

Bachelor of Marine Science

This study plan should be used as a general guide for your course. We recommend you consult with your [CSE Course/Major Advisor](#) and particularly if your intended enrolment varies from this plan. The information in the study plan is current at the time of creation and may be subject to future change. If you would prefer a part-time study plan, please adjust the below study planner; reviewing subject prerequisites to ensure you are on track for course completion.

Useful study planning/enrolment resources:

To search for information on subjects: [Subject Search](#)

To register for your classes: [Class Registration](#)

For important dates check: [Academic Calendars](#)

Further enrolment resources: [Enrolment Resources](#)

		STUDY PERIOD 1		STUDY PERIOD 2		
Year 1	Course	BS1007:03 Introduction to Biodiversity		Course		
				EA1110:03 Evolution of the Earth		
	Course	CH1001:03 Chemistry: A Central Science <i>PREREQ: CH1020, CH0020 or EG1010 or High School Senior Chemistry*</i>		Course		
				SC1102:03 Modelling Natural Systems <i>PREREQ: MA1020 or Senior Mathematics or equivalent</i> or		
				SC1109:03 Modelling Natural Systems-Advanced [^] <i>PREREQ: MA1000</i> <i>[^]SC1109 is compulsory in the Advanced Science degree and should be taken instead of SC1102 if you are considering that pathway.</i>		
	Course	MA1000:03 Mathematical Foundations <i>PREREQ: MA1020 or MA0020 or Maths B or Maths C</i>		Course		
			MB1110:03 Introductory Marine Science <i>PREREQ: (Senior Chemistry or CH1020 or CH0020) and (Maths B or MA1020 or MA0020) – allow concurrent for CH1020 and MA1020</i>			
			Elective* or CH1020:03 Prep Chemistry (note this will extend the duration of your degree, please see bridging options below)			
	STUDY PERIOD 3 (Jan-Feb)		STUDY PERIOD 7 (Jun-Jul)		STUDY PERIOD 10 (Nov-Jan)	
Course	MA1020:03 Prep Mathematics–SP3 or *Elective		<u>MISSING MATH AND/OR CHEMISTRY FROM HIGH SCHOOL?</u> <i>If you are missing math and/or chemistry from high school, you have several options to catch up.</i> 1-Take within the degree with an adjusted study plan 2-Take the online bridging options before the start of your degree.			

*STUDY PERIOD 19 (Jan) -ONLINE BRIDGING OPTIONS

MA0020/BR0202 completion allows SP1 enrolment in MA1000
CH0020/BR0301 completion allows SP1 enrolment in CH1001

Check out the JCU website for more information:

[Bridging Options-JCU's Certificate of Higher Education](#)

Note: *Electives will be granted in the degree for high school math and/or chemistry if already satisfied via previous study or upon successful completion of BRIDGING SUBJECT subjects and corresponding follow up subject of CH1001 and/or MA1000.

	STUDY PERIOD 1	STUDY PERIOD 2
Year 2	Course SC2202:03 Quantitative Methods in Science <i>PREREQ: SC1102 or SC1109</i> or SC2209:03 Quantitative Methods in Science-Advanced <i>PREREQ: MA1003 and (SC1109 plus 6 credit points of other Level 1 subjects)</i>	Course PH2006:03 Marine Physics OR PH2009:03 Advanced Marine Physics <i>PREREQ: PH1005 and MA1000</i>
	Course CH2042:03 Marine Chemistry and Chemical Ecology <i>PREREQ: CH1001 or CH1011</i>	Course EV2502:03 Introduction to Geographic Information Systems <i>PREREQ: 12 credit points of Level 1 subjects</i>
	Course MA2050:03 Functional Biology of Marine Organisms <i>PREREQ: ZL1001 or BZ1004 or AG1004 or BZ1007 or BS1007 or BZ1006</i>	Elective <i>See List 1 for recommended subject streams</i>
	Elective <i>See List 1 for recommended subject streams</i>	Elective <i>See List 1 for recommended subject streams</i>

Students (International Students) needing to complete the degree in the December of the 3rd year should undertake EA3640 in SP11 of their second year instead.

