

**RECOMMENDED STUDY PLAN****2021-2022**

NAME \_\_\_\_\_ STUDENT NUMBER \_\_\_\_\_

DEGREE Master of Science-ProfessionalMAJOR Environmental Earth Science (EES)**Course information – Master of Science (Professional)**

The Master of Science (Professional) degree is structured such that students take sets of (1) foundational ‘*knowledge*’ specific to their major, (2) technical and / or analytical ‘*skills*’ subjects, (3) *elective* subjects and (4) a capstone professional practice module in their final semester. The capstone module is either a research project or an industry internship.

Use this document to plan out what subjects you will take and when. Consult with your course advisor about the nature of subjects, research and internship pathways and any queries you may have. The course advisor for each major in the Master of Science programs is listed [here](#). When you are ready to enrol in subjects proceed to your eStudent account.

Click here to see the relevant JCU Course handbook: <https://www.jcu.edu.au/course-and-subject-handbook/courses/postgraduate-courses/master-of-science-professional> .

***Environmental Earth Science major structure***

1. Take the following 4 prescribed **Knowledge** subjects:
  - 1.1. [EA5016](#) Hydrology (SP1)
  - 1.2. [EA5017](#) Soil Properties and Processes (SP2)
  - 1.3. [EA5046](#) Earth and Environmental Geochemistry (SP2)
  - 1.4. [EA5404](#) From Icehouse to Greenhouse (SP2)
2. Take 4 **Skills** subjects:
  - 2.1. Take [EA5018](#) Field Studies in Tropical Land and Water Science (SP7) (**obligatory**); **Plus:**
  - 2.2. **One** of the following Advanced Skill subjects from [List 1](#) below:
    - 2.2.1. [EV5110](#) Environmental and Social Impact Assessment (SP2)
    - 2.2.2. [EV5502](#) Advanced Geographic Information Systems (SP11)
    - 2.2.3. [EV5506](#) Remote Sensing (SP9 / SP11)
    - 2.2.4. [SC5502](#) Design and Analyses in Ecological Studies (SP3)
    - 2.2.5. [BS5260](#) Modelling Ecological Dynamics (SP2)
    - 2.2.6. [BZ5450](#) Ecological and Conservation Genetics (SP2)
  - 2.3. **Two** subjects from the Additional Skill subjects in [List 2](#) below.
    - 2.3.1. Of these [SC5200](#) Professional Employability (SP1 and SP2) is recommended for all students in their first semester of study & is mandatory if you will be taking SC5009 (see item 4 below).
3. Take 4 **Elective** subjects from [List 3](#) below.
4. Take one of the following 12 credit point **Professional Practice** options
  - 4.1. Option 1 – Research Project (two parts, SC5912 & SC5913) **OR**
  - 4.2. Option 2 – Professional Employability (SC5009 Postgraduate Internship)

Full subject descriptions and timings of all subjects can be found online using the [Subject Search](#) tool. Use this tool to explore your subject options. Each subject is usually only offered once per year, in the ‘study period’ stated on Subject Search. It is generally recommended to take 8 subjects per year, with 3 or 4 in each main semester (Study Period 1 and 2), and additional subjects in the block mode

(intensive) periods (SP3, SP7, SP10 /11) as necessary. An explanation to JCU's academic calendar can be found [here](#).

Multiple subjects can be taken consecutively in a block mode period as long as the face to face teaching dates do not overlap. These dates are displayed on the Subject Search tool. For example in SP10 (November) a student can take both EV5502 and EA5640.

Please note that timings of some subjects occasionally change among years, due to JCU's operational requirements. While such changes are rare, students should check when a subject is being taught using the Subject Search tool above.

For any subject you need to have fulfilled the 'Assumed Knowledge' and / or Pre-requisites before you take them. These are listed in the subject's description. For example, EV5502 assumes you have already taken EV5505 or an equivalent at JCU or at your previous university. Speak with your course advisor for more assistance on this.

Where a subject includes overnight field trips this is noted in the subject's description on [Subject Search](#). Additional fees apply to cover trip transport, accommodation and food expenses for these field trips.

