

1. Survey purpose and consent to participate

This survey is administered to all participants in the 2008 iGEM competition. This survey should take about 20 minutes to complete.

The purpose of this survey is: 1) to evaluate the effectiveness of the iGEM program in preparing students to pursue careers in the STEM fields (science, technology, engineering, and math) in general, and synthetic biology in particular, and 2) to improve the iGEM program as necessary.

Please note that your participation in this survey is voluntary. You will not be compensated in any way for participating, other than the knowledge that your feedback will enable us to improve the iGEM program to the benefit all students. This is a confidential survey; any data from this survey that is published in any form will not include personal identifiers.

We appreciate your time and thank you.

2. Individual information

* 1. Your iGEM team:

* 2. What country is your iGEM team from?

* 3. Did you attend the Jamboree this year?

* 4. Gender:

5. Are you a US citizen?

6. If you are a US citizen, please consider providing us with your ethnic background. You may select more than one:

African American

Hispanic/Latin

Other (specify below)

Native American

Asian

Pacific Islander

Caucasian

Other (please specify)

7. Disability status (select any that apply):

Hearing impairment

Mobility impairment

Other (specify below)

Visual impairment

None

Other disability:

* 8. Please check the box that best describes your role

3. Questions for students on iGEM teams

* 9. What was your academic level in spring 2008?

Other (please specify)

* 10. Is this your first experience in a research lab (outside of work done for a class)?

* 11. On average I devoted the following number of hours per week to iGEM:

* 12. To what extent, if any, did you engage in each of the following types of activities during iGEM? (Select "N/A" --not applicable--if the question does not apply).

	Not at all	Small extent	Moderate extent	Great extent	N/A
Reading journal articles	jn	jn	jn	jn	jn
Learning concepts presented in textbooks or other types of books	jn	jn	jn	jn	jn
Reading about iGEM projects at other schools	jn	jn	jn	jn	jn
Attending seminars	jn	jn	jn	jn	jn
Talking with teammates	jn	jn	jn	jn	jn
Talking with team instructors	jn	jn	jn	jn	jn
Talking with PIs or advisers	jn	jn	jn	jn	jn
Talking with experts/faculty members who are not part of the team	jn	jn	jn	jn	jn
Documenting work on the wiki	jn	jn	jn	jn	jn
Preparing for the Jamboree	jn	jn	jn	jn	jn

* 13. Please check the lab skills you learned or strengthened/improved as a result of iGEM.

	learned prior to iGEM	learned as a result of iGEM	never learned
Sequence analysis	jn	jn	jn
PCR	jn	jn	jn
Cloning	jn	jn	jn
Culturing prokaryotic cells	jn	jn	jn
Culturing eukaryotic cells	jn	jn	jn
Literature searches	jn	jn	jn
Critically reading scientific literature	jn	jn	jn
Keeping a lab notebook	jn	jn	jn
Recording data on the wiki	jn	jn	jn

* 14. Our team's summer work on the project lasted the following number of weeks:

* 15. Some or all of our team continued to work on the project during the academic year in preparation for the Jamboree:

* 16. To what extent, if any, do you feel that iGEM developed your skills in the following areas? (Select "N/A" --not applicable--if the question does not apply).

	not at all	small extent	moderate extent	great extent	N/A
I learned how to identify relevant questions for inquiry	jn	jn	jn	jn	jn
I gained greater understanding of how to plan experiments	jn	jn	jn	jn	jn
I gained greater confidence in interpreting research results	jn	jn	jn	jn	jn
I became more proficient at connecting new data to old	jn	jn	jn	jn	jn
I was better able to organize information	jn	jn	jn	jn	jn
I learned how to integrate relevant published data	jn	jn	jn	jn	jn
I became more proficient at communicating my ideas to team members	jn	jn	jn	jn	jn

17. Please rate the importance of the following factors in your team's success (select "N/A" --not applicable--if the question does not apply, e.g. if you're on a computational tools team)

	1 = held back our team	2	3 = had no impact on the success or failures we experienced	4	5 = was critical to our team's success	N/A
Quality of the physical DNA parts	jn	jn	jn	jn	jn	jn
Quality of the characterization for needed DNA parts	jn	jn	jn	jn	jn	jn
Ability to assemble parts physically	jn	jn	jn	jn	jn	jn
Ability to assemble parts functionally	jn	jn	jn	jn	jn	jn
Safety considerations for our project	jn	jn	jn	jn	jn	jn
Ability to reuse components from other projects	jn	jn	jn	jn	jn	jn

* 18. What additional materials would be helpful for your team at the start of the summer? (Select "N/A" --not applicable--if the question does not apply).

