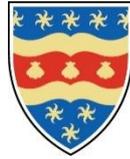


**Schumacher
College**



**UNIVERSITY OF
PLYMOUTH**

**Ecological Paradigm - Living Earth and the
Anthropocene
Module SCH5446**

Ecological Design Thinking

Module Leader: **Roberto Fraquelli**

Other Module Staff: **Mona Nasseri , Andy Letcher, Stephan Harding**

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Welcome and Introduction

We are currently living in challenging times that seem detrimental to the wellbeing of us and our home. We hope that by encouraging you to foster and develop your ecosophy (way of approaching ecological design thinking) inner transformations will take root and begin a year of creativity, wonder and joy, equipping you to play your part in social and ecological transformation.

Module SCH5446 will begin to explore the behaviour of ecosystems, critical ecological thresholds, world views and resilience. We will critique, open up and propose solutions from wide ecological perspectives & alternative ways of 'seeing'. We plan to develop personal and group enquiry practices drawing on action research, reflective enquiry and learning journals and other research methods to raise awareness of the interdependent relationship between the individual, society, nature and 'wicked' problems.

Sessions are scheduled with Stephan Harding, Jane Gleeson, Lou Rainbow, Andy Letcher, Satish Kumar, Philip Francis, Michael Martin, Daniel Wahl & EDT core team Mona Nasser, and Roberto Fraquelli. We will be including some introductory session on Ecology, Gaia, planetary change, biomimicry and regenerative practices. Alongside the taught session we hope you will find time and energy for personal study and reflection.

Teaching and Assessment Team

Programme Leader:	Roberto Fraquelli
Location:	Schumacher College
Email:	Roberto.Fraquelli@schumachercollege.org.uk
Phone number:	01803847232
Student meeting times:	By agreement

Module leader:	Roberto Fraquelli
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Lecturer	Roberto Fraquelli, Mona Nasserri, Andy Letcher, Stephan Harding
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Phone number:	
Student meeting times:	By Agreement
Module moderators:	Mona Nasserri

Personal Tutors:	Roberto Fraquelli and Mona Nasserri
Location:	Schumacher College
Email:	Roberto.Fraquelli@schumachercollege.org.uk Mona.nasserri@schumachercollege.org.uk
Phone number:	01803847232 01803847233
Student meeting times:	By agreement

Module Aims

- Apply principles from ecology and Gaia theory, dynamic systems thinking and complexity science to socio-cultural systems, settlements, artefacts and design scenarios illustrated with case studies;
- Differentiate between different concepts of sustainable design practice, and critically evaluate existing approaches to develop a personal ecological design philosophy (Ecosophy) to advance the transition to low-carbon high well-being futures;
- Develop personal and group enquiry practices to raise awareness of the interdependent relationship between the individual, society and nature & between theory, experience and practice.

Module Assessed Learning Outcomes

- Flexibly and creatively apply a theoretical and experiential understanding of an ecological world view drawn from one or more of the following: ecology and systems thinking; holism, goethian approaches; chaos and complexity science; and Gaia theory, to contemporary design challenges, synthesising ideas and information in innovative ways, and generating transformative solutions.
- Critically analyse, compare and contrast theoretical approaches to ecological design thinking and suggest new applications.
- **3:** Self-evaluate and reflect on their own values and behaviours in order to improve professional and personal awareness, and practice.

Teaching and Learning Strategy

SUMMARY OF TEACHING AND LEARNING [Use HESA KIS definitions]		
Scheduled Activities	Hours	Comments/Additional Information
lecture	40	Presentations and workshops by faculty and visiting teachers provide students with knowledge, theories and methodologies from experts in the field.
Seminar	32	Students present their own work with the support of the group. Encourages active learning, peer-to-peer support and communication skills.
Tutorial	3	Each student will receive two tutorials over the course of the module, and one feedback session..
Research methods workshop	7	Students will be introduced to a range of research methods including Action Research, Learning Journals and Participative Enquiry.
fieldwork	10	In keeping with Schumacher College's holistic approach to learning field trips will include immersive experiences in nature to better understand natural systems and cycles.
Practical Classes	10	Encourages active pro-active learning through experience – emphasis will be placed on stimulations, exercises and role play.
Supervised in the studio	12	Design workshops will encourage students to visualise knowledge, theories and methodologies as part of their sense-making process
Project Supervision	10	Students will form learning groups to promote peer-to-peer learning and project development.
Guided independent study	76	Students will be expected to spend significant time during the module, and in the completion of their projects studying independently either individually or as part of a project group
Total	200	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc)

Students are expected to take full responsibility for their learning, **attend all** scheduled sessions, read appropriate indicated readings, and work on set exercises (formative and summative assessment).

Based on previous experience; students who failed to attend sessions are likely to be unsuccessful or show poor performance. Please ensure that you are engaging with the content and learning activities relating to this module.

Scheme of Work

This module will be assessed by: Roberto Fraquelli

Use your journal as a tool to record and develop your thoughts.

