Executive Summary (1600 character limit, approx. 250 words or less)

Our team enables both STEM and non-STEM UWB students with job-readying experience by competing in an annual national drivetrain efficiency design challenge, striving for the most efficient solution and evaluating against other college teams. The non-STEM students significantly contribute towards our goal, with Graphic Design, Business, and Finance major students, to name a few, enabled to gain real-world, hands-on experience in their chosen fields. The drivetrain is inputted into an unmodified kart chassis that is equal for each college team to evaluate efficiency, enabling all team members to gain experience within the prominent sectors of electrification and renewable energy. We are requesting funds for our student team member participants to purchase the drivetrain components, including the electric motor, batteries, and monitoring equipment. In addition, the requested funds include the travel cost for six of our team members and our kart chassis to compete in the two-day eV Grand Prix national efficiency competition in Lafayette, Indiana. Our team provides vital, real-world experience that is accessible and welcoming to all University of Washington Bothell students, enabling them to apply their course-learned skill sets to distinguish themselves entering into the workplace and to thrive after completing their college degree.

Need for Program (1600 character limit, approx. 250 words or less)

Our main team ambition is to enable accessibility to job-readying experience to all UWB students. We expect over successive years that the sophistication of the drivetrain design will improve to produce a more efficient electric vehicle. Even with this expectation, our team strives to ensure that all students and all majors, both STEM and non-STEM, are effectively accommodated into our team and gain valuable workplace-preparing experience to thrive after graduation. Funding enables us to purchase higher-quality drivetrain components, resulting in a greater depth of experience gained by our STEM team members by designing with workplace-emulating parts. Funding also enables non-STEM students with greater design and administrative opportunities and bandwidth to apply their skill sets to ready themselves for the workplace. In addition, funding allows team members to travel to the efficiency evaluation competition to further expand upon their experience and presentation skills. Without this funding, the student team members would be unable to collaborate towards design an efficient electric drivetrain or participating in the eV Grand Prix efficiency competition, preventing these UWB students from earning vital collaboration and job-preparing experience. This experience gained by contributing as a team member empowers students to stand-apart in the interview process, to be hired in the industry of their interest, and to thrive in the workplace.
Is this a new request? Yes

What on your request is new or has changed?

This is the first SAF request from our Club-Council recognized team of Electric Motorsport at UWB. This means that all of our request, both in requested line-items and written reasoning, is new.

Strategic Plan (1000 character limit, approx. 150 words or less)

Our first goal is to enable prominent real-world workplace experience that is open, welcoming, and accessible to all UWB students. Both STEM and Non-STEM team members gain firsthand experience by applying course-learned concepts in a collaborative extracurricular setting, separating themselves in the interview process and thriving in the workplace. Our second goal is to empower students to develop effective collaboration skills. Team members achieve this goal by contributing in design sub-teams with students of like-minded skills sets, as well as inter-team collaboration, allowing students to comprehensively expand their ability to effectively work in a team environment. Our third goal is to expand student knowledge into renewable energy and electrification, and the new job openings available in this emerging design field. The PNW is the national leader in this technology, exemplifying UWB students to stand apart with established experience when applying for these positions.

Assessment (1600 character limit, approx. 250 words or less)

Our team consists of Mechanical Engineering, Electrical Engineering, Computer Engineering, and Computer Science majors, with 31 team members from all classes, from Freshmen to Seniors. We have and will continue to advertise our team to Graphic Design, Business, and Finance major students, as well as other non-STEM students, enabling them to collaboratively participate in our team. A significant portion of our STEM team members are also achieving graphic design or financial minors, enabling a direct communication path to these UWB students. From this, we expect over 50 team members for the 2023-24 school year of both STEM and non-STEM students directly benefitting with job-readying experience from our program. To measure financial health, our team will hold twice-quarterly evaluations comprising of the officers, design sub-team leaders, and faculty advisor to ensure financial transparency and accountability of the SAF Budget spreadsheet for our team. All financial transactions will by reviewed by Dr. Yoon, our faculty advisor and budget owner, before proceeding with the line item purchase. To measure operational health, our team will hold once-quarterly reviews with the officers and faculty advisor to evaluate and refine the depth of workplace experience.
provided to our team members. In addition, we will access direct team-member feedback in an end-of-school-year survey to gain insight on the depth of experience achieved as a team member. The officers, sub-team leaders, and faculty advisor will then analyze the survey responses to qualitatively measure the operational health of our team.

Printing & Photocopying

Yes, though not on campus at the University of Washington Bothell. This funding would be used to vinyl print the paint scheme onto the kart chassis. This enables our team to project a professional appearance of both the UWB and the Electric Motorsport at UWB team. The UW Logo, University of Washington Bothell in text form, and supporting industry partners for mentorship and services will be displayed on the paint scheme.

Transportation and Travel

Our team is requesting funding for out of state travel to Lafayette Indiana to complete in the eV Grand Prix efficiency evaluation competition. The efficiency competition dates are April 12th and April 13th, 2024. We are estimating 2-way airfare, two hotel nights, food, and rental vehicle costs to be $1260 per person. There will be 6 team members and our faculty advisor attending to represent the University of Washington Bothell at the eV Grand Prix efficiency evaluation competition. In addition, we estimate that the air-freight shipping cost of the kart chassis to the competition would be $1500, in which to enable the team to participate in the national efficiency competition. Our team is justified for evaluating our drivetrain efficiency against other college teams to enable our team to effectively assess our drivetrain design. This evaluation results in new engineering goals and targets to be set, enabling further hands-on student experience and educational insight on further electric drivetrain refinements for the student stem members to input into their drivetrain system. If our team did not attend the competition event, then we could not evaluate our drivetrain efficiency and not set new engineering goals and targets, preventing students from hands-on experience.
Total Amount (please note the total dollar value)
$21,230

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