

## STRATEGIC PLAN 2020 SCHOOL OF BIOLOGICAL SCIENCES

### MISSION

The School of Biological Sciences advances the growing body of biological knowledge through synergistic programs in research, teaching, and service. Our faculty conducts basic and applied research to educate, mentor, and train successive generations of scientists and to command national and international recognition. Our active instruction in classrooms, laboratories, and field sites promotes a sophisticated understanding of biological principles and methodologies and prepares students for success in their future careers. Our professional service and outreach advance the biological sciences, disseminating knowledge widely, and applying it to relevant societal issues.

### VALUES

Above all, the School of Biological Sciences is committed to **scholarship**: original research that advances our knowledge, our teaching, our service, and the connections we build between them. We value the **diversity** of questions, conceptual approaches, methods, and subject areas contained within the discipline of biology, and embodied in our common school.

Research is intrinsically important to our discipline. Biology is a rapidly advancing science, evolving with the advent of new technology, concepts, and information. Through **collaborative** research, faculty, postdoctoral fellows, graduate, and undergraduate students develop new knowledge in key areas of biology. Because of the importance of research, we promote and facilitate the development of excellent, vigorous programs by our faculty. We also recognize that the quality of our teaching is linked to the quality of faculty research programs, and thus is essential for our teaching mission.

In keeping with the Illinois State University mission, we provide undergraduates with a small-college atmosphere with large-university opportunities. Students enjoy easy access to faculty, close mentoring, **individualized attention**, and classes that are taught primarily by tenure-track or tenured faculty. At the same time, students have the opportunity to participate in nationally and internationally recognized research programs using cutting-edge facilities, technologies, and approaches. We provide students with a strong foundation of biological knowledge and essential research skills that prepare them for further study and active participation in biological research, teaching, medicine, environmental science, industry, and other professions.

Both in and out of the classroom, we strive to foster collegiality and mutual **respect** with open discussions in an **inclusive environment**. We are invested in shared governance and transparent administration.

## VISION

The School of Biological Sciences will continue to build its international reputation for research excellence across the life sciences. We will provide Illinois' best broad-based B.S., M.S., and Ph.D. degree programs in Biological Sciences, while also offering outstanding specialized degree programs representing important subdisciplines within the Biological Sciences. We will ensure our long-term success by attracting and retaining the best faculty while pursuing enrichment of our program with **diversity** and **inclusion**, attracting talented students and researchers, and enhancing key elements of our infrastructure: facilities, technology, financial health, and the intellectual environment.

## STRATEGIC DIRECTIONS

The strategic directions of the School reinforce those of the College's Strategic Plan and those of **Educate • Connect • Elevate**, and include the following:

- **Enhance strength and stability** of our programs

### **Undergraduate program:**

- provide students with the best possible experience through optimal student advising and mentoring by faculty
- strengthen our tradition as a major source of highly qualified high school biology teachers in Illinois
- maintain strong enrollments while encouraging student success by balancing student enrollment with the School's instructional capacity

### **Graduate program:**

- recruit high quality students
- provide greater financial support for our graduate students (e.g., increase summer fellowship opportunities, increase months under contract)
  - in the longer-term, provide all graduate students with a 12-month contract
- provide dedicated space to enhance student-student interactions across laboratories
  - in the longer-term, provide dedicated office space for graduate students
- improve our graduate program through external funding opportunities for students (e.g., GRFP program)

### **Research program:**

- strengthen the research culture at ISU by continuing to promote high-quality scholarship and securing extramural funding
- work with the relevant units on campus to improve the infrastructure and administrative support for grant submissions and management
- increase the number of postdoctoral fellows

- **Foster innovation** and enhance the School's reputation in scholarship, education, and professional service

**Undergraduate program:**

- provide state-of-the-art facilities in support of educational activities to enhance the learning experience for our students
  - replacement of obsolete teaching equipment and renovation of facilities
- increase investment in cross-disciplinary programs to better prepare students for post-graduation opportunities

**Graduate program:**

- provide state-of-the-art facilities in support of research activities to enhance the training environment for our students
  - replacement of obsolete research equipment and renovation of facilities
- encourage students to seek training opportunities in other units at ISU or outside of ISU to bring new techniques and ideas to our program

**Research program:**

- target a subset of new hires towards a cross-disciplinary focus with the explicit goal of breaking down traditional disciplinary boundaries
- encourage faculty to forge partnerships with other units at ISU or non-university organizations to foster new research opportunities
- increase support for publication costs to allow faculty to publish in open access journals

- **Nurture diversity and inclusion**

**Undergraduate program:**

- recruit and retain students that reflect the diversity of the Illinois population
- recruit and retain a diverse faculty that includes increased representation of women and underrepresented minorities to serve as role models for our undergraduates
- increase the use of evidence-based teaching practices that support diversity, inclusion, and persistence in STEM
  - increase the availability of tutoring for our majors through dedicated GA lines

**Graduate program:**

- engage in targeted recruitment of a diverse pool of high-quality applicants
- work with University Advancement to secure dedicated funds to support recruitment and retention of underrepresented minorities

**Research program:**

- recruit and retain a diverse faculty that includes increased representation of

- women and underrepresented minorities
- encourage faculty participation in groups that support underrepresented student populations (e.g., STEM Alliance and SACNAS)

- **Enrich engagement**

- **Undergraduate program:**

- increase the percentage of undergraduates participating in research (BSC 290/299) and Senior Thesis (BSC 303) opportunities
  - assess the efficacy of these research opportunities on student retention and success in STEM disciplines
- promote student opportunities to present their independent research findings at external venues
  - work with University Advancement to secure dedicated funds to send students to scientific meetings
- encourage student participation in Phi Sigma, BSSA, SACNAS, and STEM Alliance as appropriate
- increase the success of our students applying for external research opportunities (e.g., REU programs)
- offer more opportunities for students to participate in Honors sections of courses

- **Graduate program:**

- increase the profile of the School seminar series to allow for greater networking opportunities for our students
  - continuing to use Zoom (or a similar platform) as a venue for some seminars, enabling increased participation of speakers from greater distances, including non-US scientists
- continue to support graduate student organizations (e.g., Phi Sigma and SACNAS) that perform public outreach
- encourage student participation in University outreach programs (3 MT or similar).

- **Research program:**

- encourage and reward faculty that engage in impactful and visible public outreach activities
- work with the relevant units on campus to support dissemination of our research findings to the public