

Nihaar Batla

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Education

University of British Columbia, Okanagan

Kelowna, BC

Bachelor of Applied Science in Electrical Engineering, Degree Requirements Completed: December 2026 —
Degree Conferral: May 2027

Professional Status: Eligible to apply for Engineer-in-Training registration upon completion of degree requirements

Relevant Coursework: APSC_O 255 – Electric Circuits and Power, ENGR_O 320 – Electromechanical Devices, ENGR_O 315 – Systems and Control, ENGR_O 378 – Electromagnetics for Engineers, ENGR_O 468 – Advanced Digital System Design

Technical Skills

Electrical Engineering: Electrical Systems, Power Systems Fundamentals, Electrical Design, Electrical Circuits, Electrical Machines, Systems and Control, Embedded Systems

Controls & Automation: Closed-Loop Control, Sensors, System Integration

Testing & Troubleshooting: Equipment Troubleshooting, Root-Cause Analysis, Functional Testing, Hardware Debugging, Test Data Analysis

Project Coordination & Documentation: Project Coordination, Design Iteration Tracking, Cost Tracking, Technical Documentation, Test Results, Engineering Decisions, Cross-Functional Coordination

Engineering Analysis & Tools: MATLAB/Simulink, Python, Microsoft Excel, LTspice, SolidWorks, Cadence Virtuoso, ModelSim, Git

Laboratory & Programming Tools: Oscilloscopes, Multimeters, Function Generators, DC Power Supplies, Soldering, Circuit Assembly, C/C++, Verilog HDL

Projects

Capstone: Low-Cost Distillation Monitor

2025–2026

Electrical System Design, Closed-Loop Control, Testing, System Integration

- Designed and tested an electrical monitoring system integrating temperature and methanol sensors, PCB-based closed-loop control, and UART communication.
- Coordinated electrical, mechanical, sensing, and control subsystem integration while tracking design changes and testing across six design iterations.
- Used Python to collect and analyze test data, troubleshoot hardware, identify root causes, validate system performance, and document engineering outcomes while maintaining a total project budget of \$298.59.

2-Bit Flash ADC Design & Verification

2026

Electrical Design, Circuit Simulation, Functional Validation

- Designed, simulated, and validated a transistor-level 2-bit flash ADC in Cadence Virtuoso while analyzing comparator offset, capacitive loading, output swing, and power-performance trade-offs.

32-Bit Processor Design & Verification

2026

Verilog HDL, RTL Design, Functional Verification, ModelSim

- Designed and debugged a modular 32-bit processor using ModelSim testbenches to verify instruction execution, register operations, memory interfaces, and control logic.

Brushless DC Motor Prototype

2024

Electrical Machines, Electromechanical Systems, Motor Control, Hardware Testing

- Designed, assembled, tested, troubleshoot, and debugged a BLDC motor prototype using a 40 A ESC and digital servo tester.

Experience & Leadership

Lab Monitor, MLRC Hackerspace

Kelowna, BC

- Assisted students with circuit testing, troubleshooting, and hardware debugging using oscilloscopes, function generators, multimeters, and DC power supplies while communicating technical issues clearly.
- Organized laboratory equipment and workspaces, supported soldering and circuit assembly, and promoted safe laboratory practices.

Engineering Intern, Lavelle Networks

Remote

Bengaluru, Karnataka, India

Jun. 2024 – Jan. 2026

- Collaborated with cross-functional teams to develop, test, and document responsive web interfaces, communicate issues, and coordinate feature updates.