



Thomas Collins

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Objective: Find an internship or full-time engineering position within the Aerospace and spaceflight industry.

Education: **University of New Hampshire – College of Engineering and Physical Sciences** Jan. 2017 – May 2020, anticipated
GPA: **3.24/4.0** | B.S, Engineering Physics | Minor in Mechanical Engineering
University of Maine, Orono – College of Engineering August 2015 – December 2016
B.S, Engineering Physics

Tech Skills: Solidworks | MATLAB | Visual Basics for Applications | Mastercam | LabView | CNC Machining | GitHub

Extracurricular Experience:

UNH Students for the Exploration and Development of Space August 2017 – present
Vice President and Frame Lead

- Board member, in charge of the Member Body consisting of 45 members and leading Frame Team consisting of 10 members including 3 senior capstones.
- Led mechanical fabrication of a rocket frame through design engineering and drafting with successful integration of each program's components. Critical to our Hybrid Rocket with a propulsion unit capable of 200lbs of thrust.
- Developed 2D/3D CAD models of our rocket's structural components. Designs reinforced with FEA and considerations to machining constraints and the physics behind the design.
- Strong experience with propulsion system design principles through iterative testing of our hybrid engine.
- In depth knowledge of propulsion system components and their respective interfaces through extracurricular research of general rocketry and specifically hybrid rocket propulsion.

Society of Physics Students Member January 2017 – August 2018

- Academic Society devoted to creating a community for the Physics and Engineering Physics students on campus.
- Assist undergraduates in General Physics 1-2 and Calculus 1-2

Professional Experience:

TURBOCAM, International May 2019 – present
Engineering Intern

- Operation of electrochemical machines and 5-axis mills, with programming of 5-axis mills through Mastercam
- Root cause analysis leading to implementation of corrective measures.
- Developed data analysis software for data management and control, expanded program's capability by 30%. Data considerations consisted of material analysis, characterization, and testing.
- Strict attention to detail and willingness to thrive in a fast-paced engineering environment.
- Demonstration of a highly motivated mindset and drive to projects, assigned and self-directed.

Nuclear and Particle Physics Group – University of New Hampshire August 2018 – August 2019
Undergraduate Research Assistant

- Maintained hardware standards, testing standards, and designed safe processes for radioactive material. Critical to achieving a spin polarization of 14%.
- Assisted professors in development and implementation of experiments

UNH Engineering Physics and Mechanical Engineering January 2018 – present
Undergraduate Researcher

- Study of Engineering Physics Major curriculum, including Classical mechanics, quantum physics, and optics.
 - Study of Mechanical Engineering Minor curriculum, including thermal systems, control systems, and fluid dynamics.
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Extracurricular Activities:

UNH Archery Member August 2017 – August 2019

- Athletic club including weekly practice and yearly competitions.