JAMES COOK UNIVERSITY AUSTRALIA

The information provided is designed to provide helpful information on your study plan. Changes to subject information after this time may affect your study plan. Please refer to the enrolment resources for up to date information.

RECOMMENDED STUDY PLAN 2022

DEGREE Bachelor of Advanced Science MAJOR Zoology and Ecology (ZAE)

NAME _____ MAJOR Aquaculture Science and Technology (AQT)

To assist you with subject information, we recommend you consult with your CSE Course/Major Advisor and refer to Subject Search. If you would prefer a part-time study plan, please adjust the below planner, reviewing subject prerequisites to ensure you are on track for course completion.

	Study Period 1 - SP1	Study Period 2 - SP2
Year 1	**Degree Core:** SC1101 Science Technology and Truth	**Degree Core:** SC1109 Modelling Natural Systems-Advanced **PREREQ: MA1000 OR MA1009**
	Degree Core: MA1000 Mathematical Foundations **PREREQ: MA1020 OR MATHEMATICS B OR MATHS C**	**Degree Core:** MA1003 Mathematical Techniques **PREREQ: MA1000 OR MA1011 OR MA1009**
	Major Core: BS1007 Introduction to Biodiversity	**Major Core:** BS1001 Introduction to Biological Processes
	Students who have not completed High School Chemistry (or equivalent) must take **Degree Core:** CH1020 Preparatory Chemistry# *#This subject is equivalent to chemistry from high school.* **OR** **Elective -** *if student has completed high school level Chemistry or equivalent*	**Major Core:** Select a subject from Breadth-List 1

	Study Period 1 - SP1	Study Period 2 - SP2
Year 2	SC2209 Quantitative Methods in Science-Advanced **PREREQ: SC1109 AND MA1003 PLUS 6CP OF OTHER LEVEL 1 SUBJECTS**	**Major Core:** BS2460 Fundamentals of Ecology **PREREQ: 6CP LEVEL 1 OR 2 BZ/BS OR EV SUBJECTS**
	Major Core: BS2470 Evolution **PREREQ: BS1001**	**Major Core:** Select a subject from Breadth-List 1
	Major Core: AQ2001 Introduction to Aquaculture **PREREQ: 12CP LEVEL 1 SCIENCE (BZ, CH, EA, EV, MA, MB, PH OR SC SUBJECTS)**	**Elective:**
	Major Core: MI2031 Diagnosis of Bacterial Diseases in Aquaculture	

SP7 (Jun-Jul)
Major Core: BZ2490 Toolkit for the Field Biologist **PREREQ: SC2202/SC2209**

<table>
<tr><td rowspan="5">Year 3</td><td colspan="2">Study Period 1 - SP1</td><td>Study Period 2 - SP2</td></tr>
<tr><td colspan="3">Degree Option Core:
SC3008 Professional Placement
PREREQ: COMPLETED 12CP SECOND YEAR SUBJECTS
OR
SC3003 Science Research Internship
PREREQ: 15CP OF AQ, BC, BS, BZ, CH, EV, EA, MA, MB, PH OR SC SCIENCE LEVEL 2 SUBJECTS
All available in multiple study periods</td></tr>
<tr><td colspan="2">Major Core: AQ3002 Aquaculture: Feeds and Nutrition
PREREQ: (12CP LEVEL 2 AQ, BC, BZ, BS, CH, EA, EV, MA, MB OR PH SCIENCE SUBJECTS) AND (3CP LEVEL 2 AQUACULTURE SUBJECTS).</td><td><u>Degree Core List 1:</u></td></tr>
<tr><td colspan="2" rowspan="2"></td><td>Major Option Core:
BZ3061 Behavioural Ecology (SP2)
PREREQ: SC2202/SC2209 AND 6CP LEVEL 2 SCIENCE
OR
BZ3745 – Tropical Entomology (SP3) - CNS ONLY
PREREQ: SC2202/SC2209 /SC5202 AND BS1007</td></tr>
<tr><td>Major Core: BZ3220 Population and Community Ecology
PREREQ: SC2202/SC2209 /SC5202 AND BS2460 OR 3CP LEVEL 2 BZ</td></tr>
<tr><td colspan="2">SP3 (Jan-Feb)</td><td>SP7 (Jun-Jul)</td><td>SP10 (Nov-Feb)</td></tr>
<tr><td colspan="2">Major Core: AQ3015 Sustainable Aquaculture
PREREQ: 12CP LEVEL 2 SUBJECTS</td><td>Major Option Core:
AQ3003 Aquaculture: Propagation – SP7
PREREQ: AQ2001 AND 12CP LEVEL 2 SCIENCE SUBJECTS (AQ, BC, BS, BZ, CH, EA, EV, MA, MB, PH, OR SC)
OR
AQ3004 Aquaculture: Stock Improvement – SP10
PREREQ: (12CP LEVEL 2 AQ, BC, BZ, BS, CH, EA, EV, MA, MB OR PH SCIENCE SUBJECTS) AND (3CP LEVEL 2 AQUACULTURE SUBJECTS).</td><td>Major Option Core:
BZ3230 Ecological Research Methods
PREREQ: SC2202/SC2209 AND (BS2460 OR BZ2880)
OR
BZ3001 Field Studies in the Equatorial Tropics: Borneo
ASSUMED KNOWLEDGE – students should have a statistics subject equivalent to SC2202/SC2209 AND an ecology subject equivalent to BS2460.</td></tr>
</table>

