points
MURDOCH: S2-internal, S2-external

ENV332 Managing Wetlands and Water - 3 points
MURDOCH: S2-internal, S2-external

ENG341 Water Conservation and Auditing - 3 points
MURDOCH: S1-internal, S1-external

COM103 Foundations of Communication - 3 points
MURDOCH: S2-internal, S2-external

BIO257 Australian Biodiversity - 3 points
MURDOCH: S2-internal

SUS305 Economics of Sustainability - 3 points
MURDOCH: W-internal, W-external

COD302 Creative Ways to Work with Community - 3 points
MURDOCH: S2-internal, S2-external

ENV241 Ecology - 3 points
MURDOCH: S2-internal, S2-external

Environmental Science Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

ENV303 GIS for Environmental Management and Planning - 3 points
MURDOCH: S2-internal (quota of 70 places), S2-external (quota of 20 places)

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO393 Tropical Marine Biology - 3 points
MURDOCH: W-internal (quota of 40 places)

ENV334 Environmental Restoration - 3 points
MURDOCH: S1-internal (quota of 60 places), S1-external (quota of 60 places)

ENG341 Water Conservation and Auditing - 3 points
MURDOCH: S1-internal, S1-external

COM103 Foundations of Communication - 3 points
MURDOCH: S2-internal, S2-external

BIO257 Australian Biodiversity - 3 points
MURDOCH: S2-internal

MAS182 Applied Mathematics - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

Marine Science Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

ENV303 GIS for Environmental Management and Planning - 3 points
MURDOCH:
S2-internal (quota of 70 places), S2-external (quota of 20
places)

BIO246 Microbiology - 3 points
MURDOCH: S1-internal

BMS316 Parasitology: People, Pets and Wildlife - 3 points
MURDOCH: S2-internal

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

ENV241 Ecology - 3 points
MURDOCH: S2-internal, S2-external

BIO393 Tropical Marine Biology - 3 points
MURDOCH:
W-internal (quota of 40 places)

Biomedical Science Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO282 Molecular Biology - 3 points
MURDOCH: S1-internal

BIO394 Genetic Engineering - 3 points
MURDOCH: S1-internal

BIO367 Forensic Toxicology - 3 points
MURDOCH: S2-internal

BIO246 Microbiology - 3 points
MURDOCH: S1-internal

BMS218 Haematology - 3 points
MURDOCH:
S2-internal (quota of 80 places)

BMS323 Clinical Biochemistry I - 3 points
MURDOCH:
S2-internal (quota of 25 places)

BMS316 Parasitology: People, Pets and Wildlife - 3 points
MURDOCH: S2-internal

BMS317 Human Pharmacology - 3 points
MURDOCH: S1-internal

Clinical Laboratory Science Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO394 Genetic Engineering - 3 points
MURDOCH: S1-internal

BIO367 Forensic Toxicology - 3 points
MURDOCH: S2-internal

BIO246 Microbiology - 3 points
MURDOCH: S1-internal

BIO388 Forensic Science and Miscarriages of Justice - 3 points
MURDOCH: W-internal

BMS317 Human Pharmacology - 3 points
MURDOCH: S1-internal

Forensic Biology and Toxicology Major

BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO388 Forensic Science and Miscarriages of Justice - 3 points
MURDOCH: W-internal

BIO394 Genetic Engineering - 3 points
MURDOCH: S1-internal

BMS218 Haematology - 3 points
MURDOCH:
S2-internal (quota of 80 places)

BMS323 Clinical Biochemistry I - 3 points
MURDOCH:
S2-internal (quota of 25 places)

BMS317 Human Pharmacology - 3 points
MURDOCH: S1-internal

Genetics and Molecular Biology Major

MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external

MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external

BIO388 Forensic Science and Miscarriages of Justice - 3 points
MURDOCH: W-internal

BMS211 Medical Immunology and Molecular Genetics - 3 points
MURDOCH: S2-internal

BMS327 Diagnostic Genomics - 3 points
MURDOCH:
S1-internal (quota of 30 places)

