Welcome to Arizona State University’s Master of Science program in Biological Data Science (BDS). We have designed this program to give our students a strong, inquiry-based foundation in the key areas needed in data science and its biological applications. Our program emphasizes real-world training at the interface of the natural and mathematical sciences. Students learn to manipulate "Big Data", including the generation and analysis of data using statistical and computational toolsets. Students will use their analytical skills in ecological, environmental, toxicological and other biological applications. The program incorporates multiple levels of experiential learning to ensure students gain critical-thinking skills on top of core competencies. Students will be ready to enter one of the fastest-growing job markets, work with consulting firms and government agencies as well as non-governmental organizations, or go on to seek advanced professional or graduate degrees.

This is a two-year full-time program that requires 32 credit hours. During the first year, the cohort will take 2 biology classes, 2 statistics classes, 1 class in each of math, databases and programming, laboratory experience, and manuscript development. The second year will focus on electives further exploring one of the foundation areas and the completion of a thesis or applied project under the supervision of an interdisciplinary team of 2-3 faculty (the thesis is highly recommended for students wishing to seek admission to a doctoral program). We also encourage our students to attend major conferences in their desired areas to present research findings.

Arizona State University comprises sixteen colleges and schools spread across four campuses in the Phoenix, Arizona metropolitan area. The MS program in Biological Data Science is offered by the School of Mathematical and Natural Sciences, which is part of the New College of Interdisciplinary Arts and Sciences, and is housed on ASU’s West Campus in Phoenix, AZ.

If you have any questions about our program, feel free to contact Dr. Erika Camacho, the Program Director, at erika.camacho@asu.edu.
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Admissions

Admission to the MS program is only offered for the Fall semester. The program uses a rolling admission deadline and reviews applications as they are received. Applications are accepted online through the ASU Graduate College admissions system. The application fee is $70.

Applicants must fulfill the requirements of both the Graduate College and the New College of Interdisciplinary Arts and Sciences. Please visit ASU Degree Search for details on application requirements and admission deadlines.

Tuition Costs and Financial Aid

Tuition
Tuition is set by ASU and the Arizona Board of Regents every year. You can see the general tuition and fees chart by clicking here, or calculate your specific tuition costs by visiting ASU's tuition calculator.

Financial Aid
Financial aid is available through several different sources:

1) **Graduate College Fellowship**: Each year a small number of $10,000 fellowships may be awarded to first-year students upon their admission. Applicants who have a FAFSA on file and are automatically considered for this scholarship and do not need to apply for it. Students who receive the scholarships are notified before the beginning of their first semester.

2) **Traditional Financial Aid** (Loans & Grants): For information on general financial aid products, please visit ASU’s Financial Aid office (https://students.asu.edu/financialaid)

3) **Course Assistant Positions**: The availability of these positions may vary each academic year. These positions typically assist with undergraduate courses offered in SMNS. Courses are typically a full semester (15 weeks at 8 hours per week), and CAs are paid a flat $2,000 stipend for each course. Although these positions are not guaranteed, most students who desire to serve as a CA have done so in one or more classes per year.

4) **Research Assistant Funding**: On occasion, faculty may have funds that could be used to hire masters-level students to be research workers. These would typically be advanced (second-year) students who are involved in grant-funded projects.
Curriculum and Graduation Requirements

The training students receive spans statistics, computing, mathematics, and biology. It is expected that the culminating experiences will be interdisciplinary involving biology and at least one of the other areas, and thus students should choose a lead advisor and committee members with expertise that reflect the interdisciplinarity of the thesis or project.

32 credit hours including the required applied project course (ACO 593, BIO 593 or MAT 593), or 32 credit hours and a thesis

General Curriculum

**Required Core (12 credit hours)**
- ACO 501 Database Systems and Problem Solving in Python (3)
- BIO 614 Biometry (4)
- LSC 519 Applied Learning Lab (1)
- LSC 547 Wet Laboratory Experience (1)
- STP 560 Experimental Statistics in Biology (3)

**Other Requirements (9 credit hours)**
- LSC 555 Integrative Biology I (3)
- LSC 556 Integrative Biology II (3)
- LSC 562 Applied Mathematics Techniques in Biology (3)

**Electives or Research (5 credit hours)**

**Culminating Experience (6 credit hours)**
- ACO 593 Applied Project (6)
- BIO 593 Applied Project (6)
- MAT 593 Applied Project (6)
- ACO 599 Thesis (6)
- BIO 599 Thesis (6)
- MAT 599 Thesis (6)

Additional Curriculum Information

Other requirement, elective and research coursework may be substituted with approval of the academic unit. Students should see the academic unit for the approved electives and research course list.

