The University Of Queensland
AUSTRALIA

Welcome!

Bachelor of Computer Science (BCompSc)

Bachelor Information Technology (BInfTech)

Electrical Engineering and Computer Science

Acknowledgement of Country

The University of Queensland (UQ) acknowledges the Traditional Owners and their custodianship of the lands on which we meet.

We pay our respects to their Ancestors and their descendants, who continue cultural and spiritual connections to Country.

We recognise their valuable contributions to Australian and global society.

The Brisbane River pattern from *A Guidance Through Time* by Casey Coolwell and Kyra Mancktelow.

What's happening today?

Lorna Macdonald – Director Student Experience

Welcomes from:

- Head of School – Prof. Michael Bruenig
- Information Technology – Dr. Aneesha Bakharia
- Computer Science – Dr. Joel Mackenzie

Student Capstone Projects – Jason Weigel

AUA (Ask us anything) Panel

In ModWest:

- Computing Unplugged Challenges & Scavenger Hunt
- Mini Expo – Student Societies, UQ Services
- Academic Advice & Study Plans

Other Orientation Events

Lorna Macdonald – Director Student Experience

Kickstart your Programming Workshop
Today 1:30pm – 2:30pm 78-209

Women in Computing Welcome
Thurs 20th 12:00pm – 2:00pm

EAIT Welcome Carnival
Wed 26th 3:00pm – 5:00pm

Use QR code or link below for more information & to register:
www.eait.uq.edu.au/orientation-events-and-activities/undergraduate-events

Welcome to EECS

Prof. Michael Bruenig - Head of School

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Welcome to the Bachelor of Information Technology

Dr Aneesha Bakharia

Information Technology degrees are a great solution for people who want a well-paid, flexible, global and impactful career.

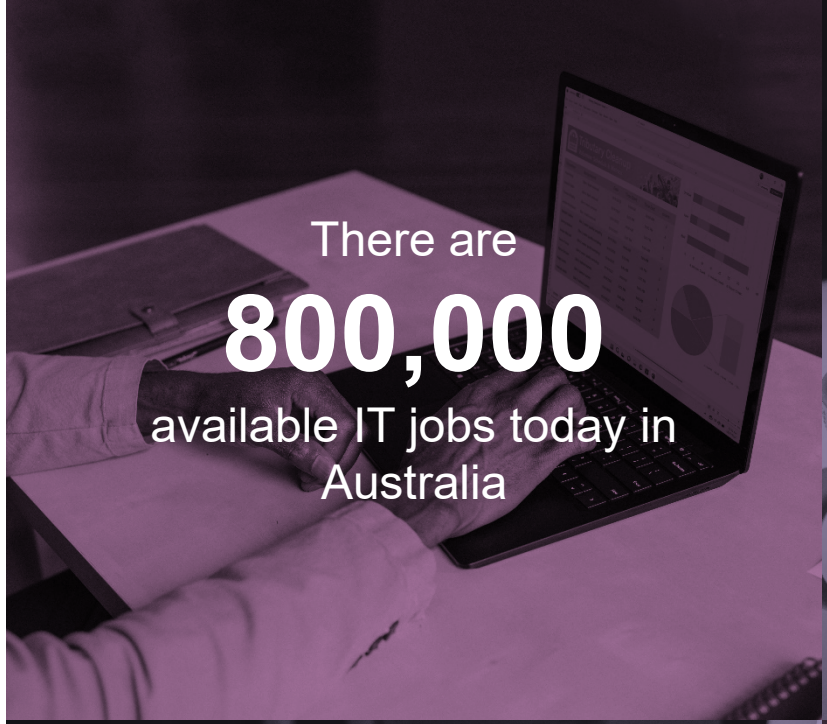

Photo by Compare Fibre on Unsplash

What is Information Technology?