BIO367 Forensic Toxicology - 3 points
MURDOCH: S2-internal

BIO359 Forensic DNA Analysis - 3 points
MURDOCH: S1-internal

BMS218 Haematology - 3 points
MURDOCH:
S2-internal (quota of 80 places)

BMS323 Clinical Biochemistry I - 3 points
MURDOCH:
S2-internal (quota of 25 places)

BMS317 Human Pharmacology - 3 points
MURDOCH: S1-internal

Chemistry Major

MAS221 Mathematical Modelling - 3 points
MURDOCH: S2-internal, S2-external

CHE309 Advanced Projects in Chemistry and Mineral Science - 3
points
MURDOCH: S1-internal, S2-internal, SUM-internal

BSC304 Innovation and Ethics in Science - 3 points
MURDOCH: S1-internal, S1-external

Physics and Nanotechnology Major

- MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external
- MAS222 Probability and Statistical Inference - 3 points
MURDOCH: S1-internal, S1-external
- ICT289 Computer Graphics Principles and Programming - 3 points
MURDOCH: S1-internal, S1-external
- ICT283 Data Structures and Abstractions - 3 points
MURDOCH: S1-internal, S1-external
- ENG297 Circuits and Systems II - 3 points
MURDOCH: S2-internal
- ENG207 Principles of Electronic Instrumentation - 3 points
MURDOCH: S2-internal, W-internal
- ICT319 Intelligent Systems - 3 points
MURDOCH: S2-internal, S2-external
- MAS221 Mathematical Modelling - 3 points
MURDOCH: S2-internal, S2-external
- MAS351 Environmental and Biological Modelling - 3 points
MURDOCH: S1-internal, S1-external
- MAS354 Modelling and Simulation - 3 points
MURDOCH: S2-internal, S2-external
- BSC304 Innovation and Ethics in Science - 3 points
MURDOCH: S1-internal, S1-external

Mathematics and Statistics Major

- MAS220 Mathematical Methods - 3 points
MURDOCH: S1-internal, S1-external
- MAS222 Probability and Statistical Inference - 3 points
MURDOCH: S1-internal, S1-external
- ICT283 Data Structures and Abstractions - 3 points
MURDOCH: S1-internal, S1-external
- MAS351 Environmental and Biological Modelling - 3 points
MURDOCH: S1-internal, S1-external
- MAS352 Time Series Analysis - 3 points
MURDOCH: S1-internal, S1-external
- ICT373 Software Architectures - 3 points
MURDOCH: S1-internal, S1-external
- ICT374 Operating Systems and Systems Programming - 3 points
MURDOCH: S2-internal, S2-external

Engineering Technology Major

- MAS221 Mathematical Modelling - 3 points
MURDOCH: S2-internal, S2-external
- The following unit is no longer available - contact the Academic Chair for advice:
- BEN200 Scientific Method in Engineering - 3 points
- MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external
- BEN300 Innovation and Ethics in Engineering - 3 points
MURDOCH: S1-internal
- BSC304 Innovation and Ethics in Science - 3 points
MURDOCH: S1-internal, S1-external
- MAS351 Environmental and Biological Modelling - 3 points
MURDOCH: S1-internal, S1-external
- MAS354 Modelling and Simulation - 3 points
MURDOCH: S2-internal, S2-external
- ENG336 Engineering Finance, Management and Law - 3 points

MURDOCH: S2-internal

Mineral Science Major

- ENG255 Chemical Process Kinetics - 3 points
MURDOCH: S2-internal, S2-external
- MAS221 Mathematical Modelling - 3 points
MURDOCH: S2-internal, S2-external
- The following unit is no longer available - contact the Academic Chair for advice:
- BEN200 Scientific Method in Engineering - 3 points
- ENG299 Control Systems and Process Dynamics - 3 points
MURDOCH: S1-internal
- BEN300 Innovation and Ethics in Engineering - 3 points
MURDOCH: S1-internal
- MAS351 Environmental and Biological Modelling - 3 points
MURDOCH: S1-internal, S1-external
- MAS354 Modelling and Simulation - 3 points
MURDOCH: S2-internal, S2-external
- ENG336 Engineering Finance, Management and Law - 3 points
MURDOCH: S2-internal

