The information provided is designed to provide helpful information on your study plan. Changes to subject information after this time may affect your study plan. Please refer to the enrolment resources for up to date information.

RECOMMENDED STUDY PLAN 2022

DEGREE Master of Science (Prof) MAJOR Tropical Biology and Conservation (TBC)

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)

Tropical Biology & Conservation major structure

1. Take the following 4 **Knowledge** subjects:
   - 1.1. BZ5215 Conservation Biology Climate Change and Biodiversity (SP1)
   - 1.2. BZ5061 Behavioural Ecology (SP2) ***OR*** BZ5235 Biological Invasions (SP1)
   - 1.3. BZ5220 Population and Community Ecology (SP2) OR BZ5230 Ecological Research Methods (SP10)
   - 1.4. BZ5740 Wildlife Ecology and Management (SP1) OR BZ5745 Tropical Entomology (SP3)

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:
   - 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 OR BZ5225 Technological Applications in Ecology*.

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)

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: SC5200 Professional Employability – available SP1 & SP2		**Major Core Option:** BZ5061 Behavioural Ecology OR BZ5235 Biological Invasions (SP1)	
	Major Core Option: BZ5740 Wildlife Ecology and Management OR BZ5745 Tropical Entomology (SP3)		**Major Core Option:** BZ5220 Population and Community Ecology OR BZ5230 Ecological Research Methods (SP10)	
	Major Core: BZ5215 Conservation Biology		**Major Core:** SC5502 Design and Analyses in Ecological Studies	
	Major Core Option: Select 1 subject from the list above. Can take this subject anywhere within this year		**Skill** or **Elective**	

Year 2 Take 24 credit points, with 12 credit points per 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)
	Skill or **Elective**		**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 Option: BZ5061 Behavioural Ecology OR BZ5235 Biological Invasions (SP1)	
Major Core Option: BZ5220 Population and Community Ecology OR BZ5230 Ecological Research Methods (SP10)	
Major Core: SC5502 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: SC5200 Professional Employability – available SP1 & SP2		**Skill** or **Elective**	
	Major Core Option: BZ5740 Wildlife Ecology and Management OR BZ5745 Tropical Entomology (SP3)		**Skill** or **Elective**	
	Major Core: BZ5215 Conservation Biology		**Skill** or **Elective**	
	Major Core Option: Select 1 subject from the list above. Can take this subject anywhere within this year		**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)
EV5020 Human Dimensions of Nature, Environment and Conservation	BS5260 Modelling Ecological Dynamics	**SP6** EA5018 Field Studies in Tropical Land and Water Science	BC5203 Advanced Bioinformatics	**SP10** AQ5004 Aquaculture: Stock Improvement
	SC5202 Quantitative Methods in Science	**SP6** EA5044 Geological Mapping	BZ5450 Ecological and Conservation Genetics	**SP9** EV5506 Remote Sensing
		SP7 BZ5990 Toolkit for the Field Biologist	CH5203 Analytical Chemistry (Advanced)	**SP11** EA5640 Advanced Marine Geoscience Technologies and Applications
		SP7 EA5330 Field Techniques	EV5110 Environmental and Social Impact Assessment	**SP11** EV5502 Advanced Geographic Information Systems
			EV5505 Introduction to Geographic Information Systems	
			MA5405 Data Mining	
			SC5502 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 pre-requisite 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).

List 2. 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 MARINE BIOLOGY Major - These are our recommended and most popular units in your major.

TOPIC	STUDY PERIOD	CAMPUS
Terrestrial Biology & Ecology		
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
Applications for Ecology		
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	2 10 (to be confirmed)	Cairns (Townsville offering to be advised)
BZ5225:03 Technological Applications in Ecology	2	Cairns & Townsville
Applications for Conservation & Management		
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
Foundations – for students without 2nd year level biology and ecology		
BS5470:03 Evolution	1	Cairns & Townsville
BZ5220:03 Population and Community Ecology	2	Townsville
MB5380:03 Invertebrate Biology	2	Townsville
Marine Science		
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