

**Faculty of Engineering, Environment and Computing**

##### 203CR Designing For Usability 2

**RESIT Assignment Brief 2018/19**

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| Module Title  **Designing For Usability 2** | Ind/Group  **Individual** | | Cohort (Sept/Jan/May)  **Sept** | Module Code  **203CR** |
| Coursework Title  **User-Centred Interface Design RESIT** | | | | Hand out date:  **06.05.2019** |
| Lecturer  **John Halloran** | | | | Due date:  **01.07.2019** |
| Estimated Time (hrs):  **<= 40**  Word Limit\*: **4000** | | Coursework type:  **Individual Report** | | % of Module Mark  **100%** |
| Submission arrangement online via CUMoodle: **Upload through assignment link**  File types and method of recording: **Word or pdf**  Mark and Feedback date: **15.07.2019**  Mark and Feedback method: **Rubric marks and comments** | | | | |

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| Module Learning Outcomes Assessed:  1. Design and run effective user studies and derive interface design requirements.   2. Design and evaluate advanced interface prototypes.   3. Understand the difference between desktop and pervasive computing and how these differences impact design and usability evaluation.   4. Be able to explain, select and apply appropriate methodology to given design problems, within an effectively run UCD process.   5. Be familiar with and able to explicate key HCI theory and conceptual frameworks and their application to usability. |
| **SUBMISSION**  You will submit your Assignment through Moodle, as a single document, either Word or pdf, with a 20MB limit.  You can include a url or urls to a OneDrive repository of any materials relating to your work. These must appear in the document.  **The deadline is 18:00 on 1st July 2019** |
| **ASSIGNMENT BRIEF**  **Summary**  **This report requires you to design, and in the process carry out usability evaluations of, a user interface.**  **Below are some specific instructions. This is followed by 2 different project suggestions. You can choose one of these; or decide your own – but please discuss and clear this with your module leader.**  **Detailed Instructions**  1 The work is individual (not group), and you will get an individual mark.  2 ‘Interface’ can mean different things. It could be a GUI only; a hardware interface (e.g. a button array) with an attached display; a haptic controller; or other.  3 There are many kinds of device, not only PCs. Some are mobile and handheld e.g. mobile phones, PDAs, etc. Some are mobile and not handheld, e.g. in-car navigation systems. Some are not ‘embedded’, i.e. built into the environment, for example supermarket checkouts, ticket machines, etc. You may be able to think of other examples.  4 ‘Designing’ the interface does not mean developing it to product level.  You should aim for a mid-to-hi fidelity prototype.  5 You will need to implement a user-centred design (UCD) process.  You need to be able to explain what user-centred design is showing clear knowledge of the different stages involved, and showing why this approach is of value for design in the first place.  6 You must carry out a UCD process involving 2 iterations. The steps are:  Iteration 1: lo-fi stage  Initial user study and requirements generation  Interactive paper prototype  User evaluation  Requirements generation  Iteration 2: mid-hi-fi stage  Interactive digital prototype  User evaluation  Requirements generation  7 To implement the UCD process, you need to decide on **methods**:   * What is your overarching approach?   - Qualitative? Quantitative? Mixed?   * What are your specific methods? Make sure you are up to speed with these, and show why you have made your choice. In particular you should be familiar with:   - Usability testing, including metrics  - Experiments and statistics  - Ethnographically-informed observation  - Coding and thematic analysis  - Interviews and questionnaires (structured and unstructured)   * What conceptual frameworks and theories are you going to use? They include:   Usability-in-itself/usability-in-life  Design principles  Usability goals  Theory can help ground and direct your work too, for example:  Activity theory  Distributed cognition  ‘Wild theory’  Be prepared to discuss your concepts and theory (if any) and show the relevance to your problem. Make sure you scope their use in  a plausible way. Trying to cover e.g. all 6 usability goals 8 design principles is rarely productive. Choose 2 or 3 concepts and show their relevance to your work.  8 How many users and what kinds?  **To do UCD you MUST run user studies. Usually, the same users will be used for all iterations. There needs to be a minimum of five. This is not ideal, but has been decided for the purposes of this module. If you can get more, this is preferable, especially if you want to do statistical analysis.**  Gender? Number? Disabled, or not? Accessibility issues? Age group?  **YOU MUST USE REAL USERS and GIVE EVIDENCE OF USER ENGAGEMENT. It is fine to use other students for the purposes of the assignment, but it’s even better if you can find other users if they better represent your intended user group.**   |  | | --- | | **VERIFIABLE USER DATA**  **User data needs to be verifiable - i.e. there is evidence of the users and user tests you carried out. Otherwise anyone can object - whether or not it is true - that the whole thing has been made up (invented), and is false.**  This can be done most simply by photographing your users as you carry out your evaluation. Include photos showing activities and users in your report and explain what is going on in them and who is pictured.  **You must add consent forms that are signed by your users**, **with their real names and addresses as well as real email addresses.**  You may have video data. Put this on OneDrive, and provide a url.  You may have transcriptions of what people said. Again, put these on OneDrive and provide a url.  **The single most important thing in usability work is engagement with other people - users. Good evidence of this is worth substantial marks. If there is no evidence, you are at risk of failing this report.** |   9 **Design features or functions** – what will you specifically focus on for your design work?  Good usability work concentrates on defined user tasks around specific features. Less is more. Decide what are the important features of your design and what specific tasks you will ask users to carry out during evaluation.  10 Make sure you think about how you are going to design and run your **user evaluation sessions**. The prototypes need to be designed with a plan in mind for what you are intending users to do with them and they must make sense to users.  11 **User instructions**. You should provide clear instructions to users, preferably written. You can add instructions to the consent form. Include all the consent forms with the participants’ original writing in an appendix. Consent forms all done in the same handwriting / pen will be regarded as fakes. You should know what kind of data you are looking for, have a means of collecting this, and know what you are going to do with this data.  12 Make sure you show how the results of your user studies inform the design of the next prototype.  13 **Include evidence of the prototypes**   |  | | --- | | **14. PROJECT SUGGESTIONS** |  |  | | --- | | **SUGGESTION 1: FACEWORK – SOCIAL NETWORK VISUALIZER** |   Social networks are everywhere online and we are all part of them. Facebook is still the biggest, but there is a lack of visual tools that would give us useful information, for example:  Who knows who  How well people know each other  Where people currently are  How active people are in the network  Popularity: like rates  What people are interested in and generally post about or share  This project gives you the opportunity to think about how you could design visual information like this and how users might interact with it. A key issue is how it is going to look. Facebook has a specific look and feel; can you emulate this in such a way as to convince people that this would be a potential Facebook interface? Think about where it would be accessible Facebook. So the project is an intended extension to Facebook which means both designing it, and analysing what Facebook already does and where your new interface or interfaces would fit.   |  | | --- | | **SUGGESTION 2: MAX MY MOODLE** |   CU Moodle has a lot of functionality, but it is generally used by students for quite a limited range of purposes, including checking course sites and downloading slides and documents, and uploading assignments and checking results.  For this project you should work with a group of students to find out what are the most frequently used functions of Moodle, and then think about how to make those functions more obvious and easily accessible.  Think about how Moodle looks and create interfaces that look like Moodle but do things in different ways. Then trial those new interfaces.   |  | | --- | | **3: FREE PROJECT - YOUR CONCEPT** |   You may have your own ideas about what you would like to do for your assignment, and we welcome this. Please think about it early (have a concept by Week 6 at the latest) and discuss it with us so that we can make constructive suggestions about issues like scope, feasibility, and relevance to the module. |
| Notes:   1. You are expected to use the [CUHarvard](https://curve.coventry.ac.uk/open/file/bdfb947c-9d43-48d3-8ec8-f511682e1dd1/1/The%20CU%20Guide%20to%20Referencing%20in%20Harvard%20Style.pdf) referencing format. For support and advice on how this students can contact [Centre for Academic Writing (CAW)](http://www.coventry.ac.uk/study-at-coventry/student-support/academic-support/centre-for-academic-writing/?theme=main). 2. Please notify your registry course support team and module leader for disability support. 3. Any student requiring an extension or deferral should follow the university process as outlined [here](https://share.coventry.ac.uk/students/Registry/Pages/Deferrals-and-Extension.aspx). 4. The University cannot take responsibility for any coursework lost or corrupted on disks, laptops or personal computer. Students should therefore regularly back-up any work and are advised to save it on the University system. 5. If there are technical or performance issues that prevent students submitting coursework through the online coursework submission system on the day of a coursework deadline, an appropriate extension to the coursework submission deadline will be agreed. This extension will normally be 24 hours or the next working day if the deadline falls on a Friday or over the weekend period. This will be communicated via email and as a CUMoodle announcement. |

**Mark allocation guidelines to students (to be edited by staff per assessment)**

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| 0-39 | 40-49 | 50-59 | 60-69 | 70+ | 80+ |
| Work mainly incomplete and /or weaknesses in most areas | Most elements completed; weaknesses outweigh strengths | Most elements are strong, minor weaknesses | Strengths in all elements | Most work exceeds the standard expected | All work substantially exceeds the standard expected |