- Creative writing assignment: Write a short play *Talking with the dead, walking in their shadows*, that explores an understanding of the philosophy and practise of Ecological Design Thinking
- Create a mandala that communicates your personal ecosophy. To be presented on 11th October.

Element of Assessment	Module Weighting	Component	Link to Assessed Learning Outcomes
Creative Writing		100%	LO1, LO2
Creative presentation of Mandala			LO3

Drafts/outlines	5.00pm on Friday, October 4, 2019.
Assignment submission	5.00pm on Friday, October 11, 2019.
Feedback and provisional marks	5.00pm on Friday, November 8, 2020

Learning outcome 1: Flexibly and creatively apply a theoretical and experiential understanding of an ecological world view drawn from one or more of the following: ecology and systems thinking; holism, goethian approaches; chaos and complexity science; and Gaia theory, to contemporary design challenges, synthesising ideas and information in innovative ways, and generating transformative solutions.			
Assessment criteria (marking rubric)			
Fail: 0 – 49%	Pass: 50 – 59%	Merit: 60 – 69%	Distinction: 70 – 100%
Does not demonstrate sufficient understanding of an ecological worldview.	Demonstrates a partial understanding of an ecological worldview in response to contemporary challenges	Demonstrates a sound understanding of an ecological worldview drawing from relevant discourses and in response to contemporary challenges.	Demonstrates a critical understanding of an ecological worldview , drawing from relevant discourses in response to contemporary challenges
Tutors assessment:			

Assessment form

Learning outcome 2: Critically analyse, compare and contrast theoretical approaches to ecological design thinking and suggest new applications.			
Assessment criteria (marking rubric)			
Fail: 0 – 49%	Pass: 50 – 59%	Merit: 60 – 69%	Distinction: 70 – 100%
Fails to provide evidence for a satisfying comparative study between ecological design thinking and other approaches	Provide partial evidence for a satisfying comparative study between ecological design thinking and other approaches	Demonstrates a comprehensive comparative study between ecological design thinking and other approaches	Demonstrates a thorough and rigorous ability to make a comparative and analytical study between ecological design thinking and other approaches
Tutors assessment:			

Learning outcome 3: Self-evaluate and reflect on their own values and behaviours in order to improve professional and personal awareness, and practice.

Assessment criteria (marking rubric)

Fail: 0 – 49%	Pass: 50 – 59%	Merit: 60 – 69%	Distinction: 70 – 100%
Absence of any evidence demonstrating self evaluation and awareness with respect to personal and professional values and behaviour. This is assessed against evidence of:	Provides limited evidence of self evaluation and inquiry with respect to personal and professional values and behaviour. This is assessed against evidence of:	Provides robust evidence of reflexive awareness into personal and professional values and behaviours. This is assessed against evidence of:	Provide extensive evidence and detailed inquiry into one’s own personal and professional practices combined with excellent, reflexively-rich, descriptions of how values, behaviours and experiences can affect particular outcomes. This is assessed against evidence of:

Evaluating own individual practice, in terms of feelings, behaviours and actions.
 Evaluating one’s interaction with others from an inter-personal perspective.
 Demonstrating an understanding of reflexivity and how it manifests in your own work.
 Noting the emergence of new understandings and practices in a relational, dialogic sense.
 Identifying areas for improvement and showing changes in practice.

Tutors assessment:

Overall comments and mark:

Tutor’s name:

Populate table as below to show all module sessions

Semester Week	Week Beginning	Provisional Activities
1	9/9/10	Design and ecology
2	16/9/19	Ecology and perspectives
3	23/9/19	Design with Nature
4	30/9/19	Designing regenerative cultures
5	7/10/19	Study week

Please note that this schedule may be subject to alteration.

Students are requested to submit:

- **A Creative writing essay** - on line via the VLE on 11th October 2019. This process includes the use of Turnitin.
- **A mandala** - exposition of the work presented to assessors on 11th October 2019. Specific timing will be set closer to the time.

The work will be marked using assessment form (see above). Feedback will be discussed and delivered to students no later than 1st November 2019.

Students will receive a module briefing document confirming the module aims, schedule, learning outcomes and core reading list. Students will also be able to access all teaching material (powerpoint and support documentation), and reading list via the VLE. With agreement with students taught session will be audio recorded and made available to students via the VLE.

Teaching materials, Assignment submission areas and student feedback forms are available on the VLE here:

<https://open.schumachercollege.org.uk/course/view.php?id=193>

Late Work/Extenuating Circumstances

If your participation in an examination or assessment has been affected by an extenuating circumstance, then you can ask the University to take this into consideration. You can submit a claim for extenuating circumstances to cover late submission of work, non-submission of work or non-attendance at a time specific assessment, such as an examination, test presentation or performance, or field class.

Information regarding the Extenuating Circumstances policy and how and where to submit Extenuating Circumstance Claims are available here:

<https://www.plymouth.ac.uk/student-life/your-studies/essential-information/exams/exam-rules-and-regulations/extenuating-circumstances>

Where there are no valid extenuating circumstances, the following regulations will automatically apply:

- Work submitted after the deadline date/time but within 24 hours of it, will be capped at the 50% pass mark.
- Work submitted 24 hours after the deadline will receive a mark of zero.

