

2022 Student Projects – STEM Outreach Proposal Cover Letter

12/17/2021

Patrick Marnell

ITE Western District

Dear Patrick Marnell,

We are pleased to submit this proposal from the University of Hawaii at Manoa ITE Student Chapter in response to your RFP to provide STEM outreach. The attached document outlines our proposed study approach to the project and addresses the information requirements that were outlined in the RFP. The UH Manoa ITE Student Chapter plans to develop a hands-on STEM activity called Vision Zero. The activity is suitable for all ages and emphasizes roadway design and pedestrian safety. It also includes calculations, real-world examples of the fundamental concepts, and building mock streetscapes. The activity can be done in a classroom, after school events, and smaller groups. The format will be easy to follow with step-by-step instructions, lists of suggested materials, and visual aids.

We would be pleased to answer any questions you may have regarding our submission.

Thank you for the opportunity to submit our proposal for your consideration.

Sincerely,



MICHELLE KUSTIN
ITE HAWAII SECTION STUDENT CHAPTER LIAISON

Progress Report & Estimate of Time Spent

2021 ITE Western District Student Projects – STEM Outreach



Date: 12/16/2021

To: Patrick Marnell - ITE Western District Project Managers

From Eric Jonah Lorica – Student Project Manager

Cc: Michelle Agustin – Professional Mentor

This progress report summarizes work completed to date.

Work completed in this period:

- Held a meeting with student board and professional mentors
- Researched for STEM activities
- Submitted RFP

Anticipated work in next period:

- Draft Lesson Plan - January 2022
- Test of Lesson Plan - February 2022
- Final Lesson Plan - March 2022

Issues encountered:

- None.

Project Time Estimates

Project Element	Estimated Person Hours Completed This Period	Estimated Person Hours Completed To Date	Estimated Percent Complete
Project Management	10	-	-
Draft Lesson Plan	20	-	-
Test of Lesson Plan	20	-	-
Final Lesson Plan	20	-	-
Final Summary Report	10	-	-

Project Scope

The project proposed by the ITE Student Chapter at UH Manoa entails the creation of a lesson plan on pedestrian safety. In our lesson, students will experience transportation engineering learning about creating a well-connected transportation network and creating a safe crossing for people walking. In groups, students will conduct research, design a plan, and present their findings and recommendations. The project will have students be creative, but also critically think about designing for pedestrian safety.

Audience

This project can be done by students of all ages and can be adapted based on the age of the audience.

Transportation Connection

Vision Zero is an initiative of ITE to eliminate all traffic fatalities and severe injuries, while increasing safe, health, and equitable mobility for all. In our lesson, we hope to share with students the importance of constructing our built environment for people, how it is necessary to make not only a complete network to connect people but one that is safe for all users.

Learning Objectives

Upon completion of the activity, students should be able to:

- Express the importance of a safe and complete transportation network.
- Recognize design and network issues and the potential negative effects those issues cause.
- Describe ideas and solutions to mitigate existing design and network issues.

Materials

The lesson plan will include:

- An introduction to the concepts and activity
- Student handouts and checklist
- Visual aids with examples
- A list of supplies needed for the activity

Level of Effort

The level of effort anticipated for this project will be 90 person-hours. Two students will create the lesson plan. Four students will conduct the lesson plan by partnering with a local school.

Use of Grant Money

The grant money will be used to pay for travel. the cost of material for the lesson, and any associated activities.

Agreement to Hold Harmless

The UH Manoa ITE Chapter holds harmless and indemnifies the ITE Western District from any and all liability associated with the conduct and completion of this proposal, data collection, and associated activity,

Project Management

Student Project Manager

Abdulrahman A. Alghamdi
Department of Civil and Environmental Engineering
University of Hawaii at Manoa
2540 Dole Street, Holmes Hall 383
Honolulu, Hawaii 96822
Tel: [REDACTED] ; Email: [REDACTED]

Eric Jonah Lorica
Department of Civil and Environmental Engineering
University of Hawaii at Manoa
2540 Dole Street, Holmes Hall 250
Honolulu, Hawaii 96822
Tel: [REDACTED] ; Email: [REDACTED]

Professional Mentor

Michelle Agustin
Wilson Okamoto Corporation
1907 S Beretania St # 400,
Honolulu, HI 96826
Tel: [REDACTED] ; Email: [REDACTED]

Cathy Leong, P.E.
Wilson Okamoto Corporation
1907 S Beretania St # 400,
Honolulu, HI 96826
Tel: [REDACTED] ; Email: [REDACTED]

Faculty Member Supporting The Effort

Roger B. Chen, PhD
Department of Civil and Environmental Engineering
University of Hawaii at Manoa
2540 Dole Street, Holmes Hall 383
Honolulu, Hawaii 96822
Tel: [REDACTED] ; Email: [REDACTED]