**S6. CRISPR in Yeast. Data analysis**

**Participants**

Survey participants were all undergraduate students from two consecutive semesters. Participants were 42% male and 58% female, which is representative of the overall class make up. Surveys were made available electronically in the last week of class on the course website, and the class was asked to complete it, but no incentives were offered. Average grades for the course overall were 85% (Fall 2017) and 87% (Spring 2018). Grades for the laboratory portion of the course were averages of 83% and 85% for the Fall 2017 and Spring 2018 semesters, respectively. Average overall grades for survey participants were 87% for both semesters. Four of the six laboratory sections surveyed were instructed by faculty (R. Ulbricht) and the remaining two sections were instructed by graduate assistants, with close supervision by faculty instructor.

Surveys were administered anonymously via Salgsite.org. Likert scale questions were offered with the following options: no gains, little gain, moderate gain, good gain, great gain and not applicable. Separate prompts requested student comments.

**Data analysis**

Likert scale results were analyzed by frequency. Survey questions were divided into five main categories (Table 1S). The frequency of each Likert scale response was recorded from all respondents for each question in the given category (Table 1S), then represented as a percentage of the total answers accumulated. Frequency of responses were similarly reported for individual questions (Figure 3B). One additional question (What gains did you make in A REALISTIC understanding of the scientific process?) was not included in categories, but reported in Figure 3B.

**Table S1. Instrument.**

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| **Question: What gains did you make in…** | **Category** |
| UNDERSTANDING of the relationships between the concepts in this course and other Biomedical Science laboratory courses | Content Knowledge |
| Connecting individual pieces of lab content into a larger experimental picture |
| Connecting key lab ideas with lecture content |
| General lab skills *i.e*., pipetting, making dilutions, electrophoresis | Skills |
| Keeping a lab notebook |
| Finding information relevant to a particular problem in professional journals or elsewhere |
| Writing documents in discipline-appropriate style and format | Communication |
| Comfort level in scientific writing |  |
| Your comfort level in working with complex ideas | Tolerance for Obstacles |
| Design and implementation of CRISPR gene editing | Experimental Design/Data Analysis |
| Analyzing experimental data |  |
| Troubleshooting experimental methods and design |  |