



MOBILE & WEB APPLICATION DEVELOPMENT



★ Most Awarded Private Education Provider¹ | Best Private Education Institution² ★



What Will I Learn?

What will our future phones and devices do? In this programme, you will learn the theory, design, techniques and practices used to develop software systems for the internet and cloud, with a focus on web-based client server applications and mobile applications. You will learn advanced web programming, mobile application development for major mobile operation systems platforms, cloud computing, server database management and programming, XML and web services, and cross-platform development.



Career Opportunities

- ▼ Web Application Developer
- ▼ Mobile Application Developer
- ▼ Mobile Games Server Developer
- ▼ Net Web Application Developer

Professional Accreditation

The programmes are accredited at the professional level with the Australian Computer Society (ACS).



Unit Outlines

Advanced Web Programming

This is an advanced unit in Internet and Web technologies, intended to develop technical understanding and practical experience in web application development.

The focus of this unit is to develop skills for constructing interactive and data-driven web applications that are both efficient and scalable. Topics include scalable web applications with Node.js, XML technologies, web services and cloud computing.

Databases

This unit provides an introduction to database design, implementation and management. Topics: data modelling, the relational model, SQL, logical and physical database design, database application design, transaction management, concurrency, recovery, security, database architectures and database administration.

The theory material is complemented by practical work using common database management systems.

IT Professional Practice Project

Students in this team-based unit will use IT approaches to solve 'real-world' problems from a range of domains. Creation of relevant project deliverables will require students to build upon skills developed during their studies.

Students will be expected to appreciate the interdisciplinary nature of their project and how the skills of team members from different IT majors are required to solve complex problems. Project management and communication with clients and other stakeholders in a professional manner will be emphasised.

Mobile Application Development

This unit focuses on mobile application development using mobile development techniques and environments. Topics covered include app life cycle, small device programming, platform architecture including Google Android, Apple iOS, and Microsoft Windows Phone, web applications for mobile, and cross platform development.

Principles of Computer Science

This unit is designed to develop the skills of problem solving and programme design using an Object Oriented programming language.

Major topics include algorithm design; procedural abstractions; the use of libraries as collection of black-box code modules; the concepts of pre- and post- conditions; strings, arrays, introduction to object-oriented concepts including data abstraction, encapsulation, classes and object references, inheritance; introduction to recursion; streams and file input and output; the definition and use of common classes – lists, stack and queues.

Software Development Frameworks

This unit aims to provide a general understanding of software development frameworks, and the practical experience and skills in using an important software development framework, with an emphasis on language interoperability, platform independence and software reuse using Microsoft .NET Framework. Topics include: Common Language Runtime, .NET Framework Class Library, C# and other .NET languages, and application packaging and deployment. It also discusses the history and background of .NET and its relationship with J2EE.

Systems Analysis and Design

This unit introduces methods and techniques for analysing problematic organisational situations, particularly those leading to the development of an information system, and draws on both technical and organisational material to provide the knowledge and skills necessary to design and implement an operational system.

Web and Mobile Computing

This unit provides an intermediate technical understanding and practical experience in developing web and mobile applications for both the traditional computer systems and for mobile devices. Topics include: design and implementation of web and mobile applications using languages, and tools and technologies such as HTML, CSS, JavaScript, AJAX, Apache Cordova, PHP, JSON, and MySQL, administration of web servers on a Unix system, and an introduction to web security.

For enquiries, please contact Elaine Goh | Mobile No.: 9277 2183 | Email Address: elaine.goh@kaplan.com



Find out more at www.murdochatkaplan.com.sg/appsdeveloper

The ICT Industry Is Booming



**World's Top 100
Young Universities³**



**More than 42,000
job openings by 2020⁴**



**Strong demand
for IT professionals⁴**

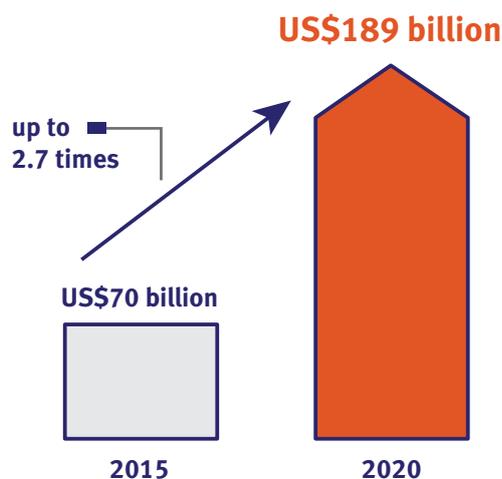


**Hands-on
modules**

Mobile App Industry Overview

Mobile apps are increasingly at the centre of the digital economy. Communication, entertainment and shopping are several of the many consumer categories apps have flourished.

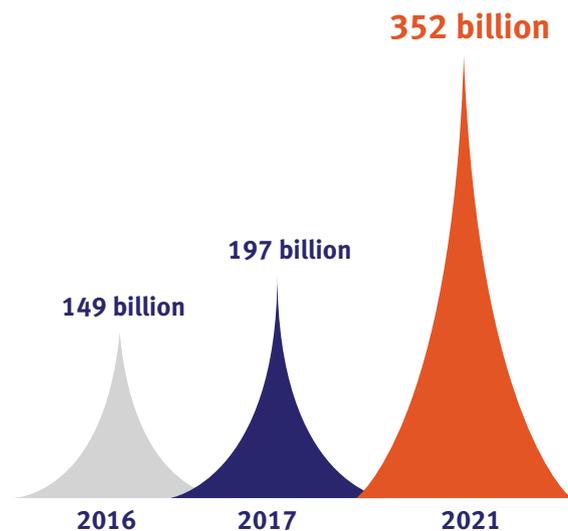
The time consumers spend in apps has skyrocketed. Combined worldwide in-app advertising and net-to-publisher app store revenue is forecast to grow by 2.7 times – from US\$70 billion in 2015 to US\$189 billion in 2020⁵.



Mobile App Download Statistics

There is almost 50 billion app downloads jump; 197 billion in 2017 versus 149 billion in 2016.

According to projection, by 2021, the total app downloads number will jump to a stunning 352 billion. The jump is contributed to major smartphones and tablets manufactures regular hardware updates and introduction of brand new features are what stand behind the exponential mobile app downloads growth⁶.



Bachelor's Degree Programmes

- ▼ Bachelor of Science in Mobile and Web Application Development (Single Major)
- ▼ Bachelor of Science in Mobile and Web Application Development and Business Information Systems (Double Major)
- ▼ Bachelor of Science in Mobile and Web Application Development and Computer Science (Double Major)
- ▼ Bachelor of Science in Mobile and Web Application Development and Cyber Security and Forensics (Double Major)
- ▼ Bachelor of Science in Mobile and Web Application Development and Management (Double Major)
- ▼ Bachelor of Science in Mobile and Web Application Development and Marketing (Double Major)
- ▼ Bachelor of Science in Mobile and Web Application Development and Web Communication (Double Major)