

Erica Nierth, PhD | Lecturer & Lab Coordinator | Biology

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Professional Profile

Lecturer with over ten years' experience teaching biology courses in higher education and nine years' experience coordinating biology laboratories in a large, public university setting. PhD in molecular and cellular biology, MS in Ecology and Evolutionary Biology and post-doctoral research experience.

Proven excellence in the development of laboratory and course curricula, student rapport and the development of instructional strategies and supportive programs to increase student success.

Education

2007 PhD, Molecular and Cellular Biology, Graduate Program Biomedical Sciences, Tulane Medical School; New Orleans, LA

1994 MS, Ecology, Evolution and Organismal Biology, Tulane University; New Orleans, LA

1992 BS, Biology, Texas Christian University; Fort Worth, TX

Teaching and Laboratory Coordination Experience

2011 – Present

Senior Lecturer and Laboratory Coordinator

Department of Biology, Texas State University, San Marcos TX.

Instructor and course coordinator for Functional Biology and Functional Biology Hybrid. Laboratory coordinator for Functional Biology laboratory. Functional Biology is an introductory cell and molecular biology course designed for biology majors and pre-health students.

Key Responsibilities:

- Development of course content, instructional methodology and student records for functional biology lecture course (250 students per semester).
- Development and implementation of online course materials for functional biology hybrid, a blended/online course (40 students per semester).
- Development of laboratory experiments and associated laboratory materials for Functional Biology laboratory (46-56 sections per semester, approximately 1000 students).

- Training and management of both undergraduate and graduate student functional biology laboratory instructional assistants (28-36 per semester).
- Inventory, equipment and laboratory room (3) maintenance and ordering of supplies for functional biology laboratory.
- As course coordinator, collection and analysis of data for *Southern Association of Colleges and Schools* accreditation and review of transfer courses.
- Recruit, coordinate and train functional biology learning assistants (LAs) to improve students' success in large lecture classrooms.
- Co-teaching of Pedagogy course for graduate teaching assistants (BIO 5100)
- Student evaluations and syllabi:
<https://hb2504.txstate.edu/viewspi.html#201010123>

2009-2011

Instructor; Atascocita High School/Kingwood College

Instructor for dual credit general biology I.

2001-2002

Adjunct Instructor; University of Holy Cross, New Orleans, LA.

Instructor for General Biology and Nutrition courses designed for nursing students.

1994-2001

Secondary School Teacher; New Orleans, LA.

Secondary biology school teacher at Mount Carmel Academy (1994-1999) and Ursuline Academy (2000-2001). Duties included instruction of advanced placement (AP) and dual credit biology courses.

Professional Experience

2009-2010

Post-doctoral Research Fellow

Center for Nuclear Receptors and Cellular Signaling, University of Houston, Houston, TX.

Post-doctoral research fellow under the direction of Jan Ake Gustafsson, PhD studying rapid estrogen signaling in mast cells. Duties included development and implantation of research studies in the field of estrogen signaling, mentoring of graduate and undergraduate students within the lab setting.

2007-2009

Post-doctoral Research Fellow

Center for Bioenvironmental Studies, Tulane University, New Orleans, LA.

Post-doctoral research fellow under the direction of John McLachlan, PhD studying genetic and cellular signaling effects of environmental estrogens in uterine cancer and leiomyoma cells. Duties included development and implementation of research studies, mentoring of graduate and undergraduate students within the lab setting and instruction of an Endocrine Pharmacology course taught to graduate pharmacology students.

2002-2007

Graduate Student

Graduate Program in Biomedical Sciences, Tulane Medical School, New Orleans, LA.

Investigated rapid estrogen signaling in normal uterine versus uterine leiomyoma cells under the direction of John McLachlan, PhD

Courses Taught

Functional Biology (introductory cell and molecular biology), General Biology I & II, Ecology, Nutrition, Endocrine Pharmacology, Cell Biology Laboratory, Ecology Laboratory, Molecular Biology Laboratory, Evolution & Organismal Biology

University Service

Team Leader, 2021-Present

BIO 1330 Course Redesign team, NSF funded (1928696) Faculty-Student Communities for improving STEM instruction.

Faculty advisor 2019-Present

Pre-Nursing Organization, Texas State University, San Marcos, TX. Established this organization in response to student interest. Invite guest speakers, coordinate off-site field trips.

Facilitator, Faculty Development – Program for Excellence and Scholarship (PETS) 2018,

Texas State University, San Marcos, TX. Led workshop for incoming faculty on teaching of large lectures.

Faculty advisor 2017-present

Pre-Nursing Living Learning Community (LLC), Texas State University, San Marco, TX. Mentor a community of approximately 80 incoming freshman who live and take classes together to increase student success and retention.