Students choose one culminating experience option based on their emphasis area in biological data science.
Program of Study

In a graduate program, the specific courses that will count toward your degree must be approved by your graduate advisor and the Program Director. The list of these courses is called a Plan or Program of Study (POS). The POS is filed online through the myASU interactive Program/Plan of Study (iPOS). You must complete this document by the end of your first year of the program. This means that you should have a conversation with your advisor about what courses you will take during your second year. We can always change the iPOS if your plans change or a new course appears that you'd rather take. If you need help with filing your iPOS, contact your faculty advisor, ncgradadvising@asu.edu, and/or download the iPOS instruction manual. After you submit your iPOS, your faculty advisor will approve it. You can track the approval process online through your MyASU account.

When we evaluate your iPOS, we will look to see that you have met the program requirements described above. In addition, we will check to make sure that you are following the additional rules below:

1. No more than 6 credits of 400-level work may be applied toward the master’s degree
2. No more than 6 credits from non-SMNS faculty may count toward your degree (including transfer credits)
   - Note that requests to take outside courses are evaluated on a case-by-case basis based on student/faculty research interests. Just because one student is allowed to take a course does not mean that all students may take it.
3. You must maintain a 3.0 GPA to progress in the program and graduate
4. You must be enrolled in at least one credit during the semester in which you defend your thesis/project

All courses that appear on your iPOS are applied toward your MS degree and are ineligible to be applied toward a future graduate degree. As such, we recommend listing only the 32 credits required for the MS degree on your iPOS. Any additional / excess credits you have earned could then theoretically be used toward a different degree program at ASU.

Master’s Thesis

A Master’s Thesis is a written report of an empirical research project. The content and scope of your thesis research is to be approved by your thesis director (advisor). Your final thesis document must then be defended before your advisor and two additional faculty members. While masters-level projects are not expected to be fully independent of an advisor’s research, it is expected that each student will have made a major substantive contribution to all aspects of the thesis research, and will be the sole author of the thesis document submitted to the committee for defense.

The general format of the thesis document is set by ASU and is somewhat different than a typical research report or paper. Thesis documents must be reviewed and approved by the university prior to final submission. See https://graduate.asu.edu/current-students/completing-your-degree/formatting-your-thesis-or-dissertation for formatting details and a template. Aside from the requirements set forth in the format manual, the thesis document should use APA style and generally include an introduction, method section, results section, and discussion. It is to your benefit to work closely with your advisor while writing the thesis document.

Once the thesis document is complete, it must be “defended” before a committee consisting of your advisor and two additional faculty members. You may choose the other two members of your committee (with
approval of your advisor). It is best to approach prospective committee members early in the process. A thesis defense is typically 1-2 hours long and involves a presentation followed by questioning by the thesis committee (the specific format for the defense is up to the thesis director). Thesis defenses are required to be open to the public and the dates/times/locations of defenses are listed on the ASU website. At the conclusion of the defense, students will be asked to leave the room while the thesis committee deliberates. The committee is given the option to pass the student, fail the student, or pass the student pending some revisions to the thesis document.

Members of the Thesis committee should be identified by the end of the first year in the program and approved by submitting an iPOS. Thesis projects are typically started in the Fall semester of a student’s second year in the MS program. Projects must be defended several weeks before the end of the student’s final semester. The timeline for completing and defending a Master’s Thesis project is dictated by ASU’s Graduate College office (see https://graduate.asu.edu/current-students/policies-forms-and-deadlines/graduation-deadlines for specific deadlines).

**Failure to meet these deadlines will delay your graduation.**
Further details about ASU’s thesis rules can be found at https://graduate.asu.edu/current-students/policies-forms-and-deadlines/policy-manuals

**Applied Project**
An “Applied Project” is an alternative to a Master’s Thesis. There are no specific rules about the scope or content of applied projects. Typically, an applied project is a research proposal, literature review, program analysis, or some other scholarly work that is supervised by a student’s faculty advisor. Applied Projects must be approved by a student’s advisor and one additional faculty member by the end of the final exam period that concludes a student’s final semester in the program. Students should plan to submit their applied project document to their advisor well in advance of this deadline.