IT (sometimes called ICT) professionals design and build the digital systems we use in our everyday lives

- **Commerce**
- **Entertainment**
- **Transport**
- **Social**

Successful careers in many different areas of industry and parts of society

- **Experience designer**
- **Software engineer**
- **Software developer**
- **IT application specialist**
- **System architect**
- **Product designer**

Who are the people working in Information Technology?

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Work in exciting and emerging industries

Problem solvers

Creative

Contributors to Society

Curious and resilient

Innovators

Team players

Adaptable

Global Opportunities

Meet Hannah

UI/UX Graduate Consultant at Deloitte

3 things about Hannah:

1. Graduated in 2022 from UQ, with a Bachelor of Information Technology, major in User Experience Design.

2. Worked as a demonstrator during her studies.

3. "*I'm passionate about technology because I like to design technology that works for people*."

BInfTech

Areas of study:

Technology (programming, databases, design)

Studio (team-based projects, open-ended problems, integrate knowledge from other courses)

Electives (courses chosen from IT specialisms or from other areas altogether, e.g. languages, business, etc.)

Honours Year

Optional fourth year after completion of your program

Advanced coursework and honours project

BInfTech

Majors offered:

- Software Design
- Software Information Systems
- User Experience Design

Minor offered:

- Computer Systems

https://my.uq.edu.au/programs-courses/requirements/program/2453

Meet our UQ Student Projects

Human-Computer Interaction

Cyber Security

Conversational Agents

Interaction Design

Virtual Reality/ Augmented Reality

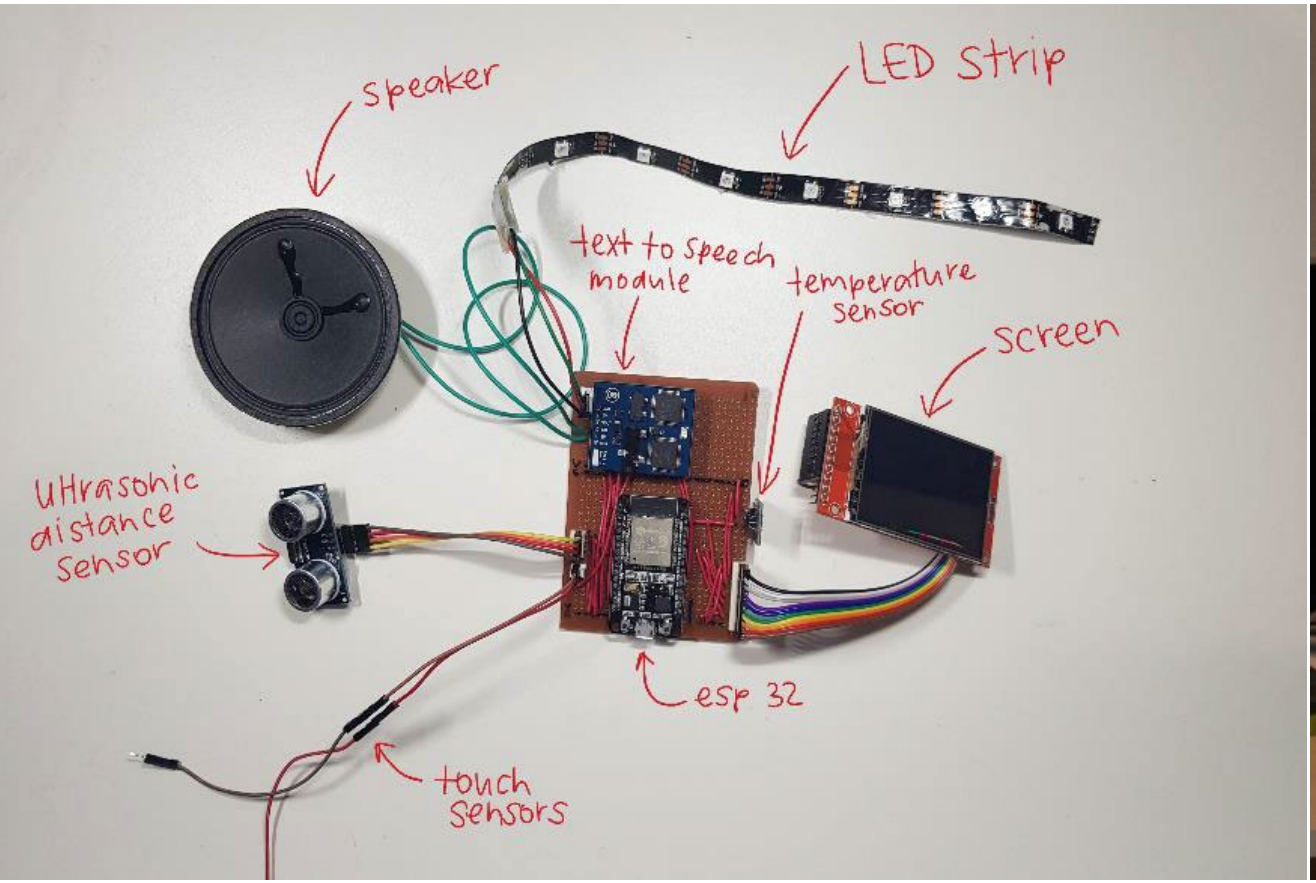
Digital Health

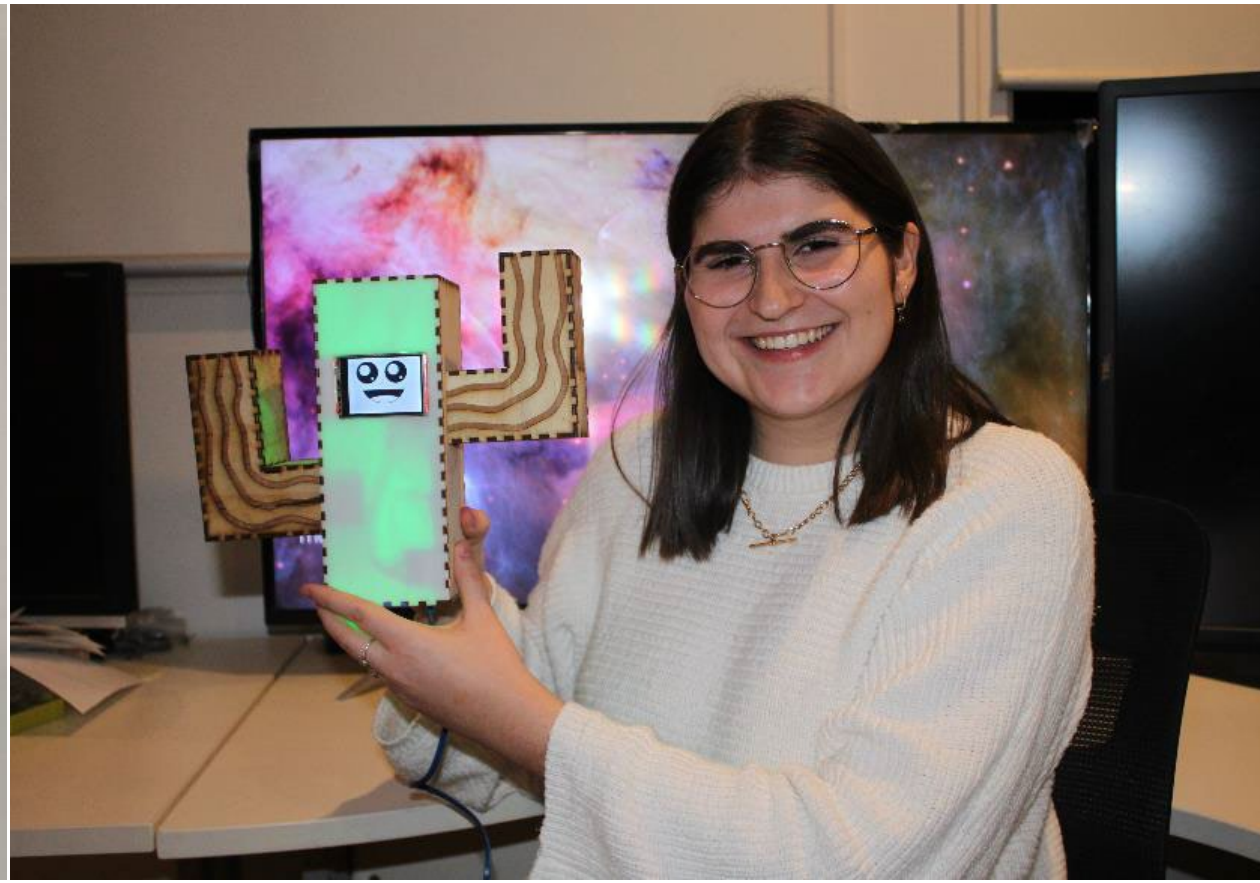
