

# Handbook 2020

**Coursecode**

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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:

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

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

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<http://goto.murdoch.edu.au/EquitySocialInclusion>

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Group	Course	Offerings
<b>Internet Software Development</b>	Mobile and Web Application Development (BSc)	<ul style="list-style-type: none"> <li>• Murdoch campus (internal)</li> <li>• Murdoch campus (external)</li> <li>• Kaplan Higher Education Institute and Kaplan Higher Education Academy (Singapore) ['KAPLAN-SGP'] (internal) (language of instruction: English)</li> </ul>

## INTERNET SOFTWARE DEVELOPMENT

### MOBILE AND WEB APPLICATION DEVELOPMENT (BSC)

**Excluded Minors:**  
Web Development

**Special Requirements:**

There may be a reduction in choice of units if completing this course in the external mode. Individual units may require access to specific nominated software.

**Recommended Double Majors:**

Computer Science; Cyber Security and Forensics; Games Software Design and Production; Games Technology

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.

**Admission Requirements (Onshore):**

As per normal undergraduate admission requirements.

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*This major is designed to provide students with specialisation in the field of programming and mobile application development. The main areas covered include: the design and management of web based computing systems and mobile applications, the development and maintenance of applications for the Internet and mobile devices including multimedia, databases, software development and multi-platform development.*

**Availability:**

- Murdoch campus (internal)<br>Murdoch campus (external)<br>Kaplan Higher Education Institute and Kaplan Higher Education Academy (Singapore) ['KAPLAN-SGP'] (internal) (language of instruction: English)

*Bachelor of Science (BSc) in Mobile and Web Application Development Mathematics and Statistics*

**Employment Prospects:**

Excellent career opportunities exist for Mobile and Web Application Development graduates in business, industry and government as web system developers, mobile application developers, programmers, systems analysts, database administrators, computer systems and network administrators, user support officers and software engineers.

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

### 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

ICT167 Principles of Computer Science - 3 points

MURDOCH: S2-internal, S2-external  
KAPLAN-SGP: TJA-internal, TMA-internal, TSA-internal

ICT159 Foundations of Programming - 3 points  
MURDOCH: S1-internal, S1-external

ICT169 Foundations of Data Communications - 3 points  
MURDOCH: S2-internal, S2-external  
KAPLAN-SGP: TMA-internal

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  
KAPLAN-SGP: TMA-internal

##### Core Units - 9 credit points

ICT284 Systems Analysis and Design - 3 points  
MURDOCH: S1-internal, S1-external  
KAPLAN-SGP: TMA-internal

ICT285 Databases - 3 points  
MURDOCH: S2-internal, S2-external  
KAPLAN-SGP: TJA-internal, TSA-internal

ICT286 Web and Mobile Computing - 3 points  
MURDOCH: S2-internal, S2-external  
KAPLAN-SGP: TJA-internal, TSA-internal

#### 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  
KAPLAN-SGP: TJA-internal, TSA-internal

##### Core Units - 12 credit points

ICT375 Advanced Web Programming - 3 points  
MURDOCH: S1-internal, S1-external  
KAPLAN-SGP: TMA-internal

ICT365 Software Development Frameworks - 3 points  
MURDOCH: S2-internal, S2-external  
KAPLAN-SGP: TJA-internal, TSA-internal

ICT376 Mobile Application Development - 3 points

MURDOCH: S2-internal, S2-external  
KAPLAN-SGP: TJA-internal, TSA-internal

ICT302 IT Professional Practice Project - 3 points  
MURDOCH: S1-internal, S1-external, S2-internal, S2-external  
KAPLAN-SGP: TJA-internal, TMA-internal, TSA-internal

### **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.

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## **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 Web Programming (ICT375)**

ICT211 Web Computing or ICT286 Web and Mobile Computing.

### **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.

### **Mobile Application Development (ICT376)**

ICT286 Web and Mobile Computing; ICT159 Foundations of Programming or ICT102 Introduction to Computer Science.

### **Principles of Computer Science (ICT167)**

ICT159 Foundations of Computer Programming or ICT102

Introduction to Computer Science.

### **Software Development Frameworks (ICT365)**

ICT167/ICT104 Principles of Computer Science and ICT284/ICT231 Systems Analysis and Design

### **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).

### **Web and Mobile Computing (ICT286)**

ICT159 Foundations of Programming or ICT102 Introduction to Computer Science.

# Personal Study Plan

Unit Sets:

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Year	Semester 1	Semester 2
1		
2		
3		
4		