**Continuous Enrollment**
Once admitted to a graduate degree program, students must be registered for a minimum of one graduate credit hour during all phases of their graduate education (excluding summer – unless they plan to graduate in the summer). Graduate students planning to discontinue registration for a semester or more must submit a petition for a leave of absence through the iPOS (preferred method) or submit the maintain continuous enrollment request form: https://graduate.asu.edu/sites/default/files/maintain-continuous-enrollment-masters-certificate_0.pdf. This request must be submitted and approved before the anticipated semester of non-registration. Students should contact their adviser as soon as possible if they will not be able to meet continuous enrollment.

**Maximum Time Limit**
All work toward a master’s degree must be completed within six consecutive years.

**Transfer Credit**
Students may transfer up to 6 credit hours of coursework taken before beginning the program (referred to as pre-admission credits). Preadmission credit hours must be approved by the degree program and the Graduate College office. Students are responsible for alerting their graduate adviser that they plan on transferring in credits.
To qualify for preadmission credits, the courses must meet specific criteria:

- Be graduate-level
- Have been taken within three years of admission to the ASU degree program.
- A grade of “B” or better must have been earned.
- Must not have been used towards a previous degree.
- Completed at a regionally accredited US institution or international institution officially recognized by that country.

Certain types of graduate credits cannot be transferred to ASU, such as courses taken at a non-collegiate institution, institutions that lack regional accreditation, for life experience, continuing education programs, workshops, etc. Students must officially transfer in preadmission credit hours through the iPOS system for approval by the academic unit and the Graduate College office. Official transcripts from where the preadmission credits were earned must be sent to Graduate Admission Services.
# New College of Interdisciplinary Arts & Sciences
## Master of Science in Biological Data Science
### Curriculum and Graduation Checklist
#### Fall 2019 (Total Credits: 32)

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Semester Taken</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 614: Biometry</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSC 555: Integrative Biology I</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSC 562: Applied Mathematics Techniques in Biology</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSC 547: Wet Laboratory Experience</td>
<td>1</td>
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**Semester 2, Spring (10 hours)**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Semester Taken</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 501: Database Systems and Problem Solving in Python</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSC 556: Integrative Biology II</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STP 560: Experimental Statistics in Biology</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>LSC 519: Applied Learning Lab</td>
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**Semester 3, Fall (5 or 6 hours)**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Semester Taken</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Project (ACO 593, or BIO 593, or MAT 593) or Thesis (ACO 599, or BIO 599, or MAT 599)</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>Elective or Research</td>
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**Semester 4, Spring (5 or 6 hours)**

*Must schedule 6 hours if 5 hours were earned in semester 3

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Semester Taken</th>
<th>Grade</th>
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<tbody>
<tr>
<td>Applied Project (ACO 593, or BIO 593, or MAT 593) or Thesis with Written &amp; Oral Defense (ACO 599, or BIO 599, or MAT 599)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective or Research</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**General Guidelines**

- You may apply only 6 credits of 400-level work toward the master’s degree
- You must meet all GPA and grade requirements outlined in the New College Satisfactory Academic Progress Policy
- You must be enrolled in at least one credit that appears on your iPOS or one credit of LSC 595 continuing registration each Fall/Spring semester
- All coursework must be approved by your advisor and formalized in the iPOS. Mere enrollment in a course does not entitle you to count it toward a graduate degree

*What can you count as elective courses?*

**What counts:**
- ACO 598: Graduate Data Science
- BIO 598: Ecosystem Ecology
- BMI 555: Statistical Learning for Data Mining
- BMI 601: Fundamentals of Health Informatics
- LSC 598: Graduate Environmental & Human Toxicology
- MAT 598: Graduate Mathematical Models in Biology
- STC 510: Applied Social Technology

**What needs to be approved (in advance) by both your advisor & the graduate program director:**
- ACO, BIO, or MAT courses (e.g., 580, 584, 590, 592)
- 400-level courses in any discipline
- Courses transferred in from other universities

**What does not count:**
- 595 credits
- 100, 200, or 300-level courses
ASU Graduate College Policies
Being a part of ASU means that all students, regardless of program, are held to the same high standards of academic integrity and excellence. It is important that all students familiarize themselves with these polices.
https://graduate.asu.edu/current-students/policies-forms-and-deadlines/policy-manuals

MyASU Portal
On your MyASU portal you will find information about your courses, transcripts, transportation, student success and support, finances, university policies and the academic calendar. Please take time to familiarize yourself with these areas:

Profile: Update your address, phone number, email information, or add guests, such as a parent, so they can look FERPA-protected information including grades.

