

**GEORGIA INSTITUTE OF TECHNOLOGY**  
**ME 2110 Creative Decisions and Design**  
**Spring 2019**  
**Homework #1 – House of Quality**

Assigned: 09 January 2019

Due: 16 January 2019 (At the Start of Lecture)

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**Description:** In this assignment, you are asked to develop a detailed House of Quality for the introductory design project. Before starting this assignment, review your lecture notes on Problem Understanding, read Chapter 2 of the textbook, and carefully review the handout describing the introductory project. Generate the customer requirements (including a column of customer importance for each one) and the engineering requirements. Put them in the proper rooms of the House of Quality (HOQ). The HOQ must be generated on the computer (not hand-drawn). If you use a template, be sure to properly cite the source. Determine the relationships between the customer requirements and the engineering requirements. Fill in the roof of the HOQ by relating the engineering requirements and also indicate the direction of improvement for these requirements. Be sure to include customer requirements and engineering requirements. Your HOQ should also develop target values for these specifications in the basement.

Using the symbol values, as well as the importance ratings, calculate the absolute and relative ratings for each engineering characteristic. To do this, go down each column and multiply the relationship weight (5, 3, or 1) by the importance rating for each customer requirement. The total value for the column is the Absolute Importance of that engineering requirement. The Relative Importance of each requirement is formed by dividing the Absolute Importance by the sum of the Absolute Importance values for all of the engineering requirement columns. This process was not detailed in lecture, but an example is given in the textbook.

Furthermore, submit your own discussion (limited to 1 page) of the results and their implications for the development of this product. Avoid summarizing what a HOQ is or how it is used. Rather, focus on some of the entries and values that you selected in your HOQ and explain them in your discussion. In particular, make sure to provide sufficient discussion on values that may not be readily apparent to someone who is unfamiliar with the intended product. Be sure to properly label the HOQ and cite it in your discussion.

**Requirements:** The submission is limited to a maximum of one page in length, using 12-point font, 1-inch margins and single-spaced. A cover page should be provided and is not included in the page limit. Any figures/tables should be attached on subsequent pages and are also not included in the page limit. Figure captions should be provided for all figures and go below the figure. Table captions for any tables are to be placed above the table. Figures and tables must be cited in sequential order in the text and all figures/tables must be cited. Use page numbers at the bottom of each page. See the textbook for further guidelines on proper formatting and writing style for reports and technical writing. All submissions should be uploaded to Canvas before the deadline.