SDES3401
Smart Textiles and New Technologies

Term T2, 2020

Course Information

Units of Credit: 6

Course Overview

Course Description

Fully Online Delivery Term 2 2020

Some adjustments have been made to this course to allow for fully online delivery during the COVID-19 situation. Please refer to the Resources section at the back of this document for more information about materials and resources required to complete this course outline.

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SDES3401 Smart Textiles and New Technologies introduces a range of smart textiles, new technologies and processes developed by industry specialists including artists and designers, for textile applications in the worlds of art, fashion, design, engineering and science.

The course covers recent developments in textile fabrics, materials, structures, manufacture, technologies and processes, and acknowledges the textile traditions that these developments referenced. Areas examined will include thermoplastics, smart textiles, micro electronics, molecular nanotechnology, sustainability and green textiles, direct digital printing, new developments in man made and natural textiles properties and architectural, medical, engineering, manufacturing and sporting applications for these textiles.

The course enables you to investigate innovative textile concepts that explore the integration of the handmade with these emerging, new and smart technologies. Projects will involve research into new technologies and development of a self directed project that aligns with individual interests.

SDES3401 Smart Textiles and New Technologies and SDES3400 Textile Industry and Forecasting are complimentary 3rd year courses which, together form the two x 3000 level core studies in the Textile Design studio stream within the BDes program. Together these courses build on the skills and knowledge acquired from previous Textile Design studio stream courses and prepare you for more advanced studies in the 4000 level courses of this program.

Course Learning Outcomes

On completion of this course, the student should be able to:

1. Investigate and communicate recent innovation in textile technologies.
2. Research and propose how to integrate new technologies into their textiles practice.
3. Design and create prototypes for new ways of using hand-made, existing and future textile technologies.
4. Demonstrate presentation skills appropriate for the sector.

Teaching and Learning in this Course

This courses uses a variety of teaching approaches:

Blended/online

- Review – Assessment / Feedback Tool
- Collaborate Ultra in Moodle – Virtual Classroom
- Microsoft Teams - Teamwork Hub and Group Chat Platform
- Moodle - Learning Management System

Assessment

	TITLE	WEIGHTING	ASSESSMENT TYPE
Assessment Task 1	Hand and Smart Textiles : design development	40%	Project Proposal
Assessment Task 2	Realised Hand and Smart Textiles studio project.	60%	Design Studio Work

Resources

Materials List

As this is a third year course you should already have a textiles studio kit with all your basic materials for textile design (See Moodle for details). In addition for specific workshops you will need:

• E-textiles kits (conductive thread, optic fibre, memory wire, thermochromatic pigment, thermoplastic fabric samples) available from Torp and Reiner Melbourne. This is a special order for UNSW Art and Design so please call Lindsay to place your order.

http://www.torbandreiner.com

• a 9V battery.

Bio plastics workshop

• White vinegar,

• 1.5 grams of cornstarch,

• 0.5 grams of glycerol,

• can be coloured with vegetable dyes.

Available at woolworths or Chemist warehouse

Thermoplastics workshop

Polyester fabrics (recycled from old clothes) larger than A3 size,

Clean large pots,

Hot plates,

Clamps, string, pegs, elastic bands.

4 x A3 sheets thick paper (for oragami moulds)

Conductive embroidery workshop

• fabric paint transparent (or white). Permaset https://www.permaset.com.au/product/p-set-aqua-print-paste/

• white or light coloured embroidery threads

Materials List by week:

EVERY WEEK

• Textile Studio Kit (As this is a 3rd year course you should already have these basic materials for textile design used in first and second year courses) See Moodle for a detailed description of Textiles Kit.
• Blank page research diary A4

WEEK 2
• Bioplastic ingredients: 10ml distilled water, 1.5g cornstarch, 1ml of white vinegar, 1-2 drops food colouring, 0.5-1.5g glycerol, foil, a mixing bowl (woolworths),

WEEK 3 &4
• E-textiles kit (conductive thread, thermochromatic pigment, memory wire, thermoplastic materials, optic fibre). This kit will be supplied by Torp and Reiner in Melbourne. Place your order by contacting Lindsay http://www.torbandreiner.com/
• Permaset Fabric medium or similar transparent fabric paint base,
• Fabric 20x20 to embroider, white or light colour (suggest second hand natural fibre)

WEEK 4
• Embroidery threads including white, crewel needle, embroidery frame, (optional), https://www.spotlightstores.com/
• 9V battery (woolworths).
• Fabric 20x20 (suggest second hand natural fibre)

WEEK 5
• Hairdryer & or Iron,
• Pressing cloth
• 2 x Polyester or Nylon fabric 50x50 cm (second hand)
• 4 x A3 sheets of thick paper
• 2 x 30cm rulers
• 4 x Bull clips or elastic bands
• Large pot
• Hot Plate

REFERENCES FOR THIS COURSE

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