

NITA A. ESKEW, PhD

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Educational History

PhD	Organic Chemistry	University of North Carolina at Chapel Hill
BS	Chemistry	University of North Carolina at Chapel Hill

Professional History

Current Position

UNIVERSITY OF NORTH CAROLINA at CHAPEL HILL

Director of Undergraduate Laboratories, Department of Chemistry
(August 2012-present) Oversee operations of the undergraduate laboratories program and implement improvements for safety, curricula, and facilities
Instructor for organic chemistry lab and lecture courses

Prior Positions

SALEM COLLEGE Winston-Salem, NC

Associate Professor, tenured, Chemistry (2010-2012)
Director of Women in Science and Mathematics (WISM) Program
(2008-2012) Coordinated the Lehman Scholars program, organized seminars and events and promoted student internships
Assistant Professor, Chemistry (2001-2009)

UNIVERSITY OF NORTH CAROLINA GREENSBORO Greensboro, NC

Part-time Instructor, Organic Chemistry Lab (January-May 2012)

FORSYTH TECHNICAL COMMUNITY COLLEGE Winston-Salem, NC

Part-time Instructor, Introductory Chemistry (August 2011-May 2012)

NORTH CAROLINA GOVERNOR'S SCHOOL WEST Winston-Salem, NC

Natural Science Instructor – Green Design (2009 and 2012)

BAYER CORPORATION Goose Creek, SC (1991-2001)

General Supervisor, Dorlastan Manufacturing

Directed and supervised 17 operations personnel and two staff members. Planned, scheduled and executed yarn winding, inspection, and shipment of Dorlastan fiber while maintaining the highest safety standards. Ensured thorough training and accurate procedures.

General Supervisor, Specialty Products Manufacturing

Directed and supervised 48 operations personnel. Oversight of new projects and products funneled through R&D into plant operations, including training and start-up. Planned, scheduled, and executed production of dyestuffs and optical brighteners while maintaining the highest safety standards.

Senior Chemist, Pilot Plant

Pilot plant testing of membrane filtration for paper and specialty dyestuffs, inkjets and pigments. Trained and supervised co-op students. Implemented project management system.

Senior Chemist, Process Improvement Laboratory

Production support for paper dyestuffs and pigments including process improvements, batch reworks, and introduction of new products.

Supervisor, Production Support Group

Responsible for production support of seven synthesis areas and maintained ISO9002 procedures and documents.

Research & Development Chemist, Product Development

Synthesized new and existing paper and textile dyestuffs.

BAYER CORPORATION New Martinsville, WV (1989-1991)

Senior Chemist, Process Improvement Lab

Production support for amine, isocyanate, and hydrochloric acid production.

Supervised technicians.

Teaching Activities

Courses Taught at the University of North Carolina

- Organic Chemistry II (CHEM262), Fall 2013, Spring 2015, SSII 2016, Fall 2016, SSII 2017, SSII 2018
- Organic Chemistry II Lab (CHEM262L), Fall 2014, Fall 2015, Spring 2016, SSII 2016, Spring 2017, SSII 2017, Fall 2017, Spring 2018, SSII 2018, Fall 2018, Spring 2019
- Organic Chemistry I (CHEM261), Summer 2015 in Sevilla, Spain
- The Chemistry of Purslane (CHEM290), Spring 2017, Fall 2017

Courses Taught at Salem College

- General Chemistry Laboratory
- Organic Chemistry and Laboratories
- Biochemistry
- Medicinal Plants
- Spectroscopy
- Chemistry Senior Seminar
- Chemistry and Art
- Science Seminar for Lehman Scholars
- Experimental Courses for January Term: Green Design and Sustainability; ABCs (Art, Botany, Chemistry) of Salem Gardens; Science Investigations: A Hands on Approach to Teaching Science
- Salem Signature First-year Seminars: Discovery of Self, Discovery of Self in Society

Teaching and Other Awards

- Safety Stratus College/University Award for undergraduate chemical safety program (2018)
- Student Undergraduate Teaching and Staff Awards, SUTASA (2017)
- Greenovation Award (2016 and 2018) for glove recycling program
- H. A. Pfohl Award (2008)
- Who's Who Among America's Teachers (2004, 2005)
- Who's Who of Women in Education (2006)
- UNC Chemistry Graduate Teaching Award (1987)

