DEGREE Master of Science **MAJOR Fisheries Science & Management (MSC-FSM)**

RECOMMENDED STUDY PLAN **2020-2021**

NAME _____ **STUDENT NUMBER** _____

DEGREE PROGRAM Master of Science **MAJOR Fisheries Science & Management (MSC-FSM)**

Course information – Master of Science

The Master 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.

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

Fisheries Science & Management major structure:

1. Take 4 prescribed '*knowledge*' subjects
   - 1.1. MB5003:03 Fisheries Science
   - 1.2. EV5020:03 Human Dimensions of Nature, Environment and Conservation
   - 1.3. MB5610:03 Fishing Gear and Technologies
   - 1.4. MB5014:03 Managing Tropical Fisheries

2. Take 4 '*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 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)

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.

Research Projects and Placement subjects. Students wishing to take a 12 credit point independent research project or professional placement need to transfer into the Master of Science (Professional) program to complete these.

[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** MB5003:03 Fisheries Science		**Major core subject** MB5610:03 Fishing Gear and Technologies	**Major core subject** MB5014:03 Managing Tropical Fisheries
	Major core subject EV5020:03 Human Dimensions of Nature, Environment and Conservation		**Advanced skill subject**	
	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.*

Level 5: Year 2 (take 12 credit points)

SP3	SP1	SP6/7	SP2	SP10/SP11
Elective	**Elective**			
	Elective			
	Elective			

Skill Subjects:

In addition to the **Major Core Skill Subject** (MB5300 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	BZ5450:03 Ecological and Conservation Genetics	EV5502:03 Advanced Geographic Information Systems - TSV 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 [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	
			SC5202:03 Quantitative	

[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

			Methods in Science (mixed mode)	

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 FISHERIES SCIENCE AND MANAGEMENT - These are our recommended elective subject sets for specific career pathways and/or study interests

TOPIC	**STUDY PERIOD**
Fisheries science (biology)	
MB5055:03 Biological Oceanography	1
MI5003:03 Advanced Marine Microbiology	1
AQ5006:03 Principles and Practices of Aquaculture	1
MB5380:03 Invertebrate Biology	2
AQ5007:03 Aquatic Animal Ecophysiology	2
BS5260:03 Modelling Ecological Dynamics	1
MB5620:03 Grand Challenges in Fisheries	1
MB5070:03 Marine Biogeography	1
AQ5004:03 Aquaculture: Stock Improvement	10
Fisheries management applications	
MB5310:03 Marine Reserves as Fisheries Management Tools	3
EV5209:03 Principles and Practices of Protected Area Management	3
EV5701:03 Managing Coastal and Marine Environments	1
EV5003:03 Environmental Economics	2
EV5107:03 Environmental Management Policy & Governance	3
MB5620:03 Grand Challenges in Fisheries	1
AQ5015:03 Sustainable Aquaculture	3
Fisheries Technology	
MB5055:03 Biological Oceanography	1
EV5506:03 Remote Sensing (CNS only/ limited)	9
MB5620:03 Grand Challenges in Fisheries	1
Fisheries Ecology	
MB5310:03 Marine Reserves as Fisheries Management Tools	3
MB5270:03 Coastal, Estuarine and Mangrove Ecosystems	2
MB5190:03 Coral Reef Ecology	2
MB5004:03 Marine Conservation Biology	2
MB5001:03 Tropical Marine Ecology & Coastal Impacts	11
MB5620:03 Grand Challenges in Fisheries	1
Fisheries Conservation	
MB5310:03 Marine Reserves as Fisheries Management Tools	3
MB5270:03 Coastal, Estuarine and Mangrove Ecosystems	2

MB5004:03 Marine Conservation Biology	2
MB5190:03 Coral Reef Ecology	2
MB5620:03 Grand Challenges in Fisheries	1