DEGREE PROGRAM Graduate Diploma of Science **MAJOR** Marine Biology (GDS-MBY)

RECOMMENDED STUDY PLAN 2020-2021

NAME _____ **STUDENT NUMBER** _____

DEGREE PROGRAM Graduate Diploma of Science **STREAM** Marine Biology (MBY)

Course information – Graduate Diploma of Science

The Graduate Diploma of Science degree is structured such that students take sets of (1) foundational '*knowledge*' specific to their major, (2) technical and / or analytical '*skills*' subjects and (3) *elective* subjects. The specific subject sets are aligned to the respective major in the Master of Science program.

Click here to see the relevant JCU Course handbook: https://www.jcu.edu.au/course-and-subject-handbook/courses/postgraduate-courses/master-of-science

Marine Biology stream structure:

1. Take 2 of the following '*knowledge*' subjects
   1.1. MB5055:03 Biological Oceanography
   1.2. MB5190:03 Coral Reef Ecology
   1.3. MB5270:03 Coastal, Estuarine and Mangrove Ecosystems
   1.4. MB5004:03 Marine Conservation Biology
2. Take 3 '*skills*' subjects for your major
   2.1. MB5300:03 Sampling and Experimental Design[1] **OR** SC5502:03 Design and Analyses in Ecological Studies
   2.2. Plus 2 subjects from **List 1**
3. Take 3 *elective* subjects (see recommended electives list)

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.

[1] For 2020, this subject is merged with SC5502.

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

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

SP3	SP1	SP6/7	SP2	SP9/10/11
Core Skill subject SC5502:03 Design and Analyses in Ecological Studies*	**Major core subject** MB5055:03 Biological Oceanography		**Major core subject** MB5190:03 Coral Reef Ecology * OR MB5270:03 Coastal, Estuarine and Mangrove Ecosystems	**Skill subject**
	Advanced skill subject		**Major core subject:** MB5004:03 Marine Conservation Biology	
	Elective		**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.
** Prerequisite for this subject is a basic univariate statistics course from university.*

Skill Subjects:

In addition to the **Major Core Skill Subject** (MB5300 OR SC5502), choose 2 subjects from **List 1**. You must meet the Assumed Knowledge or Prerequisites for any subject selected.

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 [2]	EA5018:03 Field Studies in Tropical Land and Water Science [3]	BC5203:03 Advanced Bioinformatics	AQ5004:03 Aquaculture: Stock Improvement
MB5300:03 Sampling and Experimental Design [4]	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 [5]	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	

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

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

Recommended elective subjects for the MARINE BIOLOGY Major - These are our recommended elective subject sets for specific career pathways and/or study interests

TOPIC	STUDY PERIOD
Coral Reefs	
MB5400:03 Life history & evolution of reef corals	1
EV5406:03 Coral Reef Geomorphology	1
MB5160:03 Evolution and Ecology of Reef Fishes	1
MB5190:03 Coral Reef Ecology	2
Taxa specialisations	
MB5160:03 Evolution and Ecology of Reef Fishes	1
MB5400:03 Life History & Evolution of Reef Corals	1
MB5380:03 Invertebrate Biology	2
MB5204:03 Conserving Marine Wildlife: Sea Mammals, Birds and Reptiles	1
Ecology	
MB5160:03 Evolution and Ecology of Reef Fishes	1
AQ5007:03 Aquatic Animal Ecophysiology	2
MB5270:03 Coastal, Estuarine & Mangrove Ecosystems	2
MB5430:03 Behaviour of Marine Animals *Offered in odd-numbered years*	7
Biology	
MB5160:03 Evolution and Ecology of Reef Fishes	1
MB5400:03 Life History & Evolution of Reef Corals	1
MI5003:03 Advanced Marine Microbiology	1
MB5380:03 Invertebrate Biology	2
AQ5007:03 Aquatic Animal Ecophysiology	2
MB5070:03 Marine Biogeography	1
Foundations - *recommended for students with no 2nd or 3rd year undergraduate background in biology / evolutionary ecology.*	
BS5470:03 Evolution	1
MB5380:03 Invertebrate Biology	2
BS5460:03 Fundamentals of Ecology	2
Applied Studies: Fisheries & Aquaculture	
MB5310:03 Marine Reserves as Fisheries Management Tools	3
AQ5006:03 Principles and Practices of Aquaculture	1

MB5003:03 Fisheries Science	1
AQ5015:03 Sustainable Aquaculture	3
MB5610:03 Fishing Gear and Technologies	2
MB5014:03 Managing Tropical Fisheries	11
MB5260:03 Grand Challenges in Fisheries	1
Applications for Conservation	
EV5020:03 Human Dimensions of Nature, Environment and Conservation	1
EV5107:03 Environmental Management Policy & Governance	3
BZ5450:03 Ecological & Conservation Genetics	2
EV5003:03 Environmental Economics	2
EV5209:03 Principles and Practices of Protected Area Management	SP3 (TSV) / SP7 Galapagos alternate years
Coastal Resource Management	
EV5406:03 Coral Reef Geomorphology	1
EV5020:03 Human Dimensions of Nature, Environment and Conservation	1
MB5204:03 Conserving Marine Wildlife: Sea Mammals, Birds and Reptiles	1
EV5701:03 Managing Coastal and Marine Environments	1
MB5270:03 Coastal, Estuarine & Mangrove Ecosystems	2
Unique Ecosystems	
SC5810 Marine Ecology and Upwelling	7 (Galapagos)
MB5001:03 Tropical Marine Ecology and Coastal Impacts	11 (Thailand)