	1 = our team had enough of these	2	3 = might help	4	5 = very much needed	N/A
more lab protocols	jn	jn	jn	jn	jn	jn
more lab safety training	jn	jn	jn	jn	jn	jn
more lab notebook keeping	jn	jn	jn	jn	jn	jn
more review articles/videos about synthetic biology	jn	jn	jn	jn	jn	jn
more review articles/videos about the Registry of Standard Biological Parts	jn	jn	jn	jn	jn	jn
more review articles/videos about previous iGEM competitions	jn	jn	jn	jn	jn	jn
more team building exercises and leadership training	jn	jn	jn	jn	jn	jn
more methods for searching patent and government regulations	jn	jn	jn	jn	jn	jn
more strategies to engineer safety devices into your project	jn	jn	jn	jn	jn	jn

* 19. Please rate how well the following phrases describe the kinds of thinking you experienced during iGEM

	I never did this	Almost never	Sometimes	Regularly	Frequently
Learning new concepts	jn	jn	jn	jn	jn
Explaining concepts to others	jn	jn	jn	jn	jn
Using analogies to understand a concept/process	jn	jn	jn	jn	jn
Thinking about new ways to look at a design/lab problem	jn	jn	jn	jn	jn
Integrating information from different books or articles	jn	jn	jn	jn	jn

* 20. Did the iGEM experience affect your interest in biological engineering?

* 21. Did the iGEM experience affect your interest in lab research?

* 22. Did the iGEM experience change your thinking about your career path?

23. Please provide an incident from your iGEM experience that was critical in your development

* 24. Please rate the importance of the following aspects associated with the November Jamboree at MIT. (Select "N/A" --not applicable--if the question does not apply).

	not important at all	somewhat important	important	critically important	N/A
Opportunity to present our team's work to experts in the field	jñ	jñ	jñ	jñ	jñ
Opportunity to present our team's work to other teams	jñ	jñ	jñ	jñ	jñ
Opportunity to present our team's work at a prestigious institute	jñ	jñ	jñ	jñ	jñ
Opportunity to win a prize	jñ	jñ	jñ	jñ	jñ
Opportunity to learn about other team's projects	jñ	jñ	jñ	jñ	jñ
Opportunity to interact casually with experts in the field	jñ	jñ	jñ	jñ	jñ
Opportunity to interact casually with students from other iGEM teams	jñ	jñ	jñ	jñ	jñ

25. To what extent did the Jamboree meet your expectations?

26. Do you have any suggestions for strengthening/improving the Jamboree (e.g. activities, judging, presentation style, etc.)?

27. How can we improve the iGEM experience overall?

* 28. How would you rate your iGEM experience overall?

poor

fair

good

very good

excellent

Comments

4. Questions for team advisers, faculty sponsors

* 29. What was your academic level in spring 2008?

Other (please specify)

* 30. Counting this summer, how many times have you participated in iGEM?

this is my first year

2

3

4 or more

31. Please rate your experience with the Parts distribution:

poor

fair

good

very good

excellent

clarify or comment if you would like

32. Please tell us how thoroughly you taught your team the following: (leave blank if these items are not applicable to your team, e.g. if you are running a computational tools team)

	1 = did not teach this	2	3	4	5 = extensively taught this
basic science	jn	jn	jn	jn	jn
basic computer skills	jn	jn	jn	jn	jn
basic engineering principles	jn	jn	jn	jn	jn
lab protocols	jn	jn	jn	jn	jn
lab safety	jn	jn	jn	jn	jn
lab notebook keeping	jn	jn	jn	jn	jn
how to read relevant articles	jn	jn	jn	jn	jn
how to wiki	jn	jn	jn	jn	jn
how to navigate the Registry of Standard Biological Parts	jn	jn	jn	jn	jn
content from previous iGEM competitions	jn	jn	jn	jn	jn
team work and leadership strategies	jn	jn	jn	jn	jn
how to search for patent and government information	jn	jn	jn	jn	jn
engineering safety devices and readouts	jn	jn	jn	jn	jn

33. What teaching resources or content do you wish you had?

34. What percent of your team's plan was realized?

clarify or comment if you would like

35. To what extent did the Jamboree meet your expectations?

36. Do you have any suggestions for strengthening/improving the Jamboree (e.g. activities, judging, presentation style, etc.)?

37. Any comment you'd like to add:

* 38. How would you rate your iGEM experience overall?

poor

fair

good

very good

excellent

Comments

5. Survey completion

You have completed the survey! Thank you for your time and feedback. Participation in this survey is voluntary. Data taken from this survey will not include any personal identifiers. Your name and contact information will be kept confidential. If you have questions, please contact Kate Spohr, SynBERC Education Outreach Manager, at kspohr@berkeley.edu.

39. Comments about this survey are welcome.