Year 3	STUDY PERIOD 1		STUDY PERIOD 2	
	Course MB3050:03 Biological Oceanography <i>PREREQ: (BS1007 or BZ1007) and MB2050 and (SC2202 or SC2209 or BS2001 or BZ2001)</i>		Course EA3110:03 Sedimentology and Stratigraphy <i>PREREQ: EA1110</i>	
	Course EV3406:03 Coral Reef Geomorphology <i>PREREQ: 12 credit points of Level 2 subjects including 6 credit points of Level 2 EV, EA or MB subjects</i>		Course MB3270:03 Coastal, Estuarine and Mangrove Ecosystems <i>PREREQ: BS1007 or BZ1007 and (MB2050 or BS2460) and (SC2202 or SC2209 or BS2001 or BZ2001)</i>	
	Course SC3010:03 Sensors and Sensing for Scientists <i>PREREQ: BZ2001 or SC2202 or SC2209 or SC2201</i>		Course EV3401:03 Coastal and Catchment Geomorphology <i>PREREQ: 12 credit points at Level 2 including 6 credit points of Level 2 EV or EA subjects</i>	
	Elective See List 1 for recommended subject streams			
			STUDY PERIOD 11 (Nov-Jan)	
		Course EA3640:03 Advanced Environmental and Marine Geoscience Technologies and Applications <i>PREREQ: 12 credit points of Undergraduate subjects including 3 credit points of Level 1 EA or MB subjects</i>		

LIST 1

CHEMISTRY STREAM	
STUDY PERIOD 1	STUDY PERIOD 2
CH3041:03 Environmental Chemistry <i>PREREQ: CH1001 or CH1011 or EG1010</i>	CH1002:03 Chemistry: Principles and Applications <i>PREREQ: CH1001 or CH1011 and allow concurrent for CH1011 and CH1001</i>
	CH2310:03 Syntheses and Mechanism in Organic Chemistry <i>PREREQ: CH1001 and CH1002</i>
	CH2103:03 Analytical Chemistry <i>PREREQ: CH1001 or CH1011</i>

EARTH SCIENCE STREAM		
STUDY PERIOD 1	STUDY PERIOD 2	
EA3210:03 Structural Geology and Tectonics <i>PREREQ: EA1110</i> or EA3650:03 Energy Resources and Basin Analysis (SP2) <i>PREREQ: At least 12 credit points of Level 2 subjects including EA2110</i>	EA2404:03 Earth's Climate: Past, Present and Future <i>PREREQ: At least 12 credit points of level 1 subjects</i>	
	EA3800:03 Earth and Environmental Geochemistry <i>PREREQ: 12 credit points at Level 2 and 3 credit points of level 1 CH subjects and 3 credit points of level 1 EA subjects</i>	
	STUDY PERIOD 7 (Jun-Jul) EA2900:03 Introductory Field Geology <i>PREREQ: EA1110 plus at least 9 credit points of level 1 AN, AR, BZ, EV, MA, MB, PH, SC, (BU1004 or BU1104) subjects</i>	

ENVIRONMENTAL SCIENCE STREAM		
STUDY PERIOD 1		STUDY PERIOD 2
EV1005:03 Environmental Processes and Global Change		
EV2401:03 Australian Landscape Processes and Evolution <i>PREREQ: At least 12 credit points of level 1 subjects</i>		
STUDY PERIOD 3 (Jan-Feb)	STUDY PERIOD 9 (Sep-Nov)	STUDY PERIOD 11 (Nov-Jan)
	EV3506:03 Remote Sensing <i>PREREQ: At least 12 credit points at level 2 including EV2502.</i>	EV3502:03 Advanced Geographic Information Systems <i>PREREQ: At least 12 credit points at level 2 including EV2502.</i>