User Experience

Artificial Intelligence

Robotics

You get the best of both worlds!





Thank you…

Best of luck with your studies!

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Welcome to the Bachelor of Computer Science

Dr Joel Mackenzie

Congratulations! You've made it!

Your hard work has paid off! You've made it to UQ!

In about three years' time.... You will be a qualified **computer scientist!**

So why are you here? What do you want to get out of this program? Where to next?

Computer scientists are the hidden force that drive advances across many sectors, playing a vital role in shaping our digital future.

What does a computer scientist do?

https://uq.mu/rl55a

- Design, develop, test, and deploy software
- Solve complex computing problems
- Manage, analyze, and derive insights from data
- Optimize algorithms and system performance
- Implement and test cybersecurity measures
- Research and develop novel techniques to solve existing problems
- Collaborate and work within teams

Computer scientists are creative and innovative problem solvers

Where might you find a computer scientist?

… basically everywhere! Big Tech, Government, Finance and Banking, Healthcare, Pharma, Education, Consulting, Startups, Media, Manufacturing, Science...

Bachelor of Computer Science

Machine Learning

Image Generated with AI
22 November 2023 at 11:46 am

Cyber Security

Image Generated with AI
22 November 2023 at 11:48 am

Data Science

Image Generated with AI
22 November 2023 at 11:52 am

Programming Languages

Scientific Computing

Cybersecurity

Protecting digital assets from cyber threats.

Learn the fundamental processes and practices to protect computing systems from attack, damage or unauthorised access. Study secure programming techniques and ethical hacking to safeguard individuals, businesses and governments against cybercrime, and you'll graduate with highly valued and employable skills.

