Midterm Exam

Authoring Instructions

1. **Place your TCard on a corner of your desk** where it is easily visible.
2. **Label all of your Booklets and your duotang** clearly, including as appropriate, your name, UTORid, student number, and Studio (tutorial) day.
3. **Number all of the Booklets that you use**, including the total number used (e.g. "1 of 2").
4. Write your response in one or more Booklets, in pen, and **do not use any corrective mechanisms that obscure content** (e.g. WhiteOut™ tape or liquid). If you want to make changes, simply cross out words.
5. **Do not** incorporate anything into a Booklet that might jam an automatic scanner.
6. Place your Booklets inside of your duotang when submitting your midterm.
7. Follow any **additional instructions** provided by the Proctors.

Potential Academic Offences

1. Having any aids available to you other than your duotang.
2. Conferring or collaborating with others during the midterm.

Permissible Aids

- A duotang (or similar) as specified in lecture, incorporating one or more of:
  - Your course Concept / Mind Map or other graphical representation of the course content
  - Notes and pictures from your teardown(s)
  - Direct extracts from your research
  - A copy of the "ESC101 20199 Tools -- Design for X (DfX) Handout" from Studio 04

Disallowed Aids

- **Pre-written answers or significant components thereof**
- Dictionaries (including translation)
- Electronics (e.g. cellphones, dictionaries, smartwatches, etc.)
- Course materials (e.g. lecture slides, handouts, worksheets, etc.) except as specified in advance

Note that all aids **must** be readable by your audience (e.g. members of Teaching Team).

Objectives

The primary objective of the midterm exam is to assess your ability to identify, describe, assess, and communicate about design features and their consequences. Implicit in this objective is to assess your ability to make quality engineering arguments.

The midterm, like all written ESC101 assignments, is part of the English Proficiency Assessment mandated by the Faculty of Applied Science and Engineering. As such, one of its objectives is to assess your ability to write English coherently and clearly in a closely supervised situation.

Do not read any other midterm documents until you are instructed to do so by a Proctor

Question 1 (worth 10 out of 30 total marks)

The bulleted list below represents a set of concepts introduced in Praxis.

A. Choose exactly five (5) concepts from the bulleted list.

B. Connect each concept you selected in step A to one (1) **other** concept from Praxis.

- You **must not** connect your selected concept to any concept that appears in the bulleted list below.
- You **must not** use any concept from Praxis more than once when answering Question 1.

This will yield five (5) connected pairs.

C. For each of the five (5) connected pairs:

1. Define each term in the pair in your own way
2. Explain the logical connection between the two (2) concepts in the pair
3. Explain an implication of the connection to engineering design

---

☐ **authority**	☐ **interpret**	☐ **decision**
☐ **claim**	☐ **metric**	☐ **framing**
☐ **converge**	☐ **qualify**	☐ **recommend**

☑ **Have you connected five (5) concepts from the list above with five (5) other course concepts, using any concept only once?**

Question 2 (worth 20 out of 30 total marks)

Choose one (1) device that you have torn down.

Write an engineering report that provides **exactly two** (2) of the following:

- An assessment of the **safety** of that device with reference to at least two (≥2) features of the device;
- An assessment of the **disassemble-ability** of that device with reference to at least two (≥2) features of the device; or,
- An assessment of the device from **another engineering perspective** (DfX) with reference to at least two (≥2) features of the device.

Support each assessment with appropriate engineering arguments.

Criteria Used to Assess Question 2

A. The quality, credibility, and structure of your engineering arguments
B. The quality of the integration of your evidence with your arguments
C. The appropriateness and depth of understanding shown of each DfX
D. The quality of the design of your report, including appropriate use of introduction and structure
E. The coherence and clarity of your communication in English

☐ **Have you written one (1) engineering report that assesses one (1) device from two (2) DfX perspectives and that references at least two (≥2) features for each DfX**