**Marking Rubric**

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| **GRADE** | **REPORT (/40)** |  | **DESIGN AND USABILITY WORK (/20)** |  | **VERIFIABLE USER DATA (/20)** |  | **PROTOTYPE EVIDENCE (/20)** |
| **First**  **≥70** | Firsts are not easy to get. The key features of a report that gets a First are sophistication, accuracy and originality. Sophistication means that the report demonstrates advanced knowledge of the topic and an ability to make clear links between different aspects of it in ways not spelled out in module materials or readings. Accuracy means that whatever you say about the topic is correct and concise - you do not make mistakes. Originality means two things: (1) an ability to anticipate issues and directions in the topic coming at higher levels without being told; and (2) to come up with insights, approaches and syntheses that have not been taught, but which are nevertheless sophisticated and accurate. The work shows clear evidence of reading and research beyond what was presented and will be well-written, with correct and wide-ranging academic referencing including print resources as the majority reference format not just web resources. Complete range of verifiable user data |  | The design work should be clean, effective and impressive at all prototyping levels with clearly scoped design problems and prototypes that make sense to users. The user sessions should show evidence of thoughtful design, and of being well-run with clear problems to be addressed. There should be collection of relevant data and evidence that you know how to collect it and what use you are going to make of it. There must be clear discussion of how user tests at each stage of the iterative process informs the next; i.e., that you have shown how a user test at one level has been used to inform the development of the prototype at the next. |  | Complete, comprehensive, triangulated. |  | Complete, comprehensive, fully implemented and working if digital |
| **Upper Second**  **60-69** | The report must show sophistication and accuracy but does not require originality. To get a 2.1 the material must be complete and substantially correct, as well as sophisticated. This is work that does something more than regurgitate lecture and studio materials - i.e., there must be some evidence of research and engagement that is self-directed. Referencing is usually required to get a 2.1. Verifiable user data |  | The design work should be effective at all prototyping levels. Prototypes should make sense to users. The user sessions should show evidence of having been designed in advance, and of being run with clear problems to be addressed. There should be collection of data and some evidence that you know how to collect it and what use you are going to make of it. There must be clear discussion of how user tests at each stage of the iterative process informs the next; i.e., that you have shown how a user test at one level has been used to inform the development of the prototype at the next. |  | Substantially complete and comprehensive; perhaps one or two things omitted |  | Substantially complete; perhaps one or two screens or features omitted or slightly unclear |
| **Lower Second**  **50-59** | The report is not highly sophisticated, is unoriginal, and has errors in it. It covers what has been asked for but in fairly superficial ways, and shows little evidence of engagement or research beyond the material presented on the module. May be good work worth a higher grade in principle but there is no verifiable user data |  | The design work may not cover all the levels effectively. Prototypes should make sense to users. The user sessions should show some evidence of having been designed in advance, and of being run with problems to be addressed. There should be collection of data and some evidence that you know how to collect it and what use you are going to make of it. There may be a lack of clear discussion of how user tests at one level inform prototyping at the next although there should be some material on this. |  | Basics are there, but not comprehensive and not triangulated |  | Not complete; features omitted and evidence may not clearly show the prototype. Enough to get a reasonable idea |
| **Third**  **40-49** | The report is hasty, has errors, shows little engagement beyond contact time, and no research beyond the module. Has to cover all that was asked for but may do so in trivial and superficial ways. Not much referencing, writing not at a high standard, omissions. May be good work worth a higher grade in principle but there is no verifiable user data |  | The design work will not cover all the levels. Prototypes may not make complete sense to users. The user sessions may not be run with clear problems to be addressed. There may be confusion in the collection and interpretation of data. There may be a lack of clear discussion of how user tests at one level inform prototyping at the next although there should be some material on this. |  | Partially present; shows some real user engagement, but not comprehensive or triangulated. Probably some consent forms and photos which look posed |  | Partially present; perhaps most of one or the other is missing, or there are both but very unclear |
| **Fail**  **<40** | Report is incomplete or irrelevant, last-minute. May deal with some of what was asked for. No sophistication or originality, some things correct but mainly wrong. Shows very limited engagement with the module, if any. May show pass potential. No verifiable data on users |  | The design work is low level and omits levels, or there is no design work. The user sessions are confused if they exist. Little evidence of a structured approach. Confusion on data collection and interpretation, if any. |  | Substantially incomplete; mostly or entirely omitted – maybe one or two photos that look posed but no consent forms |  | Substantially incomplete; mostly or entirely omitted |
| **Late submission** | 0 |  | 0 |  | 0 |  | 0 |