

PROGRAM PLAN

BACHELOR OF RENEWABLE ENERGY ENGINEERING (HONOURS)

PROGRAM OPTION:
Full time and Part Time

START DATE:
Semester 1, 2019 or 2020

LOCATION:
Callaghan

This Program Plan is an enrolment guide to ensure you are on track to graduate. If at any time you wish to vary from this program plan seek advice from your Academic Program Advisor to ensure you remain on track.

 [PROGRAM HANDBOOK](#)

 [COURSE HANDBOOK](#)

NAME:

STUDENT NO.:

COURSE STATUS KEY

C = Completed

En = Enrolled

NS = Not Started

| YEAR | SEMESTER | COURSE | DESCRIPTION | STATUS | NOTES |
|--------|------------|-------------------------|---|--------|---|
| YEAR 1 | SEMESTER 1 | CHEM1010 | Introductory Chemistry 1 | CORE | |
| | SEMESTER 2 | CHEE1000 | Process Engineering Principals | CORE | # From 2021 CHEE1000 will count in place of ENGG1600 |
| YEAR 2 | SEMESTER 1 | ENGG1003 | Introduction to Procedural Programming | CORE | |
| | SEMESTER 2 | ELEC2132 | Electric Energy Systems | CORE | |
| YEAR 3 | SEMESTER 1 | ENGG1500 | Introduction to Professional Engineering | CORE | |
| | SEMESTER 2 | CHEE2825 | Chemical and Renewables Engineering Laboratory | CORE | #From 2021 CHEE2825 will count in place of ENGG3860 |
| YEAR 4 | SEMESTER 1 | MATH1110 | Mathematics for Engineering, Science and Technology 1 | CORE | (Replaces option of MATH1110 OR MATH1210) |
| | SEMESTER 2 | CHEE4945B | Design Project B | CORE | First Offering in 2022 |
| | | CHEE2325 | Thermodynamics of Chemical Processes | CORE | |
| | | CHEE2695 | Energy Transfer and Technologies | CORE | In 2021 change in CAL from S2 to S1 |
| | | ELEC2320 | Electrical and Electronic Circuits | CORE | |
| | | MATH2310 | Calculus of Science and Engineering | CORE | |
| | | ELEC1310 | Introduction to Electrical Engineering | CORE | |
| | | PHYS1210 | Advanced Physics 1 | CORE | |
| | | MATH1120 | Mathematics for Engineering, Science and Technology 2 | CORE | (Replaces option of MATH1110 OR MATH1210) |
| | | ENGG2300 | Engineering Fluid Mechanics | CORE | #From 2021 ENGG2300 will count in place of Directed Course MECH2710 or CHEE2315 |
| | | ENGG2500 | Sustainable Engineering Practice | CORE | In 2021 change in CAL from S1 to S2 |
| | | RENE2000 | Bioenergy | CORE | |
| | | ENGG3500 | Managing Engineering Projects | CORE | |
| | | RENE3000 | Solar and Wind | CORE | |
| | | ELECTIVE PATHWAY | | | |
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| | | CHEE3160 | Principles and Design of Off-Grid Power Systems | CORE | |
| | | ELEC3251 | Power Electronics and Renewable Energy Systems | CORE | |
| | | RENE3100 | Geothermal, Hydro, Ocean and Hybrid Systems | CORE | |
| | | RENE4000 | Energy Storage Systems | CORE | First Offering in 2022 |
| | | ELECTIVE PATHWAY | | | |
| | | RENE4900A | Renewable Energy Engineering Project A | CORE | First Offering in 2022 |
| | | CHEE4945A | Design Project A | CORE | |
| | | CHEE4945B | Design Project B | CORE | First Offering in 2022 |
| | | RENE4900B | Renewable Energy Engineering Project B | CORE | First Offering in 2022 |
| | | ENGG4500 | Engineering Complexity | CORE | |
| | | ELECTIVE PATHWAY | | | |

COMPULSORY PROFESSIONAL PRACTICE: INDUSTRIAL EXPERIENCE - 12 WEEKS

*Prior to 2021 students were required to complete ENGG3860, ELEC3850 **PLUS** RENE4800A and RENE4800B (50 units total). From 2021, students are required to complete CHEE2825, RENE4900A, RENE4900B, CHEE4945A and CHEE4945B (50 units total).

If you who have already completed ENGG3860 it will still count towards your program and you will not be required to complete CHEE2825. Students will complete RENE4800A, RENE4800B, CHEE4945A and CHEE4945B. Students can (and are strongly encouraged to) take CHEE2825 as an Elective if they have an available 10-unit Elective

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To be eligible to graduate make sure you have completed 320 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- **Core courses** – 270 units

MATH courses

- **Prior to 2021**, students could choose to complete either MATH1110 and MATH1120, OR MATH1210 and MATH1220. Choice of maths courses is based on your assumed knowledge. To find out which MATH course you should enrol in please see the [Enrolling in Maths information](#). More information is in your [Program Handbook](#). Note that due to course offerings it is recommended midyear commencing students take MATH1110 and MATH1120, and that you also consider the University's [Summer School](#) offerings following your first semester.
- **After 2021**, the option to do MATH1210 and MATH1220 has been removed from the program. **From 2021 onwards:** 1) if you have not yet completed MATH1210 you must complete MATH1110; and 2) if you haven't completed MATH1220 then you must complete MATH1120. Enrolment in MATH courses is based on your assumed knowledge. To find out which MATH courses you should enrol in please see the [Enrolling in Maths information](#). More information in your [Program Handbook](#).

Please also note the following regarding the multi-term sequence courses research courses:

- CHEE4945A Design Project A (10 units) and CHEE4945B Design Project B (10 units) must be completed in consecutive terms.
- RENE4900A Renewable Energy Engineering Project A (10 units) and RENE4900B Renewable Energy Engineering Project A B (10 units) must be completed in consecutive terms.
- **Directed Course** – 10 units. From 2021, **ENGG3860** will replace the option of CHEE2315 Fluid Mechanics for Chemical Engineers or MECH2710 Fluid Mechanics 1.
- **Elective Pathway** – 40 units, visit the [Program Handbook](#) for more information. Students who do not meet the enrolment requisite for MATH1110 and must take MATH1002 will count MATH1002 as one of their 10 unit elective courses with 30 units total remaining. Contact Programadvice@newcastle.edu.au for further advice regarding your Program Plan if you need MATH1002.
- **Students must not exceed 120 units at 1000 level in this program.**
- **It is also a requirement that students complete a total of 12 weeks of [industrial experience](#).**
- **The duration of this program is 4 year full-time (40 units per semester) or part-time equivalent.**
- **The maximum time to complete this program is 10 years.**



Some courses have assumed knowledge and/or requisites, please refer to the individual [Course Handbook](#). Please refer to the [Program Handbook](#) for specific information on program structure. If you are intending varying from this program plan please seek advice from your [Academic Program Advisor](#).