

# Department of Biological Sciences

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The Department of Biological Sciences provides educational opportunities to undergraduate and graduate students and conducts world class research in a variety of areas in modern biology.

Undergraduate Programs in the Department of Biological Sciences have the primary mission of providing our diverse population of students with the opportunity and support to successfully complete their major and prepare for their post-baccalaureate life as independent thinkers, lifelong learners, and contributing members of society.

Undergraduates begin with comprehensive studies of the structure, function, behavior, and evolution of cells, organisms, populations, and ecosystems and then have the opportunity to select upper division courses that reflect their intellectual interests and career goals. Those who earn a Bachelor of Science degree in Biological Sciences, Genetics, Microbiology, or Zoology gain a strong background in biology and in related fields. Those who earn a Bachelor of Arts degree in Biology establish a solid foundation in the life sciences and also design a secondary area of focus to complement their studies in the life sciences. All students complete the NC State general education program. Some students complete one of the many minors available from departments all across campus.

All incoming first-year students interested in majoring in any one of these degree programs will start their studies in the NC State Life Sciences First Year Program (<https://departments.sciences.ncsu.edu/lfsf/>), and will explore these and related degree options during their first year while they take courses relevant to all life science degree programs at NC State.

The Department of Biological Sciences also offers minors in Biological Sciences, Toxicology, Evolutionary Biology, Forensic Science, Genetics, Global Health, Microbiology, Paleontology, and Zoology, as well as two online certificate programs: the Undergraduate Certificate in Microbiology and the Graduate Certificate in Biology for Educators.

To learn more about the Department of Biological Sciences, visit our website (<https://bio.sciences.ncsu.edu/>).

## Contact

### Department of Biological Sciences

Student Services and Advising Offices

2727 Bostian Hall

Campus Box 7611

Raleigh, NC 27685

919.515.3341

BioSciHelp@ncsu.edu ([bioscihelp@ncsu.edu](mailto:bioscihelp@ncsu.edu))

### Dr. Bruce A. Schulte

Department Head

Thomas Hall 3510A

[baschult@ncsu.edu](mailto:baschult@ncsu.edu)

## Faculty

### Departmental Administration

B.A. Schulte, Department Head

J. L. Lubischer, Associate Department Head

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## Undergraduate Program Directors and Coordinators

Directors of Undergraduate Degree Programs, *L. D. Parks (Bio Sci)*, *J. Little (BA in Biology)*, *B. Gardner (Genetics)*, *J. W. Olson (Microbiology)*, *J. L. Campbell (Zoology)*

Coordinators within the B.S. in Biological Sciences, *M. L. Sikes (Molecular, Cellular, and Developmental Biology)*, *J. E. Meitzen (Integrative Physiology and Neurobiology)*, *L. D. Parks (Human Biology)*, *R. B. Langerhans (Ecology, Evolution, and Conservation Biology)*

Departmental Honors Program Committee, *L. D. Parks*, *B. Gardner*, *J. W. Olson*, *J. L. Campbell*, *R.B. Langerhans*

Coordinators of Minors, *L. D. Parks (Bio Sci)*, *E. Thompson (Environmental Toxicology)*, *R. B. Langerhans (Evolutionary Biology)*, *A. H. Ross (Forensic Science)*, *J. P. Casani (Global Health)*, *B. Gardner (Genetics)*, *J. W. Olson (Microbiology)*, *T. Gates (Paleontology)*, *J. L. Campbell (Zoology)*

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## Graduate Program Directors

*M. Cowley, Toxicology*

*J. R. Godwin, Biology*

*R. B. Roberts, Genetics*

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## Online Certificate Coordinators

*M. Gazdik-Stofer, Online Undergrad Microbiology Certificate*

*E. E. A. Thompson, Graduate Certificate in Biology for Educators*

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## Named Professors

*H. B. Patisaul*

*R. C. Smart*

*F. A. Wright*

*Z.-B. Zeng*

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## University Faculty Scholars