- Cyber security analyst
- Cyber systems engineer
- Security architect
- Information security officer
- Cryptographer
- Information security analyst

CRIM1000: Introduction to Criminology

COMP3320: Vulnerability Assessment and Penetration Testing

COMP3301: Operating Systems Architecture

CYBR3000: Information Security

Data Science

Extracting insights from data to drive informed decision making.

Learn comprehensive and fundamental techniques for end-to-end processing that transforms data into information, and information into knowledge. Study techniques for storing, processing, and deriving insights from big data.

- Data scientist
- Data analyst
- Business analyst
- Statistical analyst
- Database developer
- Research analyst

COMP2011: Fundamentals of Data Science

STAT2003: Mathematical Probability

INFS2200: Relational Database Systems

STAT2004: Statistical Modelling & Analysis

Machine Learning

Machine learning is the study of algorithms that automatically improve with experience.

Learn how computers can automatically identify and harness useful data to help decision making, find hidden insights without being explicitly programmed where to look, and predict outcomes to help authorities design effective policies.

- Data scientist
- DevOps Engineer
- MLOps Engineer
- Data Engineer
- ML Engineer
- Research translation

COMP3702: Artificial Intelligence

COMP4702: Machine Learning

COMP3710: Pattern Recognition and Analysis

STAT3006: Statistical Learning

Programming Languages

Programming languages are the building blocks of software.

Study the craft and science of programming, and graduate with the skills to enable the construction of effective programming languages and reliable software.