### List 1. Advanced Skill Subjects (Select 1)

SP3 Jan – Feb	SP1 Feb - June	SP7 June - July	SP2 July - Nov	SP9 Sept to Dec SP10 / 11 Nov -
			<a href="#">BZ5450:03</a> Ecological and Conservation Genetics	<a href="#">EV5502:03</a> Advanced Geographic Information Systems - TSV
			<a href="#">EV5110:03</a> Environmental and Social Impact Assessment	<a href="#">EV5506:03</a> Remote Sensing -CNS LTD (SP9: Sept to Nov)
			<a href="#">BS5260:03</a> Modelling Ecological Dynamics	

**List 2. Additional Skill Subjects (Select 2)**

<b>SP3</b> Jan – Feb	<b>SP1</b> Feb - June	<b>SP6 / SP7</b> June - July	<b>SP2</b> July - Nov	<b>SP9</b> Sept to Dec <b>SP10 / 11</b> Nov - Dec
<a href="#">MB5300</a> :03 Sampling and Experimental Design <sup>1</sup>	<a href="#">SC5200</a> :03 Professional Employability	<a href="#">EA5330</a> :03 Field Techniques	<a href="#">SC5200</a> :03 Professional Employability	<a href="#">AQ5004</a> :03 Aquaculture: Stock Improvement
<a href="#">SC5502</a> :03 Design and Analyses in Ecological Studies	<a href="#">SC5202</a> :03 Quantitative Methods in Science	<a href="#">EA5044</a> :03 Geological Mapping	<a href="#">BZ5450</a> :03 Ecological and Conservation Genetics	<a href="#">EV5502</a> :03 Advanced Geographic Information Systems - TSV
	<a href="#">EV5020</a> :03 Human Dimensions of Nature, Environment and Conservation	<a href="#">BZ5990</a> :03 Toolkit for the Field Biologist ( <i>Terrestrial studies</i> )	<a href="#">CH5203</a> :03 Analytical Chemistry (Advanced)	<a href="#">EV5506</a> :03 Remote Sensing - CNS (SP9 start)
			<a href="#">EV5110</a> :03 Environmental and Social Impact Assessment	<a href="#">EA5640</a> :03 Advanced Marine Geoscience Technologies and Applications
			<a href="#">EV5505</a> :03 Introduction to Geographic Information Systems	
			<a href="#">MA5405</a> :03 Data Mining	
			<a href="#">BS5260</a> :03 Modelling Ecological Dynamics	
			<a href="#">BC5203</a> :03 Advanced Bioinformatics	

<sup>1</sup> MB5300 and SC5502 are merged subjects in 2021. Students should have prior understanding of statistics, equivalent to SC5202.

## Professional Practice Options

Take one of the following:

### *Option 1 - Research Project*

- Take [SC5912:06](#) Research Project (Part 1 of 2) & [SC5913:06](#) (Part 2 of 2)

You can take the research project all in your final semester, or spread it over 2 semesters. Enrolment is conditional on attaining a minimum GPA of 5.5 from the preceding coursework units, and having a research project + supervisor confirmed.

Taking this research project is a pathway into a PhD program. More information about PhD pathways can be found [here](#).

### *Option 2 - Professional Employability*

- Take [SC5009:12](#) Postgraduate Internship

This unit is to be taken in your final semester of study. Students must have completed the pre-requisite subject [SC5200:03](#) *Professional Employability*. This pre-requisite unit should be taken in your first semester of study (in Year 1) and is recommended for both research and internship track students.

If you are seeking to gain employment in your field directly after the Master degree, then you should take the Professional Employability option.

Detailed information about the Professional Practice options is provided to students during their first year of study and available on the LearnJCU course page (Organisations & Communities tab).

## List 3. Elective Subjects

You can take any Level 5 subject with a prefix subject code of: AQ, BS, BZ, CH, EA, EV, MA, MB, MI, SC or TV. Other subjects can also be approved by your advisor.

Use [Subject Search](#) to review the units and check the study period they are offered in.

