RECOMMENDED STUDY PLAN **2021-2022**

NAME _____ **STUDENT NUMBER** _____

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

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 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.

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 .

Fisheries Science & Management - Major structure

1. Take the following 4 prescribed **Knowledge** subjects:
   - 1.1. MB5003 Fisheries Science (SP1)
   - 1.2. EV5020 Human Dimensions of Nature, Environment and Conservation (SP1)
   - 1.3. MB5610 Fishing Gear and Technologies (SP2)
   - 1.4. MB5014 Managing Tropical Fisheries (SP11)
2. Take 4 **Skills** subjects:
   - 2.1. Take MB5300:03 Sampling and Experimental Design[1] **OR** SC5502:03 Design and Analyses in Ecological Studies (SP3) ***(obligatory); Plus:***
   - 2.2. Take 1 of the following Advanced Skill subjects from List 1:
     - 2.2.1. BS5260 Modelling Ecological Dynamics (SP2)
     - 2.2.2. BZ5450 Ecological and Conservation Genetics (SP2)
     - 2.2.3. EV5110 Environmental and Social Impact Assessment (SP2)
     - 2.2.4. EV5502 Advanced Geographic Information Systems (SP11)
     - 2.2.5. EV5506 Remote Sensing (SP9 / SP11)
   - 2.3. And take 2 Additional Skill subjects from List 2
     - 2.3.1. Of these SC5200 Professional Employability (SP1 and SP2) is recommended for all students in their first semester of study & compulsory if you are taking the internship subject (SC5009) in item 4 below.
3. Take 4 **Elective** subjects from List 3.
4. Take a 12 credit point **Professional Practice** option
   - 4.1. Option 1 - Research Project (two parts: SC5912 & SC5913) ***OR***
   - 4.2. Option 2 – Professional Employability (SC5009 Postgraduate Internship)

Full subject descriptions and timings of all subjects can be found online using the *Subject Search* tool. Use this tool 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,

[1] For 2021, MB5300 and SC5502 are merged subjects.

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 a student can take SC5502 in SP3 followed by MB5310.

Please note that timings of some subjects occasionally change among years, due to JCU's operational requirements. 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.

List 1. Advanced Skill Subjects (Select 1)

SP3 Jan – Feb	**SP1** Feb - June	**SP6 / SP7** June - July	**SP2** July - Nov	**SP9** Sept to Dec **SP10 / 11** Nov - Dec
			BZ5450:03 Ecological and Conservation Genetics	EV5502:03 Advanced Geographic Information Systems - TSV
			EV5110:03 Environmental and Social Impact Assessment	EV5506:03 Remote Sensing – CNS (SP9 start: Sept to Nov)
			BS5260:03 Modelling Ecological Dynamics	

List 2. Additional Skill Subjects (Select 2)

SP3 Jan – Feb	**SP1** Feb - June	**SP6 / SP7** June - July	**SP2** July - Nov	**SP9** Sept to Dec **SP10 / 11** Nov - Dec
	SC5200:03 Professional Employability	BZ5990:03 Toolkit for the Field Biologist *(Terrestrial studies)*	SC5200:03 Professional Employability	AQ5004:03 Aquaculture: Stock Improvement
	SC5202:03 Quantitative Methods in Science	EA5018:03 Field Studies in Tropical Land and Water Science [2]	BZ5450:03 Ecological and Conservation Genetics	EV5502:03 Advanced Geographic Information Systems - TSV
		EA5330:03 Field Techniques [2]	BS5260:03 Modelling Ecological Dynamics	EV5506:03 Remote Sensing - CNS (SP9 start)
		EA5044:03 Geological Mapping[2]	EV5110:03 Environmental and Social Impact Assessment	EA5640:03 Advanced Marine Geoscience Technologies and Applications
			EV5505:03 Introduction to Geographic Information Systems	
			MA5405:03 Data Mining	
			BC5203:03 Advanced Bioinformatics	
			CH5203:03 Analytical Chemistry (Advanced)	

[2] Not intended for students in Marine Biology, Fisheries, Aquaculture or Tropical Biology & Conservation

Professional Practice

Select one of the following Options:

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 preceeding 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.* This pre-requisite unit should be taken in your first semester of study (in Year 1) and is recommended for both research and internship track students.

