

Opportunities Week of February 15, 2019

INDUCER Program: Are you currently a sophomore, in a science major with a 3.0 or better GPA, a US citizen or permanent resident, and under-represented in the STEMs? If yes, then the INDUCER (Increasing Diversity in Undergraduate Cancer Biology Education and Research) program is for you! This program allows students to learn and do cancer research at SBU, receive a salary for tuition and living expenses, and attend a national scientific meeting.

Applications deadline is March 29th, 2019

For more info and eligibility, see <https://renaissance.stonybrookmedicine.edu/inducer>

University at Buffalo Pharmacy Summer Institute: The Summer Institute is an enrichment program providing information about the challenging career pathway opportunities in the profession of pharmacy and exposure to the fields of pharmacy. This unique day camp experience incorporates active participation in a broad scope of learning experiences, including “hands-on” training in pharmacy practice skills, lectures by faculty and local Buffalo area alumni pharmacist practitioners and field trips. The program reviews pharmacy education opportunities and the pharmacy curriculum at SPPS as well as recommended high school preparatory and collegiate pre-pharmacy course work. We proudly graduate pharmacy and pharmaceutical sciences leaders.

For more info, see <https://pharmacy.buffalo.edu/news-events/events/annual-events/pre-pharmacy-summer-camp.html>

Paid Internships through Suffolk County Water Authority: The Central Pine Barrens Joint Planning and Policy Commission is currently accepting applications for paid internship opportunities to aid in ecological monitoring and field projects and assist with administrative programming. Interested candidates should apply to the Central Pine Barren Intern-Admin or Intern-Central Pine Barrens positions on the Suffolk County Water Authority site.

For job listings, see <https://www.scwa.com/careers/listing/>

Northeast Reptile and Amphibian Field Ecology 2019: Hosted by New Jersey School of Conservation, this workshop is an introduction to the reptiles and amphibians of the Northeast United States and the techniques that are used to conserve and study them in the field. Through numerous field activities, participants will acquire vital research skills and hands-on experience with the salamanders, frogs, toads, turtles, lizards, and snakes that call the Northeast home. A small number of classroom lectures and active learning discussions will also contribute to the learning experience.

Program runs June 17-28, 2019

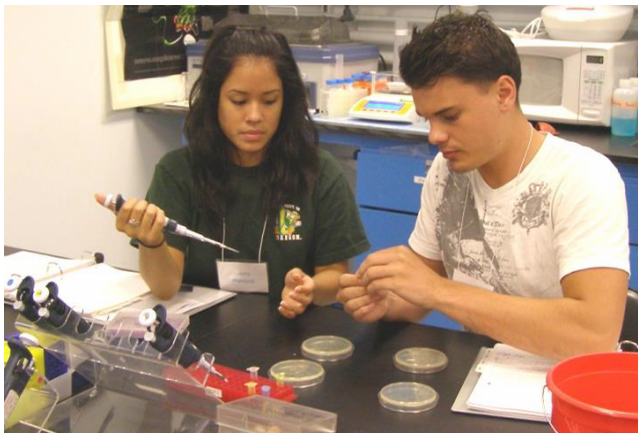
For more info, please see <http://www.montclair.edu/school-of-conservation/summer-workshops/herpetology/>

Southern Teachers Positions: Southern Teachers currently have over a hundred science openings in schools. The schools seek teachers with subject-matter expertise who are enthusiastic about working with children and teenagers, certification is not typically required.

For more info and to apply, see <https://southernteachers.com/>

*Disclaimer: Undergraduate Biology does not endorse or take responsibility for any off-campus programs listed in Opportunities emails. While we do our best to vet any opportunity that is shared, please let us know immediately if you are suspicious of any employers/programs.

Interested in becoming a **Cancer Researcher?**



Are you...