Marine Biology Major

- BSC200 Research in the Physical and Life Sciences - 3 points
Not available this year
- ENV303 GIS for Environmental Management and Planning - 3 points
MURDOCH: S2-internal (quota of 70 places), S2-external (quota of 20 places)
- BIO246 Microbiology - 3 points
MURDOCH: S1-internal
- BMS316 Parasitology: People, Pets and Wildlife - 3 points
MURDOCH: S2-internal
- MAS223 Applied Statistics - 3 points
MURDOCH: S2-internal, S2-external
- MAS224 Biostatistical Methods - 3 points
MURDOCH: S1-internal, S1-external
- BIO282 Molecular Biology - 3 points
MURDOCH: S1-internal

PREREQUISITES**Advanced Projects in Chemistry and Mineral Science (CHE309)**

Students need to have completed a minimum of 24 points at 200 and 300 level.

Advanced Quantitative Research Methods (BSC302)

BSC201 Psychology: Measurement, Design and Analysis OR
PSY212: Psychology: Measurement, Design and Analysis.

Animal Diversity (BIO244)

BIO103 Introduction to Environmental Biology/Environmental Biology or BIO180 Introduction to Marine Biology

Applied Mathematics (MAS182)

MAS164 Fundamentals of Mathematics OR at least a pass in the Year 11 course Introduction to Calculus together with a final scaled score of 55% or more in TEE Applicable Mathematics OR a final scaled score of 55% or higher in ATAR Mathematics Methods (WACE Mathematics 3C/3D).

Applied Statistics (MAS223)

MAS183 Statistical Data Analysis.

Australian Biodiversity (BIO257)

Nil.

Biochemistry (BIO247)

BIO152 Cell Biology/Foundations of Cell and Molecular Biology/Foundations of Cell Biology

Biostatistical Methods (MAS224)

MAS180 Introduction to Statistics or MAS183 Statistical Data Analysis.

Building Blocks for Science Students (BSC100)

Enrolment in a Bachelor of Science, Bachelor of Animal Science, Bachelor of Environmental Management, Bachelor of Environmental Science, Bachelor of Extractive Metallurgy, Bachelor of Forensics, Bachelor of Information Technology Management, Bachelor of Marine Science, Bachelor of Sports Science, Bachelor of Technology in Engineering Technology, Bachelor of Sustainability, Bachelor Of Sport And Exercise Science, Bachelor of Sport and Exercise Science + Psychology (BsportExSc, BSc) or Bachelor Of Sport And Exercise Science/Graduate Diploma In Clinical Exercise Physiology, B1355 Bachelor of Laws / Bachelor of Science (Psychology)

Career Learning: Managing Your Career (MSP100)

Nil.

Cell Biology (BIO152)

A thorough knowledge of ATAR Chemistry is assumed. For students who did not achieve a WACE course score of more than 50% in Chemistry (3A/3B) or Chemistry ATAR within the three years immediately preceding enrolment, completion of CHE140 Fundamentals of Chemistry is required.

Successful completion of BSC100 Building Blocks for Science Students is required. BEd(Sec) students not meeting these prerequisite requirements will need to seek approval from their Academic Chair to participate in this unit.

Chemical Analysis (CHE207)

CHE144 Foundations of Chemistry/PEC144 Chemical Principles.

Chemical Process Kinetics (ENG255)

All Part I units in the Chemical and Metallurgical Engineering Honours major.

Circuits and Systems II (ENG297)

ENG225 Circuits and Systems I AND MAS182 Applied Mathematics or equivalent.

Clinical Biochemistry I (BMS323)

BIO247 Biochemistry

Computer Graphics Principles and Programming (ICT289)

ICT167 Principles of Computer Science OR ICT104 Principles of Computer Science. Students are encouraged to also complete MAS162 Foundations of Discrete Mathematics AND ICT170 Foundations of Computer Systems.

