

# COMPLEX BIOSYSTEMS (PHD)

The program in Complex Biosystems is directed toward students interested in applying quantitative statistical and computational approaches to multiple areas of biology including human health, medical biochemistry, microbial metagenomics, ecology, evolution, and plant systems.

## Description

The first year of this interdisciplinary program offers students two semesters of laboratory rotations on diverse topics and one semester of laboratory teaching experience. In the first year of study, the cohort of incoming students considers "big questions" in multiple areas of life sciences, and learns current technical and analytical approaches to address them.

In addition to various types of scientific communication skills and ethical approaches to research, students acquire a foundation in population, cellular and molecular life sciences; statistics; bioinformatics; and computational analysis. This unique graduate program is tailored to the student's specific desired outcomes, offering a flexible curriculum and broad interdisciplinary training.

## Specializations

- Computational Organismal Biology, Ecology, and Evolution
- Integrative Plant Biology
- Microbial Interactions
- Pathobiology and Biomedical Science
- Systems Analysis

## Program-Related Information

### Program Director

Jennifer Clarke  
402-472-2512  
jclarke3@unl.edu

### Support Staff

Stacey Herceg  
402-472-7790  
sherceg2@unl.edu

## Program Website

<https://bigdata.unl.edu/>

## Applying for Admission

### Standard requirements for all graduate programs

- Application for Admission with \$50 non-refundable application fee (<https://graduate.unl.edu/admissions/requirements/#appfee>).
- Transcripts (<https://graduate.unl.edu/admissions/requirements/#transcripts>) (unofficial): Uploaded as part of application form.

If International: Uploads must include all college- or university-level transcripts or mark sheets (records of courses and marks earned), with certificates, diplomas, and degrees plus certified English translations.

After admission: Official documents are required from all students who are admitted and enroll. Photocopies of certified records are not acceptable. International students

enrolled in other U.S. institutions may have certified copies of all foreign records sent directly to the Office of Graduate Studies by their current school's registrar office.

- If applicant's native language is not English, verification of English proficiency (<https://graduate.unl.edu/admissions/english-proficiency/>) is required.

When sending TOEFL scores, our institution code is 6877 and a department code is not needed.

- If applicant is not a US citizen and expects an F or J visa: financial information (<https://graduate.unl.edu/prospective/international/financial/>).
- Applicants must also fulfill any additional requirements the department specifies at the time of application.

### Additional requirements specific to this program

- GRE (optional)
- Resume/CV: Be sure to include prior educational, research, teaching, internship/work, and volunteer experiences. Applicants are also encouraged to include information about awards, publications, and presentations, and highlight any leadership activities.
- Personal Statement: In two pages or less, include a description of your (1) motivation for pursuing a graduate degree including what you hope to achieve with your degree, (2) relevant experiences in BOTH the life and data sciences (research, teaching, internships/works, volunteering) that have prepared you for this program, (3) persistence and/or ability to overcome obstacles, (4) leadership and communication skills, and (5) career/professional goals. Also tell us specific faculty members you are interested in working with and why.
- Three letters of recommendation: These should specifically describe what training and/or experiences have prepared you for graduate research at the intersection of the life and data sciences.

### Admission Application Deadlines

Fall Admission: December 15 for priority consideration, applications are welcome until January 15.

Spring admission is available only to current UNL students or with program permission.

## Requirements

Hours required: 90