YOOBEE ONLINE

PROGRAMME GUIDE**DIPLOMA IN SOFTWARE DEVELOPMENT YR2**

INTAKE DATE: **18th September, 2023 – 14th June 2024** INTAKE: **2309-ONLINE-DSD-Y2 FT**

Welcome to your programme: Diploma in Software Development | DSD. We really hope that you enjoy your learning journey. This document outlines the programme requirements so that you can have oversight of the journey ahead. Using this programme guide to plan and schedule your time is highly recommended. You can contact me at any time if you have questions.

Contact details:

You can easily contact me (your tutor) or Online Learning Support through the emails below or through the message chat function in Yoobee Online searching under our names.

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Important dates:

Day 5 Meeting	**Friday, 22st September,2023 at 12:30 pm** *(Please refer to Orientation/Regular news > 1.2.2 Live Sessions)*
Public Holidays*	**2023/24:** Labour Day: **23 October**, Christmas Day: **25 December**, Boxing Day: **26 December**, New Years Day **1 January**, Day after New Years: **2 January**, Waitangi Day: **6 February**, Good Friday: **29 March**, Easter Monday: **1 April**, ANZAC Day : **25 April : 5 June,** Monarch's Official Birthday
Programme Breaks*	11/11/2023 – 26/11/2023(2 weeks) 20/04/2024 – 11/02/2024 (3 weeks) 06/04/2024 – 21/04/2024 (2 weeks)

**Public holidays and Programme breaks are where the Online Campus has a break.*

Your schedule is decided by you, around the assessment submission dates; however, it is suggested that you have a break when the Online Campus does. All dates and information are correct at the time of publishing but may be subject to change.

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The programme is completely online and is asynchronous. This means you are part of the Online Campus and that you and everyone else on the programme will be at different stages of the course, working at different times, and potentially are located in different areas of Aotearoa/NZ and the world. At times there will be opportunities to work together, but others will be individual work.

Asynchronous learning means you have access to all your learning at any time. You schedule your learning around your life. Your typical week will consist of the following

- Engaging in the content on Yoobee Online
- Participating in the forums and Live Sessions (or watching the recording)
- Assessment work: either formative practice or summative work
- Taking theory and implementing it by doing the practice, then reflection.
- Doing your course admin, which may include reading the Monday post, planning the weekly/monthly/course schedule, attending any 1:1 sessions you have booked, meeting your group for the collaborative assessment, reading assessment feedback.

It is expected that your learning hours per week should be around: <u>37.5 hours</u> per week (*FULL-TIME STUDENT*)

Course Overviews

More details on each course will be available on Day 1. The details of assessments in each course are below.

CS201 - Technical Design for Software (15 credits)	
Course Aim	Learning Outcomes
To give students the opportunity to explore a specialist topic within the software development domain in order to further develop their own personal learning journey, enhance their graduate profile and acquire skills necessary to add value to a software development team. To provide year-two students with transdisciplinary opportunities and experience to collaborate with students in other years and across qualifications.	1. Define a field of inquiry through the mapping of personal learning objectives to a specialist area of practice within software development. 2. Demonstrate understanding in a specialist area of software development through practice-based inquiry. 3. Differentiate individual learning strategies as a practitioner in a specialist area of software development.
CS201A – Foundation of Data Science (15 credits)	
Course Aim	Learning Outcomes

