

## HISTORY

STEM Pathways is the outreach program of the Living Computing Project which is sponsored by National Science Foundation's Expeditions in Computing Program (Awards #1522074 / 1521925 / 1521759). Partner universities and businesses include Boston University, Massachusetts Institute of Technology, MIT Lincoln Labs, BBN Technologies, and TEGrant Consulting. Dr. Douglas Densmore, BU ECE Asst Professor, is the Lead PI for the Living Computing Project.

## MISSION

STEM Pathways will inspire, mentor, train, and empower current and future generations of students, with a focus on underrepresented groups, to obtain academic and research experiences in the growing field of Synthetic Biology; pursue rewarding careers in computer and biomedical engineering; and influence innovations and impacts in STEM, community education, and outreach.

## IMPACT OF OUTREACH

*Outreach is the extent or length of reaching out; an organization's involvement with or activity in the community, especially in the context of social welfare.*

STEM Pathways is the Living Computing Project Outreach Tool to:

- Increase access
- Remove assumed barriers to participation and expand the students' willingness to engage
- Understand the target audience - the underrepresented student
- Educate, inspire, and inform the targeted audience
- Establish a meaningful community and support network for industry partners, higher education, K12, programs, and resources

## CULTIVATION OF THE UNDERGRADUATE

With the goal of fulfilling the mission, undergraduates will develop through the completion of six (6) modules:

1. Bachelor's Degree
2. Research Experiences could include:
  - Living Computing Project
  - CIDAR (Broad)
  - Biological Design Center
  - International Genetically Engineered Machine (iGEM)
3. Life, Career, & Professional Development
4. Teaching Experience
5. Work-based Learning Experiences
6. Student Dashboard



## ENGAGEMENT

For BU and MIT Undergraduates:  
Connect online to apply to be a part of the next STEM Pathways Cohort:

- Spring - deadline January 31
- Fall - deadline September 30

Other participants like high school students, industry partners, or STEM organizations are welcome to connect with STEM Pathways on an ongoing basis. Information will be posted on the website and in newsletters.

## STEM PATHWAYS EVENTS

- High School Dinner & Dialogue (Spring & Fall)
- International Genetically Engineered Machine (iGEM)
- Mini-Jamboree (Winter/Spring)
- STEM Pathways Lectures on local university and college campuses
- Judging of regional Science Fair Projects
- LCP Alumni Shadow Day
- Mentor Connection
- Industry-sponsored Senior Project
- Work-based Learning Experiences

## STEM PATHWAYS OUTREACH ECOSYSTEM

The undergraduate student is the primary focus for the STEM Pathways outreach ecosystem, and key participants also include high school students and graduate students. The impact of all roles will be clarified as ecosystem is designed, piloted, implemented and sustained.

