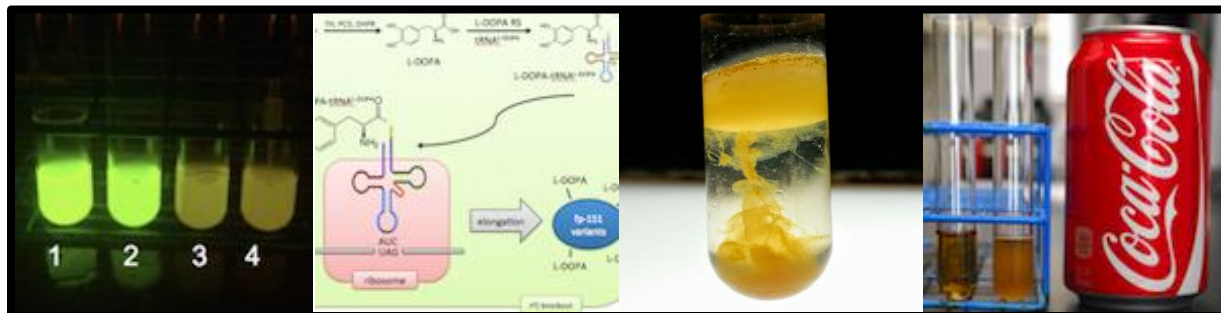


## The 2018 UT Austin iGEM team: Research Opportunity in Synthetic Biology



The UT Austin iGEM team is composed of undergraduate students with an interest in synthetic biology. This emerging discipline integrates genetic engineering, biochemistry, molecular biology, microbiology, computer science, and many other fields to reprogram living cells to address societal challenges.

**What is iGEM?** The “International Genetically Engineered Machine” (iGEM) competition is an annual contest for teams of undergraduate students engaging in synthetic biology research. [iGEM Main Page](#)

Each year the team develops one or more *student-initiated* research projects. Past iGEM projects have involved creating caffeine-addicted bacteria for bioremediation, improving technology for expanding the genetic code with novel amino acids, and engineering the community of microbes in the Kombucha SCOBY. **If you are interested in graduate school or a career in bioengineering, iGEM can be a very valuable in-depth research experience.** Past projects have led to peer-reviewed publications for iGEM team members in *ACS Synthetic Biology* and the *Journal of Biological Engineering*. Multiple iGEM alumni have been awarded NSF Graduate Research Fellowships and many have been accepted to prestigious PhD programs such as Yale, Caltech, Rice, University of Oregon, University of Washington, and others.

During the spring and summer, the team works on their project(s) under the guidance of Professors Jeffrey Barrick and Dennis Mishler and mentorship of several graduate student researchers. In the fall, select team members travel to the iGEM Jamboree in Boston to present the team’s research to an audience of hundreds of other iGEM teams and researchers from around the world!

### Expectations for 2018

**We are looking for students who are willing to make a multi-year commitment to the iGEM team.** While great research progress can be made in one year, we have found that most projects take two years to move from a new idea to completion. **This is a capstone experience; the goal for our team is for the research to result in a peer-reviewed publication in a scientific journal for members of the iGEM team who fully participate in conceiving, carrying out, and writing up a research project.**

Applications are due **October 13<sup>th</sup>, 2017.**

Promising applicants will be interviewed between October 16<sup>th</sup> and 20<sup>th</sup>, and decisions will be announced by **October 23<sup>rd</sup>, 2017.**

Our first meeting with these new team members will occur that week so that the new 2018 team members can interact and learn from the 2017 team members preparing to go to Boston.

## There are two ways to join the team

**1. If you are a freshman**, you must be enrolled in the FRI stream “Microbe Hackers” in spring 2018. Students who excel during the Spring semester of the stream and attend additional iGEM meetings as well as stay with us during the summer can be iGEM 2018 team members. If you are not placed in the Microbe Hackers stream during stream sort, you should contact Professor Mishler immediately.

**2. If you are not a freshman**, you must apply in Fall 2017 for one of a limited number of spots to join the team. **We encourage FRI students “graduating” from other streams to apply if they are interested in pursuing upper-level synthetic biology research**, but we will also consider applicants who have no previous research experience. You need to submit a CV and a 2-page personal statement, which should include **why you are interested in synthetic biology** and **an idea about a potential research project** that could be started by the 2018 iGEM team. Be sure to reference relevant papers or past iGEM projects, if applicable. Successful applicants will highlight their enthusiasm for synthetic biology and research while also demonstrating that they are capable of creative and independent scholarship.

**What time commitments are required?** You will be expected to:

1. Attend a weekly (1-2 hr) team meeting that will introduce synthetic biology and facilitate project brainstorming. These will begin in **mid Fall 2017** (~5 hrs/wk total commitment).
2. Attend a weekly lab time (4+ hr block) starting **Spring 2018** to learn all the requisite techniques. More advanced students can use this time to begin working on their project (~10 hrs/wk total commitment).
3. Conduct research with the team during **Summer 2018** (20+ hrs/week).
4. Help the team finish its project prior to the annual conference during **Fall 2018**.

**If you have questions, please contact Professor Mishler at [dennis.mishler@utexas.edu](mailto:dennis.mishler@utexas.edu). Applications should also be sent to this e-mail address.**

For more information, please visit us at our UT Austin website: <http://barricklab.org/igem>

For previous UT Austin iGEM team pages see below. The 2017 team page is currently being built.

[http://2012.igem.org/Team:Austin\\_Texas](http://2012.igem.org/Team:Austin_Texas)

[http://2014.igem.org/Team:Austin\\_Texas](http://2014.igem.org/Team:Austin_Texas)

[http://2015.igem.org/Team:Austin\\_UTexas](http://2015.igem.org/Team:Austin_UTexas)

[http://2016.igem.org/Team:Austin\\_UTexas](http://2016.igem.org/Team:Austin_UTexas)



*iGEM team at the Hynes Convention Center in Boston during the 2015 Jamboree*