*J. A. Hoppin*

*C. Hoy*

*C. J. Mattingly*

*J. E. Meitzen*

*H. B. Patisaul*

R. B. Roberts

A. H. Ross

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## Alumni Distinguished Undergraduate Professors

J. L. Campbell

M. G. Ferzli

L. D. Parks

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## Professors

S. Belcher

J. C. Bonner

R. J. Borski

D. B. Buchwalter

G. Conant

J. R. Godwin

S. Fenton

A. Hartstone-Rose

J. A. Hoppin

C. Hoyo

S. W. Kullman

J.E. Meitzen

C. J. Mattingly

H. B. Patisaul

I. T. Petty

E. F. Rissman

A.H. Ross

F. Scholle

B.A. Schulte

R. C. Smart

J. L. Thorne

Y. Tsuji

J. Tsuji

F. A. Wright

J. Yoder

Y. Zhou

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## Teaching Professors

J.L. Campbell

M.D. Engell

M.G. Ferzli

M. B. Gardner

C. Goller

J. Landin

J.L. Lubischer

L. D. Parks

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## Research Professors

D. Shea

R. L. Jirtle

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## Associate Professors

D. L. Aylor

M. Burford-Reiskind

M.A. Cowley

P.A. Estes

S. Gaddameedhi

R. B. Langerhans

K.Marsden

D. M. Nielsen

J. W. Olson

A. J. Planchart

R. B. Roberts

M. L. Sikes

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## Associate Teaching Professors

P. A. Estes

C.L.Gordy

J. F. Flores

T.A. Gates

M. Gazdik-Stofer

C.J. Halweg

W.M. Jones

M.J. Klesath

E.F. Kosal

A. M. Lee

M.V. Ramirez

M.E. Tavrne

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## Associate Research Professors

D.A Skaar

L. E. Zanno

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## Assistant Professors

C. Baker

L.M. Bobay

C. Clinton

N. Duque-Wilckens

J.R. Enders

R.F. Guerrero

J. R. Hall

C. S. Heil

M. Rodgers

E.A.E. Schroeter

D. A. Skaar

A. A. Smith

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## Assistant Teaching Professors

J. L. Little

S. L. Chen

S. Mathews

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## Lecturers

R.J. Ohr

L. M. Paciulli

E. E. A. Thompson

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## Adjunct Faculty

R. R. Anholt

T. P. Augspurger

A. E. Bogan

R. E. Cannon

C. J. Cavazos

J. C. DeWitt

S. E. Fenton

M. B. Hawkins

A. B. Heckert

W. O. McMillian III

V. J. Johnson

C. F. Kammerer

C. F. Kwiatkowski

R. L. Langley

E. C. Lynch

T. F. MacKay

JM Maillard

J. E. Horvath Roth

M. E. Serr

B. L. Stuart

D. C. Zeldin

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## Emeritus Faculty

W. R. Atchley (Emeritus)

E. Hodgson (Emeritus)

C. S. Levings III (Emeritus)

W. H. Mackenzie (Emeritus)

J. F. Roberts (Emeritus)

J. G. Scandalios (Emeritus)

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## Plans

- Biological Sciences (BA) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/biological-sciences-ba/>)
- Biological Sciences (BS) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/biological-sciences-bs/>)
- Biological Sciences (BS): Ecology, Evolution and Conservation Biology Concentration (<http://catalog.ncsu.edu/undergraduate/>)

sciences/biological-sciences/biological-sciences-bs-ecology-evolution-conservation-biology-concentration/)