Further Degree Options:

Breadth-List 1:	
Study Period 1 – SP1	**Study Period 2 – SP2**
BM1000 Introductory Biochemistry and Microbiology – *TSV only* **PREREQ: CH1020 OR SENIOR CHEMISTRY**	CH1002 Chemistry: Principles & Applications – *TSV only* **PREREQ: CH1001 OR CH1011**
CH1001 Chemistry: A Central Science **PREREQ: CH1020 OR EG1010 OR SENIOR CHEMISTRY**	EA1110 Evolution of the Earth
EG1000 Engineering 1	MA1003 Mathematical Techniques **PREREQ: MA1000 OR MA1011 OR MA1009**
EV1005 Environmental Processes & Global Change	MA1580 Foundations of Data Science **PREREQ: MA1000 OR MA1020 OR MATHS B**
MA1000 Mathematical Foundations **PREREQ: MA1020 OR MATHEMATICS B OR MATHS C**	PH1007 Advanced Stream Physics 2 – *TSV only* **PREREQ: ((MATHS B OR EQUIVALENT OR MA1020) AND PH1005) OR (PHYSICS AND MATHS C)**
PH1005 Advanced Stream Physics 1 **PREREQ: Maths B OR MA1020 OR MA1000 OR MA1008.**	

Trimester 1 (Feb-May)
CP1401 Problem Solving and Programming I

Trimester 3 (Sept-Dec)
CP1404 Programming II **PREREQ: CP1401 OR EG1002**

Degree Core List 1: Advanced Skill Subjects	
Study Period 1 – SP1	**Study Period 2 – SP2**
BS5260 Modelling Ecological Dynamics	BC5203 Advanced Bioinformatics
MA2000 Mathematics for Scientists and Engineers	SC5502 Design and Analyses in Ecological Studies
EA5409 Mineralogy and Geophysics – Not currently offered	CH5002 Research Skills and Communication in Chemistry (Adv)
	PH5014 Research Skills and Communication in Physics (Advanced) – Not currently offered

ADDITIONAL COURSE RULES

A maximum of 30 credit points may be taken at Level 1.
A minimum of 18 credit points of science subjects must be taken at Level 3 or higher.

ADDITIONAL COURSE REQUIREMENTS

Some majors require attendance in intensive or mixed mode attendance subjects on either the Townsville or Cairns campus. If students must attend intensive mode classes at a campus other than the one they are enrolled at, they are responsible for their own expenses.

COURSE PROGRESSION REQUISITES

Must successfully complete 18 credit points of Level 2 science subjects before attempting any Level 5 science subject

ADDITIONAL INFORMATION

Bachelor of Advanced Science course handbook
Zoology and Ecology major handbook
Aquaculture Science and Technology major handbook