Students will be informed and reminded about the process relating to extenuating circumstances during the module briefing/introduction session.

Sources of Guidance and Support

Students and academic staff will work closely together to make best use of Seminars, personal tutorials, DAS and LD to modify any assessment modes and/or provisions required.

Students are encouraged to make use of the wider Schumacher opportunities including but not limited to sister programmes including MA Economics for Transition, short-courses and vocational programmes; and the broad level of facilities available on the Dartington estate including cinema, social entrepreneur programmes and many other resources and services available.

Referencing Protocols and Academic Offences

When writing a report or an essay you are expected to fully reference the materials you have used. The report or essay should be your own work, in your own words.

Plagiarism is an offence under the University regulations on examination and assessment offences. It is important that you familiarise yourself with what constitutes plagiarism, and academic offences. Further information can be found:

<https://www.plymouth.ac.uk/student-life/your-studies/essential-information/regulations/plagiarism>

And <https://www.plymouth.ac.uk/student-life/your-studies/essential-information/exams/exam-rules-and-regulations/examination-offences>

Reading List; Recommended Texts/Support Materials

Recommended Readings:

Abram, D. (1996) *The Spell of the Sensuous*. Pantheon, NY.

- Benyus, J.M., 2002. Biomimicry. Harper Perennial, New York.
- Campbell, Colin T. (2013) Whole. BenBella Books Inc. Dallas.
- Diamond, J. (2006) Collapse. Penguin Books. London.
- Drengson, A. & Devall, B. (eds)(2008) The Ecology of Wisdom. Writings by Arne Naess. Counterpoint. Berkeley.
- Ehrenfeld, J.R. & Hoffman, A.J. (2013) Flourishing. Greenleaf Publs. Sheffield.
- Flinders, T. (ed)(2013) John Muir. Spiritual Writings. Orbis Books. NY.
- Forbes, P., (2006) The Gecko's Foot: Bio-Inspiration: Engineering New Materials From Nature. W. W. Norton & Co., New York.
- Foster, J. (2008) The Sustainability Mirage. Earthscan. London.
- Gunderson L.H. and Holling C.S. (2002) Panarchy: Understanding Transformations in Human and Natural Systems. Island Press, Washington DC
- Harding, S. (2006) Animate Earth. Green Books. Dartington.
- Harman, J., (2013) The Shark's Paintbrush: Biomimicry and How Nature Is Inspiring Innovation. White Cloud Press, Ashland, Ore.
- Hawken,P (2018) Drawdown: The Most Comprehensive Plan Ever Proposed to Roll Back Global Warming. Penguin Books. London
- Holmgren, D. (2009) Future Scenarios. Green Books. Dartington
- Jackson, W. (1996) Becoming Native to this Place. Counterpoint. Washington,DC.
- Kellert, S.R., Heerwagen, J., Mador, M., (2008) Biophilic Design: The Theory, Science, And Practice Of Bringing Buildings To Life. Wiley, Hoboken, N.J.
- Lane,J (2006) Spirit of Silence: Making Space for Creativity. Green books.
- Macfarlane, R. (2004) Mountains of the Mind. Granta books. London.
- Macy,J. Brown,M. Fox,Matthew. McIntosh, D. (2014) Coming Back to Life: The Updated Guide to the Work that Reconnects. New Society Publisher. Gabriola Island, British Colombia
- Mayne,M. (2008) This Sunrise of Wonder-letter for the Journey. Longman & Todd Ltd, Darton
- Meadows D.H. (1997) Places to Intervene in a System. Whole Earth,
- Monbiot, G. (2013) Feral. Allen Lane. London.
- Orr, D.W. (2011) Hope is an Imperative. The Essential David Orr. Island Press. Washington DC.
- Palmer, P.J., (1993) To Know as we are Known San Francisco: Harper
- Vaughan-Lee, L. (2016) Spiritual Ecology: The Cry of the Earth, a Collection of Essays. The Golden Sufi Centre, California
- Wahl,D., (2016) Designing Regenerative Culture, Axminster: Triarchy press
- Walker B. And Salt D. (2006) Resilience Thinking. Island Press, Washington DC
- Weisman, A. (2008) A World Without Us. Virgin Books Ltd. London.
- Wilson, E.O. (1984) Biophilia. Harvard University Press. Camb. Mass.
- Whitefield,P. (2013) The Earth Care Manual: A Permaculture Handbook for Britain and Other Temperate Climates. Permanent publication. Hampshire
- Yung, C.G. Sabini, M (2008) The Earth has a Soul: The Nature Writing of C.G.Young. North Atlantic Books. Barkley, California.

Module Feedback

We value what our students say: you share your feedback we act upon it. Part of the feedback process includes Module Evaluation. A link to the form and details of where to submit can be found here:

<https://open.schumachercollege.org.uk/course/view.php?id=193>