Jonas Graff **Mechanical Engineering Student**

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TECHNICAL SKILLS

Software
- SolidWorks + HSMWorks
- Microsoft Excel
- Python

Machinery
- Manual and CNC mills
- Waterjet cutter
- Bench lathe

Fabrication
- Carbon fiber layups
- Welding (MIG/TIG)
- 3D printing

EDUCATION

University of British Columbia **Expected May 2026**
Bachelor of Applied Science - Mechanical Engineering
Placement Availability: Available for 12 months beginning May 2024
Cumulative GPA: 81%

ENGINEERING STUDENT DESIGN TEAMS

Formula UBC Racing, University of British Columbia **June 2023 – Present**
Materials and Manufacturing Sub-team Lead
- Leading a team of 8 members working on mechanical design projects and materials and manufacturing strategies including composite gas tank design, optimizing exhaust system heat management, improving moulds for airfoil manufacturing, and forged carbon fibre prototyping
- Training new members for CNC and manual machining, CAD and tool-pathing, and carbon fibre layups

Materials and Manufacturing Sub-team Member **September 2022 – July 2023**
- Piloted manufacturing strategy for our first-ever carbon fiber steering wheel with an integrated dash
- Decreased steering wheel weight by a factor of 2 by optimizing material selection and layup schedule through carefully developed test procedures
- Manufacture of various components for other sub-teams through CNC machining or carbon fiber layups such as airfoils, pedal box components, a composite intake manifold, and a CNC'd steering mount

TECHNICAL WORK EXPERIENCE

Convergent Manufacturing Technologies, Vancouver, BC **May 2023 – Present**
Mechanical Engineering Co-op
- Designed and implemented a lab-wide gas plumbing system to control and regulate dry compressed air and nitrogen lines supplying our analytical equipment
- Cut sample preparation times in half by designing and manufacturing a sample polishing fixture
- Designing, performing, and optimizing test procedures of composite materials and analyzing data to provide clients with manufacturing feedback
- Performing material characterizations using methods including DMA, DSC, TMA, TGA, and Rheometry

TECHNICAL PROJECTS

Rainwater Harvester Simulation, University of British Columbia **April 2022 – May 2022**
- Led team in developing a complex rainwater harvesting system simulation using Microsoft Excel
- Expanded simulation by 250% compared to other teams by retrieving past BC rainwater data
- Placed 5th out of over 150 teams in competition

Mechanical Elevator Bed **July 2020 – August 2020**
- Designed and constructed a height-adjustable loft bed to optimize space in a small bedroom
- Implemented safety factor considerations in a winch-operated pulley system to suspend bed from an external frame with aircraft cable

AWARDS

Dean's Honour List **2022, 2023**
BC Achievement Scholarship **2021**