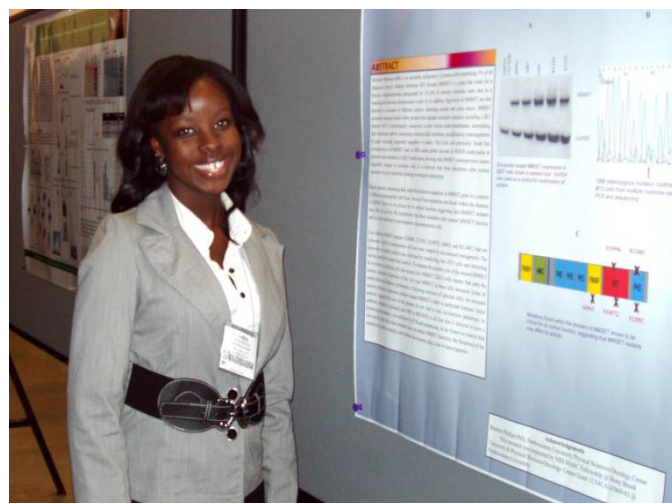
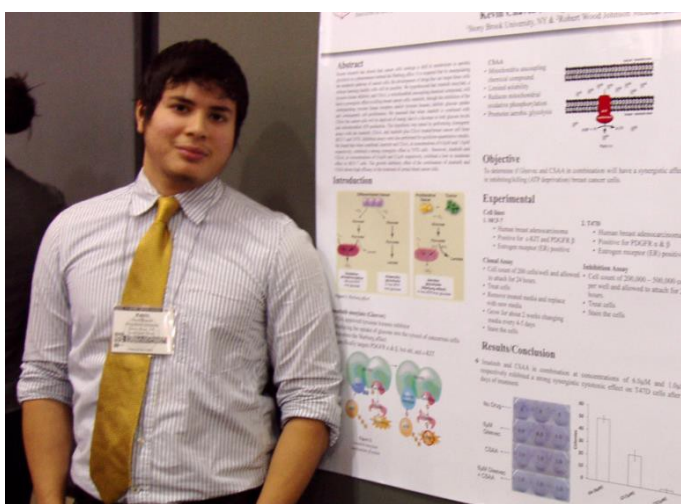
- **Currently a sophomore at Stony Brook University?**
- **In a science major with a 3.0 or better GPA?**
- **A US citizen or permanent resident?**
- **Under-represented in the STEMs**

If you answered "yes" to the questions above,

The **INDUCER** fellowship Is for you!!

(Increasing Diversity in Undergraduate Cancer Biology Education and Research)
funded by the *National Institutes of Health/National Cancer Institute (NIH/NCI)*

- Benefits:**
- **Learn & do cancer research at SBU**
 - **Receive a salary for tuition & living expenses**
 - **Attend a national scientific meeting**



Application Deadline is March 29, 2019

For more information

Contact: Dr. Jennie Williams, Ph.D. (Program Director)
Jennie.Williams@stonybrookmedicine.edu

Or visit the website:

<https://renaissance.stonybrookmedicine.edu/inducer>

Sponsored by the



NATIONAL CANCER INSTITUTE

NORTHEAST REPTILE AND AMPHIBIAN FIELD ECOLOGY



Dates: June 17-28, 2019

Location: New Jersey School of Conservation (NJSOC) in Stokes State Forest, Sussex County, New Jersey

Description: This workshop is an introduction to the reptiles and amphibians of the Northeast United States and the techniques that are used to conserve and study them in the field. Through numerous field activities, participants will acquire vital research skills and hands-on experience with the Northeast's salamanders, frogs, toads, turtles, lizards, and snakes.

The course will include:

- Discussions of reptile and amphibian natural history, taxonomy, and conservation
- Reptile and amphibian identification (visual and auditory)
- Habitat, plant, and non-herp animal identification
- Reptile and amphibian sampling, trapping, and marking/tagging techniques
- Radiotelemetry
- Reptile and amphibian tissue sampling for DNA analysis
- Collection of occupancy, abundance, physical, environmental, and geographic data
- Field note recordation and organization
- A primer in nature photography
- Day and night surveys for reptiles and amphibians
- Hikes through several diverse northeastern habitats
- Off-site field trips to the NJ Pine Barrens and urban habitats around NYC
- Participation in ongoing herpetological studies at the NJSOC and elsewhere
- Meals and lodging at the NJSOC

Cost: \$750.00 for one week or \$1000.00 for two weeks (register by May 1st for a 10% discount)

Academic Credit: 1-3 transferable, undergraduate credits are obtainable through Montclair State University for an additional fee. Non-credit options and course completion certificates are also available.

Register: Contact Thomas J Duchak at: Thomas.J.Duchak@hofstra.edu

Additional Information: <https://www.montclair.edu/school-of-conservation/summer-workshops/herpetology/>

Northeast Herpetology Workshop 2019

Dates: June 17-28, 2019 (weekend attendance is optional)

Location: New Jersey School of Conservation (NJSOC) in Stokes State Forest, Sussex County, New Jersey

Description: This workshop is an introduction to the reptiles and amphibians of the Northeast United States and the techniques that are used to conserve and study them in the field. Through numerous field activities, participants will acquire vital research skills and hands-on experience with the salamanders, frogs, toads, turtles, lizards, and snakes that call the Northeast home. A small number of classroom lectures and active learning discussions will also contribute to the learning experience.

