**The University of Queensland**

**Faculty of Engineering, Architecture and Information Technology**

**School of Mechanical and Mining Engineering**

**METR3100 (Control System Implementation)**

**Project: Conceptual design of an electric vehicle that is capable of automated highway driving.**

**Part B: Actuator selection and performance evaluation for an autonomous electric vehicle.**

**Sean Plunkett (43570582)**

**Mahendra Pokhrel (…)**

**Samuel Williams (…)**

**Due date and time: Monday, 30 April 2018, 12:00**

**Executive Summary**

**Contents**

Executive Summaryi

1. Introduction1

2. Task 1. Load modelling and actuator requirements

2.1 Load model

2.2 Parameter values

2.3 Actuation requirements

3. Task 2. Actuator selection and evaluation

4. Task 3. Battery and electrical system

5. Task 4. Regenerative braking

6. Conclusion

7. References

8. Appendices

**List of Tables and Figures**

Figure 1:

Figure 2:

Table 1:

Table 2:

Table 3:

Table 4:

Table 5:

Table 6:

**1. Introduction**

**2. Task 1. Load modelling and actuator requirements**

**2.1 Load model**

**2.2 Parameter values**

**2.3 Actuation requirements**

**3. Task 2. Actuator selection and evaluation**

**4. Task 3. Battery and electrical system**

**5. Task 4. Regenerative braking**

**6. Conclusion**

**References**

**Appendices**