Unit Staff
Nicolas Marechal (Unit Leader)
Eva Verhoeven (Course Leader)
+
David King (Specialist Technician)
Tom Lynch (Specialist Technician)

UAL London College of Communication
MA Interaction Design Communication 2015/16
Unit Contact: n.marechal@lcc.arts.ac.uk

Location:	Terms 2&3 | Unit Two
Credit rating:	20
Level:	7
Total Learning Hrs:	200

Unit: Physical Computing & Design Prototyping

Essential Reading
Blum, J. (2013). Exploring Arduino: Tools and Techniques for Engineering Wizardry. John Wiley & Sons.

Hara, K. (2007). Designing Design. Lars Muller Publishers.

Igoe, T. (2007). Making Things Talk: Practical Methods for Connecting Physical Objects. Maker Media, Inc.

Borenstein G. (2012). Making Things See: 3D vision with Kinect, Processing, Arduino, and MakerBot. Maker Media, Inc.

Collins N. (2009). Handmade Electronic Music: The Art of Hardware Hacking. Routledge.

Further Reading
Baudrillard, J. (2005). The System of Objects (Radical Thinkers). Verso Books.

Scherz, P., & Monk, S. (2013). Practical Electronics for Inventors, Third Edition. Tab Electronics.

Shiffman, D. (2008). Learning Processing: A Beginner's Guide to Programming Images, Animation, and Interaction (The Morgan Kaufmann Series in Interactive 3D Technology). Morgan Kaufmann

Aims/context:
This unit underpins the project work in the parallel unit Interaction Futures & Speculative Design and gives you a practical skills set to produce innovative interaction design prototypes that span the digital and analogue domains.

The unit aims to give you an expanded context for media and interaction experimentation and connect you to the various open source communities that support these relevant prototyping platforms.

This unit also aims to give you a critical perspective on the importance of design prototyping as a methodology integral to interaction design.

Indicative content:
Visual Coding: You will be introduced to visual coding tools such as MAX/MSP to enable quick prototyping of media environments.

Electronics Prototyping: You will be introduced to electronics prototyping platforms such as Arduino and its associated open source community.

Working with sensors: You will work with sensors and actuators in a design context producing interactive experience.

Computer Vision: You will work with gesture capture processes and object recognition using open source code libraries with 3D camera platforms such as the Microsoft Kinect.

Low Tech / High Tech: You will connect past and future, physical and digital, learn how to use a real world approach with computing and computational thinking in the real world.

Teaching and learning methods will include lectures, seminars, workshops, individual exercises, group work, self-directed study and presentations.

Learning Outcomes
On completion of this unit you will be able to

Understand the importance of design prototyping as a methodology integral to interaction design. **(Subject Knowledge, Technical Competence)**

Use various technical procedures of digital prototyping in the production of interaction design prototypes. **(Subject Knowledge, Experimentation, Collaborative and / or Independent Professional Working, Technical Competence)**

Demonstrate a critical awareness of the technological context of interaction design. **(Research, Subject Knowledge, Technical Competence)**

Assessment Requirement
This unit is assessed holistically.

Portfolio of work: documenting the outcomes for the set project work. This will also include a research weblog documenting your experimentation and development process specifically in the areas of Physical Computing & Design Prototyping. (100% Holistic)

Submission Method: Manual to Studio M304 at 2-3pm only, on submission date.

Please submit as directied above on
Tuesday, 21st of June 2016

Assessment feedback date
Grades to be returned to students via the Online Assessment Tool O.A.T. by Tuesday, 12th of July 2016.

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Moodle - Accepts a range of file types including but not limited to word-processed documents, spreadsheets, images, audio / video clips etc. You can upload a maximum of 3 attachments totalling 20MB.

Turnitin - Accepts .DOC or .PDF files to a maximum of 20MB. If you are submitting work via Turnitin: this assessment will be submitted via an online submission platform called Turnitin UK. As part of the submission process, the University will utilise Turnitin UK to check the authenticity and originality of your work.

Please note: It is your responsibility to submit your work on time and by the required method, otherwise there may be an impact on your achievement and progression. Further information about your responsibility to submit your work is available on the website:
http://www.arts.ac.uk/assessment/assets/docStudentGuideAssessmentSubmissions1415.pdf

Turnitin or Moodle: If you are submitting work online via Turnitin and/or Moodle: The CLTAD e-learning blog includes step-by-step guides to uploading assignments to both Moodle and Turnitin:
http://elearningsupport.myblog.arts.ac.uk/student-help/student-help/assessment-how-to/

If you have any queries about submitting your work or are experiencing any difficulties in submitting work, please contact you Programme team well in advance of the submission deadline, via email on: interactive.visual.communication.staff@lcc.arts.ac.uk

Please note: all feedback is indicative until formally received and confirmed at an Exam Board. You will be informed of your results and when these will be published via email and/or Moodle announcements.

Marking Criteria:
If you are a postgraduate student, you can access the PG marking criteria via your course Moodle page and also at the link below:
http://www.arts.ac.uk/assessment/assets/doc/PG-Marking-Criteria-Matrix-with-Letter-Grades.pdf

Other key information:

The UAL Assessment Webpages
http://www.arts.ac.uk/assessment/courseregulations/index.html
include useful information on:

- The course requirements
- What happens if you fail a piece of work or miss a deadline
- What to do if you are ill or have other extenuating Circumstances
- What to do if you want to take time out from your studies
- The adjustments that can be made to assessments if you have a disability
- How to avoid plagiarism in your work
- What to do if you want to appeal an exam board decision.