2024-2025 ANNOUNCEMENTS OF OPPORTUNITY

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FIRST NATIONS LAUNCH (FNL)
High-Power Rocket Competition
APRIL 25-27, 2025

	Moon/Mars Challenges Early-Bird Gateway Challenge	Gateway Challenge
Applications Open:	September 1, 2024	September 1, 2024
Application Deadline:	October 24, 2024	December 9, 2024
Award Announcements:	October 28, 2024	December 16, 2025
Award Cycle:	October 29, 2024 – May 12, 2025	January 7, 2025 – May 12, 2025

About the Program: NASA's Wisconsin Space Grant Consortium (WSGC) is pleased to announce the 15th Annual First Nations Launch (FNL) National Rocket Competition. This competition is an opportunity for students attending a Tribal College or University (TCU), a Native American-Serving Nontribal Institution (NASNTI), or who are active members of an American Indian Science and Engineering Society (AISES) collegiate chapter at a non-TCU/NASNTI university/college to design, build, and fly a high-powered rocket to be launched at a competition at the Richard Bong State Recreational Area in Kansasville, WI.

Purpose: The Wisconsin Space Grant Consortium First Nations Launch competition offers Tribal Colleges and Universities (TCU), Native American-Serving Nontribal Institution (NASNTI), as well as active American Indian Science and Engineering Society (AISES) collegiate chapters the opportunity to demonstrate engineering and design skills through direct application in high-power rocketry. The competition requires teams of undergraduate students to conceive, design, fabricate and compete with high-power rockets. FNL is a 'First Step' experience designed for students with no prior experience working with high-powered rockets. Rocket motors and dimensions are restricted by competition parameters so that knowledge, creativity and imagination of the students are challenged. The result is a great aerospace learning experience unique to the Native American communities.

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Award: *(based on availability of funds for U.S. teams only)*:

$4,000 *(project/travel funds)*

Additional travel funds *(teams traveling more than 1000 miles to Carthage College may request additional travel funds)*

Lodging *(Each team receives up to three (3) hotel rooms per night for a maximum of three (3) nights at the hotels selected for the competition weekend)*

Meals *(Friday breakfast, lunch, and dinner, and Saturday breakfast, lunch, and dinner for the competition weekend)*

Competition Rocket Motor *(One competition motor, ejection charges, and motor casing per team for competition flight)*

Level 1 Rocket Certification *(Each team is eligible to send up to 3 individuals (Advisor/Co-Advisor, Team Lead, and Team Member) to an in-person or virtual rocket certification workshop)*

It is the purpose of this Announcement of Opportunity to support the innovative, visionary projects that are student-led and designed to fully realize WSGC's goal of assisting in training the next generation of aerospace professionals.

Gateway Challenge

Teams shall design and construct a dual deploy high-power rocket from a list of possible kit combinations. There is no payload/challenge associated with this challenge, with the focus being on the safe and complete selection, simulation, procurement, assembly/fabrication, and flight of the kit rocket. The flight shall be stable and reach an apogee between 2200' – 2800' AGL. The rocket should satisfy all other technical requirements as outlined in the competition handbook.

Moon Challenge

Teams shall build a minimum 4" diameter rocket from components or a kit, utilizing one of the competition motors and achieve an altitude of 3,000' – 4,000' AGL. The annual challenge will see the teams incorporate two sensors (2 of 4) into a cohesive system to analyze the flight. The rocket must satisfy all other technical requirements as outlined in the requirements section of the competition handbook.

Mars Engineering Challenge

Teams shall build a minimum 4" diameter rocket from components or a kit, utilizing one of the competition motors and achieve an altitude of 3,200' – 4,000' AGL. The annual challenge will see the teams incorporate multiple sensors (5) into a cohesive system to analyze the flight. The rocket must satisfy all other technical requirements as outlined in the requirements section of the competition handbook.

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Application Requirements: Team/Individual applicants who meet the following requirements can apply for this program by registering and applying online at spacegrant.carthage.edu/about/login.