This paper focuses on several core topics that constitute the infrastructure for Data Science, including the data analytics pipeline, management of large-scale data, how analytics and machine learning capabilities are built on top of that storage, and how data scientists develop machine learning and modelling platforms using libraries.	1. Demonstrate an understanding of common mathematical models used in machine learning 2. Demonstrate an understanding of the core concepts of machine learning algorithms and models 3. Create and apply machine learning pipelines to solve common practical problems
CS201B – Cloud Computing Fundamentals (15 credits)	
Course Aim	Learning Outcomes
To give students an opportunity to explore cloud computing concepts and prepare them with a view towards having a career in cloud computing technologies. As well as allow students to gain hands on experience with the cloud providers that dictate a major share of the ANZ market. The learning path aims to contribute towards vendor certification to afford students a competitive advantage when looking to enter the industry.	1. Identify and classify various cloud services in order to recommend a suitable business model. 2. Analyse various policies and procedures of a cloud service including but not limited to security, governance, privacy, cost management and service level agreements. 3. Demonstrate specialized technical or theoretical knowledge of cloud computing and explain its role in business decision making
CS201C – Networking and Systems Administration (15 credits)	
Course Aim	Learning Outcomes
This paper provides a solid knowledge on network and system administration. It covers an integrated approach to data communications and computer networking principles, building on IT infrastructure concepts. It also includes issues, skills and strategies associated with providing core services over a network in a multiuser environment. The student will learn about fine tuning of networked systems for optimum delivery in terms of security, cost, and speed.	1. Demonstrate an understanding of computer systems and their communication 2. Demonstrate skills in common network design and troubleshooting 3. Apply best practices in system administration to maintain a stable of managed systems.
CS202 – Cross Platform Development (15 credits)	
Course Aim	Learning Outcomes

To further students' understanding of academic and professional investigation and presentation approaches, in order to creatively ideate and apply critical thinking to the production and presentation of well-researched and persuasive proposals for software products. To closely integrate with CS203 via a research outputs that directly informs the semester-long, practical project therein.	1. Integrate an understanding of academic practice and research methods to identify and investigate subjects of interest in relation to professional projects and directions. 2. Generate effective communication to share ideas and concepts, and enhance professional practice. 3. Demonstrate understanding of how development in an area of personal expertise can used to contribute to the execution of a team-based software project. 4. Integrate investigative findings to develop a coherent argument for a project proposal.
CS203 – Investigative Studio I (30 credits)	
Course Aim	Learning Outcomes
To provide a creative space for students to develop and deepen their knowledge, skills, and practices through processes of ideation, experimentation and prototyping within areas they are passionate about, and/or have an aptitude for, in preparation for a team project. To develop students' abilities to ideate collaboratively, empathise with the creative processes of teammates, and connect theories and concepts with practice through practise-based inquiry.	1. Generate prototypes as proofs-of-concept for proposed software products. 2. Demonstrate an understanding of experimental practicebased inquiry. 3. Monitor social sensitivity to form and work within teams. 4. Identify, and work towards, individual learning goals though reflective practice.

CS204 – Art Pipeline for Games (15 credits)	
Course Aim	Learning Outcomes
To develop student understanding of the software industry, its relationship to global markets, and to society in general. To develop in students design-thinking skills, in order to produce innovative and viable software products, as well as develop strategies to fund, build, launch, and market new software products for both commercial and not-for-profit purposes.	1. Integrate key concepts and knowledge of global economies, media platforms, and marketing strategies in the field of software sale and distribution. 2. Compare and contrast the key principles of design thinking to identify markets for software, generate concepts, and creatively solve business problems. 3. Demonstrate an awareness of social contexts and ethical concerns influencing professional practice in software development. 4. Employ effective business and academic skills to research and plan for software production. 5. Differentiate between business and enterprise skills and attributes to pitch viable software products.
CS204A – Artificial Intelligence (15 credits)	
Course Aim	Learning Outcomes