My Classes: Click on the name of each course to access the corresponding Blackboard content. This is where you will see the syllabus, find links to readings and submit assignments. Take a few minutes to familiarize yourself with the structure of each course.

Final Transcript: If you sent in a transcript for admission to the program before you graduated, send your final transcript with your degree posted.

Academic Integrity Module: ASU Graduate College module reviewing academic integrity expectations. Please complete as soon as possible. Please note, this module explains the university-wide policy. The New College academic integrity policy includes additions specific to our students. Please be familiar with both policies.

Academic Calendar (bottom right box): This has important dates you need to monitor, including when classes begin, last day to register or drop/add classes, tuition and fee payment deadlines, holidays, withdrawal deadlines, schedule of classes available and when to enroll.

Campus Services: This includes Health and Wellness Resources, such as health insurance, counseling, disability services; Transportation, such as parking permits, METRO Light Rail, U- Pass and campus shuttles; Student Success and Support, such as disability services, tutoring and student success centers; and Job & Career Services. Please note these job resources are university-wide and not specific to the MS Biological Data Science program.

University Resources
There are a numbers of resources available in the program and through the university.

New College/West Campus - Academic
- Fletcher Library
- Graduate Writing Center – in-person (all campuses) and online writing assistance and tutoring
- Career & Professional Development Services – resource for finding jobs and internships, career advising, and more; online services available
New College/West Campus - Amenities

- Dining Options
- Banks
- Parking & Transit

University Services

- Student support services (e.g., International Student Services, Housing, Health, Counseling, Disability Resources, Veterans, Graduate and Professional Student Association).
- Business and Finance services (e.g., parking and transit, student accounts, ID cards).
- Contact information (e.g., Provost’s Office, Graduate College, GPSA Outreach, IT Help Office, department’s assigned librarian, emergency services).
Satisfactory Academic Progress Policy

All graduate students are expected to make systematic progress toward completion of their degree. Students are responsible for verifying and tracking satisfactory progress policies as required by their degree program and Graduate College. If a student fails to satisfy the requirements, the student may be dismissed from his/her program based on the academic unit’s recommendation to Graduate College. These policies are detailed in the Graduate College Policies and Procedures Handbook: https://graduate.asu.edu/current-students/policies-forms-and-deadlines/policy-manuals

The MS Program also follows the New College of Interdisciplinary Arts & Sciences Satisfactory Academic Progress Policy available on the MS Biological Data Science website.

Student Code of Conduct

All students are expected to adhere to the Arizona Board of Regents Student Code of Conduct and university policies and procedures: https://eoss.asu.edu/dos/srr/codeofconduct

Students are expected to regularly check their ASU email accounts for messages from the university and New College. Students also are expected to regularly check their MyASU priority tasks for messages and holds from the university. Students are responsible for managing their tuition payments, finances and tracking university academic calendar deadlines.

Academic Integrity

New College and the MS Biological Data Science program has a zero tolerance policy toward academic dishonesty that is enforced within every course and educational activity offered or sanctioned by the school. Any allegation of academic dishonesty will be referred to the school’s Office of Student Rights and Responsibilities for review and recommendation to the Dean of the school. If any student is found to have engaged in academic dishonesty in any form – including but not limited to cheating, plagiarizing and fabricating – that student shall receive a grade of XE for the class and will be dismissed from the school. There will be no exceptions. Please refer to the University’s Academic Integrity Policy for the full policy.

International students who violate academic integrity policies may be dismissed immediately. Being withdrawn from a degree program can have immediate consequences regarding visa status, and dismissed students are required to leave the country immediately per immigration and visa rules.

