



Miles Park
Industrial Design Program
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Product Design | Sustainable Futures

BA Honours undergraduate degree



MA Sustainable Product Design

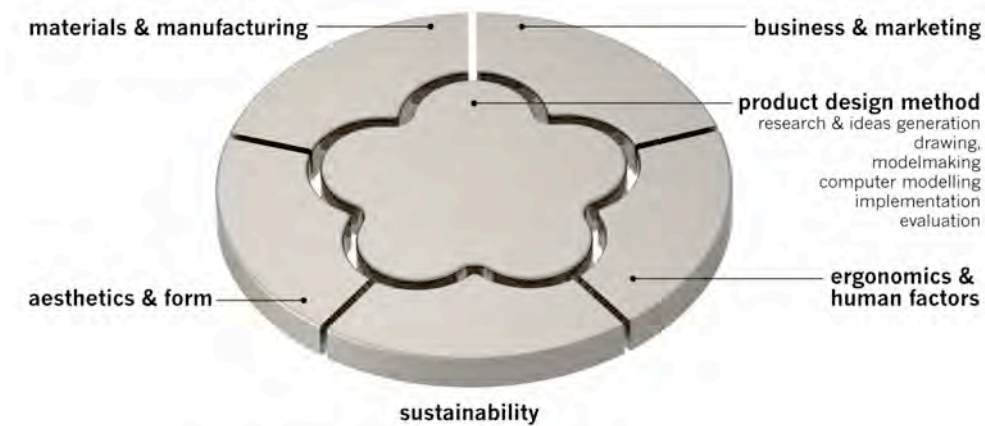
Master of Arts

UCA Farnham, Surrey UK

[Formally Surrey Institute of Art and Design]



Product Design | Sustainable Futures > program structure



Product Design | Sustainable Futures



Product Design | Sustainable Futures > curriculum

Stage	Semester 1,3,5	Semester 2,4,6
1	<p>PRD1007 Understanding Products (30 credits)</p> <p>PRD1002 Creative Dialogue (15 credits)</p> <p>CTX1003 Design Discourse 1: Historical and Critical Contexts (15 credits)</p>	<p>PRD1008 Design Projects 1 (30 credits)</p> <p>PRD1006 Design and Sustainability (15 credits)</p> <p>CTX1004 Design Discourse 2: Object Analysis (15 credits)</p>
2	<p>PRD2008 Design Projects 2a (30 credits)</p> <p>PRD2009 Sustainable Design: Technology, Strategies & Assessment Tools (15 credits)</p> <p>CTX2002 Exhibiting Culture: Objects and Environments in Theory and Practice (15 credits)</p>	<p>PRD2010 Design Projects 2b & Work Placement (30 credits)</p> <p>PRD2011 Design Business and Management (15 credits)</p> <p>CTX2005 The Uses of Things: Design, Consumption and Identity (15 credits)</p>
3	<p>PRD3005 Design Projects 3 (30 credits)</p> <p>PRD3006 Sustainable Futures (15 credits)</p> <p>CTX3001 Dissertation (15 credits)</p>	<p>PRD3007 Major Project (30 credits)</p> <p>PRD3008 Major Project: Addressing Sustainability (15 credits)</p> <p>CTX3003 Design and Creative Enterprise (15 credits) <i>or</i> CTX3004 Language and Practice of Design (15 credits) <i>or</i> CTX3005 Aesthetics and Experience (15 credits)</p>



Product Design | Sustainable Futures > curriculum

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1	PRD1007 Understanding Products (30 credits)	PRD1008 Design Projects 1 (30 credits)
	PRD1002 Creative Dialogue (15 credits)	PRD1006 Design and Sustainability (15 credits)
	CTX1003 Design Discourse 1: Historical and Critical Contexts (15 credits)	CTX1004 Design Discourse 2: Object Analysis (15 credits)
2	PRD2008 Design Projects 2a (30 credits)	PRD2010 Design Projects 2b & Work Placement (30 credits)
	PRD2009 Sustainable Design: Technology, Strategies & Assessment Tools (15 credits)	PRD2011 Design Business and Management (15 credits)
	CTX2002 Exhibiting Culture: Objects and Environments in Theory and Practice (15 credits)	CTX2005 The Uses of Things: Design, Consumption and Identity (15 credits)
3	PRD3005 Design Projects 3 (30 credits)	PRD3007 Major Project (30 credits)
	PRD3006 Sustainable Futures (15 credits)	PRD3008 Major Project: Addressing Sustainability (15 credits)
	CTX3001 Dissertation (15 credits)	CTX3003 Design and Creative Enterprise (15 credits) <i>or</i> CTX3004 Language and Practice of Design (15 credits) <i>or</i> CTX3005 Aesthetics and Experience (15 credits)