FISHERIES STREAM		
STUDY PERIOD 1		STUDY PERIOD 2
MB3150:03 Fisheries Science <i>PREREQ: (SC2202 or SC2209 or BS2001 or AG2001) or MB2060 or BS2460</i>		BS2460:03 Fundamentals of Ecology <i>PREREQ: 6 credit points of level 1 or 2 BZ, BS, or EV subjects</i>
		MB2080:03 Invertebrate Biology <i>PREREQ: BZ1004 or AG1004 or BZ1006 or BZ1007 or BS1007</i>
		STUDY PERIOD 11 (Nov-Jan)
		MB3014:03 Managing Tropical Fisheries <i>PREREQ: At least 12 credit points at level 2 including 6 credit points of level 2 BZ, BS, EV, or MB subjects</i>

MARINE BIOLOGY STREAM	
STUDY PERIOD 1	STUDY PERIOD 2
MB2070:03 Marine Biogeography <i>PREREQ: BS1001 or BZ1001 and (ZL1001 or BZ1004 or AG1004 or BZ1007 or BS1007)</i>	MB2080:03 Invertebrate Biology <i>PREREQ: BZ1004 or AG1004 or BZ1006 or BZ1007 or BS1007</i>
MB3160:03 Evolution and Ecology of Reef Fishes <i>PREREQ: MB2050 and MB2050 and (MB2060 or BS2460) and a minimum mark of credit in BS2470 or MB2070 (or MB5070 or equivalent)</i>	BS2460:03 Fundamentals of Ecology <i>PREREQ: 6 credit points of level 1 or 2 BZ, BS, or EV subjects</i>
	MB3190:03 Coral Reef Ecology <i>PREREQ: Credit or better in MB2060 OR BS2460. Prior approval required.</i>

MATHS STREAM	
STUDY PERIOD 1	STUDY PERIOD 2
MA2000:03 Mathematics for Scientists and Engineers <i>PREREQ: MA1003</i>	MA1003:03 Mathematical Techniques <i>PREREQ: MA1000 or MA1011 or MA1009</i>
	MA2210:03 Linear Algebra <i>PREREQ: MA1003</i>
	MA2405:03 Advanced Statistical Modelling <i>PREREQ: MA1401 OR BZ2001 OR MA2401 OR SC2202 OR SC2209 AND MA1000</i>
	MA3405:03 Statistical Data Mining for Big Data <i>PREREQ: MA2405 OR MA2000 OR SC2202 OR SC2209</i>
	TRIMESTER 3
	CP2404:03 Database Modelling <i>PREREQ: MA1401 OR BZ2001 OR MA2401 OR SC2202 OR SC2209 AND MA1000</i>

PHYSICS STREAM	
STUDY PERIOD 1	STUDY PERIOD 2
PH1005:03 Advanced Stream Physics 1 <i>PREREQ: Maths B or MA1020 or MA0020 or MA1000 or MA1008 OR admission to 116209, 116409 or 116309. Allow concurrent for MA1000 and MA1008</i>	PH3006:03 Oceanography and Meteorology <i>PREREQ: MA2000 and PH2019</i>
PH2002:03 Classical Mechanics and Quantum Physics 1 <i>PREREQ: MA1003 AND PH1005 AND (PH1006 OR PH1007 OR (EG1012 AND EG1011))</i>	MB2080:03 Invertebrate Biology <i>PREREQ: BZ1004 or AG1004 or BZ1006 or BZ1007 or BS1007</i>
PH2019:03 Introduction to Electromagnetism Optics and Early Quantum <i>PREREQ: (EG1012 OR PH1005) AND MA1003</i>	PH2240:03 Atomic and Nuclear Physics <i>PREREQ: PH2002 and MA1003</i>

COURSE NOTES

Students must complete a minimum of 18 credit points of Level 3 subjects.

ADDITIONAL INFORMATION

[2023 Bachelor of Marine Science Handbook](#)