To qualify for the competition, individuals/teams must:

1. be enrolled at a Tribal College/University, a Native American-Serving Nontribal Institution (NASNTI), or active members of a Collegiate AISES chapter at a non-MSI/NASNTI college/university
2. have a committed faculty mentor
3. have a Tripoli or NAR mentor*
4. select a team leader

Individuals/teams:

1. should be comprised of approximately 4-6 students
2. can compete without experience *(Teams will be given the basic training and information required)*
3. shall seek advice/mentorship from Industry, Tripoli, NAR, and others

> **Note from WSGC*: *We are excited to welcome our Canadian First Nations Teams into the FNL Competition. Due to restrictions on our competition funding, we are unable to reimburse or directly award any monetary prizes to participating Canadian Teams.*
>
> **Note from Tripoli*: *Without exception, university teams must involve an experienced mentor, preferably a TAP or L3CC, during the design and construction phases of their rocketry projects if they expect to fly the competition rocket at Tripoli events. The mentor must be certified at or above the level of motor the team wishes to fly AND be experienced in the type of construction, propulsion, and recovery the team uses.*

To Register and Apply: The faculty advisor must first register with WSGC before students/team members register. One exception to the order of registration exists. If the student team lead has never registered with WSGC, he/she must register before the advisor begins the Notice of Intent (NOI).
A **faculty advisor** must complete the following steps:

1. **CREATE a NASA STEM GATEWAY account** *stemgateway.nasa.gov/public/s/login/*
   (applicants will be required to update profile information annually).
2. **CREATE a WSGC account** *spacegrant.carthage.edu/about/login/*
   (applicants will be required to update profile information annually).
3. Sign into your WSGC account and submit an application/supporting documents to the **ROCKET LAUNCH TEAM (CREATE NOI)** application site *https://spacegrant.carthage.edu/forms/account/login/*.
   a. Challenge selection: If applying for both the Moon and Mars Challenge, please indicate in the Rocket Launch Team NOI which competition is the school's preference as only one team per school may participate each year.
4. **MOON/MARS Additional Requirement**
   a. **Proposal**: During the 2024-2025 cycle, the milestones have been moved earlier to allow more time between each. With this change, proposals are required by Moon and Mars teams at their NOI due date of October 24th. Submit the proposal by email to fnl@carthage.edu in addition to uploading to the Space Grant portal as soon as able to.
      i. If we are at our team limit, the proposals may be utilized to determine which teams are selected.
   b. **Proposal Virtuals**: Moon and Mars teams are asked to participate in a virtual discussion about their proposals. No presentation is required for this meeting as the technical advisory team is meeting with the team to discuss your rocket and challenge plans. Visit the following link to request a time slot: https://calendar.app.google/BMmFyzFwAULESFBQ7

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Once the faculty advisor completes the Notice of Intent (NOI), identifies the team name, lists the co-advisor(s) (if applicable), mentor, team lead and student participants, and chooses which competition the team will compete in, the team lead and each team member will need to:

1. **CREATE a NASA STEM GATEWAY account** *stemgateway.nasa.gov/public/s/login/*
   (applicants will be required to update profile information annually).
2. **CREATE a WSGC account** *spacegrant.carthage.edu/about/login/*
   (applicants will be required to update profile information annually).
3. Sign into your WSGC account and submit an application/supporting documents to the **FIRST NATIONS ROCKET COMPETITION** application site *https://spacegrant.carthage.edu/forms/account/login/*.

Award Acceptance Components: As part of the award acceptance, participants will submit the following documents on the WSGC application website under Program Applications/Your Applications:

Advisor
- Award Agreement Letter
- W9
- Media Release

Team Lead
- Award Agreement Letter
- Media Release

All Team Members
- Media Release

Please direct questions about the First Nations Launch program to:

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This funding opportunity is made available for the pursuit of space-related research and/or activities through the National Space Grant College and Fellowship Program: NASA Educational Cooperative Agreements #80NSSC20M0123. Catalog of Federal Domestic Assistance (CFDA) number for this award is 43.008. All awardees are subject to the terms of the prime award. The material contained in this document is based upon work supported by a National Aeronautics and Space Administration (NASA) grant or cooperative agreement. Any opinions, findings, conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of NASA. All awards are fully competitive awards of opportunity in which applications are reviewed by the FNL Technical Advisory Panel and other experts as needed. Awards are made by the FNL Program Director based on recommendations from the FNL Technical Advisory Panel.

Please follow us on **for program updates**

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