Product Design | Sustainable Futures > highlights



Live projects > Cole & Mason Pepper mills

Student conference > 2020vision

Small class sizes

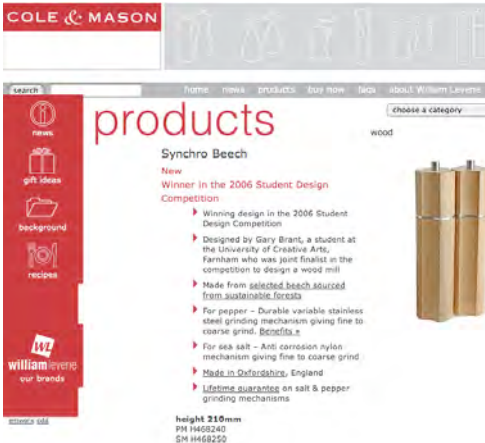
London Graduate shows

International MA students



Product Design | Sustainable Futures > highlights

Live projects > Cole & Mason Pepper mills



Student designed pepper mills > Product launch, Frankfurt 2006



Product Design | Sustainable Futures > highlights

Live projects > Kitchenware



Product Design | Sustainable Futures > highlights

Live projects > Door hardware



Product Design | Sustainable Futures > highlights

Student conference > 2020vision



**Keynote: Sara Parkin [Forum for the Future]
Chair: Dr Kate Fletcher
Special guest: John Gertsakis**



Product Design | Sustainable Futures > the sales pitch

First and for most you will attain skills and knowledge as a product designer

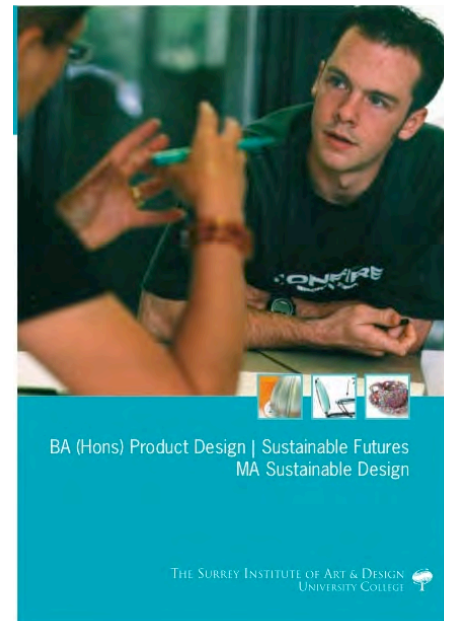
Product designer skills and knowledge are highly transferable

Sustainability is becoming increasingly important to design

Future-proof your career

Small class sizes

International staff team with global networks & research record



Product Design | Sustainable Futures > challenges



What was that bump?

Overcrowded curriculum

Finding the right balance
Design skills v's Sustainability knowledge

Lack of commitment from research centers

Finding appropriate staff

Attracting the right students

Limitations of a traditional Art & Design model



UK Sustainable design education > what others say

Barriers for design educationalists:

- > Low level of student demand
- > Low level of HE institution interest, understanding &/or perceived importance,
- > Low level of business demand
- > Low level of government support to encourage demand/curriculum change>
- > No or poor track record of graduate employment as sustainable designers
- > Lack of stature for design in the marketplace
- > Sustainability currently not seen as part of mainstream design education
- > Lack of appropriate tools/models and/or formal knowledge sharing network to aid students/practitioners
- > Lack of skilled lecturers/tutors
- > Knowledge exchange network poor beyond specialist individuals and centres
- > Poor eco-literacy in school students

Richardson, J; T Irwin & C Sherwin (2005) *Design & Sustainability. A Scoping Report for the Sustainable Design Forum, 27 June 2005*, the Design Council, UK.



