

## **SCNC 503: Resources, Design and Sustainability**

### **Paper Outline**

#### **Aim**

To embed the principles of sustainable and regenerative design with responsible resource use and processes to solve complex problems with sustainable solutions/initiatives that meet UN Sustainable Development Goals (SDGs).

#### **Learning Objectives**

- Integrate and synthesise advanced knowledge of resources and processes to the sustainable design of products, systems and services, through lifecycle mapping and impact assessment.
- Effectively contribute to an interdisciplinary team to create real-world impact on a sustainability problem or opportunity.
- Integrate national and international frameworks, tools, key legislation, and certification requirements to the design of practical sustainability solutions.
- Effectively communicate sustainability issues and opportunities throughout a sustainable design process.

#### **Paper Coordinator**

Professor Sarah Wakes ([SCNC503@otago.ac.nz](mailto:SCNC503@otago.ac.nz))

#### **Timetable**

All lecture, field trip and case study material are pre-recorded and available on ECHO360, accessible through Aoroa embedded links. You are expected to watch this material in your own time. It is suggested that you do this in the first half of the paper.

The workshops are in person and an outline of the workshop topics is given below.

**Workshop Outline (2 hrs each)**

<b>Date (all Thursday)</b>	<b>Workshop</b>
18 <sup>th</sup> June	1) Welcome, introduction, A1 goal and challenge setting & measuring
25 <sup>th</sup> June	2) SDGs, Ti Kouka badges
9 <sup>th</sup> July	3) Cultural workshop
16 <sup>th</sup> July	4) A2 introduction, and introduction to GrantaEDU tool and poster template
6 <sup>th</sup> August	5) Field trips, guest lectures, case studies: student led discussion
20 <sup>th</sup> August	6) GrantaEDU tool help
27 <sup>th</sup> August	7) Introduction to A3 and formation of groups
10 <sup>th</sup> September	8) A3 support session, cultures framework
1 <sup>st</sup> October	9) A2 write up/critique and GrantaEDU tool help
22 <sup>nd</sup> October	10) Oxfam toilet article discussion with a focus on stakeholders, values, needs, ethics, & personas
29 <sup>th</sup> October	11) Brainstorming wicked problems under theme, problem finding & systems thinking
19 <sup>th</sup> November	12) Group critique, concept selection. concept alignment/merging
26 <sup>th</sup> November	13) Prototyping
3 <sup>rd</sup> December	14) A3 support session
10 <sup>th</sup> December	15) Presentations, badge giving

## Assessment

Final grade is 100% from internal assessments. Staff are willing to provide feedback and help on assignments during workshops and via [scnc503@otago.ac.nz](mailto:scnc503@otago.ac.nz) up to 2 working days prior to the due date. Assignment details are at the end of this document.

Assessment	Overview	Percentage
<b>A1: Sustainability Challenge</b>	This assignment is about taking practical steps towards a more sustainable future for Aotearoa/New Zealand and the planet. You will be setting a 2050 sustainable goal for a future New Zealand and then using a backcasting technique to identify the first steps you can take towards realizing that goal. We also want you to connect to and support your fellow students. To measure progress, there are some waypoints where you will be reporting back on measurable progress on your challenge.	25%
<b>A2: Lifecycle Map</b>	This assignment is about understanding materials and the products they make. You will be researching a product and two constituent materials. You will use software (GrantaEDU) to research material information and make more sustainable choices. You will be presenting this information on a poster depicting the lifecycle of the product and materials.	25%
<b>A3: Sustainability Initiative Project</b>	You will working in a group to develop a sustainable initiative that furthers New Zealand's sustainable goals such as the waste and resource efficiency strategy, net zero emissions, product stewardship etc.	45%
<b>A4: Ti Kouka Badge</b>	The Ti Kouka badge for sustainable education at postgraduate level requires you to reflect on what you have learnt during the paper through watching the lectures, guest videos, field trips and case studies, participating in the workshops and undertaking activities for the assessments	5%

Assignments submitted by the due date will be marked according to the University of Otago standard scale.

### Pass

90-100 A+

85-89 A

80-84 A-

75-79 B+

70-74 B

65-69 B-

60-64 C+

55-59 C

50-54 C-

### Fail

40-49 D

&lt; 40 E

Assignments will normally be returned 3 weeks after the final submission date with marks posted on Aoroa for all **with the exception of assignment 3**.

### **Late submission of assignments**

- Apart from the final assignment, late submissions will be accepted during the period of 1 week following the due date but will incur a 10% penalty. After this date late assignments will not be marked unless an extension has been approved.
- No late submission is accepted for the final assignment without an approved extension.

### **Extensions**

To request an extension please email [scnc503@otago.ac.nz](mailto:scnc503@otago.ac.nz) with appropriate documentation.

We strongly encourage you to apply for an extension before the final submission date. After this, extensions will only be granted in exceptional circumstances.

### **Academic integrity**

Academic integrity means being honest in your studying and assessments. It is the basis for ethical decision-making and behaviour in an academic context. Academic integrity is informed by the values of honesty, trust, responsibility, fairness, respect and courage. Students are expected to be aware of, and act in accordance with, the University's Academic Integrity Policy.

Academic Misconduct, such as plagiarism or cheating, is a breach of Academic Integrity and is taken very seriously by the University. Types of misconduct include plagiarism, copying, unauthorised collaboration, submitting work written by someone else (including from a file sharing website, text generation software, or purchased work) taking unauthorised material into a test or exam, impersonation, and assisting someone else's misconduct. A more extensive list of the types of academic misconduct and associated processes and penalties is available in the University's Student Academic Misconduct Procedures.

It is your responsibility to be aware of and use acceptable academic practices when completing your assessments. To access the information in the Academic Integrity Policy and learn more, please visit the University's Academic Integrity website at [www.otago.ac.nz/study/academicintegrity](http://www.otago.ac.nz/study/academicintegrity) or ask at the Student Learning Centre or Library. If you have any questions, ask your course coordinator.

For further information:

Academic Integrity Policy

<http://www.otago.ac.nz/administration/policies/otago116838.html>

Student Academic Misconduct Procedures

<http://www.otago.ac.nz/administration/policies/otago116850.html>

**Readings**

The course draws on readings from a number of books and journals. Copies of these are held primarily in the Science Library, although some items are held in the Central Library. Essential readings will be available on e-reserve linked through Aoroa.

**Disability**

The Department encourages students to seek support if they find they are having difficulty with their studies due to a disability, temporary or permanent impairment, injury, chronic illness or deafness. Contact Disability Information and Support, (Ph 479-8235, email [disabilities@otago.ac.nz](mailto:disabilities@otago.ac.nz), website <http://www.otago.ac.nz/disabilities>).

**Class Representative**

A class representative will be nominated for the course. You are welcome to bring any issues you have to the attention of your class representative for discussion at these meetings.

**Problems**

Should you experience any problems with any aspect of this paper, you should first see the person teaching the relevant section of work. If the problem is not resolved or discussion with the teacher is not appropriate, please contact the paper co-ordinator [Professor Sarah Wakes].

**Staff**

Professor Sarah Wakes (Paper Coordinator)

Dr Linda Dunn

**All email correspondence with either Sarah or Linda must be sent to:**

[scns503@otago.ac.nz](mailto:scns503@otago.ac.nz)