At the beginning of every MS Biological Data Science class, each student will be given a copy of the full academic integrity policy, along with accompanying information on plagiarism in their course syllabus. More detailed guidance on how to avoid plagiarism and fabrication, can be found at: https://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing
Professional Ethics
In addition to academic integrity commitments, students in MS Biological Data Science program must abide by the highest levels of ethics. This includes following the core principles of the APA Code of Ethics, including conducting research ethically and independently, privacy and confidentiality, and record keeping.
Mentoring

Given the training model of our Thesis and Applied Project tracks, graduate students in those tracks should take advantage of the mentoring provided by his/her faculty advisor. Mentoring involves many activities, ranging from development of a course plan to meet one’s career goals, development of skills related to teaching and research and the provision of constructive feedback related to these domains, and consultation on professional issues and career development.

At a minimum, a graduate student should expect the following from his/her mentor:

- development of goals/objectives for a specified time period
- availability for periodic meetings
- provision of regular and constructive feedback regarding student progress
- any other responsibilities stipulated by program policy or the Graduate Handbook

However, it is important to keep in mind that mentoring involves a relationship; thus, it is the responsibility of the graduate student to seek out these mentoring activities and to follow through in a timely fashion with any activities on which he/she and his/her mentor agree. If problems arise in a student’s mentoring relationship or with any other faculty member, the graduate student should arrange a time to discuss the problem with the Program Director.

Funding for Travel and Research

As research is a core component of this program, we encourage our students to conduct and present research at national and international academic conferences. As such a number of options exist for funding research (e.g., participant payment, supplies, equipment) and conference travel expenses. Additionally, you may be able to apply any unused funds towards travel expenses for doctoral program interviews. However, please note, that the Biological Data Science faculty expect students to utilize the allotted funds for conference travel and research (as it is unlikely that students will be interviewed by doctoral programs if they have not conducted and presented their research). As with the other funding requests, your advisor and Director must approve this request and you must explain why you have remaining funds for this type of request.

1) **MS Biological Data Science Program Funding.** The MS program makes approximately $700 in travel/research funding available, to be used over the course of the two-year program. Students may choose to use that money in one year or split it over the two years in the program. Inquiries can be made to the Program Director Erika Camacho (erika.camacho@asu.edu). If at the end of each fiscal year, we have a surplus in funds, the maximum amounts on each award (and per student total) will be increased for the following fiscal year.

2) **ASU Graduate College Travel Grants.** ASU’s Division of Graduate College makes a limited number of travel grants available to students presenting at conferences. These grants typically cover airfare from Phoenix to the conference location and conference registration. This award has four application deadlines per year and must be applied for well in advance of the travel date. Applications must be submitted to the director of the graduate program. See
3) **Graduate and Professional Student Association (GPSA) Travel Grants.** ASU’s graduate student association offers a variety of travel awards available. Individual travel awards (to conferences) are up to $950 and have a monthly application deadline. Group travel grants are for teams of student researchers presenting a symposium or other group project. Interview travel grants are need-based grants made available to students who require funds in order to travel to an academic interview (e.g., at a PhD program). Details and application materials can be found at [http://gpsa.asu.edu/funding](http://gpsa.asu.edu/funding). Priority for funding is often given to those who volunteer for the GPSA. **Please note:** The deadlines for these are often several months prior to the conference or PhD interview (i.e., in October) – you can still apply even if you do not know about your acceptance to a conference or invitation to interview.

4) **External Student Travel Funding from professional societies.** Various professional societies have free or discounted student membership and travel grants available to present research at their conferences. Two such societies and travel links are the Society for Industrial and Applied Mathematics: [https://www.siam.org/Conferences/Travel-Support/SIAM-Student-Travel-Awards](https://www.siam.org/Conferences/Travel-Support/SIAM-Student-Travel-Awards) and the Society for Mathematical Biology: [https://www.smb.org/travel-grants/](https://www.smb.org/travel-grants/). Please consult your advisor to see if other professional societies might be more appropriate for your particular research area.

