

Robotics 204: Introduction to Human-Robot Systems
Winter 2025

Lab Title: Usability Study Design

Submission Type: Group Submission. Each team should copy this document and record their answers together. Only one member of the group needs to submit the final report. When you submit, make sure to list each group member. Check the rubric to make sure you have submitted all that is required.

Part 1: Formalizing the usability study tasks

Deliverable: Provide your selected tasks, questions to consider, additional sketches/diagrams, and training approach.

Task Selection

<Insert your 3 selected tasks, with description of the task and how the task aligns with this conceptual design stage>

Question to Consider

<Insert specific questions that align with your tasks that could be used in your usability study>

Additional Sketches and Diagrams

<Insert additional sketches and diagrams that would be needed to support your usability evaluation>

Training Considerations

<Insert the training information that will be needed for your usability study for your design concept>

Part 2: Selecting the usability concepts to evaluate

Deliverable: Details of the usability attributes selected.

<Insert into the list your team's 4 attributes that will be measured. For each attribute selected, state the dimension it aligns with (i.e., the definition of the concept being used) and the level of measurement associated with your operationalization.>

- **Attribute 1 - <Insert Attribute Name>**
 - **Description:** <Insert response>
 - **Usability Concept:** <Insert response>
 - **Usability Dimension:** <Insert response>
 - **Level of Measurement:** <Insert response>
 - **Relation to Study Tasks:** <Insert response>
 - **Goals for system on this attribute:** <Insert response>
- **Attribute 2 - <Insert Attribute Name>**
 - **Description:** <Insert response>
 - **Usability Concept:** <Insert response>
 - **Usability Dimension:** <Insert response>
 - **Level of Measurement:** <Insert response>
 - **Relation to Study Tasks:** <Insert response>
 - **Goals for system on this attribute:** <Insert response>
- **Attribute 3 - <Insert Attribute Name>**
 - **Description:** <Insert response>
 - **Usability Concept:** <Insert response>
 - **Usability Dimension:** <Insert response>
 - **Level of Measurement:** <Insert response>
 - **Relation to Study Tasks:** <Insert response>
 - **Goals for system on this attribute:** <Insert response>
- **Attribute 4 - <Insert Attribute Name>**
 - **Description:** <Insert response>
 - **Usability Concept:** <Insert response>
 - **Usability Dimension:** <Insert response>
 - **Level of Measurement:** <Insert response>
 - **Relation to Study Tasks:** <Insert response>
 - **Goals for system on this attribute:** <Insert response>

Part 3: Preparing for the user study

Deliverable: Provide the testing procedure for your usability study

<Insert your complete usability testing procedure, inclusive of the demographics questions, training phase, usability study task phase, and post-task phase. This protocol should be the final protocol and inclusive of any updates you make after Part 4>

Part 4: Practicing the usability test procedure

Deliverable: Summarize updates that were made to Part 3 based on your practice in lab

<Insert a summary of your updates made based on your practice running through your protocol>

Grading Rubric

The following rubric will be used to grade your submission.

Required Deliverables	Points
Part 1: Description of study tasks is provided and they are appropriate for concept phase evaluation. Questions to consider. Additional sketches and diagrams Training considerations	3 pts for description of study tasks 3 pts for questions to ask that align with study tasks 3 pts for additional sketches and diagrams 3 pts for training information
Part 2: For each attribute, provide a description, the usability concept, usability dimension, level of measurement, relation to study tasks, and goals for the attribute with acceptability performance level	For each attribute: 1 pt for description 1 pt for usability concept 1 pt for usability dimension 1 pt for level of measurement 1 pt for relation to study task 1 pt for goals of the attribute
Part 3: Usability protocol is provided with step by step instructions. Demographics questions are provided and align with understanding the user in context with the study tasks. Training information is provided and detailed so that a reader understands the methods used. Diagrams are provided to support the training and/or study tasks. Opportunity for open-ended feedback is presented and delivered in a non-biased manner.	3 pts for complete usability protocol in a step-by-step presentation 2 pts for demographics questions 3 pts for training documentation 2 pts for supporting diagrams 2 pts for non-biased open ended feedback
Part 4: Summarize updates made	2 pts for summary
Total Points Available	50 pts