ANU Below Zero Internship in Engineering

This is a paid part-time casual position to be counted as for-credit internship through the ENGN3200 or ENGN6200 Engineering Internship courses. The successful intern must schedule the onboarding meeting with the Course Convener before enrolling in the internship course or commencing the placement.

This internship opportunity cannot be double counted towards ENGN3100. For ENGN3100, students cannot claim for any work undertaken within the ANU.

Position Description

ANU Below Zero is offering a placement with the Technical and Engineering Services team in the Infrastructure and Planning team of ANU Facilities & Services Division (F&S). This team work to deliver projects that reduce the University's greenhouse gas emissions through enhancing energy efficiency, electrification and renewable energy installations across campus. These programs contribute directly to the ANU climate goals of below zero emissions by 2030 with an interim goal of net zero by 2025.

You will have the opportunity to work on interesting day to day engineering challenges in the building services space and learn from passionate and experienced engineers.

The role

As an intern you will be embedded in the Infrastructure & Planning Division in the Technical and Engineering Services team. The team is supporting ANU Below Zero commitment to reduce greenhouse gas (GHG) emissions to net zero by 2025 and below zero by 2030 for all of Scope 1, 2 and partial Scope 3 (university travel and waste). As such the Technical Team is primarily involved in the planning and the installation of heat pumps to replace gas boilers and the role out of PV installations across the campus.

You will have the opportunity to work on interesting day to day engineering challenges in the building services space and report to a mechanical engineer in the Technical Team. Your tasks may be comprised of:

- Supporting the design of mechanical building services systems for example by carrying out calculations, doing research, preparing equipment selections or writing short memos.
- Review and learning how to read building services drawings of different disciplines (mechanical, electrical, hydraulic, controls) and develop engineering mark-ups.
- Supporting trouble shooting activities to address issues with the Heating, Cooling and Ventilation (HVAC) systems at the ANU buildings, for example by assessing logged trends on the Building Management System, drawing review, data analysis and site inspections.
- Supporting the team in providing construction support on projects currently under construction. This may include site investigations, responding to request for information (RFIs) and helping to develop engineering solutions to problems encountered on site.
- Supporting the development of design or construction scope of works for consultants and contractors.

- Supporting project management and design management tasks related to engineering projects

The project you will be given will encompass the above tasks, but we hope to be able to give you a project that matches your expertise and interests. You will be involved in our below zero activates and you will attend meetings with university internal and external stakeholders. Example projects you may work on are:

- Development and implementation of energy efficiency measures for selected buildings by helping to analyse operation and energy consumption of HVAC systems.
- Supporting accredited NABERs assessors in the team to complete a NABERs rating for one building.
- Assessment of roof top PV roll out on the ANU campus involving a spatial and electrical assessment as well as predicting solar energy generation and load coverage.
- Review of buildings electrical metering infrastructure including desktop study and site investigation.
- Assisting Senior Engineer with building electrification / heat pump design projects. Tasks may include review of BMS data to determine existing thermal loads and sizing of new heat pumps. Review of electrical metering data and electrical infrastructure to confirm if existing electrical infrastructure is suitable for the increased electrical loads. Design of new heat pump plant layout including manufacturer equipment selections, spatial layout of plant and drawing mark-ups.

The person

We are looking for a person who is passionate about helping to progress Australia, and the world, toward a smarter, carbon neutral and energy abundant future. Someone who has a strong interest in renewable energy, electrification and innovation. We are wanting someone who is positive, goal oriented, able to work in a team and comfortable with working autonomously on sections of a team project, when required.

The right person will be currently enrolled in an undergraduate or postgraduate degree in Engineering and are keen to put some of what you have learned into practice.

But above all, someone who has an eagerness to roll up their sleeves, be tenacious and make a 240 difference all while having a bit of fun along the way!

Key Characteristics

Category	Description
Engineering rigour	• Be able to apply the fundamentals of engineering to real world problems • Maintain a high quality of work, no matter what the work is • Ability to identify the correct engineering approach or tool for the job at hand • Deliver accurate and well researched artefacts

Time Management	• Ability to manage competing priorities • Ability to deliver outputs on time and asking for help if getting stuck
Communication	• Communicate in a frank and open manner • Ability to communicate appropriately with all levels of stakeholders • Not afraid to ask for help when you need it
Teamwork and self-awareness	• Ability to work independently and as part of a team • Provide clear updates to the team of progress • Know your strengths, and play to them
Enthusiasm	• Have a passion for engineering and clean energy tech • Love problem solving

Key Accountabilities

- Outcomes Focus
- Stakeholder Engagement
- Attention To Detail
- Problem Solving
- Project Delivery
- Proactive Communications

ENGN3200/ENGN6200 Engineering Internship Eligibility requirements:

To be eligible to undertake this opportunity you must meet the Engineering Internship (ENGN3200/ENGN6200) eligibility requirements listed below:

- currently enrolled in an undergraduate or postgraduate engineering program at ANU;
- have completed a minimum of 96 Engineering program courses (UG) or 48 units of postgraduate courses including ENGN6250 or ENGN8260 (PG);
- have sufficient space in your remaining program for 6–12-unit internship;
- have a minimum GPA of 5.0;
- ensure you do not overload your enrolment in the second half 2024 - See ANU Overload Enrolment Information.

Role Requirements:

1. Students in their final year are preferred, but not essential.
2. Right to work in Australia during the duration of the internship and a professional level of both written and oral English.
3. max of 2 days per week (14 hours) for the total of 240 hours to 280 hours.

This will be a casual part-time position at ANU Level 3

Start date: The expected start time will be mid 2024. The placement dates are flexible and start times will be before or by 1 July.

Location: Facilities & Services offices in the Anthony Low Building

How to apply:

Application documents required:

- An expression of interest (max 500 words) that addresses your experience against the key characteristics and accountabilities.
- As part of this application, you will be required to upload a copy of an up-to-date CV and a copy of your ANU academic transcript.

Applications close on Sunday 21 April 2024.

Please contact studentemployability.cecc@anu.edu.au if you have any questions about the application process.
If your questions are around the actual position and working arrangements, we'll refer your questions to the ANU Host Department.