



PROJECT TITLE: Grad Student STEM Share

PROJECT TAGLINE/CAPTION (160 characters): **Pairs of graduate students will create presentations to share their research and educational experiences with high school science classes in Houston ISD.**

IMAGE:



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Name of Group/Organization: **Rice Office of STEM Engagement**

PROJECT DETAILS

Provide a description of the project.

The Grad Student STEM (Science Technology Engineering and Math) Share project would involve 16 to 20 graduate students and postdocs from natural sciences and engineering. These participants would pair up by research similarities and/or availability/transportation to visit classrooms during a February 2016 planning meeting. Each pair will be partnered with a Houston ISD secondary science teacher that is currently participating in professional development via the Rice Office of STEM Engagement. The pair and teacher will coordinate via email to plan a day to present to as many classes as possible in April or May 2016. Each pair will create a high school level presentation about their current research at Rice University, as well as their individual educational backgrounds and how they became interested in STEM. During weekly seminars from March to May 2016, pairs will present to the group for feedback, constructive criticism, and tips for talking with high schoolers prior to their actual classroom presentations. Those pairs that have already presented will offer advice, share student questions, and tell how they engaged the students. The high school teachers will offer feedback to the graduate students and postdocs via SurveyMonkey after the classroom presentations.

GRAD starter

Timeline: If the project will take place at a specific time and place, please give details. Is it a one-time event or a series?

Recruitment for grad student, post doc, and teacher participants will be during January 2016. Informational meetings will be scheduled as needed. A planning meeting for 16-20 committed participants will occur in February 2016 to create pairs of students and link with high school teachers. Weekly seminars will take place starting March 2, 2016 through May 4, 2016. Wednesdays will be the initial day for meetings unless the group prefers another day. Seminars will be from noon to 1 pm and include lunch. Graduate student pairs will be scheduled to visit a high school classroom in April or May 2016. The program lead will match the teacher with the student pair based on content of presentation and availability.

Audience: Who is your target audience? (e.g. program-specific, interdisciplinary, or university-wide? Will undergraduates, faculty, staff, or postdocs be involved? Any off campus participants?)

Graduate students or postdocs in STEM fields (Natural Sciences or Engineering) will be targeted as on-campus participants. High school science teachers in Houston ISD (via the Rice Excellence in Secondary Science Teaching RSTEM program) and their students will be off campus participants.

How many people do you anticipate will participate?

- **16-20 (8-10 pairs) of graduate students and/or postdocs**
- **8-10 high school teachers in Houston ISD**

Marketing Plan: How do you plan to publicize the project?

Online registration will be done via EmailMeForm. The link will be posted on the RSTEM website. In January 2016, applications will be disseminated via the college of engineering and the college of natural sciences. Email listervs (such as PostDoc Weekly Announcements, Rice GSA, and departmental graduate student groups) will be contacted to include the information for graduate students and postdocs.

High school teachers will be asked to sign-up for the program during January professional development meetings. Teachers will provide a list of potential days and times for visits, as well as preferred areas of interest.

ADVANCEMENT

What are the goals of the project?

The goals of Grad Student STEM Share are to facilitate community outreach opportunities for graduate students in high schools. This community outreach will benefit the graduate students and postdocs by allowing them opportunities to network across departments during weekly seminars, refine presentation skills to non-scientific audiences, develop leadership skills, and connect with secondary science teachers. The high school students will also benefit by learning about post graduate education opportunities and being encouraged to pursue STEM fields in college.

Briefly explain the need for the project and how it will promote excellence in scholarship, training, and/or development?



Graduate students and postdocs have limited opportunities to present their work to non-scientific audiences. This opportunity would enhance their presentation skills and engage them with the community to foster scientific interest in youth. As many of the graduate students and postdocs at Rice University are not local to the Houston area, connecting with Houston ISD classrooms will give them new insight on their city and connections with science teachers that could be mutually beneficial.

If this is an existing project/event or a similar one exists, describe how the project/event is being expanded or enhanced.

N/A

If your proposal is for a pilot project, suggest how it might develop over a three-year period.

The first semester of Grad Student STEM Share would be Spring 2016. If the program is well attended by graduate students and postdocs and well received by the high school teachers and students, it may be incorporated as part of the Nanotechnology Enabled Water Treatment (NEWT) Center. Within Rice University, the program could also grow to involve more graduate students and postdocs, as well as reach middle school students and more high school students beyond Houston ISD. As part of the NEWT Center, the program could be expanded to partner campuses and thus high schools in more cities.

Describe how you will measure the success and impact of this project. Please, provide quantitative targets, if possible.

The success of this first semester of Grad Student STEM Share will be measured first by participation statistics including number of grad students and postdocs (goal = 20), number of high school teachers and their students (goal = 10 classrooms), as well as the numbers interested and not able to participate in the pilot semester. The grad students and postdocs will be surveyed during the 5th weekly meeting for feedback on implementation and during the 10th weekly meeting for overall impact feedback. The participating teachers will be surveyed for implementation and impact feedback, as well as to provide detailed comments to the grad students and post docs on their presentations and the number of students reached.



BUDGET

Itemized Budget

Please, provide an itemized budget. List each item, a description, and the anticipated cost.

Item	Description	Cost
Logo pens	1500 pens for high school students, 10 teachers x about 150 students each	\$700
Lunches at weekly seminars	Sandwich trays or box lunches for 20 people x 11 meetings	\$2200
Transportation* for up to half of student pairs	Zip car fee of approximately \$70 per day x 5 student pairs	\$350
Total Expenses		\$3250

*Transportation costs are dependent on the number of participating grad students/postdocs without their own cars to travel to the local high schools. We do not want to prevent interested grad students from participating because they do not have a car. Grad students will be paired to try to minimize the need to pay for transportation (Zip cars).

Funds from other sources

Please, provide any information on funds from other sources that you have secured or potential funds that you plan to apply for.

Source	Status	Cost
N/A		
Total Amount		\$

If the project/event has been offered in the past, how was it supported?

N/A