

TEST DOCUMENT

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ME 407

Preliminary Design of Robotic Systems

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Meiosis

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1 Introduction

Specification 1.1.a states: **The cost for the MEIOSIS team to develop the manipulator shall cost no more than \$800.** This is met if the cost for the MEIOSIS team to develop the manipulator does not exceed \$800. This can be tested by looking at the parts list provided in the parts list seen in Table 1.

Table 1: MEIOSIS Bill of Materials with Costs

money		money
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As can be seen in Table 1, the manipulator will cost XX and the manipulator meets specification 1.1.a.

Specification 1.2.a states: **The system shall consist of six rotational joints connected by four links. The last three joints will create a spherical wrist.** For this specification to be met, the robot must have six rotational joints and 4 links. The last three joints must create a spherical wrist where the axis of revolution for the last three joints are intersecting with one another. To perform a test to check for six rotational joints, SolidWorks is required. A render of the manipulator with labeled joints can be seen in Figure 1.

2 Specifications and Tests

3 Conclusion

Table 2: Summary of Test Results

Specification Tested	Specification Met?
1.1.a	
1.2.a	✓
1.2.b	✓
1.3.a	Cannot be Determined
1.4.a	Cannot be Determined
1.4.b	Cannot be Determined
1.4.c	Cannot be Determined
1.5.a	✓
1.5.b	✓
1.6.a	✓
1.6.b	×
1.7.a	✓
1.7.b	Cannot be Determined
1.8.a	Cannot be Determined
2.1.a	
2.2.a	
2.2.b	✓

Appendix

References