

RECOMMENDED STUDY PLAN

2022

DEGREE Master of Science (Prof)

MAJOR Global Change Biology (GCB)

NAME _____

STUDENT NUMBER _____

Course information – Master of Science (Professional)

The Master of Science (Professional) degree is structured such that students take sets of foundational ‘*knowledge*’ specific to their major, technical and / or analytical ‘*skills*’ subjects, *elective* subjects and 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.

For more information relevant to the degree see the JCU Course handbook for the [Master of Science \(Professional\)](#)

Global Change Biology major structure

1. Take the following 4 **Knowledge** subjects:
 - 1.1. [BZ5755](#) Climate Change and Biodiversity (SP7)
 - 1.2. [BZ5930](#) Conservation in a Changing World: Issues and Solutions (SP2)
 - 1.3. [BZ5935](#) Terrestrial Ecophysiology (SP2)
 - 1.4. [BZ5940](#) Evolutionary Adaption in a Changing World (from 2023)

2. Take these **Skills** subjects:
 - 2.1. [SC5200](#) Professional Employability (SP1 OR SP2)AND
 - 2.2. [SC5502](#) Design and Analyses in Ecological Studies (SP2)

AND take 1 of these advanced skill subjects (Major Core Option):

 - 2.3. [BS5260](#) Modelling Ecological Dynamics (SP1)
 - 2.4. [BZ5450](#) Ecological and Conservation Genetics (SP2)
 - 2.5. [EV5110](#) Environmental and Social Impact Assessment (SP2)
 - 2.6. [EV5502](#) Advanced Geographic Information Systems (SP11)
 - 2.7. [EV5506](#) Remote Sensing (SP9)

AND take 1 additional skill subject from **List 1**

- *For your major we recommend [SC5202](#) Quantitative Methods in Science OR [BZ5990](#) Toolkit for the Field Biologist.*

3. Take 4 **Elective** subjects
See recommendations for your major below.

4. Take a 12 credit point **Professional Practice** option to complete your degree
Option 1 – Research Project (two parts: take SC9512 & SC5913) **OR**
Option 2 – Internship (SC5009 Postgraduate Internship)
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Descriptions and availabilities of all subjects can be found online using the [Subject Search](#) tool. Use this 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 SP11 (November) a student can take both EV5502 and EA5640.

Please note that availability of some subjects sometimes changes. 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.

YOUR STUDY PLANNER

Fill in the cells below with your planned subjects. You can re-arrange when you take your skill and elective subjects depending 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 Study Period 1 (SP1) or Study Period 2 (SP2). Pink are core subjects.

February start

Year 1 Take 8 subjects (24 credit points) with approx. 4 subjects per 6 month Teaching Period

Teaching Period 1 (January-Jun)			Teaching Period 2 (July-December)	
Study Period 3 (Jan-Feb)	Study Period 1 (Feb-May)	SP 6 (May-Jul) SP 7 (Jun-Jul)	Study Period 2 (Jul-Nov)	SP 9 (Sept-Nov) SP 10 (Nov-Jan) SP 11 (Nov-Feb)
	Major Core: <u>SC5200</u> Professional Employability – available SP1 & SP2	Major Core: <u>BZ5755</u> Climate Change and Biodiversity	Major Core: <u>BZ5930</u> Conservation in a Changing World: Issues and Solutions	
	Major Core Option: Select 1 subject from the list above. Can take this subject anywhere within this year		Major Core: <u>BZ5935</u> Terrestrial Ecophysiology	
	Skill or Elective		Major Core: <u>SC5502</u> Design and Analyses in Ecological Studies	
			Skill or Elective	

Year 2 Take 24 credit points, with 12 credit points per Teaching Period

Teaching Period 1 (January-June)			Teaching Period 2 (July-December)	
Study Period 3 (Jan-Feb)	Study Period 1 (Feb-May)	SP 6 (May-Jul) SP 7 (Jun-Jul)	Study Period 2 (Jul-Nov)	SP 9 (Sept-Nov) SP 10 (Nov-Jan) SP 11 (Nov-Feb)
	Major Core: <u>BZ5940</u> Evolutionary Adaptation in a Changing World <i>(Not offered in 2022)</i>		Option 1 - Research Stream SC5912 Research Project (Part 1 of 2) SC5913 Research Project (Part 2 of 2) OR Option 2 – Professional Employability Stream SC5009 Postgraduate Internship	
	Skill or Elective			
	Skill or Elective			
	Skill or Elective			

July start

Year 1: Take 4 subjects (or 12 credit points) in teaching period 2.

Teaching Period 2 (July-December)	
Study Period 2 (Jul-Nov)	SP 9 (Sept-Nov) SP 10 (Nov-Jan) SP 11 (Nov-Feb)
Major Core: <u>BZ5930</u> Conservation in a Changing World: Issues and Solutions	
Major Core: <u>BZ5935</u> Terrestrial Ecophysiology	
Major Core: <u>SC5502</u> Design and Analyses in Ecological Studies	
Skill or Elective	

