CURE Survey

The Classroom Undergraduate Research Experience (CURE) survey grew out of a creative collaboration of faculty from Grinnell College, Hope College, Harvey Mudd College, and Wellesley College, funded by HHMI. The CURE may be used as a pretest-posttest or posttest-only survey to measure student experiences in "research-like" or other science courses. Each survey takes about 10-15 minutes. The surveys are hosted by a commercial site, Vovici. Students arrange to complete the survey either anonymously or not, depending on their arrangement with you and your institutional review board. (We suggest the surveys not be anonymous, as having the student names facilitates matching the pre-course to the post-course surveys.) The data are analyzed by Prof. Lopatto and Ms. Leslie Jaworski, Electronic Survey Data Analyst for the project. We report aggregate data for an institution or program to the designated faculty liaison or program director. CURE survey: https://www.grinnell.edu/node/25703

Pretest questions include:

* Demographic questions
* Reasons for taking the course
* Level of experience on various course elements
* Science attitude questions
* Learning style questions

The posttest survey is parallel to the pretest. Questions include:

* Estimate of learning gains in the course elements
* Estimates of learning benefits that parallel questions in the SURE surveys
* Overall evaluation of the experience
* Science attitude questions

The CURE survey has three components:

1) A brief survey for the course or lab instructor in which the instructor indicates which common activities are emphasized in the course.

2) A pre-course survey to be completed by the students in the course or lab.

3) A post-course survey to be completed by the student in the course or lab.

Published examples of CURE results in support of science education programs include:

* Denofrio, L.A., Russell, B., Lopatto, D., & Lu, Y. (2007). Linking student interests to science curricula. Science, **318**, 1872-1873.
* Lopatto, D., et al. (2008). Genomics Education Partnership. Science, **322**, 684-685.

In accordance with the US Department of Health & Human Services and the Grinnell Institutional Review Board, permission is required by parents or guardians and assent by participants under the age of 18 years. It is the responsibility of the institution providing the research experience or the institution requesting participation in these assessment tools to follow the requirements established by the HHS.

CURE Survey Consent Form

**BL322 Synthetic Biology with Laboratory Research Consent Form**

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, agree to participate in a study of individuals involved in the Build-a-Genome Network that is being conducted by Dr. Lisa Scheifele of Loyola University Maryland. The Build-a-Genome Network is a consortium of undergraduate institutions offering courses in synthetic biology. The purpose of this study is to evaluate the relative effectiveness of these programs. The project directors hope to use the information obtained from this study to improve their courses so that they can offer unique research-intensive laboratory courses to undergraduate students.

As a participant, I understand that my involvement in the BL322 Synthetic Biology with Lab course at Loyola will be coincident with my participation in this research project. I understand that twice over the course of the semester, I will be asked to take an online survey related to my attitudes, learning gains, and overall research experience. My involvement with the research project will end at the end of the spring 2015 semester.

I understand that there is no risk directly involved with this research and that I am free to withdraw my consent and discontinue participation in this study at any time. My compensation for participation in the study will consist solely of 5 points toward my overall semester course grade. These points will be awarded for completing the survey. The answers that I provide will have no impact on my course grade. A decision to withdraw from the study will not affect the services available to me from Loyola or any other aspects of my course performance beyond the 5 points for survey completion.

I have been informed that any information obtained in this study will be anonymous. Under these conditions, I agree that any information obtained from this research may be used in any way thought best for publication or education, provided that I am in no way identified and my name is not used.

If I have any questions or problems that arise in connection with my participation in this study, I should contact Dr. Lisa Scheifele, the project director at (410) 617-2316 or lzscheifele@loyola.edu.

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature of Participant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature of Investigator \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Witness\* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY THE LOYOLA UNIVERSITY MARYLAND INSTITUTIONAL REVIEW BOARD (PHONE: 410-617-2561).