**PROGRAM PLAN**

**BACHELOR OF ENVIRONMENTAL SCIENCE AND MANAGEMENT**

**PROGRAM OPTION:**
Standard

**START DATE:**
Semester 1, 2020

**LOCATION:**
Callaghan and Central Coast

This Program Plan is an enrolment guide to ensure you are on track to graduate. If at any time you wish to vary from this program plan seek advice from your Program Advisor to ensure you remain on track.

**COURSE STATUS KEY**

- C = Completed
- En = Enrolled
- NS = Not Started

**PROGRAM HANDBOOK**

**COURSE HANDBOOK**

**NAME:**
STUDENT NO.: 

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>SEMESTER 1</th>
<th>ENVS1001 Environmental Science Concepts and Methods</th>
<th>SCIE1002 Multidisciplinary Laboratories</th>
<th>PROGRAM MATH DIRECTED</th>
<th>MAJOR</th>
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<tr>
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<tr>
<th>YEAR 1</th>
<th>SEMESTER 2</th>
<th>ENVS1002 Physical and Chemical Environmental Systems</th>
<th>ENVS1003 Environmental Values and Ethics</th>
<th>STAT1070 Statistics for the Sciences</th>
<th>BIOL1002 Organisms to Ecosystems</th>
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<tbody>
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<tr>
<th>YEAR 2</th>
<th>SEMESTER 1</th>
<th>ENVS2002 Environmental Legislation and Planning</th>
<th>MAJOR</th>
<th>MAJOR</th>
<th>ELECTIVE** 1000, 2000 or 3000 level</th>
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<tbody>
<tr>
<td>CORE</td>
<td>MAJOR</td>
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<td>ELECTIVE</td>
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<tr>
<th>YEAR 2</th>
<th>SEMESTER 2</th>
<th>GEOS2161 Spatial Science</th>
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<th>ELECTIVE** 1000, 2000 or 3000 level</th>
<th>ELECTIVE** 2000 or 3000 level</th>
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<tr>
<th>YEAR 3</th>
<th>SEMESTER 1</th>
<th>ENVS3001 Integrated Impact Assessment</th>
<th>PROGRAM DIRECTED* 3000 level</th>
<th>MAJOR</th>
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<tr>
<th>YEAR 3</th>
<th>SEMESTER 2</th>
<th>ENVS3002 Environmental Management Perspectives</th>
<th>MAJOR</th>
<th>MAJOR</th>
<th>ELECTIVE** 2000 or 3000 level</th>
</tr>
</thead>
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<td>CORE</td>
<td>MAJOR</td>
<td>MAJOR</td>
<td>ELECTIVE</td>
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*Students undertaking the Natural Resources and Hazards Major must complete ENVS3008 as their 3000 level Program Directed course.

**Elective Options include: Environmental Science and Management Elective Pathways or any unrestricted courses offered within the university.
To be eligible to graduate make sure you have completed 240 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- Core courses – 100 units.
- Directed courses – 20 units (10 units of MATH* and 10 units Program Directed at 3000 level)
- Major courses – 80 units, visit the Program Handbook for more information.
- Elective courses – 40 units, Electives can be chosen from Environmental Science and Management Elective Pathways or any unrestricted courses offered within the university. Refer to the Environmental Science and Management Elective Pathway Documents located on the Program Handbook or visit the Course Handbook to see a list of available Electives.
- Students must not exceed 100 units at 1000 level in this program.
- Students must take a minimum of 60 units at the 3000 level.
- The duration of this program is 3 year full-time (40 units per semester) or part-time equivalent.
- The maximum time to complete this program is 8 years.

* Students choose their MATH Directed course based on previous mathematical background. See the Enrolling in mathematics – Maths Placement Test section of this page.

