START QUT Intensive:
Physics of the Very Small

Kick-start your university degree this summer!

QUT is offering a unique opportunity for girls entering Year 12 in 2021 to experience University studies by participating in a two-week intensive delivery of a first-year unit “Physics of the Very Small”.

The fundamental concepts of physics seek to describe, predict and explain phenomena at all scales from the observable universe down to subatomic particles. This unit will introduce you to those underlying physical processes that relate to the behaviour of the microscopic world. By observing the behaviour of waves, electric and magnetic fields, we have come to a deeper understanding of the nature of sound and light, and found experimental evidence for the structure of atoms and their nuclei, eventually leading to the Standard Model of particle physics. These are the principles at the heart of developing new materials and technology.

In the two-week intensive block, you will learn how to think about scientific concepts and solve problems like a physicist, and critically apply what you have learnt to practical exercises in laboratories progressively developing both your experimental and scientific report writing skills that will provide the foundation for all future studies in science.

The intensive will be led by Physics academics and assisted by a current Physics undergraduate student. Successful completion of this Unit will count as credit towards an undergraduate degree in Science, Engineering or Mathematics without charge.

This program is an affirmative action to address the current gender imbalance in STEM professions nationally and is in response to Industry demand for women in this field.

START QUT “intensive mode”
block features

- Self-paced remote learning (~30 hours) including lectures, virtual pracs and problem-solving, with regularly scheduled support through collaborative sessions.
- Hands-on learning (~30 hours) over two weeks of on-campus workshops and pracs.
- Opportunity for you to gain insight into whether Physics is the right fit for you, in a safe and supportive environment
- Small cohort

Important dates

- Orientation: Friday 4 Dec 2020 | 9.30am – 3.30pm
- Intensive mode block: Monday 11 – Friday 22 Jan 2021
  9am – 5pm

Orientation details

- Meet teaching staff and fellow students
- Familiarise yourself with the Campus and online learning site
- Get your student card
What’s involved?

Learning objectives
• Quantitative and qualitative scientific analysis of basic concepts of the physics of the micro universe.
• Data collection and analysis using scientific equipment during practical experiments in laboratory settings.
• Critical reasoning and problem solving techniques (using data acquired or provided) to evaluate results.
• Communicate scientific arguments by producing written scientific reports incorporating visual representations of scientific concepts and numeric data, including the generation of graphs.

Entry requirements
To be eligible, you must be:
• You must be enrolled as a Year 11 (2020) student when you participate in this unit.
• A Queensland-based student on an ATAR or International Baccalaureate Diploma (IBD) pathway.
In the semester before you apply, you must have maintained:
• A minimum of a B in English, Literature, English and Literature, or English as an additional language (or equivalent IBD subjects)
You must also:
• Be capable of undertaking university level study
• Have the support of your parents or guardians
• Have permission from your school to participate. A staff member must approve your participation
• Be available to attend the duration of the intensive block mode at Gardens Point campus and be able to remotely work through content delivered online.

Other benefits?
If you successfully complete your unit and obtain an ATAR or an IBD Diploma, you’ll receive:
• Advanced standing (credit) for this unit towards a related bachelor degree at QUT
• An adjustment of up to two selection ranks for most QUT courses, one for each START QUT unit successfully completed, added to your selection rank through our Year 12 subject scheme

How to apply
Please register your interest, and we will send you the application details:

Program cost
No tuition fees. What’s included:
• Morning tea, afternoon tea and lunch every day
• Taught by leading academics in the field
• Access to industry mentors
• Access to current Physics Student Ambassadors

Course Contact
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