

NOAH HESS

Mechanical Engineering Student - Available for co-op positions starting May 2027

3440 Anzio Drive, Vancouver, British Columbia, V5M 4E2

noahmichaelhess@gmail.com | (647) 990-0244 | [LinkedIn](#) | [Portfolio](#)

EDUCATION

University of British Columbia

Expected May 2028

Bachelor of Applied Science (Year 4 Standing) – Mechanical Engineering

- CGPA: 84% or 3.7 GPA (Calculus: 98%, Computation: 96%, Engineering Design: 91%, Instrumentation: 91%)

WORK EXPERIENCE

Delta-Q Technologies – Mechanical Engineering Co-op (Vancouver, BC)

May 2026 – December 2026

Leading developer of industrial power conversion and battery charging solutions for industrial electric equipment.

- Designed custom assembly fixtures in **SolidWorks** and **3D-printed** them with lead-locating features, resolving manual alignment errors and reducing unit assembly time by **51% (by 4.4 minutes)** to increase production throughput.
- Validated alternative enclosure breather vents for a cost-down initiative by conducting and documenting water immersion, **pressure leak**, and humidity and temperature cycling tests, securing **\$108,000 in annual savings**.
- Redesigned connector seals to resolve connector bowing caused by seal over-compression, balancing interface geometry with material compression behaviour to preserve **IP-rated seal integrity**.
- Updated CAD components and revised **2D production drawings** in SolidWorks according to **ASME Y14.5** standards, managing revision control within **SolidWorks PDM**.

Metro Vancouver – Project Research Assistant Co-op (Vancouver, BC)

September 2025 – April 2026

Regional government utility providing drinking water, wastewater treatment, and solid waste management.

- Improved **predictive accuracy** for an alpine lake discharge model by benchmarking **governing equations** against historical precipitation and operational data to tune hydraulic loss coefficients.
- Audited legacy **mechanical and civil engineering drawings** to extract missing geometric parameters and validate historical benchmarks, authoring a unified reference memorandum to ensure cross-department data consistency.
- Automated the UV disinfection data verification workflow in **Excel** to programmatically flag sensor and data transfer errors, using dynamic references to cross-validate plant records.
- Standardized maintenance review workflows for project managers by creating **cross-functional flowcharts** that eliminated administrative loops and clarified approval requirements.

Genist Systems – Mechanical Design Engineer Intern (Vancouver, BC – Remote)

May 2025 – August 2025

Hardware startup designing unmanned aerial vehicles for emergency response and specialized defense applications.

- Optimized aerodynamic profiles using **CFD simulations** in Ansys and **SimScale** to refine outer mold lines and reduce mass for a high-speed VTOL emergency response drone and an interception drone.
- Applied **structural FEA** in **Ansys** to load-bearing rotor duct support spars to size structural profiles and verify integrity under expected aerodynamic loads and motor torque.
- Designed a custom internal assembly in **Fusion 360** to unify control servo mounts and wing structural interfaces, packaging mechanical actuation hardware within a highly constrained interception airframe.
- Engineered a quick-service internal mounting sled lined with low-friction polymer guide surfaces, allowing avionics packages to slide smoothly into the fuselage and lock via structural clamps and outer fairings.
- Managed **top-level CAD version control** and **design documentation**, coordinating asynchronously across electrical, software, and manufacturing teams to integrate cross-functional subsystem requirements.

ENGINEERING PROJECTS

VTOL UAV Aileron Wing Design

April 2025 – May 2025

- Designed a VTOL UAV wing with a servo-actuated Frise aileron in **Fusion 360**, utilizing a **NACA 4412 airfoil** to meet speed, altitude, and payload requirements.
- Executed **CFD simulations** in **SimScale** to evaluate lift, pressure distribution, and control-surface effects under expected operating conditions at various aileron deflections.

Alternate Power Case Study

September 2024 – December 2024

- Led **stakeholder research** with commercial lawn-care providers to define user needs, **engineering requirements**, and target specifications for alternative-power commercial mowing solutions.
- Developed **quantitative satisfaction curves** from stakeholder data to model customer value and drive **evidence-based evaluations** of non-ICE power sources.

TECHNICAL SKILLS

Digital Tools: SolidWorks, Fusion 360, Ansys (FEA/CFD), Python, C, C#, MATLAB, Office Suite, Google Workspace

Fabrication: Mill, Lathe, Hand/Power Tools, 3D Printing (FDM), DFM, DFA, Tolerance Stack-up, GD&T, ASME Y14.5