- Biological Sciences (BS): Human Biology Concentration (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/biological-sciences-bs-human-biology-concentration/>)
- Biological Sciences (BS): Integrative Physiology and Neurobiology Concentration (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/biological-sciences-bs-integrative-physiology-neurobiology-concentration/>)
- Biological Sciences (BS): Molecular, Cellular, and Developmental Biology Concentration (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/biological-sciences-bs-molecular-cellular-developmental-biology-concentration/>)
- Biological Sciences (Honors) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/honorsbiology/>)
- Biological Sciences (Minor) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/biological-sciences-minor/>)
- Evolutionary Biology (Minor) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/evolutionary-biology-minor/>)
- Forensic Science (Minor) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/forensic-science-minor/>)
- Genetics (BS) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/genetics-bs/>)
- Genetics (Minor) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/genetics-minor/>)
- Microbiology (BS) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/microbiology-bs/>)
- Microbiology (BS): Microbial Biotechnology Concentration (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/microbiology-bs-microbial-biotechnology/>)
- Microbiology (BS): Microbial Health Science Concentration (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/microbiology-bs-microbial-health-science/>)
- Microbiology (BS): Microbial Research Concentration (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/microbiology-bs-microbial-research/>)
- Microbiology (Certificate) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/microbiology-certificate/>)
- Microbiology (Minor) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/microbiology-minor/>)
- Paleontology (Minor) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/paleontology-minor/>)
- Toxicology (Minor) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/toxicology-minor/>)
- Zoology (BS) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/zoology-bs/>)
- Zoology (BS): Applied Zoology (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/zoology-bs-applied-zoology/>)
- Zoology (Minor) (<http://catalog.ncsu.edu/undergraduate/sciences/biological-sciences/zoology-minor/>)

## Undergraduate Honors Program in Biological Sciences

The Department of Biological Sciences (DBS) Honors Program requires students to design a challenging program of advanced study, including 8 credits of honors coursework in biology and at least two semesters of

research or teaching scholarship. Participants are required to present their scholarly work at a local, regional, or national meeting. A written honors thesis is also required. Invitations to join the DBS Honors Program are sent in the first 3 weeks of the Fall and Spring semesters, based on GPA and number of credit hours completed at NC State, as described in the Admissions Requirements.

## Program Requirements

BSC 497 Biological Sciences Honors Project Part 1 and BSC 498 Biological Sciences Honors Project Part 2

- two semesters of mentored research or teaching scholarship in biology
- includes written project proposal (BSC 497 Biological Sciences Honors Project Part 1), and a draft of the honors thesis (BSC 498 Biological Sciences Honors Project Part 2)
- includes completion of reflection prompts posted on Moodle
- enrollment requires a completed contract with the mentor, approved by the DBS Honors Program Committee

BSC 499 Honors Thesis in Biological Sciences

- requires oral presentation of work completed in BSC 497 Biological Sciences Honors Project Part 1 & BSC 498 Biological Sciences Honors Project Part 2
- requires final written honors thesis on the work completed in BSC 497 Biological Sciences Honors Project Part 1 & BSC 498 Biological Sciences Honors Project Part 2
- the honors thesis will be submitted mid-way through the semester for evaluation and to allow time for revisions
- the honors thesis must be approved by the mentor and by the DBS Honors Program Committee

Honors Coursework (8 cr)

- courses must be completed with a B- or higher
- courses must be numbered 300 or higher
- courses must focus on a topic in biology
- eligible courses include: (1) any course designated as an honors course by the DBS Honors Program Committee, (2) any course for which an honors contract is approved by the DBS Honors Program Committee, and (3) any Study Abroad course approved by the DBS Honors Program Committee.

## Admissions Requirement

Students in any major offered by the Department of Biological Sciences who have earned an overall GPA of 3.60 after completing 30 (but fewer than 65) credit hours at NC State will receive an invitation to join the DBS Honors Program.

Transfer Students in any major offered by the Department of Biological Sciences who have earned an overall GPA of 3.60 after completing 15 credit hours at NC State (and a total of 30 credit hours of college coursework), will receive an invitation to join the DBS Honors Program.

## Graduation Requirements

complete the Program Requirements described above  
maintain an overall GPA of 3.40 or higher  
complete the graduation requirements for an undergraduate degree program offered by the Department of Biological Sciences

## **Program Director**

Please contact [bioscihelp@ncsu.edu](mailto:bioscihelp@ncsu.edu)