

Start Tour- Level 4 (Main Entrance near Old Government House) at entrance to The Cube

SCIENCE AND ENGINEERING CENTRE

Note: This Centre is a teaching area and classes may be in progress. Please be mindful and move quietly around these spaces.

- The Science and Engineering Centre (SEC) is a learning space for the whole community, students, researchers, Industry, schools and the public, with a focus on education and research in sustainable technology. The Centre has changed the way students learn, providing a more interactive, collaborative and real-world focussed environment.
- SEC achieved a 5-star Design Education V1 Certified rating from the Green Building Council of Australia, making it one of the highest-rated 'green' buildings in Brisbane's CBD.
- It houses state-of-the-art labs for researchers studying how our natural, built and virtual environments interact, change and converge to find ways to make them more sustainable, secure and resilient
- A world-leading centre for the development of Science, Technology, Engineering and Mathematics (STEM).
- SEC was jointly funded by the Commonwealth Government (\$75 million), the Queensland Government (\$35 million), Atlantic Philanthropies (\$25 million) and QUT (\$95 million).



Science & Engineering Centre (P Block)

SEC consists of two multi-storey towers with stimulating learning and research spaces:

- Y Block (across the lawn) houses the campus support services, a large function room with 360 degree views over the city, South Bank, and Kangaroo Point, as well as state-of-the-art research spaces.
- P Block home to The Cube, as well as exciting food and retail spaces, collaborative study spaces, large 220 person lecture theatres, and more research zones.

ABOUT THE CUBE

- The Cube is the heart of QUT's \$230 million Science and Engineering Centre (SEC).
- The Cube is a soaring two-storey high digital display that features 14 high-definition projectors and 48 multi-touch screens, two levels of SEC.
- The Cube is one of the world's largest digital learning and display spaces designed to provide an inspiring, explorative and interactive experience.
- The Cube offers learning and research opportunities for the community – from school students to scientists and engineers. Our researchers use The Cube to showcase their ideas and to visualise, model and manipulate big data sets.
- The Cube hosts a range of hands-on and interactive workshops and public programs for schools, public and professional development programs.



Dino Zoo

THE CUBE - DIGITAL PROJECTS

The Cube's digital projects rotate on a regular basis. Here are some of the projects you may see when visiting The Cube:

The Living Reef is an immersive underwater interactive experience of the Great Barrier Reef. This innovative project features hyper-realistic digital content created by The Cube studio. For example, the fish have been programmed with complex artificial intelligence (AI) controlling their behaviours. This AI system gives each fish a purpose which replicates fish behaviour in the wild – fish can look for food, avoid being eaten, or even swim in schools!

Nature imagined is an interactive digital learning experience and exhibition of works by artist William Robinson. The project displays three of William Robinson's landscape paintings, digitised for the first time at high resolution. Visitors can zoom in on each of the artworks to see the detail and discover fascinating facts about the painted landscapes.

Code-A-Bot is an interactive digital game putting you in charge of programming robot workers to collect and sort rubbish, improving the overall efficiency of a waste recycling plant. Using The Cube's digital touch screens, robots can be coded to move, sense, and collect or distribute rubbish around the facility and into the correct bins.

Physics Observatory is a game-like environment where people of all ages can engage in learning about physics. Imagine throwing a wooden block while under the Moon's gravity and then observing the difference when you throw one on the Sun. This project builds on one of The Cube's first screen projects Physics Playroom, and has a stronger alignment to the STEM national curriculum.

Dino Zoo is the closest you can get to the real thing, minus the danger of being eaten! Our life-sized dinosaurs are the most scientifically accurate portrayals of these creatures in the world. This project includes digital activities, an archaeological dig simulator, an interactive Earth timeline and more.



The Living Reef



Physics Observatory

Walk up the outside stairs, two floors to level 6, Solar Terrace (solar panels)

SOLAR TERRACE

- Solar panels convert sunlight into electricity. There are static solar panels across the terrace and main roofs of the Centre, as well as solar 'trees' that are programmed to follow the sun's path. The power generated by the solar panels on an average sunny October day is enough to run 12 standard homes for a day (approx. 200 kWhrs).
- SEC is primarily clad in a special type of state-of-the-art glass. The glass building facade is constructed with two layers of glass and a layer of argon gas in between. This reflects a lot of the sun's heat, and in combination with shades that automatically raise and lower when in the sun's direct path, we can reduce the amount of cooling the building requires.
- Grey water and rain water are collected and reused for irrigation and filling the swimming pool.

Enter the automatic doors to the Atrium on level 6

THE ATRIUM

The Atrium is a gathering space for students and connects with the Institute for Future Environments (IFE), a transdisciplinary research and innovation institute that brings together the brightest minds to collaborate on large-scale projects relating to our natural, built and digital environments.



The Atrium

Take the lift down to level 5

LEARNING AND TEACHING SPACES

Levels 4 and 5 of P Block are the Learning and Teaching spaces of SEC, providing many different environments for students to collaborate and work together on projects.

- Private rooms can be used for group work, with access to MoCOWS (large movable touch screens that can be connected to your laptop as external monitors).
- Visitors can relax in informal study spaces scattered around these two floors. The computers are positioned around these round tables so that multiple people can work at one computer, or work individually along the back wall.



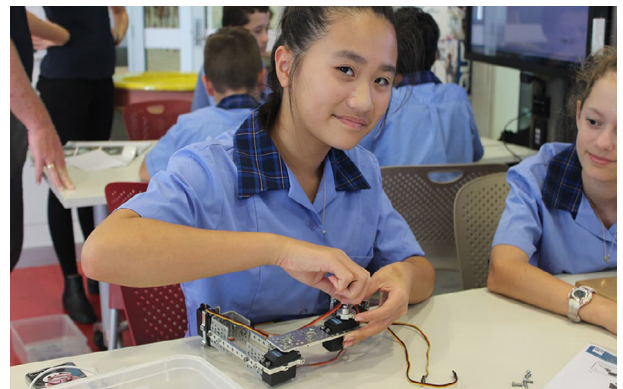
Level 5

Digital projects on level 5 (on the screens next to the marble table) include a games area, The Retro Arcade and the motion capture Plasma Wall:

- *The Retro Arcade* is a trip down memory lane into 80s style games, revitalised in full 3D. Built into each game are behind-the-scenes mathematical insights, based on the algorithms that go into achieving simple arcade fun. The latest addition to The Retro Arcade brings two new sporting games, Track Stars and Mighty Pucks.
- *Plasma Wall* uses motion capture technology for a fun and colourful interactive experience of The Cube. Let your body talk with Plasma Wall's collection of abstract light and movement games.

Young Accelerators Engagement Room:

P502 (near the level 5 screens) is a special space for hands on activities, engaging school groups in STEM. More information and booking details about the Young Accelerators Program can be found on the [Young Accelerators](#) page of [The Cube website](#).



Young Accelerators Workshop

Return to Level 4 to finish the tour.
Thank you for visiting The Cube!