

Grant-Paid Job Description

Job Title	Team Leader, Engineering
Reports to Position Title	Executive Director
Research Project Title	SuperNOVA
Faculty/ Department	Engineering
FTE (based on 35 paid hr work week)	1.0
Duration	May 8, 2024 – August 23, 2024
Date Created/Updated	December 19, 2023
Salary	\$17.00 per hour + 4% in lieu of vacation

About the Research

SuperNOVA is a not-for-profit initiative of Dalhousie University that provides experiential learning for school aged youth in Science, Technology, Engineering and Mathematics (STEM). SuperNOVA offers innovative workshops, summer camps, clubs, and community events throughout Atlantic Canada that provide youth with fun and rewarding experiences in STEM and nurture a life-long love of exploration, creativity, and academic achievement.

Job purpose

As the SuperNOVA Engineering Team Leader, you will be responsible for the successful development, organization and execution of SuperNOVA's summer Engineering programs including ATLAS (Atlantic Academy of Space). You will oversee a small team of instructors, working to develop high-quality educational STEM curriculum to be delivered to youth across Atlantic Canada. You will be responsible for developing, learning, and delivering STEM programs in classrooms, off campus locations including urban, rural, and remote communities, and on the Dalhousie University campuses. You will work individually, or alongside one or more other SuperNOVA instructors to deliver the programs and provide supervision and care to youth participants. From time to time you may be required to perform additional tasks. You will work under the supervision of the Executive Director of SuperNOVA and will report directly to the Executive Director on any employment matters.

Duties and responsibilities

Serve as Team Leader on the Engineering team.

- Oversee a small team of instructors during curriculum development to ensure that curriculum is innovative, safe, accessible, and appropriate for the target grade ranges.
- Develop a work plan based on deliverables, delegating tasks and responsibilities among your team appropriately, deferring to Program Coordinators where necessary.
- You will be responsible for creating, maintaining and procuring a list of materials required for programming, as well as maintaining a budget to be submitted to the Executive Director.
- Serve as a resource to fellow instructors delivering content, providing support in alignment with SuperNOVA protocols, policies and mandate.
- Hold regular meetings with your team of instructors to ensure smooth delivery of programs

- Act as a liaison between Instructors and SuperNOVA supervisors and management.

Development of Engineering curriculum.

- Assist with the development of innovative, exciting and educational Engineering curriculum for all Engineering camps.
- Ensure all required components of curriculum development, including research, testing, and written documentation related to curriculum are complete in a timely manner.
- Identify and coordinate mentoring events, tours, and site-visits with science, engineering and technology professionals from the industry and research sectors.
- Work with team members to procure and manage program curriculum materials and resources.
- Ensure integration of technology and digital resources into the curriculum.
- Perform cost benefit analysis for projects and activities, in accordance with budget directives

ATLAS Program Development

- Work closely with the ATLAS team to develop curriculum and design satellite components.
- Gain skills and experience in systems engineering.
- Participate in weekly and monthly technical meetings to discuss progress of the project.
- Work with subsystems and develop understanding of electrical, mechanical, control aspects of work.
- Develop technical systems documentation for each subsystem.
- Aid in the creation of social media and graphic design content.

Ensure the successful delivery of Engineering content in workshops and camps.

- Act as a lead delivery person for workshop and camp modules.
- Delivering STEM workshops (May-June) and camps (July-August) in Halifax and communities throughout Atlantic Canada, and via online platforms (if applicable)
- Work with project partners to ensure program quality is high and expectations are met/exceeded.
- Attend meetings to communicate progress on the program content with project partners.
- Assist with collection of testimonials, photos, quotes, and other documentation for reporting.
- Ensure that team is responsible for maintaining all materials and equipment in good working order, including bin organization
- Develop engineering projects that follow the engineering design process
- Highlight the necessity of an interdisciplinary approach to engineering and showcase the benefits of each discipline
- Research new engineering technologies and create programming to reflect current trends
- Build relevant equipment and experimental apparatuses for classroom use
- Perform a safety analysis of each proposed project