Control Systems and Process Dynamics (ENG299)

PEC152/PEN152 Principles of Physics; MAS161 Calculus and Matrix Algebra or co-requisite MAS208 Mathematical Modelling; ENG109 Computing for Scientists and Engineers; ENG192 Energy, Mass and Flow or CHE144 Foundations of Chemistry.

Creative Ways to Work with Community (COD302)

Nil.

Data Structures and Abstractions (ICT283)

ICT167/ICT104 Principles of Computer Science. Students are encouraged to also complete MAS162 Foundations of Discrete Mathematics AND ICT170 Foundations of Computer Systems.

Diagnostic Genomics (BMS327)

BIO282 Molecular Biology

Ecology (ENV241)

BIO103 Environmental Biology/Introduction to Environmental

Biology or BIO180 Introduction to Marine Biology.

Economics of Sustainability (SUS305)

Nil.

Engineering Finance, Management and Law (ENG336)

Nil.

Environmental Biology (BIO103)

Nil.

Environmental Policy and Law (ENV328)

Nil.

Environmental Restoration (ENV334)

BIO103 Environmental Biology/Introduction to Environmental Biology. Students are strongly recommended to complete ENV268/ENV241 Ecology.

Environmental and Biological Modelling (MAS351)

MAS221/MAS208 Mathematical Modelling OR MAS220/MAS261 Mathematical Methods.

Evolutionary Analysis (BIO379)

BIO356/BIO372 Genetics and Evolution.

Forensic DNA Analysis (BIO359)

BIO202 Molecular Biology I or BIO212 Genetic Engineering or BIO282 Molecular Biology

Forensic Science and Miscarriages of Justice (BIO388)

PEC103/CHE103 Introduction to Forensic Science OR CRM100 Introduction to Criminology OR permission of the Unit Co-ordinator.

Forensic Toxicology (BIO367)

Successful completion of, or concurrent enrolment in, either BIO247/BIO270 Biochemistry/Biochemistry I or BMS261/VET272 Human and Comparative Biochemistry/Comparative Mammalian Biochemistry or CHE207 Chemical Analysis..

Foundations of Chemistry (CHE144)

A thorough knowledge of Chemistry ATAR is assumed. Students who did not achieve a final scaled score of 50 percent or more in Chemistry ATAR within the three years immediately preceding this enrolment are required to pass CHE140 Fundamentals of Chemistry before enrolling in this unit.

Foundations of Communication (COM103)

Nil.

Fundamentals of Chemistry (CHE140)

Knowledge of chemistry to the level of Year 10 (fourth year of WA secondary school) or equivalent and reasonable grounding in basic mathematics are assumed.

GIS for Environmental Management and Planning (ENV303)

Completion of 24 points or enrolment in an appropriate graduate qualification.

Genetic Engineering (BIO394)

BIO282 Molecular Biology

Genetics and Evolution (BIO356)

BIO152 Cell Biology/Foundations of Cell and Molecular Biology/Foundations of Cell Biology and either MAS183 Statistical Data Analysis and Databases or MAS182 Applied Mathematics or equivalent.

Haematology (BMS218)

BIO152 Cell Biology/Foundations of Cell and Molecular Biology/Foundations of Cell Biology.

Human Pharmacology (BMS317)

Essential: BIO247 Biochemistry or BMS206 Biomedical Physiology OR VET272 Comparative Mammalian Biochemistry.
Recommended: BRD202 Drugs in Society

Innovation and Ethics in Engineering (BEN300)

BEN200 Engineering Research Skills; MAS261/MAS220

Mathematical Methods OR MAS208/MAS221 Mathematical Modelling.

Innovation and Ethics in Science (BSC304)

Completion of one 200-level research skills unit recommended for your major.

Intelligent Systems (ICT319)

ICT167 Principles of Computer Science OR ICT104 Principles of Computer Science.

Introduction to Research Methodology and Evidence Based Practice (BSC206)

100-level Transition Unit.

