RECOMMENDED STUDY PLAN 2020-2021

NAME _____ **STUDENT NUMBER** _____

DEGREE PROGRAM Master of Science-Professional **MAJOR** Tropical Biology & Conservation (MSC-TBI)

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 *project* module.

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

Tropical Biology & Conservation major structure:

1. Take 4 prescribed '*knowledge*' subjects
   - 1.1. BZ5215:03 Conservation Biology
   - 1.2. BZ5061:03 Behavioural Ecology ***or*** BZ5235:03 Biological Invasions
   - 1.3. BZ5220:03 Population and Community Ecology ***or*** BZ5230:03 Ecological Research Methods
   - 1.4. BZ5740:03 Wildlife Ecology and Management ***or*** BZ5745:03 Tropical Entomology

2. Take 4 '*skills*' subjects for your major
   - 2.1. SC5202:03 Quantitative Methods in Science ***or*** SC5502:03 Design and Analyses in Ecological Studies
   - 2.2. Plus 1 of the following *advanced skills* subject
     - 2.2.1. BS5260:03 Modelling Ecological Dynamics ***or***
     - 2.2.2. BZ5450:03 Ecological and Conservation Genetics ***or***
     - 2.2.3. EV5110:03 Environmental and Social Impact Assessment ***or***
     - 2.2.4. EV5502:03 Advanced Geographic Information Systems ***or***
     - 2.2.5. EV5506:03 Remote Sensing
   - 2.3. Plus 2 subjects from **List 1**
3. Take 4 *elective* subjects (see recommended electives list)
4. Take 12 credit points of *Professional Practice* (select a stream)
   - 4.1. Option 1- Research Stream ***OR***
   - 4.2. Option 2- Professional Project Stream ***OR***
   - 4.3. Option 3- combined Research & Professional Project Stream

Full subject descriptions and timings of all subjects can be found online using the Subject Search tool. It is generally recommended to take 8 subjects per year, with 3 - 4 in SP1 and SP2 and additional subjects in block mode periods (SP3, SP7, SP10 /11) as necessary. You need to have fulfilled the 'Assumed Knowledge' or Prerequisites for any subject, 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.

RECOMMENDED STUDY PLAN - TOWNSVILLE

Colour legend: Pink are core 'major or knowledge' subjects, Grey are skills subjects, White are electives, Blue are professional practice.

Level 5: Year 1 (take 8 subjects / 24 credit points)

SP3	SP1	SP6/7	SP2	SP9/10/11
	Major Core: BZ5215:03 Conservation Biology TSV + CNS		**Major Core:** BZ5061:03 Behavioural Ecology	**Skill subject**
	Major Core: BZ5740:03 Wildlife Ecology and Management		**Major Core:** BZ5220:03 Population and Community Ecology	
	Major Core Skill subject: SC5202:03 Quantitative Methods in Science		**Advanced skill subject**	

Notes:
Boxes without specific subjects listed in them may be rearranged to meet your course needs as long as the total number of subjects and degree structure is met. For example, you may choose to move a SP1 elective in Year 1 to SP7 in Year 2.

Level 5: Year 2 (take 24 credit points)

SP3	SP1	SP6/7	SP2	SP10/SP11
Elective	**Elective**		**Professional Practice subjects (12cp)** Choose a stream	
	Elective			
	Elective			

RECOMMENDED STUDY PLAN - CAIRNS

Colour legend: Pink are core 'major or knowledge' subjects, Grey are skills subjects, White are electives, Blue are professional practice.

Level 5: Year 1 (take 8 subjects / 24 credit points)

SP3	SP1	SP6/7	SP2	SP9/10/11
	Major Core: BZ5215:03 Conservation Biology TSV + CNS		**Major Core:** BZ5230:03 Ecological Research Methods	**Skill subject**
	Major Core: BZ5235:03 Biological Invasions		**Advanced skill subject**	
	Major Core Skill subject: SC5202:03 Quantitative Methods in Science		**Elective**	
	Elective			

Notes:
Boxes without specific subjects listed in them may be rearranged to meet your course needs as long as the total number of subjects and degree structure is met. For example, you may choose to move a SP1 elective in Year 1 to SP7 in Year 2.

Level 5: Year 2 (take 24 credit points)

SP3	SP1	SP6/7	SP2	SP10/SP11
Major Core: BZ5745:03 Tropical Entomology	**Skill subject**		**Professional Practice subjects (12cp)** Choose a stream	
	Elective			
	Elective			

Skill Subjects:

In addition to the **Major Core Skill Subject** (SC5202 OR SC5502), choose 1 advanced skill subject 2 subjects from **List 1**. You must meet the Assumed Knowledge or Prerequisites for any subject selected.

Advanced Skill Subjects (Select 1)

SP1	SP2	SP9/SP10/SP11
BS5260:03 Modelling Ecological Dynamics TSV	BZ5450:03 Ecological and Conservation Genetics TSV	EV5502:03 Advanced Geographic Information Systems - TSV
	EV5110:03 Environmental and Social Impact Assessment	EV5506:03 Remote Sensing -CNS LTD (SP9)

List 1 – Additional Skill Subjects (Select 2)

