DEGREE Master of Science-Professional **MAJOR Geology (MSC-GEL)**

RECOMMENDED STUDY PLAN 2021-2022

NAME _____ **STUDENT NUMBER** _____

DEGREE Master of Science-Professional **MAJOR Geology (MSC-GEL)**

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 .

Geology major structure

1. Take the following 4 prescribed **Knowledge** subjects:
   - 1.1. EA5048 Minerals and Magmas (SP1)
   - 1.2. EA5320 Earth Resources, Exploration and Environment (SP1)
   - 1.3. EA5650 Sedimentary Environments and Energy Resources (SP2)
   - 1.4. EA5211 Structural Geology and Tectonics (SP1)
2. Take 4 **Skills** subjects:
   - 2.1. EA5044 Geological Mapping (SP6) (***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. BS5260 Modelling Ecological Dynamics (SP2)
     - 2.2.5. BZ5450 Ecological and Conservation Genetics (SP2)
     - 2.2.6. SC5502 Design and Analyses in Ecological Studies (SP3)
   - 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 a student can take both EV5502 and EA5640 in SP11.

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 - Dec
			BZ5450:03 Ecological and Conservation Genetics	EV5502:03 Advanced Geographic Information Systems - TSV
			EV5110:03 Environmental and Social Impact Assessment	EV5506:03 Remote Sensing -CNS LTD (SP9: Sept to Nov)
			BS5260:03 Modelling Ecological Dynamics	

List 2. Additional Skill Subjects (Select 2)

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

Professional Practice

Select one of the following options:

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 preceeding coursework units, and having a research project + supervisor confirmed.

Taking this research stream is a pathway into a PhD program. More information about PhD pathways can be found here.

[1] MB5300 and SC5502 are merged subjects in 2021. Students should have prior understanding of statistics, equivalent to SC5202.

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 Stream.

Detailed information about the Professional Practice options and opportunities 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 GEOLOGY - These are our recommended and most popular units in your major.

Subject	Study Period
SC5502 Design & Analysis in Ecological Studies	3
CH5041:03 Environmental Chemistry	1
EA5090:03 Applied Hydrology (CNS only)	1
EA5320:03 Earth Resources, Exploration and Environment	1
EV5015:03 Sustainability in Practice	1
EV5406:03 Coral Reef Geomorphology	1
EA5046:03 Earth and Environmental Geochemistry	2
EA5340:03 Disturbed Site Repair	2
EA5650:03 Sedimentary Environments and Energy Resources	2
EV5401:03 Coastal and Catchment Geomorphology	2
EV5454:03 Natural Hazards	2
EA5640:03 Advanced Marine Geoscience Technologies and Applications	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.

<table>
<tr><td colspan="5">Year 1 Take 8 subjects (24 credit points) with 4 subjects per 6 month Teaching Period</td></tr>
<tr><td colspan="3">TEACHING PERIOD 1 (TP1 Jan – June)</td><td colspan="2">TEACHING PERIOD 2 (TP2 July – December)</td></tr>
<tr><td>SP3
Jan – Feb</td><td>SP1
Feb - June</td><td>SP6 / SP7
June - July</td><td>SP2
July - Nov</td><td>SP9 Sept to Dec
SP10 / 11 Nov - Dec</td></tr>
<tr><td rowspan="4"></td><td>Major Core: EA5048:03 Minerals and Magmas</td><td>Major Skill Core:
EA5044:03 Geological Mapping</td><td>Major core:
EA5650:03 Sedimentary Environments and Energy Resources</td><td>Skill Subject</td></tr>
<tr><td>Major Core: EA5320:03 Earth Resources, Exploration and Environment</td><td rowspan="3"></td><td>Advanced Skill Subject</td><td rowspan="3"></td></tr>
<tr><td>Major Core: EA5211:03 Structural Geology and Tectonics</td><td>Skill Subject</td></tr>
<tr><td>Skill subject
SC5200:03 Professional Employability recommended.</td></tr>
</table>

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

<table>
<tr><td colspan="5">Year 2 Take 24 credit points, with 12 credit points in each teaching period</td></tr>
<tr><td colspan="3">TEACHING PERIOD 1 (TP1 Jan – June)</td><td colspan="2">TEACHING PERIOD 2 (TP2 July – December)</td></tr>
<tr><td>SP3
Jan – Feb</td><td>SP1
Feb - June</td><td>SP6 / SP7
June - July</td><td>SP2
July - Nov</td><td>SP9 Sept to Dec
SP10 / 11 Nov - Dec</td></tr>
<tr><td rowspan="4"></td><td>Elective</td><td rowspan="4"></td><td rowspan="4">Professional Practice (12cp)
Pre-requisite conditions apply to both streams
• RESEARCH PROJECT (SC5912+SC5913)
OR
• POSTGRADUATE INTERNSHIP (SC5009)
Pre-requisite unit SC5200

This module should be the final subject of your degree.</td><td rowspan="4"></td></tr>
<tr><td>Elective</td></tr>
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<tr><td>Elective</td></tr>
</table>

Notes: Timing of Electives are suggestion only