EID Midterm Review

Embedded Interface Design

with **Bruce Montgomery**

Midterm Exam

- In class on Wednesday 10/16 (will review topics on Monday 10/14)
- Closed book exam, no connected devices
- You may have one 8.5 x 11 inch note paper, you can use both sides
- You may write out or type your notes
- You cannot use other people's note materials, the notes must be your own
- You will turn in your notes with the exam papers
- You will be given spare paper for scratch paper or for writing out longer answers if needed

Midterm Exam and Quizzes

- I am not directly using quiz questions in the exam
- Having said that, I may duplicate in whole or in part questions from the quizzes as I create the exam, simply because I have a topic I want to cover

- I would look at the quizzes to identify any areas where you may have less clarity on a concept to focus your study and notes

Midterm Exam and Readings

- At this point in the lecture cycle, for the last few weeks, we have been following the topics in the Buley UX Team of One book
  - We have covered material from Chapters 1 to 6 in that book
  - We have not yet directly covered any readings from the McElroy Prototyping book yet
- I have significantly supplemented the book materials in lectures
- I will not directly use the book to pull exam questions, although some of my lecture material comes from the book…

- For exam study, I suggest you only refer to the book if you have questions regarding a method we reviewed that Buley includes in her discussions of Planning and Discovery or of User Research

Midterm Exam and Lectures

- The exam questions will come primarily from the Lectures and things we have discussed in class
- This is where I would focus studies and note taking

- Some questions are based on knowing definitions, some on how terms relate to each other, some are essay questions where you'll need to hit some points in a short answer
- Plan to be brief – the exam has ~38 questions over 75 minutes – some should be really quick, some may take a couple minutes – keep your answers short – key words or one/two sentences

- The following slide(s) will list all lectures covered in the exam

Lecture Materials Included on Exam

- Intro to EID
- Usability Studies and Design
  - UVP, MVP
- Introduction to Python
- Introduction to NodeJS
  - No coding on exam
- Introduction to Git
- Multiprocessing, Multithreading
- Introduction to QT
- M2M and IoT

- Low Level Protocols
- IoT Protocols
- M2M Protocols
- LPWAN Protocols
  - Know how to apply protocols
  - Know how to compare
- Cloud Architectures
- Cloud for IoT
- AWS
- AWS for IoT
  - Especially here

Lecture Materials Included on Exam

- IoT Security
  - Vulnerabilities, protection
- Message Queueing
  - Rabbit, 0MQ, SQS
- APIs and Microservices
- Intro to UX and UI
- Cognitive Psychology and Human Factors
- Discount and Formal UX
- UX Analysis and Planning (and Methods)
- Work Breakdowns

- UX Research (and Methods)
- User Personas
- Use Cases and UML
  - I will not ask for UML diagrams to be drawn on this exam – we haven't done them in a project yet
- Embedded Interface Components
  - Strengths, weaknesses

UX Process Elements

- **Phases** are the different periods in an overall process
    - Analysis and Planning
    - User Research
    - Design
    - Verification and Validation
- **Methods** are tools that could be used in a Phase
    - Work Breakdown Structures
    - Personas
    - Project Brief
    - etc.
- Know the UX Phases and the Methods in the Phases
- This exam only covers Analysis and Planning, Research Phases