Scholarly Activities

Presentations

- “Introduction of research into a large enrollment organic chemistry lab course” ACS, Boston, August 2018 and CFE Faculty Showcase, November 2018
- “Fostering a Culture of Safety at the University of North Carolina at Chapel Hill ACS, Boston, August 2018
- “Introduction of research into a large enrollment organic chemistry lab course” URD Summit, Greensboro, NC March 2018
- “Why is Chemistry so Important?” July 2016, NC Governor’s School West
- “From Industry to Academia”, ACS on Campus, Chapel Hill, NC, February 2011
- “American Ginseng: The Quest for Ginsenosides,” NC Governor’s School West, Winston-Salem, NC, July 2009
- “American Ginseng: Achievements in Undergraduate Research” SERMACS, Nashville, TN November 2008
- “Green Design” Environmental Issues series, The Shepherd’s Center, Winston-Salem, NC October 2007
- “Incorporating Art into the Chemistry Curriculum” National ACS Meeting, Boston, MA August 2007
- “An Interdisciplinary Approach to Green Design” SERMACS, Augusta, GA November 2006
- “Students Taking a Hands-on Approach to Teaching Science” SERMACS, Raleigh, NC 2004

Publications

- C. Cruz, N. Holmberg-Douglas, N. Onuska, I. MacKenzie, J. McManus, B. Hutson, N. Eskew, D. Nicewicz, “Development of a Large Enrollment Course-based Research Experience in an Undergraduate Organic Chemistry Laboratory: Structure-Function Relationships in Pyrylium Photoredox Catalysts. Manuscript submitted to *J. Chem. Educ.*
- H. Ainsworth, R. Gyawali, L. Murphy, S. Sharma, N. Eskew, “Identification of Ginsenosides in American Ginseng Seedlings”, *Explorations: The Journal of Undergraduate Research and Creative Activities for the State of North Carolina*, 2010, **5**, 3. (non-refereed)
- Dissertation thesis: “The Chemistry of 1,3,2λ₅- Dioxaphospholanes from Monosaccharides. Cyclodehydration, Conformational Analyses, Kinetic Studies and Nucleophilic Substitution.” **1989**, 1-185.
- N. A. Eskew and S. A. Evans, Jr., *J. Chem. Soc., Chem. Commun.*, 1990, **9**, 706-708. (refereed)
- N.A. Eskew and S.A. Evans, Jr., *Heteroatom Chemistry*, 1990, **1**, 307-316. (refereed)
- W.T. Murray, A. Pautard-Cooper, N. A. Eskew, S. A. Evans, Jr., *Phosphorus, Sulfur and Silicon*, 1990, **49/50**, 101-104. (refereed)
- J. W. Kelly, N. A. Eskew, S. A. Evans, Jr., *J. Org. Chem.*, 1986, **51**, 95-97. (refereed)

Professional Development

- Safe Zone Training, UNC, April 2018
- Biennial Conference on Chemical Education (BCCE); Grand Rapids, MI; August 2015
- Engaged STEM Learning: From Promising To Pervasive Practices; Miami, FL; 2011
- Process Oriented Guided Inquiry Learning (POGIL) Southeastern Regional Workshop; Williamsburg, VA; 2010
- Women Chemists Web: Building Strength through Connections; Catawba College; Salisbury, NC; 2009
- Council for Entrepreneurial Development Biotechnology Conference; Winston-Salem, NC; 2008
- NCICU 4th Annual Assessment Conference; Guilford College, Greensboro, NC; 2008
- Non-Timber Forest Products-Field Meeting; Galax, VA; 2007
- Medicines from the Earth symposium; Black Mountain, NC; 2007
- Growing Ginseng workshop; Galax, VA; 2007
- POGIL (Process Oriented Guided Inquiry Learning) Workshop; Atlanta, GA; 2006
- NSF sponsored workshop in Chemistry and Art; Millersville, PA; 2003
- Green Chemistry workshop; Biennial Conference on Chemical Education (BCCE); Bellingham, WA; 2002

Professional Membership

- American Chemical Society

Institutional Service

Committee Membership

University of North Carolina Chemistry Department

- Undergraduate Laboratories, chair (2012-current)
- Morehead Building Committee (2018-current)
- Undergraduate Studies (2012-2017)
- Education Committee (2013-current)
- Safety Committee (2012-2014)

University of North Carolina campus wide

- QEP Leadership Committee, CURE Team Member (2016-current)
- Laboratory Chemical and Safety Committee (2012-current)
- Green Labs Committee (2012- 2015)
- Carolina Firsts (2013-current)
- Carolina Covenant mentor (2014-2018)