**Recommended elective subjects for the ENVIRONMENTAL EARTH SCIENCE Major** - These are our recommended and most popular units in your major.

Subject	Study Period	Campus
CH5041:03 Environmental Chemistry	1	Cairns & Townsville
EA5090:03 Applied Hydrology	1	Cairns
EA5320:03 Earth Resources, Exploration and Environment	1	Townsville
EV5015:03 Sustainability in Practice	1	Cairns & Townsville
EV5406:03 Coral Reef Geomorphology	1	Townsville
EV5200:03 Natural Resource Management	1	Townsville
EV5701:03 Managing Coastal & Marine Environments	1	Townsville
EV5020:03 Human Dimensions of Nature, Environment & Conservation	1	Townsville
BZ5480:03 Restoration Ecology	1	Cairns
EA5046:03 Earth and Environmental Geochemistry	2	Cairns & Townsville
EA5650:03 Sedimentary Environments and Energy Resources	2	Townsville
EV5401:03 Coastal and Catchment Geomorphology	2	Cairns & Townsville

EV5454:03 Natural Hazards	2	Cairns & Townsville
EV5003:03 Environmental Economics	2	Cairns & Townsville
EA5640:03 Advanced Marine Geoscience Technologies and Applications	11	Townsville
EV5404:03 Field Studies in Tropical Geography <i>Only taught in even-numbered years.</i>	11	

## YOUR STUDY PLANNER

Fill in the cells below with your planned subjects. You can re-arrange when you take your skill and elective subjects contingent on when your preferred unit is taught. Aim to complete all your core & skill subjects in your first year of study. You will normally start your program in either SP1 or SP2, but can on request start in SP3 or SP7.

<b>Year 1</b> Take 8 subjects (24 credit points) with 4 subjects per 6 month Teaching Period				
<b>TEACHING PERIOD 1 (TP1 Jan – June)</b>			<b>TEACHING PERIOD 2 (TP2 July – December)</b>	
<b>SP3</b> Jan – Feb	<b>SP1</b> Feb - June	<b>SP6 / SP7</b> June - July	<b>SP2</b> July - Nov	<b>SP9</b> Sept to Dec <b>SP10 / 11</b> Nov - Dec
	<b>Major Core:</b> <a href="#">EA5016</a> Hydrology TSV + CNS	<b>Major Skill Core:</b> <a href="#">EA5018</a> Field Studies in Tropical Land and Water Science	<b>Major Core:</b> <a href="#">EA5017</a> Soil Properties and Processes. TSV + CNS	<b>Advanced Skill subject</b>
	<b>Skill subject</b> <a href="#">SC5200</a> Professional Employability <sup>a</sup> <i>recommended.</i>		<b>Major Core:</b> <a href="#">EA5046</a> Earth and Environmental Geochemistry	
	<b>Skill subject</b>		<b>Major Core:</b> <a href="#">EA5404</a> From Icehouse to Greenhouse	

**Notes:** Pink are core knowledge subjects, Grey are skills subjects, White are electives, Blue are professional practice.

*a.* SC5200 unit is recommended for all students and should be taken in the first study period of your degree. It is offered in both SP1 and SP2.

Year 2 Take 24 credit points, with 12 credit points in each teaching period				
TEACHING PERIOD 1 (TP1 Jan – June)			TEACHING PERIOD 2 (TP2 July – December)	
SP3 Jan – Feb	SP1 Feb - June	SP6 / SP7 June - July	SP2 July - Nov	SP9 Sept to Dec SP10 / 11 Nov - Dec
	<div>Elective</div> <div>Elective</div> <div>Elective</div> <div>Elective OR Skill subject</div>		<b>Professional Practice (12cp)</b> <i>Pre-requisite conditions apply to both streams</i> <ul style="list-style-type: none"> <li>RESEARCH PROJECT (SC5912+SC5913)</li> </ul> OR <ul style="list-style-type: none"> <li>POSTGRADUATE INTERNSHIP (SC5009)  <i>Pre-requisite unit SC5200</i></li> </ul> <p>This module should be the final subject of your degree.</p>	