

Handbook 2020

Coursecode

B1317A

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.

Alternative Formats

Handbook home page:

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This publication can also be provided in alternative formats by contacting the Equity and Social Inclusion Office at Murdoch University

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Cancellation of Courses, Majors, Minors and Units

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

INTERNETWORKING AND NETWORK SECURITY

INTERNETWORKING AND NETWORK SECURITY (BSC)

Mathematics and Statistics

Admission Requirements (Onshore):

As per normal undergraduate admission requirements.

Employment Prospects:

This major prepares students for a career in computer networking for business, industry or government. The major also offers training towards the excellent Cisco Certification useful in a number of areas such as Network Engineer and System Administrator that are considered very desirable by potential employers across a large range of enterprises.

This major provides the knowledge and skills required to manage the complexity of the Internet of tomorrow, integrating voice, wireless, and security into the network. It is designed in consultation with industry to meet the growing need for networking specialists with skills in security and converged voice and data networks.

Bachelor of Science (BSc) in Internetworking and Network Security

Special Requirements:

Internet access is required for all students.

Recommended Double Majors:

Business Information Systems; Mobile and Web Application Development

Excluded Minors:

Network Design; Network Security

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

Main Research Areas:

Communication standards, electronic commerce, high speed networks and distance education.

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.

Availability:

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

Course Codes: B1317 B1317A

Course Structure - 72 credit points

Part I - 24 credit points

Year 1 - 24 credit points

Transition Unit - 3 credit points

ICT100 Transition to IT - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

OR (for Kaplan and Dubai students only)

BBS100 Academic Skills for Business - 3 points

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

ICT171 Introduction to Server Environments and Architectures - 3

points

MURDOCH: S1-internal, S1-external

ICT159 Foundations of Programming - 3 points

MURDOCH: S1-internal, S1-external

ICT169 Foundations of Data Communications - 3 points

MURDOCH: S2-internal, S2-external

MAS162 Foundations of Discrete Mathematics - 3 points

MURDOCH: S1-internal, S1-external, S2-internal, S2-external

ICT170 Foundations of Computer Systems - 3 points

MURDOCH: 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 Unit - 3 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

BSC203 Introduction to ICT Research Methods - 3 points

MURDOCH: S1-internal, S1-external

Core Units - 9 credit points

ICT284 Systems Analysis and Design - 3 points

MURDOCH: S1-internal, S1-external

ICT291 Network Design and Implementation - 3 points

MURDOCH: S1-internal

ICT285 Databases - 3 points

MURDOCH: S2-internal, S2-external

General Electives - 9 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 - 24 credit points

Research Skills Unit - 3 credit points

BSC301 Applied Research Skills in ICT - 3 points

MURDOCH: S1-internal, S1-external

Core Units - 12 credit points

ICT369 Wireless and Interactive Networks - 3 points

MURDOCH: S2-internal

ICT377 Network Security - 3 points

MURDOCH: S1-internal

ICT372 Advanced Network Design and Implementation - 3 points

MURDOCH: S2-internal

ICT302 IT Professional Practice Project - 3 points

MURDOCH: S1-internal, S1-external, S2-internal, S2-external

General Electives - 9 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.

PREREQUISITES

Academic Skills for Business (BBS100)

Enrolment in Bachelor of Business, Bachelor of Commerce, Bachelor of Economics, Bachelor of Business in Applied Accounting, or Bachelor of Digital Marketing and Media, Bachelor of Business in Sustainability, or Bachelor of Science, or Bachelor of Arts

Advanced Network Design and Implementation (ICT372)

ICT120 Principles of Data Communications OR ICT291 Network Design and Implementation.

Applied Research Skills in ICT (BSC301)

BSC203 Introduction to ICT Research Methods and enrolment in one of the following Information Technology majors: Computer Science or Business Information Systems or Cyber Forensics and Information Security or Games Software Design and Production, or Games Technology or Internetworking and Network Security or Mobile and Web Application Development.

Career Learning: Managing Your Career (MSP100)

Nil.

Databases (ICT285)

ICT102 Introduction to Computer Science or ICT159 Foundations of Programming or ICT170 Foundations of Computer Systems.

Foundations of Computer Systems (ICT170)

Nil.

Foundations of Data Communications (ICT169)

Nil.

Foundations of Discrete Mathematics (MAS162)

MAS164 Fundamentals of Mathematics/MAS182/MAS161 OR a final scaled score of 55% or more in ATAR Mathematics Applications or WACE Mathematics 2C/2D OR a final scaled score of 50% or more in ATAR Mathematics Methods or WACE Mathematics 3A/3B (or higher) OR equivalent.

Foundations of Programming (ICT159)

Nil.

IT Professional Practice Project (ICT302)

Students must be enrolled in an IT major and have accumulated 56 credit points. Students should also have passed ICT290 Games Design and Programming, OR ICT284 Systems Analysis and Design and ICT285 Databases.

Introduction to ICT Research Methods (BSC203)

BSC100 Building Blocks for Science and enrolment in one of the following Information technology majors: Computer Science or Business Information Systems or Cyber Forensics and Information Security or Games Software Design and Production, or Games Technology or Internetworking and Network Security or Mobile and Web Application Development.

Introduction to Server Environments and Architectures (ICT171)

Nil.

Network Design and Implementation (ICT291)

ICT169 Foundations of Data Communication OR ICT103 Introduction to Data Communications.

Network Security (ICT377)

ICT120 Principles of Data Communications OR ICT291 Network Design and Implementation.

Systems Analysis and Design (ICT284)

ICT102 Introduction to Computer Science OR ICT159 Foundations of Programming OR ICT107 Principles of Information Systems OR ICT158 Introduction to Information Systems or enrolment in a postgraduate IT course.

Transition to IT (ICT100)

Enrolment in the Bachelor of IT & Business or the Bachelor of Science (IT majors).

Wireless and Interactive Networks (ICT369)

ICT103 Introduction to Data Communications or ICT169 Foundations of Data Communications.

Personal Study Plan

Unit Sets:

Year	Semester 1	Semester 2
1		
2		
3		
4		