- Software Engineer
- Cloud Engineer
- Software Tester/QA
- Full stack developer
- Mobile App developer
- Web developer

COMP4403: Compilers and Interpreters

CSSE3100: Reasoning About Programs

COMP2140: Web/Mobile Programming

COMP3400: Functional & Logic Programming

Scientific Computing

Computers hold the key to fast and efficient analysis of complex scientific problems.

Study algorithms for mathematical analysis to solve a wide array of complex scientific and engineering problems. Graduate with skills used to support various scientific endeavours.

- Software Engineer
- Data Engineer
- Business Analyst
- Algorithm Specialist
- Research Engineer
- HPC Specialist

COSC2500: Numerical Methods in Computational Science

COSC3500: High-Performance Computing

COSC3000: Visualization, Computer Graphics & Data Analysis

SCIE2100: Bioinformatics 1: Introduction

No Major, Single Major, Double Major: Your call

Each BCompSc plan shares the same **16 core units (8 courses).**

Beyond the core, you can choose to **single major, double major**, or **not have a major at all.**
Selecting a given major **will not** lock you into a certain career path, but **it will** demonstrate that you have focused more deeply on a given area of computing.

The BCompSc program is developed at producing life-long learners; you will be able to adapt to new technology, advances and changes in the field, and apply your knowledge to new problems and domains.

Academic Advice

Which courses should I choose at the start of the program?

Planning your study – which courses will you take? When?

I want to change to Information Technology / Software Engineering / other

We recommend you visit us at the "great wall" later today to see specific plans

The following webpage contains lots of useful information

https://eecs.uq.edu.au/current-students/academic-advice/bachelor-computer-science

For more complex questions, you can book an appointment with our academic advisors.

- Failed some courses and need help rearranging your program
- Want to switch/add/remove your major
- Planning for exchange

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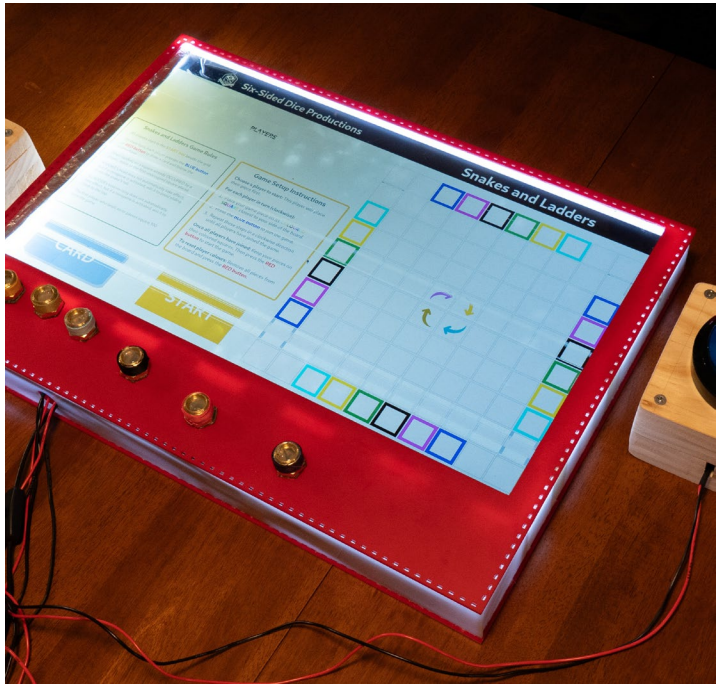
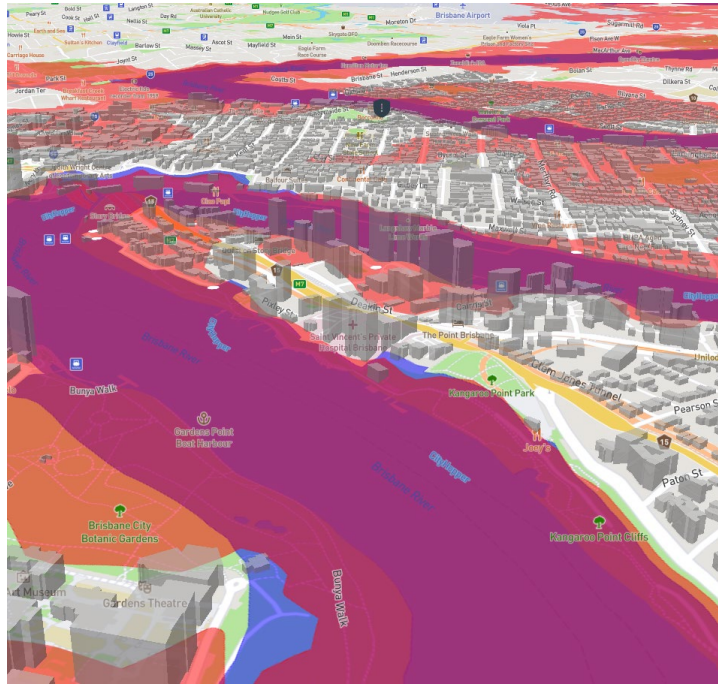
Welcome to the Bachelor of Computer Science