Some courses have assumed knowledge and/or requisites please refer to the individual Course Handbook. Please refer to the Program Handbook for specific information on program structure. If you are intending varying from this program plan please seek advice from your Program Advisor.
NATURAL RESOURCES AND HAZARDS MAJOR

**COMPULSORY COURSES**
- GEOS1040: Earth’s Dynamic Systems
- GEOS2050: River Basin Processes
- GEOS2060: Soil Properties and Processes
- GEOS3340: Climate Change and Resource Management

**DIRECTED COURSES – 2000 LEVEL**
Complete 10 units from:
- ENVS2009: Catchment and Water Resource Management
- GEOS2080: Earth Science Field Course
- GEOS2200: Earth’s Sedimentary Rocks & Environments

**DIRECTED COURSES – 3000 LEVEL**
Complete 20 units from:
- ENVS3007: Environmental Remediation
- ENVS3009: Advanced Water Science and Resource Management
- ENVS3010: Extended Organisational Placement in the Environmental Sector
- GEOS3340: Advanced Research Project
- GEOS3320: Coastal Environments and Processes
- GEOS3390: Global Change and the Rise of Modern Environments

ECOSYSTEMS AND BIODIVERSITY MAJOR

**DIRECTED COURSES – 1000 LEVEL**
Complete 10 units from:
- BIOL1001: Molecules, Cells and Organisms
- CHEM1020: Introductory Chemistry II
- GEOS1040: Earth’s Dynamic Systems

**DIRECTED COURSES – 2000 LEVEL**
Complete 30 units from:
- BIOL2090: Microbial Biology
- ENVS2004: Ecology
- ENVS2005: Ecology and Management of Australian Flora
- ENVS2006: Ecology and Management of Australian Fauna
- ENVS2009: Catchment and Water Resource Management

**DIRECTED COURSES – 2000 LEVEL**
Complete 40 units from:
- ENVS3003: Conservation Biology
- ENVS3004: Ecotoxicology
- ENVS3005: Animal Behaviour
- ENVS3009: Advanced Water Science and Resource Management
- ENVS3010: Extended Organisational Placement in the Environmental Sector
- ENVS3340: Advanced Research Project
- MARI3320: Ecological Methodology
- SRMT3060: Restoration Ecology

SUSTAINABILITY MAJOR

**DIRECTED COURSES – 1000 LEVEL**
Complete 10 units from:
- BIOL1001: Molecules, Cells and Organisms
- ENVS1004: Social Development & the Environment
- GEOG1020: Introduction to Human Geography

**DIRECTED COURSES – 2000 LEVEL**
Complete 30 units from:
- ENVS2004: Ecology
- ENVS2005: Ecology and Management of Australian Flora
- ENVS2006: Ecology and Management of Australian Fauna
- ENVS2008: The Sustainable Society
- ENVS2009: Catchment and Water Resource Management
- GEOG2080: Cities and Regions
- GEOG2130: Geographies of Development
- SOCS2400: Applied Social Research

**DIRECTED COURSES – 2000 LEVEL**
Complete 40 units from:
- ECON3006: Environmental Economics
- ENVS3003: Conservation Biology
- ENVS3006: Sustainability: Theory and Practice
- ENVS3010: Extended Organisational Placement in the Environmental Sector
- ENVS3340: Advanced Research Project
- GEOG3390: Society and Space
- GEOG3240: Globalisation: Cities, Economies
- GEOS3340: Climate Change and Resource Management
- SRMT3040: Community Resource Management
- SRMT3050: Sustainable Land Management
**COMPULSORY COURSES**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MARI1000</td>
<td>Issues in the Marine Environment</td>
</tr>
<tr>
<td>ENVS2004</td>
<td>Ecology</td>
</tr>
<tr>
<td>MARI2300</td>
<td>Marine Biology</td>
</tr>
<tr>
<td>MARI2500</td>
<td>Coral &amp; Marine Ecosystem Services</td>
</tr>
<tr>
<td>MARI3300</td>
<td>Integrated Coastal Ecosystems</td>
</tr>
<tr>
<td>MARI3320</td>
<td>Ecological Methodology</td>
</tr>
</tbody>
</table>

**DIRECTED COURSES – 2000 LEVEL**

Complete 20 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ECON3006</td>
<td>Environmental Economics</td>
</tr>
<tr>
<td>ENVS3005</td>
<td>Animal Behaviour</td>
</tr>
<tr>
<td>ENVS3009</td>
<td>Advanced Water Science &amp; Resource Management</td>
</tr>
<tr>
<td>ENVS3010</td>
<td>Extended Organisational Placement in the Environmental Sector</td>
</tr>
<tr>
<td>ENVS3400</td>
<td>Advanced Research Project</td>
</tr>
<tr>
<td>MARI3410</td>
<td>Coral Reef Biology, Ecology and Sustainability</td>
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