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 3. 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 FISHERIES SCIENCE & MANAGEMENT - These are our recommended and most popular units grouped by particular career pathways and/or study interests.

TOPIC	STUDY PERIOD
Fisheries Science (biology)	
MB5055:03 Biological Oceanography	1
MB5620:03 Grand Challenges in Fisheries	1
MB5070:03 Marine Biogeography	1
MI5003:03 Advanced Marine Microbiology	1
AQ5006:03 Principles and Practices of Aquaculture	1
BS5260:03 Modelling Ecological Dynamics	7
MB5380:03 Invertebrate Biology	2
AQ5007:03 Aquatic Animal Ecophysiology	2
AQ5004:03 Aquaculture: Stock Improvement	10
Fisheries Management & Governance - Applications	
MB5310:03 Marine Reserves as Fisheries Management Tools	3
EV5209:03 Principles and Practices of Protected Area Management	3

EV5107:03 International Environmental Policy & Governance	3
AQ5015:03 Sustainable Aquaculture	3
EV5701:03 Managing Coastal and Marine Environments	1
MB5620:03 Grand Challenges in Fisheries	1
EV5003:03 Environmental Economics	2
PL5006:03 Political Communication; Ecology & Environmentalism	2
Fisheries Technology	
MB5055:03 Biological Oceanography	1
EV5506:03 Remote Sensing (CNS block mode)	9 (Sept – Nov)
MB5620:03 Grand Challenges in Fisheries	1
Fisheries Ecology & Conservation	
MB5310:03 Marine Reserves as Fisheries Management Tools	3
MB5620:03 Grand Challenges in Fisheries	1
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

YOUR STUDY PLANNER

Fill in the cells below with your planned subjects. You can re-arrange when you take your skill and elective subjects contingent 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 SP1 or SP2, but can on request start in SP3 or SP7.

Year 1 Take 8 subjects (24 credit points) with 4 subjects per 6 month Teaching Period				
TEACHING PERIOD 1 (TP1 Jan – June)			**TEACHING PERIOD 2 (TP2 July – December)**	
SP3 Jan – Feb	**SP1** Feb - June	**SP6 / SP7** June - July	**SP2** July - Nov	**SP9** Sept to Dec **SP10 / 11** Nov - Dec
	Major core MB5003 Fisheries Science		**Major core** MB5610 Fishing Gear and Technologies	**Major core** MB5014 Managing Tropical Fisheries
	Major core EV5020 Human Dimensions of Nature, Environment and Conservation		**Advanced skill subject**	
	Skill subject SC5200 Professional Employability [b] *recommended.*		**Elective Or Skill Subject**	
	Skill subject SC5202 Quantitative Methods in Science *recommended* **Or Elective**			

***Notes**:* Pink are core knowledge subjects, Grey are skills subjects, White are electives, Blue are professional practice.

b. SC5200 unit is recommended for all students and should be taken in the first study period of your degree. It is offered in both SP1 and SP2.

<table>
<tr><td colspan="5">Year 2 Take 24 credit points, with 12 credit points in each teaching period</td></tr>
<tr><td colspan="3">TEACHING PERIOD 1 (TP1 Jan – June)</td><td colspan="2">TEACHING PERIOD 2 (TP2 July – December)</td></tr>
<tr><td>SP3
Jan – Feb</td><td>SP1
Feb - June</td><td>SP6 / SP7
June - July</td><td>SP2
July - Nov</td><td>SP9 Sept to Dec
SP10 / 11 Nov - Dec</td></tr>
<tr><td>Core Skill subject
MB5300 Sampling & Experimental Design*
OR SC5502 Design & Analysis in Ecological Studies.</td><td>Elective
MB5620 Grand Challenges in Fisheries</td><td></td><td rowspan="4">Professional Practice (12cp)
Pre-requisite conditions apply

• RESEARCH PROJECT (SC5912+SC5913)
OR
• POSTGRADUATE INTERNSHIP (SC5009)
Pre-requisite unit SC5200

This module should be the final subject of your degree.</td><td></td></tr>
<tr><td>Elective
MB5310 Marine Reserves as Fisheries Management Tools</td><td>Elective</td><td></td><td></td></tr>
<tr><td></td><td>Elective</td><td></td><td></td></tr>
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* Pre-requisite knowledge is a university level introductory statistics unit or SC5202. MB5300 and SC5502 are merged subjects in 2021.