Managing Wetlands and Water (ENV332)

ENV241/ENV268 Ecology

Marine Ecology (BIO377)

BIO261/BIO244 Animal Diversity/Animal Speciation, Radiation, Evolution, or BIO287 Plant Diversity (Marine Science) / BIO254 Marine Botany or BIO265/BIO245 Plant Diversity/Plant Evolution, Radiation and Adaptation, or ENV268/ENV241 Ecology.

Mathematical Methods (MAS220)

MAS161 Calculus and Matrix Algebra OR MAS208/MAS221 Mathematical Modelling OR equivalent.

Mathematical Modelling (MAS221)

MAS182 Applied Mathematics or MAS161 Calculus and Matrix Algebra or equivalent.

Medical Immunology and Molecular Genetics (BMS211)

BIO152 Cell Biology/ Foundations of Cell and Molecular Biology.

Microbiology (BIO246)

BIO152 Cell Biology/Foundations of Cell and Molecular Biology/Foundations of Cell Biology

Modelling and Simulation (MAS354)

MAS161 Calculus and Matrix Algebra OR MAS221/MAS208 Mathematical Modelling OR both MAS182 Applied Mathematics AND MAS167 Computational Mathematics/MAS162 Foundations of Discrete Mathematics

Molecular Biology (BIO282)

BIO152 Cell Biology/Foundations of Cell and Molecular Biology/Foundations of Cell Biology

Operating Systems and Systems Programming (ICT374)

ICT283/ICT209 Data Structures and Abstractions.

Parasitology: People, Pets and Wildlife (BMS316)

BIO152 Cell Biology/Foundations of Cell and Molecular Biology/Foundations of Cell Biology

Plant Evolution, Radiation and Adaptation (BIO245)

BIO103 Environmental Biology / Introduction to Environmental Biology or BIO180 Introduction to Marine Biology.

Principles of Electronic Instrumentation (ENG207)

ENG225 Circuits and Systems I and MAS182 Applied Mathematics.

Probability and Statistical Inference (MAS222)

MAS180 Introduction to Statistics OR MAS183 Statistical Data Analysis OR MAS223 Applied Statistics OR MAS224/MAS230 Biostatistical Methods OR MAS284 Applied Statistics and Process Management. In addition, students must have a calculus background equivalent to at least MAS182 Applied Mathematics.

Psychology: Measurement, Design and Analysis (BSC201)

PSY173 Introduction to Psychological Research Methods

Research and Evidence Based Practice (BSC306)

Completion of BSC206 Introduction to Research Methodology and Evidence Based Practice or special permission of Unit Coordinator.

Research in the Physical and Life Sciences (BSC200)

BSC100 Building Blocks for Science Students; OR enrolment in B1329 Bachelor of Education/Bachelor of Science and BED100

Ideas in Education.

Software Architectures (ICT373)

ICT104 Principles of Computer Science OR ICT167 Principles of Computer Science; ICT231 Systems Analysis and Design OR ICT284 Systems Analysis and Design.

Statistical Data Analysis (MAS183)

Nil.

Statistical Design and Data Analysis (MAS353)

MAS222/MAS278 Probability and Statistical Inference OR MAS223 Applied Statistics OR MAS224/MAS230 Biostatistical Methods OR MAS284 Applied Statistics and Process Management.

Time Series Analysis (MAS352)

MAS222/MAS278 Probability and Statistical Inference OR MAS223 Applied Statistics OR MAS224/MAS230 Biostatistical Methods OR MAS284 Applied Statistics and Process Management or enrolment in a postgraduate IT course. In addition students must have a calculus background equivalent to at least either MAS161 Calculus and Matrix Algebra OR MAS221/MAS208 Mathematical Modelling.

Tropical Marine Biology (BIO393)

BIO261/BIO244 Animal Diversity/Animal Speciation, Radiation, Evolution OR BIO265/BIO245 Plant Diversity/Plant Evolution, Radiation and Adaptation OR BIO287/BIO254 Plant Diversity (Marine Science) /Marine Botany OR ENV268/ENV241 Ecology OR permission of the Unit Coordinator.

Water Conservation and Auditing (ENG341)

Nil.

Personal Study Plan

Unit Sets:

Year	Semester 1	Semester 2
1		
2		
3		
4		