**Funding Priorities for Biological Data Science Program Fee Monies (not rank ordered)**

- Presenter at a professional conference
- Co-authorship on a conference presentation
- Thesis/Applied Project research expenses
- Doctoral program interview expenses (only if monies remaining after prior travel/research expense requests)
- Attending only at a professional conference (no funding)

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**Major Expectations/Timelines for MS BDS Program**

**FIRST YEAR IN PROGRAM**

- Have regular meetings with your advisor
- Submission of iPOS
  - Recommend March of second semester*
- Student Progress Checklist
- Thesis Committee Member Form

* /* Throughout the year

**SECOND YEAR IN PROGRAM**

Submit to Director by May 1st
- Continue regular meetings with your advisor  
  Throughout the year
- Prospectus presented/defended to committee  
  No later than October 1st
- Begin applying for doctoral programs (if desired)**  
  Late in Fall semester
- First full draft of thesis to advisor (if planning to graduate in May)  
  Recommended by February 15th

* must submit iPOS by the time you have enrolled for 50% of minimum credit hours for program (i.e., 18 credit hours). Grad College will send an email and a message will appear on your MyASU (usually in Spring of 1st year).

** make sure to discuss with your advisor the most appropriate places for you to apply; also, confirm with your potential reference letter writers that they are willing and able to provide letters – give them plenty of lead time to write letters!

Please refer to the Graduate College deadlines page (https://graduate.asu.edu/current-students/policies-forms-and-deadlines/graduation-deadlines) for specific deadline dates for graduation.
MS Program Faculty

Becky Ball
Associate Professor
Email | directory profile
Research Interests: impacts of global environmental change on soil ecosystems

Jennifer Broatch
Associate Professor
Email | directory profile
Research Interests: mixed models and the application of those models to educational data, and interdisciplinary collaborations

Kimberly Bussey
Instructor
Email | directory profile
Research Interests: cancer cytogenetics and applied bioinformatics

Thomas Cahill
Associate Professor
Email | directory profile
Research Interests: environmental and analytical chemistry

Erika Camacho
Associate Professor, Program Director
Email | directory profile
Research Interests: mathematics applied to biology and sociology; mathematical physiology; mentoring

Suzanne Dietrich
Professor
Email | directory profile
Research Interests: computer science education, especially databases, and interdisciplinary collaborations

Charles Deutch
Emeritus Professor
Email | directory profile
Research Interests: physiological and biochemical mechanisms by which various bacteria adapt to high-salt environments

Jennifer Hackney Price
Assistant Professor
Email | directory profile
Research Interests: how organisms respond to injury and the systemic effects of signals produced following localized tissue damage

Chad Johnson
Associate Professor
Email | directory profile
Research Interests: animal behavior, conservation ecology, sexual cannibalism and conflict in arthropods

Peter Jurutka
Professor
Email | directory profile
Research Interests: molecular medicine approaches to elucidate fundamental questions in human health/disease
Sree Kanthaswamy  
Associate Professor  
Email | directory profile  
Research Interests: population and evolutionary genetics and forensic DNA analysis

Michelle Mancenido  
Assistant Professor  
Email | directory profile  
Research Interests: optimal experimental designs, statistical modeling for chemical, mixture, and sensory experiments

Pamela Marshall  
Professor  
Email | directory profile  
Research Interests: cell biology, genetics, and pedagogy

Joel Nishimura  
Assistant Professor  
Email | directory profile  
Research Interests: network science, dynamical systems and mathematical modeling

Beth Polidoro  
Associate Professor  
Email | directory profile  
Research Interests: marine biodiversity conservation, risk assessment and applied toxicology

Todd Sandrin  
Professor, Dean  
Email | directory profile  
Research Interests: microbial biosignatures

Yasin Silva  
Associate Professor  
Email | directory profile  
Research Interests: social media analysis, online misbehavior detection, big data systems

Francisco Solis  
Associate Professor  
Email | directory profile  
Research Interests: physics of biological systems

Carl Wagner  
Associate Professor  
Email | directory profile  
Research Interests: design and synthesis of small molecules that target the retinoid-X-receptor, and of triarylamines

Feng Wang  
Professor  
Email | directory profile  
Research Interests: networking research in general, with emphasis on network data security

Haiyan Wang  
Professor  
Email | directory profile  
Research Interests: applied math, differential equations, mathematical biology, online social networks and data science

Karen Watanabe  
Associate Professor  
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Research Interests: math models of biological systems to predict how chemicals in the environment effect living organisms
Stephen Wirkus
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Research Interests: mathematical biology and dynamical systems

Haitao Xu
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Research Interests: cybersecurity, user privacy, and data analytics

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Research Interests: machine learning methodology and theory in network analysis with applications in biology and the social sciences