Member, Lecturer Evaluation Committee 2016-present

Biology department, Texas State University, San Marcos, TX. Participant in the development of criteria for lecturer evaluation.

Pre-medical/dental advisory committee 2012-Present

Texas State University, San Marcos, TX. Interview senior pre-medical and dental students to create committee letters for entrance into medical and dental schools.

Faculty advisor 2011-Present

Biology department, Texas State University, San Marcos, TX. Beta Beta Beta National Biology Honor Society which hosts an annual graduate and undergraduate student research colloquium.

Summer Pipeline Research Initiative (SPRITE) mentor 2002-2005

Tulane University, New Orleans, LA. Direct summer undergraduate research experiences for six talented under-represented undergraduates.

Professional Development and Training

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| May, 2021 | “STEM Faculty/LA Communities summer institute,” Texas State University, San Marcos, TX. |
| November, 2020 | Virtual Conference Attendance, “Annual Conference,” National Association of Biology Teachers. |
| May, 2020 | “STEM Teaching, STEM Communities workshop,” Texas State University, San Marcos, TX. |
| November, 2019 | National Association of Biology Teachers Annual Conference, Chicago IL. |
| July, 2019 | “Disability Ally,” Texas State University, San Marcos, TX. |
| October, 2018 | “Freshman Research Initiative Conference,” University of Texas, Austin, TX. |
| February, 2018 | “Mental Health Part I,” Texas State University, San Marcos, TX. |
| January 2017 | “Improving your Online Course,” Quality Matters, San Marcos, TX. |
| January 2017 | “Allies Training,” Texas State University, San Marcos, TX. |
| October 2016 | “Pedagogy in Large Lectures,” Texas State University, San Marcos, TX. |
| September 2016 | “Hybrid Course Teaching,” Texas State University, San Marcos, TX. |
| August 2016 | “Foundations in Online Course Design and Development,” Requirement for SACSOC distance education, Texas State University, San Marcos, TX. |
| February 2016 | “Active Learning and Flipped Classrooms,” Texas State University, San Marcos, TX. |

Honors and Awards

- 2021 Student Athlete's Faculty of the Year, Texas State University, San Marcos, TX.
- 2021 College Achievement Award for Excellence in Teaching, College of Science and Engineering, Texas State University.
- December 2017 Foundations of Excellence Award, Student Foundation. Texas State University, San Marcos, TX.
- 2014, 2016, 2018 Favorite Professor, Alpha Chi Honor Society. Texas State University, San Marcos, Texas.
- 2006 Morris F. Schaffer Award for best graduate student presentation. Graduate Program in Biomedical Sciences, Tulane Medical School.

Scholarly

Nierth-Simpson, E. N., Martin, M., Chiang, T.C., Burrow, M. E. and J. A. McLachlan. 2009. Human Uterine smooth muscle and leiomyoma cells differ in their rapid estrogen signaling: implications for proliferation. *Endocrinology*. 150(5), 2436-2445.

Tilgman, S., **Nierth-Simpson, E.N.**, Wallace, R., Burow, M.E. and J.A. McLachlan. 2010. Environmental hormones: multiple pathways for response may lead to multiple disease outcomes. *Steroids*. 75, 520-523.

Frigo, D. E., Basu, A., **Nierth-Simpson, E. N.**, Weldon, C. E., Dugan, C. M., Elliot, S.,...and M. E. Burow. 2006. P38 MAPK stimulates estrogen-mediated transcription and proliferation of the p160 coactivator GRIP1. *Molecular Endocrinology*. 20, 971-983.

McLachlan, J.A., **Nierth-Simpson, E.N.**, and M. Martin. 2006. Endocrine disrupters and female reproductive health. *Best Practices and Research in Clinical Endocrinology and Metabolism*. 20(1): 63-75.

Professional Organizations

2019- Present, 1994-2001 National Association of Biology Teachers.

2002-2009 Endocrine Society.

2010-2011 Lake Houston Collaborative for Science Educators

1994-2000 National Science Teachers Association.

Professional Activities

May 2014-Present Scientific Consultant. KJ Scientific. Georgetown, TX.

January-April 2019 Reviewer, MacMillan Publishing.

December 2016 Reviewer, McGraw-Hill Publishing.

Community Service

May 2020 – Present Healthy Kids Running Series. New Braunfels, TX.

January 2014-2019 Host, STEM fieldtrip for local fifth graders. San Marcos, TX.

November 2018 Host, IDEA school visit. San Marcos, TX.

2014- Present New Braunfels Cycling Fundraising Team for Bike MS.

2016-2017 Weekly volunteer, Emergency food pantry, New Braunfels, TX.

2009-2011 Science Fair Judge coordinator, Humble ISD, Houston, TX.