Year 1-2: Take 24 credit points, with 12 credit points per Teaching Period

Teaching Period 1 (January-Jun)			Teaching Period 2 (July-December)	
SP 3 (Jan-Feb)	Study Period 1 (Feb-May)	SP 6 (May-Jul) SP 7 (Jun-Jul)	Study Period 2 (Jul-Nov)	SP 9 (Sept-Nov) SP 10 (Nov-Jan) SP 11 (Nov-Feb)
	Major Core: <u>SC5200</u> Professional Employability – available SP1 & SP2	Major Core: <u>BZ5755</u> Climate Change and Biodiversity	Skill or Elective	Skill or Elective
	Major Core Option: Select 1 subject from the list above. Can take this subject anywhere within this year		Skill or Elective	
	Major Core: <u>BZ5940</u> Evolutionary Adaptation in a Changing World		Skill or Elective	

Year 2: Take 12 credit points in Teaching Period 1

Teaching Period 1 (January-Jun)	
SP 3 (Jan-Feb)	Study Period 1 (Feb-May)
	Option 1 - Research Stream SC5912 Research Project (Part 1 of 2) SC5913 Research Project (Part 2 of 2) OR Option 2 – Professional Employability Stream SC5009 Postgraduate Internship

List 1. Additional Skill Subjects (Select 1)

Study Period 3 (Jan-Feb)	Study Period 1 (Feb-Jun)	Study Period 6 (May-Jul) Study Period 7 (Jun-Jul)	Study Period 2 (Jul-Nov)	Study Period 9 (Sept-Nov) Study Period 10 (Nov-Jan) Study Period 11 (Nov-Feb)
<u>EV5020</u> Human Dimensions of Nature, Environment and Conservation	<u>BS5260</u> Modelling Ecological Dynamics	SP6 <u>EA5018</u> Field Studies in Tropical Land and Water Science	<u>BC5203</u> Advanced Bioinformatics	SP10 <u>AQ5004</u> Aquaculture: Stock Improvement
		SP6 <u>EA5044</u> Geological Mapping	<u>BZ5450</u> Ecological and Conservation Genetics	SP9 <u>EV5506</u> Remote Sensing
	<u>SC5202</u> Quantitative Methods in Science	SP7 <u>BZ5990</u> Toolkit for the Field Biologist	<u>CH5203</u> Analytical Chemistry (Advanced)	SP11 <u>EA5640</u> Advanced Marine Geoscience Technologies and Applications
		SP7 <u>EA5330</u> Field Techniques	<u>EV5110</u> Environmental and Social Impact Assessment	SP11 <u>EV5502</u> Advanced Geographic Information Systems
			<u>EV5505</u> Introduction to Geographic Information Systems	
<u>MA5405</u> Data Mining				
<u>SC5502</u> Design and Analyses in Ecological Studies				

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 prerequisite subject [SC5200:03 Professional Employability](#).

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).

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 GLOBAL CHANGE BIOLOGY Major - These are our recommended and most popular units in your major.

TOPIC	STUDY PERIOD	CAMPUS
<i>Terrestrial Biology & Ecology</i>		
BZ5745:03 Tropical Entomology	3	Cairns & Townsville
BZ5740:03 Wildlife Ecology & Management	1	Cairns & Townsville
BZ5925:03 Australian Terrestrial Diversity	1	Cairns & Townsville
BZ5235:03 Biological Invasions	1	Cairns & Townsville
BZ5755:03 Climate Change and Biodiversity	7	Townsville
BZ5620:03 Tropical Flora of Australia	7	Cairns
BZ5650:03 Australian Land Plants: Recognition, Evolution and Diversity	1,2,7 & 11	Online - External
BZ5061:03 Behavioural Ecology	2	Cairns & Townsville
BZ5935:03 Terrestrial Ecophysiology	2	Cairns & Townsville
<i>Applications for Ecology</i>		
BZ5740:03 Wildlife Ecology & Management	1	Cairns & Townsville
CH5041:03 Environmental Chemistry	1	Cairns & Townsville
BZ5990:03 Toolkit for the Field Biologist	7	Cairns & Townsville
BZ5450:03 Ecological & Conservation Genetics	2	Townsville

BZ5230:03 Ecological Research Methods	10	Cairns & Townsville
BZ5225:03 Technological Applications in Ecology	2	Cairns & Townsville
<i>Applications for Conservation & Management</i>		
EV5020:03 Human Dimensions of Nature, Environment and Conservation	1	Townsville
EA5016:03 Hydrology	1	Cairns & Townsville
EA5018:03 Field Studies in Tropical Land & Water Science	6	Cairns
BZ5930:03 Conservation in a Changing World: Issues and Solutions	2	Cairns & Townsville
BZ5450:03 Ecological & Conservation Genetics	2	Townsville
EV5003:03 Environmental Economics	2	Townsville
EA5017:03 Soil Properties & Processes	2	Cairns & Townsville
<i>Foundations – for students without 2nd year level biology and ecology</i>		
BS5470:03 Evolution	1	Cairns & Townsville
BZ5220:03 Population and Community Ecology	2	Townsville
MB5380:03 Invertebrate Biology	2	Townsville
<i>Marine Science</i>		
EV5406:03 Coral Reef Geomorphology	1	Townsville
MB5204:03 Conserving Marine Wildlife: Sea Mammals, Birds and Reptiles	1	Townsville
MB5160:03 Evolution and Ecology of Reef Fishes	1	Townsville
MB5400:03 Life History & Evolution of Reef Corals	1	Townsville
MB5270:03 Coastal, Estuarine & Mangrove Ecosystems	2	Townsville
AQ5007:03 Aquatic Animal Ecophysiology	2	Townsville
MB5190:03 Coral Reef Ecology	2	Townsville
MB5001:03 Tropical Marine Ecology and Coastal Impacts	11	Thailand