SP3	SP1	SP6/7	SP2	SP9/SP10/SP11
SC5502:03 Design and Analyses in Ecological Studies	SC5202:03 Quantitative Methods in Science [1]	EA5018:03 Field Studies in Tropical Land and Water Science [2]	BC5203:03 Advanced Bioinformatics	AQ5004:03 Aquaculture: Stock Improvement
MB5300:03 Sampling and Experimental Design [3]	BS5260:03 Modelling Ecological Dynamics	EA5330:03 Field Techniques [3]	BZ5450:03 Ecological and Conservation Genetics	EV5502:03 Advanced Geographic Information Systems - TSV
	EV5020:03 Human Dimensions of Nature, Environment and Conservation	SC5232:03 Marine Sensor Technologies and Applications [4]	CH5203:03 Analytical Chemistry (Advanced)	EV5506:03 Remote Sensing -CNS LTD (SP9)
		BZ5990:03 Toolkit for the Field Biologist	EV5110:03 Environmental and Social Impact Assessment	EA5640:03 Advanced Marine Geoscience Technologies and Applications
		EA5044:03 Geological Mapping[3]	EV5505:03 Introduction to Geographic Information Systems	
			MA5405:03 Data Mining	
			SC5202:03 Quantitative	

[1] SC5202 is a required unit if you have not already completed a statistics subject at university.
[2] Not intended for students in Marine Biology, Fisheries, Aquaculture or Tropical Biology & Conservation
[3] Merged with SC5502 for 2020. SC5202 is a required unit if you have not already completed a statistics subject at university
[4] Not yet available

			Methods in Science (mixed attendance)	

Professional Practice Options

Select 1 Stream

Option 1 - Research Project Stream (*entrance conditions apply)* SC5912:06 **AND** SC5913:06 *You may choose which semesters you would like for each subject.*				
	SP1		**SP2**	
	SC5912:06 Minor Project, Seminar and Literature Review (Part 1)		SC5912:06 Minor Project, Seminar and Literature Review (Part 1)	
	SC5913:06 Minor Project, Seminar and Literature Review (Part 2)		SC5913:06 Minor Project, Seminar and Literature Review (Part 2)	
Option 2 - Professional Project Stream SC5009:12 *You may choose which semester to take this in.*				
	SP1		**SP2**	
	SC5009:12 Professional Project		SC5009:12 Professional Project	
Option 3 - Research & Professional Project Stream Select 12 credit points from:				
SP3	**SP1**	**SP6/7**	**SP2**	**SP10/SP11**
	SC5007:06 Professional Project		SC5007:06 Professional Project	
	SC5900:06 Special Topic		SC5900:06 Special Topic	
SC5901:03 Special Topic 1 *Note-This subject is available in any study period.*				
SC5902:03 Special Topic 2 *Note- This subject is available in any study period.*				
SC5008:03 Professional Placement *Note- This subject is available in any study period.*				

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.

Recommended elective subjects for this Major: The recommended elective subject sets for specific career pathways and/or or study areas:

TOPIC	STUDY PERIOD
Plants	
BZ5615:03 Plant Survival in a land of Fire, Flood and Drought *Note- Not offered in 2019.*	1
BZ5620:03 Tropical Flora of Australia	7, CNS
BZ5650:03 Australian Land Plants: Recognition, Evolution and Diversity	1,11,2,7 EXT
Taxa specialisations	
BZ5745:03 Tropical Entomology	3 CNS
MB5204:03 Conserving Marine Wildlife: Sea Mammals, Birds and Reptiles	1 TVL
MB5380:03 Invertebrate Biology	2 TVL
Ecology	
BZ5880:03 Ecology: Distribution, Abundance and Diversity	2 CNS
BZ5225:03 Technological Applications in Ecology	2 CNS
BZ5230:03 Ecological Research Methods	2 CNS
BZ5450:03 Ecological and Conservation Genetics	2 TVL
BZ5480:03 Restoration Ecology	1 CNS
MB5160:03 Evolution and Ecology of Reef Fishes	1 TVL
AQ5007:03 Aquatic Animal Ecophysiology	2 TVL
MB5270:03 Coastal, Estuarine & Mangrove Ecosystems	2 TVL
MB5450:03 Behaviour of Marine Animals *Note-Offered in odd-numbered years.*	7 TVL
Biology	
BZ5808:03 Adapting to Environmental Challenges	2 CNS
MB5160:03 Evolution and Ecology of Reef Fishes	1 TVL
MB5400:03 Life History & Evolution of Reef Corals	1 TVL
MI5003:03 Advanced Marine Microbiology	1 TVL
MB5380:03 Invertebrate Biology	2 TVL
AQ5007:03 Aquatic Animal Ecophysiology	2 TVL
Foundations	
BZ5220:03 Population and Community Ecology	2 TVL
BS5470:03 Evolution	1 TVL
MB5380:03 Invertebrate Biology	2 TVL
BS5460:03 Fundamentals of Ecology	2 TVL

Applied Studies	
MB5310:03 Marine Reserves as Fisheries Management Tools	3 TVL
AQ5006:03 Principles and Practices of Aquaculture	1 TVL
MB5003:03 Fisheries Science	1 TVL
AQ5015:03 Sustainable Aquaculture	3 TVL
MB5610:03 Fishing Gear and Technologies	2 TVL
MB5014:03 Managing Tropical Fisheries	11 TVL
Applications for Conservation	
BZ3215:03 Conservation Biology	1 TVL, CNS
EV5020:03 Human Dimensions of Nature, Environment and Conservation	1 TVL
EV5107:03 International Environmental Policy & Governance	3 TVL
BZ5450:03 Ecological & Conservation Genetics	2 TVL
EV5003:03 Environmental Economics	2 TVL
Coastal Resource Management	
EV5406:03 Coral Reef Geomorphology	1 TVL
MB5204:03 Conserving Marine Wildlife: Sea Mammals, Birds and Reptiles	1 TVL
EV5020:03 Human Dimensions of Nature, Environment and Conservation	1 TVL
MB5270:03 Coastal, Estuarine & Mangrove Ecosystems	2 TVL
Unique Ecosystems	
SC5810:03 Marine Ecology and Upwelling	7 (Galapagos)
MB5001:03 Tropical Marine Ecology and Coastal Impacts	11 (Thailand)