and best wishes for your program!

Student Capstone Courses

Jason Weigel – DECO3801 Teaching Staff





Student Capstone Courses

Jason Weigel – DECO3801 Teaching Staff

DECO3800: Studio 3 Propose (Core for BInfTech)
DECO3801: Studio 3 Build (Core for BInfTech & BCompSc)
DECO3850: Physical Computing Studio (Core for BInfTech Major User Experience Design)

Builds on skills and knowledge learnt in your entire degree.
Make sure to do them in your final year!

Work in a multidisciplinary team to design and develop well-rounded prototypes.
The large projects require multiple skill sets; you can't do it all yourself!

Excellent examples for your portfolio / CV.
Show off what you can do to future employers!

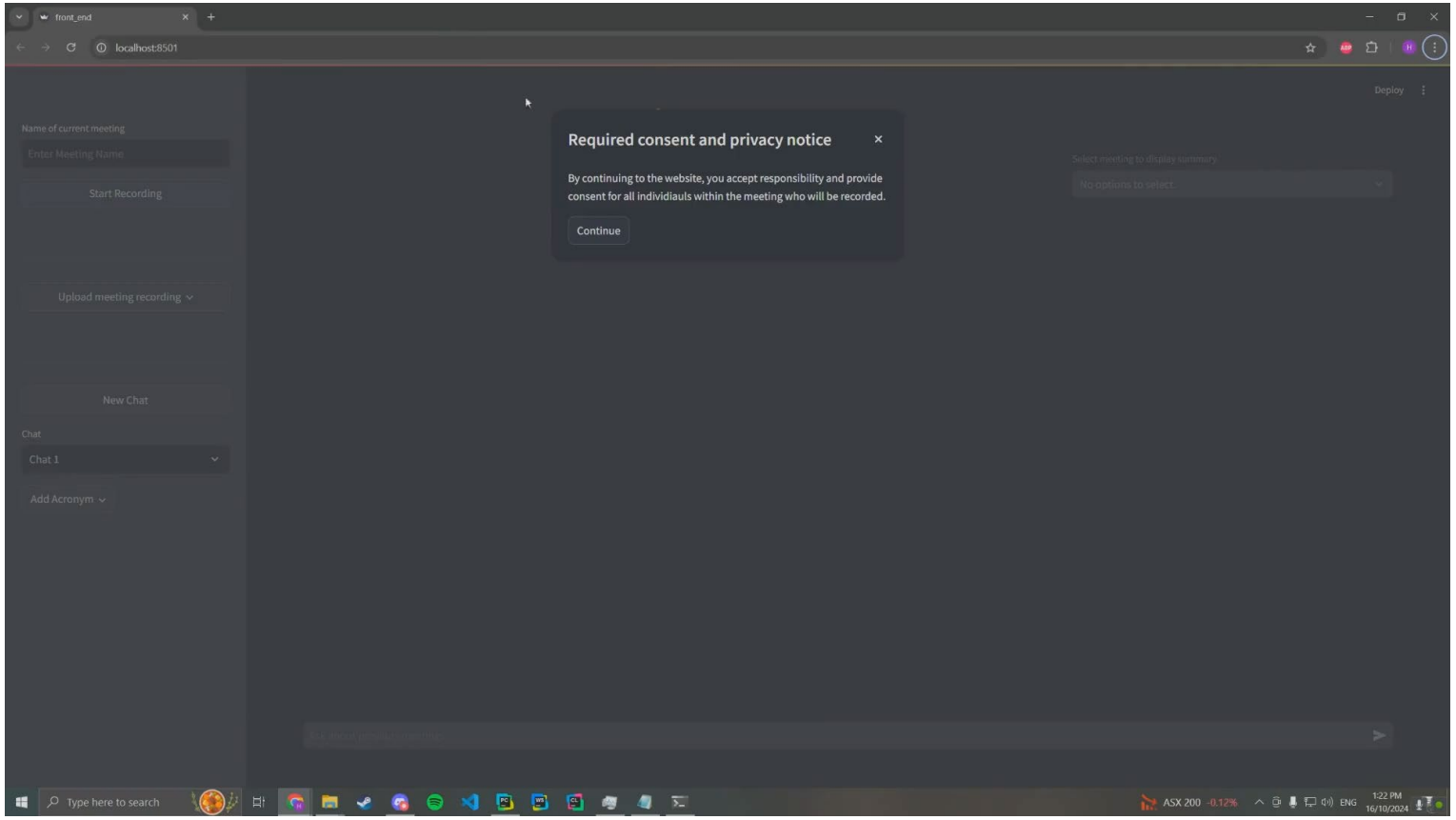
Select a project that aligns with your program and major to get the most out of the experience.
Challenge yourself and have fun.

