

## RECOMMENDED STUDY PLAN

2022

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

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

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### Course information – Master of Science

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

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](#).

Students wishing to take a semester long internship or research project need to transfer to the [Master of Science \(Professional\)](#) degree. This should be done before you start your course.

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### *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 (SP2 Cairns and SP10 Townsville)
  - 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.*

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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.

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

**Year 2** Take 12 credit points in Teaching Period1

<b>Teaching Period 1</b> (January-Jun)		
<b>Study Period 3</b> (Jan-Feb)	<b>Study Period 1</b> (Feb-May)	<b>Study Period 6</b> (May-Jul) <b>Study Period 7</b> (Jun-Jul)
	<b>Skill</b> or <b>Elective</b>	
	<b>Skill</b> or <b>Elective</b>	
	<b>Skill</b> or <b>Elective</b>	
	<b>Skill</b> or <b>Elective</b>	

**July start**

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

<b>Teaching Period 2 (July-December)</b>	
<b>Study Period 2</b> (Jul-Nov)	<b>SP 9</b> (Sept-Nov) <b>SP 10</b> (Nov-Jan) <b>SP 11</b> (Nov-Feb)
<b>Major Core Option:</b> <u>BZ5061</u> Behavioural Ecology OR <u>BZ5235</u> Biological Invasions (SP1)	
<b>Major Core Option:</b> <u>BZ5220</u> Population and Community Ecology OR <u>BZ5230</u> Ecological Research Methods (SP10)	
<b>Major Core:</b> <u>SC5502</u> Design and Analyses in Ecological Studies	
<b>Skill</b> or <b>Elective</b>	

**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		Skill or Elective	
	Major Core Option: <u>BZ5740</u> Wildlife Ecology and Management OR <u>BZ5745</u> Tropical Entomology (SP3)		Skill or Elective	
	Major Core: <u>BZ5215</u> 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	

**List 1. Additional Skill Subjects (Select 1)**

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

## 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
<i>Terrestrial Biology &amp; 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	2 10 (to be confirmed)	Cairns (Townsville offering to be advised)
BZ5225:03 Technological Applications in Ecology	2	Cairns & Townsville
<i>Applications for Conservation &amp; 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 2<sup>nd</sup> 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