UK Sustainable design education > what others say

Barrier	Solution
Crowded curriculum	Create space through a rigorous review of existing curricula
Irrelevance	Development of credible teaching materials which are fully contextualised and relevant to each subject area
Limited staff awareness and expertise	Significant investment in staff development and capacity building
Limited institutional commitment	Develop a credible business case for HE institutions, setting out triple bottom line benefits

Dawe, G, R Jucker and S Martin (2005) *Sustainable Development in Higher Education: Current Practice and Future Developments, A Report for the Higher Education Academy, November 2005*.



UK Sustainable design education > what others say

"The sustainability context expands the boundary of what design is, what it does and also who is involved, by drawing on dialogues, individuals and groups from outside design's traditional confines". Fletcher & Dewberry 2001

Best Practice

The HEA study (2005) noted three prevailing orientations in delivering teaching:

1. **Educators as role models** and learners. Tutor as role model for students giving a credible and authoritative perspective, putting reality into practice.
2. **Experiential learning** by reconnecting to real-life situations. Real, practical life issues providing actual (learning) experiences.
3. **Holistic thinking**. Acknowledges the complex, multi-layered and interconnected systems. Promotes a more open-ended exploration of interdependency, trans-disciplinary connections and critical thinking skills.

Dawe, G, R Jucker and S Martin (2005) *Sustainable Development in Higher Education: Current Practice and Future Developments, A Report for the Higher Education Academy, November 2005.*



UK Sustainable design education > what others say

Solutions:

- Course reviews
- Institutional commitment
- National commitment
- Staff expertise
- Research as a feeder



Product Design | Sustainable Futures > reflection

Talking dry but drinking sweet > **Sustainability** is a word with many meanings

Sustainability **explicit** or **embed** within the curriculum?

Interdisciplinary

Specialist Design V's **Mutli-Specialist** institutions

Jumping fences > leaning from **other fields**, appropriate knowledge where required



UK Sustainable design education > research

My research: Prolonging product lifespans > inconspicuous consumption > technological obsolescence > design amateurism > open products for reconfiguration



UK Sustainable design education > reflection

Go Beyond recycling, simplistic materials focus and eco-efficiency technological fixes.

Design & production - multiplier effect

Basic eco-literacy - earth systems, biology, economic and social systems

Lifecycle & Systems thinking

Engage with new media - Issue and problems based learning through new channels

Embedded sustainability - implicit and applied in design projects, often inconspicuous, the quiet achiever



Feature	Methodology				
	Craft	Design-by-drawing	Hard systems	Soft systems	Next generation
Emerging cognitive state	Reflective consciousness	Reductionist science	Structured systems thinking	Holistic systems thinking	Evolutionary systems thinking
Scale	Local	Usually regional/national	National/global	National/global	Global and local
Grounding in science	Mostly pre-scientific; trial-and-error	Mathematical Sciences	Mathematical and Natural Sciences	Mathematical, Natural and Social Sciences (reductionist)	Holistic and reductionist sciences
Typical design cycle	Centuries	Decades/years	Years	Years/months	Months/weeks
Technological support	Simple hand tools	Manual/mechanical	Mechanical/electronic	Mostly electronic	Extensive electronic support
Knowledge base	Largely personal, tacit	Tacit and explicit; limited	Extensive information flows, mostly text-based	Huge information flows, mostly electronic	Knowledge management/ information visualization/ artificial intelligence
Interdisciplinarity	Mostly pre-discipline	Within design discipline	Interdisciplinary, across professions	Interdisciplinary, across professions and wider community	Inclusive of all stakeholders

Evolution of design methodology
John Broadbent (2003) UTS

Sustainable design education > design!

“Promoting design as an **process** to envision **new possibilities**, pluralistic, engaging and forward-looking picture, drawing on ideas of **systems** thinking, human **needs**, **local** products, **slow** and more **meaningful consumption** practices, **participatory** design, as well as knowledge of materials”.

Kate Fletcher [author of Sustainable Fashion & Textiles]



Sustainable design education > teaching resources

A few.....

RSA Royal Society for the Arts > RSA design direction student competition - thoughtful design briefs www.rsadesigndirections.org

The Designer's Atlas of Sustainability > Open source teaching guide covers basic eco--literacy + links to discussion list www.designers-atlas.net

Greenfly > new streamlined LCA tool for designers www.greenflyonline.org/