The workshop includes:

- Discussions of reptile and amphibian natural history: their basic biology, life histories, and habitats
- Discussions on the conservation and management of reptiles and amphibians
- Discussions concerning research design
- Reptile and amphibian identification and taxonomy
- Identification of calling amphibians by ear
- Habitat, plant, and non-herp animal identification
- Reptile and amphibian sampling, trapping, and marking/tagging techniques
- Radiotelemetry
- Reptile and amphibian tissue sampling for DNA analysis
- Collection of occupancy, relative abundance, mark-recapture, physical, environmental, and geographic data
- Field note recordation and organization
- A primer in nature photography
- Day and night surveys for reptiles and amphibians
- Hikes through several diverse northeastern habitats
- Off-site field trips to the New Jersey Pine Barrens and urban habitats near NYC
- Participation in ongoing herpetological studies at the NJSOC and elsewhere
- Meals and lodging at the New Jersey School of Conservation

Qualifications: No experience is necessary but participants should be capable of college-level work and have strong interests in field biology, ecology, natural history, etc. Participants should also be in relatively good health and capable of hiking several miles in a range of conditions over moderate-difficult terrain.

Cost: The workshop will be divided into two one-week sessions, with each week-long session involving different schedules, activities, and learning experiences. Participants will have the option of taking the workshop for either one week (5 days) or two weeks (10 days). Cost is \$750.00 per person for one week and \$1000.00 per person for two weeks (discounts available for early registrants; see registration below). These fees include instruction, meals, and lodging at the NJSOC.

Credit: Visiting undergraduate students who complete the workshop can obtain 1-3 transfer credits from Montclair State University (MSU) *or* they can obtain credit from their home institution by completing the workshop as an independent study or special project (if their home institution approves). Non-credit options and course completion certificates are also available upon request. To receive credit from MSU, participants attend the course in June and register for Special Topics in Earth and Environmental Studies (EAES499) during MSU's Fall 2019 semester. For all inquiries regarding academic credit, please contact Dr. Randall Fitzgerald at: fitzgeraldr@mail.montclair.edu

Registration: Class space is limited and participants will be admitted on a first come, first served basis. To reserve a seat, each participant must pay a non-refundable \$250 deposit by May 1st 2019. Participants who pay in full by May 1st will receive a 10% discount on their registration. Late registrations will be welcome after May 1st if space is still available (please inquire). Full registration must be paid by June 1st 2019. Refunds will not be issued after June 1st.

Contact: Thomas.J.Duchak@hofstra.edu

More Information: <http://www.montclair.edu/school-of-conservation/summer-workshops/herpetology/>

Northeast Herpetology Workshop 2019: Northeast Reptile and Amphibian Field Ecology - Syllabus

Dates: June 17-28, 2019

Location: New Jersey School of Conservation (NJSOC), Stokes State Forest, New Jersey

Instructors: Thomas J. Duchak and Dr. Randall Fitzgerald

Contact Email: Thomas.J.Duchak@hofstra.edu

About this workshop

Reptiles and amphibians, or "herps" as they are collectively called, are among the most misunderstood and unappreciated of all vertebrate animals. While their direct value to mankind is not immediately apparent, herps provide various ecological services at multiple levels and serve as indicators of environmental health. Recently, a global decline in herpetofauna has been documented. Detrimental factors such as habitat fragmentation and destruction, disease, pollution, invasive species, overexploitation, and collection for the wildlife trade have affected countless species. Educating students about the general biology and plight of reptiles and amphibians will undoubtedly improve public perception of these sensitive creatures and encourage a desire to protect and conserve them.

This workshop is designed to introduce college-level students to the reptiles and amphibians of the Northeast United States, the environments they inhabit, and the techniques that are used to conserve and study them in the field. Through hands-on field activities and classroom lectures, students will accomplish the following objectives:

