

---

---

## **Final Contract**

### **EscalAid Assistive Knee Brace**

*MECHTRON 4TB6: Mechatronics Capstone Project*

---

---

Group 14

Ram Arunan

Alex Bartella

Ethan Cavallin

Peter Kosir

Ryan Lee

Submitted: 2024-11-17

Group 14, the creators of the EscalAid assistive knee brace, define the obligations and requirements our project must meet to be considered a successful implementation below:

1. **Idle capability:** The brace is intended to be worn at all times of the day to prevent the wearer from carrying it around any time they are not actively ascending or descending steep terrain or stairs. As such, the brace must not impede the wearer's regular range of motion or interrupt/oppose any movement the wearer makes while the brace is not in operation (that is, while it is not being used to support a portion of the wearer's bodyweight). This includes, but is not limited to, walking, sitting, and crouching.
2. **Support through ascending motion:** The brace is designed to support a portion of the wearer's weight throughout movements involving the ascension or descension of the wearer's body up or down stairs or steep terrain. However, it may prove to be conceivably difficult to offer support throughout both motions. Therefore, the brace will be considered effective and successful having the ability to reduce load on the user's joints, muscles, and/or ligaments during only ascension.
3. **Budget:** The development of the brace must stay within the allotted budget of \$750, as per course requirements.

This concludes the contract requirements of the EscalAid assistive knee brace.