Student Capstone Courses

SwingTheory by Freitag – DECO3801 Semester 2, 2024

Student Capstone Courses

MinuteMate by Kraken – DECO3801 Semester 2, 2024



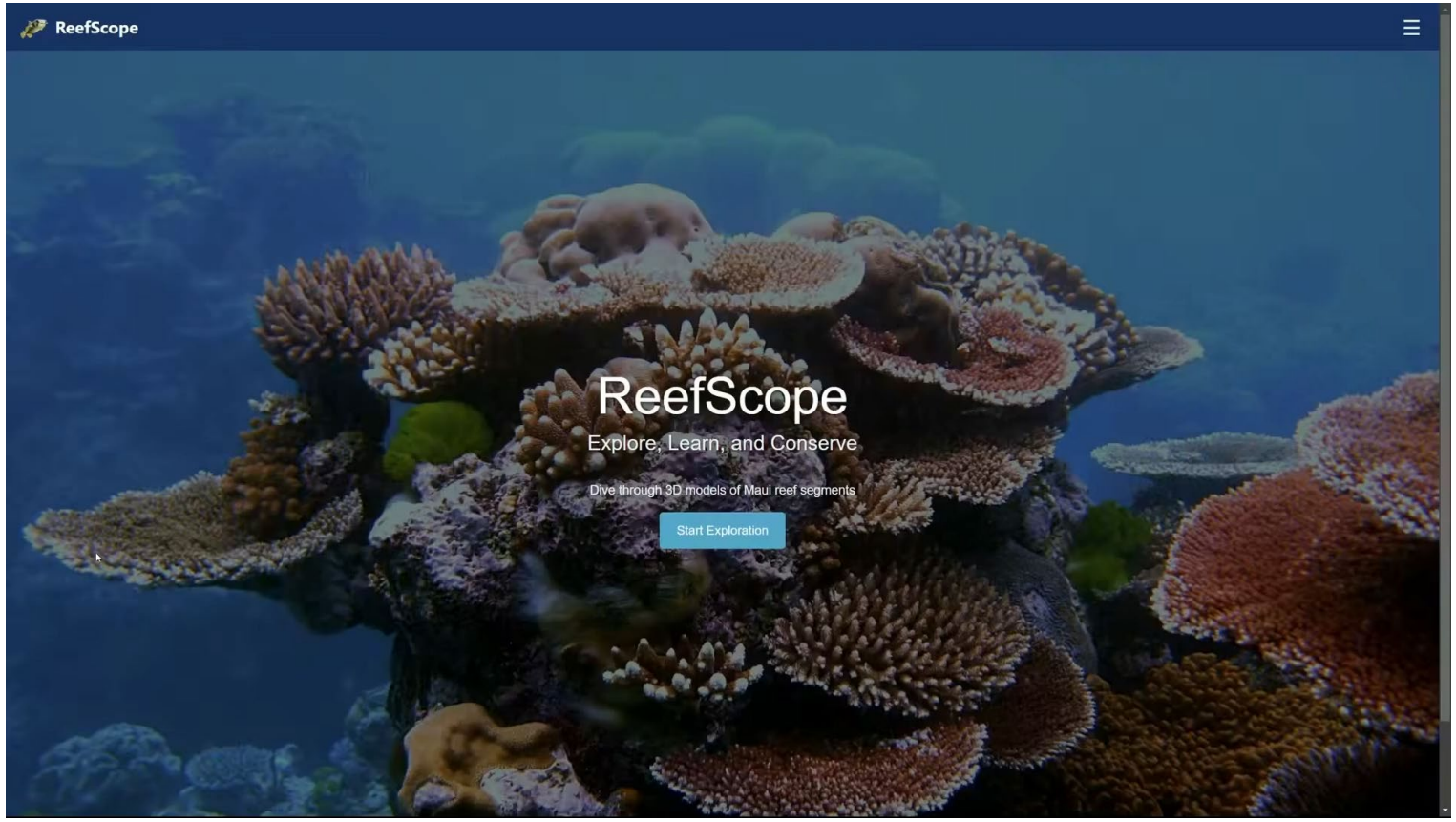
Student Capstone Courses

FloodWise by Grey Matter – DECO3801 Semester 2, 2024

FloodWise

Student Capstone Courses

ReefScope by Sazssl – DECO3801 Semester 2, 2024



Student Capstone Courses

TEBS by Six Sided Dice – DECO3801 Semester 2, 2024

Six Sided Dice

TEBS - Technology-Enhanced Board Game System

STUART MOYES - Team Leader, Product Owner, Hardware (Device Build and Software)
ERIK KELEMEN - Hardware (Device Build and Software)
GARRETT BARGEWELL - Backend Software
YUVRAJ FOWDAR - Backend Software
ANGELINE SOETANTO - Frontend and Backend Software
CHRISTINA RUSSO - Design, Frontend Software, Testing, Team Admin

Ask Us Anything

Joel Mackenzie – Program Convenor Computer Science

Aneesha Bakharia - PC Information Technology

Jacki Drinnen - EECS Coursework Studies Team

Lorna Macdonald – Director Student Experience

over to you!

EECS Student Hub

https://learn.uq.edu.au/ultra/organization

Dedicated Blackboard site for all coursework students in the school.

Automatically enrolled as a student in EECS

Opportunity to ask questions & give feedback via EdDiscussion.

Welcome to the Faculty message from our Associate Dean Academic Prof. Liza O'Moore

https://bit.ly/eaitwelcome

What Next?

Computing Unplugged Challenges

Teams of no more than 5 people

- Maze Runner
- Fashion by Binary
- Encode / Decode
- Make me a Sandwich
- Pixelated
- Build a Computer Scavenger Hunt

Team prizes up for grabs!!!

Mini Expo

- Stalls from UQ services
- Academic advice & study plans
- Student Societies

Pizza Lunch

Watch out for these bracelets!

Thank you & welcome to UQ!

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