Workshop Objectives

- Practice various herp sampling and monitoring techniques
- Understand how these techniques can be used to answer ecological questions about reptiles and amphibians
- Understand how molecular techniques can be used to screen for herp diseases and investigate the genetics of reptile and amphibian populations
- Learn how to gather and record data and observations in the field
- Participate in ongoing herpetological studies at the NJSOC and elsewhere
- Learn basic taxonomic schemes of extant reptile and amphibian groups and the general characteristics of each group
- Identify all reptile and amphibian species encountered during the workshop, assign them to their respective taxonomic groups, and understand their basic life histories
- Understand the roles these reptile and amphibian species play in their respective microhabitats, habitats, and ecosystems
- Identify common, non-herp species (plants, fungi, invertebrates, fish, birds, mammals etc.) encountered during the workshop
- Classify habitats according to their abiotic and biotic features
- Understand how abiotic, biotic, and anthropogenic factors can influence the composition and abundance of reptile and amphibian species
- Understand various reptile and amphibian conservation issues and strategies
- Understand how to design feasible studies and practice "good" science

Course Work Required for Academic Credit

- **Field Journal:** Each student is responsible for keeping a field journal during the workshop. Learning how to write clear, concise, and well-organized field notes will enable students to record field data and observations in an efficient manner, distinguish familiar species from unfamiliar ones, and recognize ecological patterns and processes in nature. Through this exercise, students will gain a heightened awareness of the natural world that will enhance their observational skills in the field, and a greater appreciation not only for reptiles and amphibians but also for their habitats and life histories. Style and format of field journals will be discussed in detail during the workshop.
- **Research Project Proposal:** Each student must propose an original study that should effectively test a hypothesis and answer a scientific question about any reptile or amphibian species encountered during the workshop. Proposals should include the following sections: an “introduction” that clearly states a scientific question and hypothesis about the student’s chosen study system, a “methods” section that outlines and justifies the proposed study methods, a “purpose” section that states the value of the proposed study, and a “budget” section that itemizes the proposed study’s monetary costs. Project proposals should not exceed two pages (additional pages for citations and figures will be permitted) and will be graded on the proposed study’s merit and feasibility.
- **Species Lists:** Each student must construct two photographic species lists: a "herp" species list and a "general" species list. The herp list must include every species of reptile and amphibian encountered during the workshop. The general species list must include at least 50 newly-learned, non-herp species (plants, fungi, invertebrates, fish, birds, mammals etc.) of the student's choosing. Students are encouraged to identify and add at least 5 non-herp species per day while the workshop is in session. Both species lists should be submitted as PowerPoint files that include common and scientific names and original photos of each species.
- **Field Guide Entries:** Each student must contribute at least one species account to the New Jersey School of Conservation's Guide to Reptiles and Amphibians. Species accounts should be submitted in a Microsoft Word document that includes the following: common and scientific name; diagnostic features and an original photo that clearly shows them; preferred habitat; activity period; reproduction; observational notes that include where, when, and how the species was found during the workshop; and references.
- **Attendance & Participation:** Each student is expected to attend and participate in all required workshop activities! Unless extenuating circumstances present themselves, each absence will result in a deduction of one letter grade.

All course work is due before 12:00am on 1 December 2019!

Grading

Field Journal	50%
Research Project Proposal	20%
Herp Species List	10%
General Species List	10%
Field Guide Entry	10%

Required Field Guides

- Peterson Field Guide to Reptiles and Amphibians of Eastern North America by Robert Powell, Roger Conant, and Joseph T. Collins (April 12, 2016)
- A Field Guide to Eastern Forests: North America (Peterson Field Guides) by John C. Kricher and Roger Tory Peterson (October 15, 1998)

Recommended Texts

- Amphibians and Reptiles of Pennsylvania and the Northeast by Arthur C. Hulse, C.J. McCoy, and Ellen Censky (June 21, 2001)
- Herpetology, Fourth Edition: An Introductory Biology of Amphibians and Reptiles by Laurie J. Vitt and Janalee Caldwell (June 19, 2013)
- Amphibian Ecology and Conservation: A Handbook of Techniques (Techniques in Ecology and Conservation) by C. Kenneth Dodd Jr. (September 17, 2009)
- Reptile Ecology and Conservation: A Handbook of Techniques (Techniques in Ecology and Conservation) by C. Kenneth Dodd (July 5, 2016)
- Reptile Biodiversity: Standard Methods for Inventory and Monitoring by Roy McDiarmid and Mercedes S. Foster (January 20, 2012)



University at Buffalo

**School of Pharmacy and
Pharmaceutical Sciences**

Pharmacy Summer Institute

for High School and College Students

July 2019

Kapoor Hall

UB South Campus

This unique day camp experience incorporates active participation in a broad scope of learning experiences, including “hands-on” training in pharmacy practice skills, lectures by faculty and local Buffalo area alumni pharmacist practitioners and field trips.

pharmacy.buffalo.edu/summercamp