

AQS110 – Introduction to Quality and Metrology  
LABORATORY EXERCISE #2

**CREATING PRODUCT SPECIFICATION(S)**

**Purpose**

The purpose of this laboratory exercise is to demonstrate evaluating a product to establish key characteristics and generating a product specification.

**Format**

- A. Product Description and Component List
- B. Component Specification – handwritten or typed (word document in BB)
  - The specification shall follow the format of the template provided on page 3.
  - Hand written documents must be readable as they will be used by another person in the class to complete the task.
  - Complete sentences and correct spelling are necessary.

**Due Date**

**Laboratory Exercise:**

The lab will be conducted in teams of 3-4 students. Each team will be given a different product to manufacture and establish a device history file to maintain documents.

**Procedure**

A. In-Class Activity

1. Evaluate finished product. What components (materials) are needed for the complete product?
  - a. Create a draft document listing all the individual parts needed for the product.
2. Establish Company Name and determine the following:
  - a. Select a component the company will manufacture.
  - b. The remaining components will be purchased.
  - c. The company will assemble the finished product
3. Determine the materials to be used for construction
  - a. All metal
  - b. All plastic
  - c. Mixture plastic and metal
4. Discuss each purchased component to determine what feature(s) are critical to the final assembly. These features will be used for creating the purchase specification.

B. Outside Class Activity

1. Each team member shall select a component and create a purchase specification.
2. A google search for similar components can be helpful in determining what data and or characteristics are important to include in the document.

**Debriefing Questions (to be answered after the exercise has been completed)**

The questions below will be answered individually, followed by group discussion.

1. Perform a google search for your component and compare the specification you created versus what's commercially available.

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2. How did your team decide what aspect of the manufacturing process the company would perform and which components would be purchased? What considerations were evaluated? Describe the thought process.

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3. Describe the experience of creating the component specification. Consider the team discussion surrounding which feature(s) were critical and what data (information) was needed to create the document.

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Name \_\_\_\_\_

## **PRODUCT COMPONENTS LIST**

Describe finished product:

Components used in construction of final product

Component (Description)	Material of construction	Purchased (Y or N)

**SPECIFICATION TEMPLATE**

<b>Company Logo</b>	<b>PURCHASE SPECIFICATION</b>	<b>Revision:</b>
<b>Title:</b> (i.e. Liquid Ink)	<b>Effective Date:</b>	<b>Page of</b>

**1.0 PURPOSE**

1.1 The following specification applies to

**2.0 SCOPE**

2.1 This specification is used for [insert company name, plant location, etc..]

**3.0 APPROVED SUPPLIER(S)****4.0 COMPONENT DESCRIPTION**

- Describe the part / material that will be purchased.
- Be specific regarding size, shape, color(s), materials of construction, etc.
- Include inspection requirement(s)

**5.0 CONTAINER/LABELING REQUIREMENTS**

- How many parts per container (bag, box, carton, etc)
- Labeling requirements (i.e. your part number, their part number, lot number, date of manufacture, expiration, etc.)

**6.0 SHIPPING REQUIREMENTS**

- Are there special requirements (i.e. cooling, no stacking, protect UV, etc.)
- Delivery schedule (i.e. no weekends, morning / afternoon only, etc.)

**7.0 OTHER**

*Anything else to be included?*

**8.0 REVISION HISTORY**

Revision	Date	Description of Change

**9.0 APPROVAL**

Author: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name (print & signature)

Purchasing: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name (print & signature)

Quality: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name (print & signature)