Act as a Program Instructor

- Adherence to SuperNOVA's policies and procedures at all times.
- You may be required to teach camps outside of your field of study, and outside of your field of curriculum creation.
- Participating in SuperNOVA training during the course of your employment.
- Developing and delivering exciting and educational workshop and camp curriculum for youth in grades 1 - 12 related to Science, Technology, Engineering and Math (STEM).
- Learning and practicing the delivery of all SuperNOVA activities prior to delivery.
- Advance preparation of materials prior to the start of the programs.
- You may be required to travel within Atlantic Canada for STEM workshops and camp delivery.
- Providing supervision for program participants and acting as a positive role model.
- Delivering presentations at community events and other STEM outreach opportunities.
- Communicating with and supporting positive relationships with campers, parents, media, and other stakeholders.
- Ensuring that program facilities are tidy, secure, and facility policies are being followed.
- Creating hazard assessment documents for each activity developed to ensure that safety protocol is accessible at all times.
- Reconcile expenses charged to SuperNOVA as per SuperNOVA procedure.

- Aiding in maintaining a healthy relationship with Dalhousie, which includes ensuring that all instructors and participants are respectful of Dalhousie University staff, property and facilities

Qualifications

Required: Current student or graduate from a Bachelor of Education or STEM program. Must possess strong verbal and written communication skills, time management skills, the ability to problem solve effectively and make decisions independently. Experience working with youth.

The following are considered assets: Experience working with rural, remote, low-income, and other populations typically underrepresented in STEM fields; experience working with Indigenous communities and an understanding of local socio-economic conditions and personal nuances of the Indigenous communities that we serve. French proficiency and public speaking skills. Full and unrestricted Nova Scotia driver's licence is an additional asset.

Additional but not required assets might include circuit design and schematic capture, experience with SolidWorks, Cosmol Multiphysics and exposure to test equipment such as oscilloscopes, protocol/network analyzers. Good understanding of thermodynamics and how to integrate system changes to achieve a desired goal.

Working conditions

On campus role: Due to operational requirements, the successful applicant is required to work in-person on campus.

Dalhousie's vaccine mandate has been suspended at this time, and employees no longer need to provide proof of full vaccination. However, health and safety risks to our community will continue to be monitored and a vaccine mandate may be reinstated if necessary.

Supervisory/managerial

SUPERNOVA INSTRUCTOR EXPERIENCE

As a SuperNOVA Instructor, you will have access to a unique work experience that offers personal and professional development, education and career support, skills and competencies development, extensive high-quality training, and unique community outreach and engagement opportunities.

Training

SuperNOVA's robust training and certification program equip Instructors with foundational skills, knowledge and practice that are essential for developing and delivering impactful youth STEM programming and supporting future academic and professional careers.

- Gender Equity
- Indigenous Worldviews and Cultural Competency training
- Mental Health in the Workplace
- Anti-Racism in STEM
- Inclusive & Accessible Teaching Practices
- Conflict Resolution
- Effective Communication Certifications
- Emergency First Aid and CPR/AED Level A (valid for 3 years)
- Workplace Hazardous Materials Information System (WHMIS)
- Criminal Record Check w/ Vulnerable Sector

Competencies & Benefits

Science Communication

- Across all industries and sectors, it is critical to have the skills and confidence to communicate your work, research, or knowledge to people outside of your area of expertise.
- You may be required to represent your field of work or your company in a variety of settings (media, conferences, networking events) and it is essential that you are able to understand your audience and explain your work while serving as a representative of your company.
- SuperNOVA will offer you the opportunity to build the skills necessary for synthesizing complex scientific concepts and tailoring the information for a wide variety of audiences

Leadership

- Team management
- Teamwork, collaboration, communication

Community Involvement

- Support your community
- Mentor and serve as role models for youth
- Impact youth with positive experiences in STEM

Networking

- Engage with STEM professionals and SuperNOVA's industry, government and corporate partners

Personal Development

- Peer-to-peer mentorship
- Work with and learn from others with varying academic backgrounds
- Learn about yourself - what matters most to you, how you show up during difficult situations
- Flexibility to explore and teach subjects of interest

Additional Career Development Opportunities_ Offered in partnership with Actua

- Micro-credentials
- Micro-internships
- Work-integrated Learning

