



S17-010 - High School Materials Research Day by the MRS chapter of the University of North Carolina at Chapel Hill

Submitted by [redacted] in 12/15/2016 4:32:41 PM
The University of North Carolina at Chapel Hill
[redacted]

Proposal Categories:

Funding Type: Total Project Support

1. The MRS Foundation should support

"High School Materials Research Day" by the MRS chapter of the University of North Carolina at Chapel Hill

2. WHAT IS THE PURPOSE OF THE PROJECT

The MRS student chapter at the University of North Carolina at Chapel Hill (UNC-CH) would like to organize a high school materials research day in collaboration with the newly established "Be A Maker" (BeAM) Makerspace within the Applied Physical Sciences Department. In our proposed plan, we will coordinate a day workshop and invite 75 high school students to UNC-CH to experience hands-on science activities through BEAM, participate in laboratory tours, and interact with current graduate students in materials-related fields. Furthermore, we will provide students with information about possible research opportunities at UNC-CH and other universities in the area.

3. The Project Lead(s) is (are)

[redacted] (Chapter Vice President); [redacted] (Chapter Outreach Chair)

4. The target audience for this project is:

The event would focus on students from high schools with limited resources across North Carolina (rural and inner-city schools) that are given limited exposure to STEM fields, and would introduce these students to research opportunities, higher education, and potential careers in materials science.

5. What is the intended outcome of the project?

To expose students from underrepresented high schools to materials-based research at a large research institution, and get them interested in materials research through hands-on activities in our new makerspace (BeAM) as well as laboratory tours. We also will provide information about research opportunities at UNC-CH and other universities in the area specifically for high school students.

6. How will this project/program benefit the materials community?

By introducing underrepresented high schools students to materials research at an early stage, we hope to increase diversity in the materials community going forward. We believe that involving high school students in an interactive makerspace environment is a good way to inspire students to get involved in materials-based projects.

7. Does MRS or anyone else offer a similar program?

Many schools offer similar programs aimed at involving high school students in materials-based research, some of which also target underrepresented groups/lower income schools. However, not many are on the scale that we are proposing. We believe that our program is especially unique in using the interactive aspects of a makerspace to provide a truly hands-on experience to engage the students.

8. What is needed for this effort?

Funding for lunch for the participants and supplies for the event.

9. What is the budget for the project (itemize if possible)?

\$800 to cover lunch for all participants and reimbursement of supplies
? \$600: lunch for participants and volunteers
? \$200: supplies for science activities and advertising supplies

10. How much are you requesting from the MRS Foundation?

\$800

11. Is this total funding, seed money or matching funds?

Total Funding

12. If seed money or matching funds, please provide additional details.

N/A

13. Do you require assistance from a MRS Operating Committee?

No

14. Do you require assistance from MRS Headquarters Staff?

No

15. Provide a brief “Executive Summary” of the proposed project/program

MRS Special Project Proposal: High School Materials Research Day
University of North Carolina at Chapel Hill
[Redacted] (Chapter Vice President)
[Redacted] Chapter Outreach Chair)

Description: The MRS student chapter at the University of North Carolina at Chapel Hill (UNC-CH) would like to organize a high school materials research day in collaboration with the newly established “Be A Maker” (BeAM) Makerspace within the Applied Physical Sciences Department. The event would focus on high school students across North Carolina that are typically underrepresented in the STEM field and would introduce these students to careers in materials science. In our proposed plan, we will coordinate a day workshop that invites high school students to UNC-CH to experience hands-on science activities through BEAM, participate in laboratory tours, and interact with current graduate students in materials-related fields. Furthermore, we will provide students with information about possible research opportunities at UNC-CH and other universities in the area.

Cost Estimate: \$800 to cover lunch for all participants and reimbursement of supplies

- \$600: lunch for participants and volunteers
- \$200: supplies for science activities and advertising supplies

Estimated Time Frame: We would like to have this event on a Saturday in May. We are working to coordinate with various high schools to choose the best weekend.

Deliverables:

- At the BeAM Makerspace, students will learn a “maker” technique and the importance of creativity in scientific problem solving.
- BeAM staff will have the opportunity to share their facility resources and personal expertise with a new, younger, demographic
- High school student participants will be exposed to various areas of materials science research during the campus lab tours
- During a brief information session, students will learn ways to prepare for future college studies and STEM careers and also receive resources on research opportunities for high school students (e.g. ACS SEED)
- The event will promote diversity in the STEM field by targeting participation from underrepresented groups
- Graduate student volunteers will gain experience in mentoring a younger generation of scientists and describing their research to a general audience