

GEORGIA INSTITUTE OF TECHNOLOGY
ME 2110 Creative Decisions and Design

Fall 2018

Homework #1 – House of Quality

Assigned: 27 August 2018

Due: 5 September 2018 (At the Start of Lecture)

Develop a detailed QFD “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 for the introductory design project. 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. Be sure to include customer requirements and engineering requirements.

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.

You can develop your HOQ in conjunction with your teammates. However, you need to submit your own final version. Your HOQ should be computer generated, not hand drawn. Furthermore, submit your own discussion 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. Limit yourself to 1 page of text. All homework assignments are considered individual assignments and must be labeled with your name, section instructor, section TA, and section time. All assignments are due at the beginning of class. Late work is NOT accepted.

NOTE: You do not need to develop a comparison to current products (right-hand room) or develop target values for your engineering requirements (basement).