The aim of this course is to understand the nature of intelligent systems and how such a system may be implemented. We will study modern techniques for computers to represent taskrelevant information and make intelligent (i.e., satisficing, or optimal) decisions towards the achievement of goals.	1. Demonstrate an understanding of the algorithmic foundations of AI and it's interrelation with probability. 2. Demonstrate and understanding of the core concepts of knowledge, reasoning and planning in artificial intelligence and how automated agents learn. 3. Apply AI techniques to deal with common practical problem
CS204B – Cloud Application Development (15 credits)	
Course Aim	Learning Outcomes
To give students an opportunity to deepen their understanding of cloud computing technologies and develop capabilities around building cloud native applications and their subsequent advantages to maximise scaling, increased responsiveness, collaboration and improved recovery abilities. Through development students learn the benefits of locking and unlocking the cloud including security, integration into existing operations and optimised performance. The learning path aims to continue towards vendor certification to afford students a competitive advantage when looking to enter the industry.	1. Demonstrate a fundamental understanding of cloud application development. 2. Identify and use the major components needed for cloud application development, deployment and monitoring. 3. Configure common service categories including security services provided by various cloud service providers.
CS204C – Cybersecurity (15 credits)	
Course Aim	Learning Outcomes
The course introduces various concepts related to software, system, and network security. It covers a range of topics including attacks on privacy and attack surface, static and dynamic analysis of malware, hardware security (trusted computing base, secure boot, and attestation),	1. Demonstrate an understanding of different levels of security, security mechanisms, algorithms and ethics. 2. Demonstrate detailed knowledge and the ability to critically analyse and design secure networks, applications, and systems.
network security and some trending applications.	3. Apply the best policies and practices to improve the security of different parts of information systems.
CS205 – Intergrated Studio III – Immersive Technology (45 credits)	
Course Aim	Learning Outcomes
To develop software practitioners who are emerging as deep-thinking creatives capable of performing maturely and collaboratively in a pressured team-based environment. To provide a semester-long focused project, requiring associated documentation, to test and stretch software practitioners, so that they may perform to a high technical standard in their chosen areas of interest.	1. Articulate an individualised learning journey through reflection on specialist contribution to a team software development project. 2. Produce a useable, fit-for-purpose software product to the required technical standard. 3. Identify and resolve issues and problems in an open and collaborative way. 4. Engage in innovation and creativity as software practitioners. 5. Integrate effective collaborative practices in a team-based software development environment.

Assessment timings and dates:

All assessments are individual, unless indicated with "Collaboration" (Teamwork). During Collaboration assessments, please plan ahead and make yourself available for team meetings.

COURSE		FULL-TIME
Electives (CS201, CS201B, CS201C)	Time to complete*:	8 weeks concurrent with Cross Platform Development CS202 18/09/2023 – 10/11/2023 (Term 1)
	Due date for Course:	**CS201 - Elective:** Assessment 1: Sunday, 15/10/2023 at 11:59 pm Assessment 2: Sunday, 12/11/2023 at 11:59 pm
		CS201B - Elective: Assessment 1: Sunday, 15/10/2023 at 11:59 pm Assessment 2: Sunday, 12/11/2023 at 11:59 pm
		CS201C - Elective: Assessment 1: Sunday, 15/10/2023 at 11:59 pm Assessment 2: Sunday, 12/11/2023 at 11:59 pm
Cross Platform Development (CS202):	Time to complete*:	8 weeks concurrent with CS201 Elective 18/09/2023 – 10/11/2023 (Term 1)
	Due date for Course:	Assessment 1: Sunday, 15/10/2023 at 11:59 pm Assessment 2: Sunday, 12/11/2023 at 11:59 pm
Investigative Studio I (CS203)	Time to complete*:	8 weeks | 27/11/2023 – 19/01/2024 (Term 2)
	Due date for Course:	Assessment 1: Wednesday, 10/01/2023 at 11:59 pm Assessment 2: Sunday, 21/01/2023 at 11:59 pm
Electives (CS204, CS204B, CS204C)	Time to complete*:	16 (8 weeks + 8 weeks) weeks concurrent with CS205 12/02/2024 – 05/04/2024 (Term 3)
	Due date for Course assessment:	CS204, CS204B, CS204C Elective Assessment 1(Quiz): Sunday, 10/03/2024 at 11:59 pm Assessment 2 : Sunday, 07/04/2024 at 11:59 pm
Intergrated Studio III (CS205)	Time to complete*:	16 (8 weeks + 8 weeks) weeks concurrent with CS204 Electives 12/02/2024 – 05/04/2024 (Term 3)
	Due date:	Assessment 1: Sunday, 07/04/2024 at 11:59 pm
	Time to complete*:	8 weeks | 22/04/2024 – 14/06/2024 (Term 4)
	Due date:	Assessment 2: Sunday, 16/06/2024 at 11:59 pm

It is recommended you complete the content before starting the assessment. However, only you know what works for you.
All other relevant information can be found within the Orientation section in Yoobee Online or in the Student Handbook.

If you have any questions which you cannot find the answer to, please don't hesitate to contact me or Online Learning Support.

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** Not including Yoobee programme break weeks.*

We hope you enjoy your programme and look forward to supporting you complete it.