**Quantitative Biology Undergraduate Summer Research Program**

**Application Deadline: January 26, 2024**

**Program Dates\*: June 17, 2024 – August 9, 2024**

The Quantitative Biology Undergraduate Summer Research Program offers summer research fellowships to undergraduates. This program allows undergraduate students majoring in biology, mathematics, physics, statistics, computer science, data science, or related fields to participate in hands-on laboratory or computational research that applies mathematical concepts and methodology to understanding mechanisms in biology. If selected, leadership will match you with a faculty mentor or NITMB Fellow from either Northwestern University or the University of Chicago. [A list of faculty and fellow mentors is available here.](https://www.nitmb.org/faculty)

Participants will be encouraged to attend activities such as, weekly workshops covering communication, design, ethics, teamwork, and entrepreneurship; a day trip to a local museum or Argonne National Laboratory; a presentation on applying to graduate school; and other cohort outings.

This program is supported by the Northwestern Quantitative Biology REU and the National Institute for Theory and Mathematics in Biology. Workshops and activities are held in conjunction, all students receive a stipend, housing, and a meal plan.

**Stipend**

Participants in the program receive a taxable stipend of approximately $4,500.

**Eligibility**  
To be considered for this program, applicants must currently be freshmen, sophomores, or juniors with demonstrated interests in biology, mathematics, physics, statistics, computer science, data science, and related fields. Applicants will be prioritized based on their demonstrated interest to learn and/or research at the interface of mathematics and biology.

**Expectations**

* Participants are expected to spend 100% of their summer break working in a participating\* faculty member’s research group for 8-weeks between end of June 17 – August 9, 2024. (Dates can be flexible to accommodate your university/college’s spring term/quarter end date and fall term/quarter start date. Housing move-in is open on June 16.)
* Participants must agree not to take on any other paid work or research grants for any part of the eight-week period, and must not be enrolled in courses for any part of that period.
* Participants must give a 15-minute presentation with slides or present a poster at the end of the program to the faculty, investigators, scholars and personnel.

**Application Materials**  
To apply, students are required to submit the following materials via email to **programs@nitmb.org** at by **January 26, 2024**.

* A completed **Application Form**
* Your college/university **Transcripts** (unofficial transcripts are accepted)
* **Resume**
* **Essay Questions**
* A **Letter of Recommendation** from a faculty instructor/advisor/mentor

**For additional information about this program, please contact programs@nitmb.org**

**Application Form**

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| **Applicant Information** | | | | |
| Name: | | | | |
| Date of birth: | | Gender:  Male  Female  Non-binary    Other        Prefer not to say | | |
| There are two funding sources for this undergraduate research program. One of them, a NSF REU grant, can only support US citizens or permanent residents. Are you a citizen, national, or permanent resident of the United States or its territories and possessions?  If you are not, does your visa permit you to work in the United States? If yes, please provide your country of citizenship and your visa type here: | | | | |
| Permanent Address: | | | | Email: |
| City: | State: | | ZIP Code: | |
| Telephone: | | | | |

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| **IDENTITY & DEMOGRAPHC INFORMATION** | | | | | | |
| This is self-reporting section. Completing this section is not required for your application. | | | | | | |
| Race | American Indian or Alaska Native | | | | Asian | Black or African American |
| Native Pacific Islander | | | | White | Other (specify): |
| Prefer not to say | | | | | |
| Ethnicity | Hispanic or Latinx | | NOT Hispanic or Latinx | | | Other (specify): |
| Prefer not to say | | | | | |
| Do you identify as | | LQBTQAI+ | | NOT LQBTQAI+ | | Prefer not to say |
| Are you a first-generation college student? | | Yes | | No | | Prefer not to say |
| If you have a disability, you are welcome to self-report in this section. Should you be selected we will make accommodates in our program and changes to our learning and research environments to meet your needs. | | | | | | |

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| **ACADEMIC Information** | | | | | | |
| College/University: | | | | | | |
| Major(s): | | | | | | |
| Current Year: | Expected Graduation Date: | | | GPA: | Northwestern Student ID Number (if applicable): | |
| Spring academic term end date:  Fall academic term start date: | | | | | | |
| Previous colleges attended (if applicable): | | | | | | |
| List any societies, fraternities/sororities, organizations, etc. you have been involved with during college/university: | | | | | | |
| Please list any awards you have received while attending college/university: | | | | | | |
| Do you have any programming experience (e.g. MATLAB, R, Python, etc.)? If yes, please list coding language/programs and level of familiarity (beginner, intermediate, advanced, expert). | | | | | | |
| Are you considering an additional, advanced degree after you complete your Bachelor’s degree?  For each of the following advanced degrees, rate your interest on a scale of 1 to 5 where 1 is extremely interested and 5 is not at all interested: | | | | | | |
| Business (MBA)  Medicine (MD, DO)  Pharmacy (PharmD)  Dentistry (DDS) | | | Engineering (MS/PhD)  Science (MS/PhD)  Law (JD)  Other – please list | | | |
| Do you plan on applying to graduate school at Northwestern? | | | | | | |
| If not planning on applying to graduate school, what are your plans post-graduation (e.g.  industry, consulting, etc.)? | | | | | | |
| How did you find out about this program? Check all that apply: | | | | | | |
| Flyer  Email  Website | | Twitter  Friend  Instructor/mentor/advisor | | | | Other |

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| **ResearCh APPROACH PREFERENCES** | | |
| Mathematical/ Computational/ Theory | Laboratory/ Experimental | Mixed |

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| **Research Interests** (Select up to FIVE) | | | |
| Differential Equations | Machine Learning | Biophysics | Ecology and Evolutionary Biology |
| Simulation | Network Models | Cell Biology | Genetics |
| Stochastic Processes | Dynamical Systems | Developmental Biology | Neuroscience |
| Data Science |  |  | Structural Biology |

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| **ESSAY QUESTIONS** |

1. Why are you interested in quantitative biology research and this program in particular? Why should you be chosen for this program? Why are you interested in joining the program this year? (200-500 words)

2. What is your current career goal or aspiration upon completion of your academic studies? Would you like to go into industry, business, medicine, government, or something else? How will this summer program impact or support this goal? (200-500 words)

3. What challenges have you overcome to get to where you are now? How have these challenges impacted you as a person, scholar or researcher? (200-500 words)

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| **AGREEMENT** | |
| I attest that I meet the program requirements listed on this application, and I have disclosed all of the information this form is requesting of me. If accepted to this program, **I agree to present a 15-minute slide presentation or a poster presentation at the end of the summer program and I agree not to take on any other paid work or research grants**. In submitting this application, I understand that failure to disclose any requested information and/or failure to comply with the above terms and conditions may result in disqualification of and/or termination from the program. | |
| Signature of applicant: | Date: |

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