

Curriculum Vitae
Wesley Eugene Stites

Department of Chemistry and Biochemistry
University of Arkansas
Fayetteville, AR 72701-1201



EDUCATION:

Johns Hopkins University
School of Medicine
Postdoctoral Fellow

Baltimore MD
March, 1988 to August, 1991

Massachusetts Institute of Technology
Ph.D. in Biochemistry

Cambridge MA
February, 1988

Johns Hopkins University
Combined four-year B.A./M.A. in Chemistry

Baltimore MD
May, 1983

RESEARCH AND WORK EXPERIENCE:

- 2019-Present: Associate Vice Chancellor for Research and Innovation. Responsibilities include budgeting and administering faculty start-up packages and matches for grants, data analytics, administrative evaluation of over 60 research centers, institutes, and core facilities, administration of internal grant competitions, identification and nomination of faculty for external awards, research computing and data policy and management, and oversight of research and creative space issues. Key accomplishments in these areas include clean-up of chronic budget issues for faculty start-up; comprehensive University-wide benchmarking of departmental research/creative productivity, collaboration, and space; and identification, acquisition, and deployment of a web-based solution to manage submission and review of internal grants, limited submission opportunities, faculty start-up packages, center reports, IRB, IBC, and IACUC research compliance protocols, conflict of interest reports, and scholarships. General manager for \$114M+ Institute for Integrative and Innovative Research building project. Represent the U of A on various national and state committees including EPSCoR and IDEA related issues. Direct reports include the VCRI Data Analyst, the VCRI Web/IT Administrator, the co-Directors of Undergraduate Research, the VCRI Communications team, and the Assistant VC for Research Compliance.
- 2014-2019: Chair of the Department of Chemistry and Biochemistry. Recommended by faculty, appointed by Dean and served one complete four-year term, reappointed in 2018 and served until August 2019. While serving as Associate Vice Chancellor, assisted Interim Chair in the fall of 2019. Key accomplishments include: Oversight of the final phases of the renovation of Discovery Hall, the main teaching laboratory building; An invigorated safety program including leading the adoption of an automated lab coat exchange program for both Biological Sciences and Chemistry and Biochemistry research and teaching labs; Working with the instructional team for our largest service course, the introductory chemistry sequence, to reduce DFW rates without lowering standards; Undergraduate and graduate curriculum revision, and; Managing resources so that the second largest service courses, Organic I and II, could both be offered every semester and thus facilitate student success. During the time as chair the Department had 26 tenured or tenure track faculty, 6 hard-funded full-time non-tenure track instructional faculty, 6 hard-funded full-time administrative staff, 3 hard-funded full-time scientific staff, 4-8 soft-funded instructors and scientific staff, 2 research-active emeritus faculty, and was home to the Arkansas State-Wide Mass Spectrometry Facility and its 2 additional hard-funded scientific staff. Handled seven promotion and/or tenure cases, hired five tenure-track faculty, two full time instructors, and eight administrative staff. Building executive for three buildings comprising 468 rooms and 166,003 gross square feet. Department had over 400 majors enrolled and taught 26,519 SSCH in 2018-19, the last year as chair. Over the five years 2014-2019, the Department was responsible for about 3.7% of all SSCH production or one out of every 27.2 credit hours taught by the entire University of Arkansas. Again over

2014-2019, the Department attracted 5.22% of all external research funding obtained by the entire University.

- 1991-Present: Faculty at the University of Arkansas in Department of Chemistry and Biochemistry. Professor of Biochemistry. Research program investigating the basis of protein folding and association. Investigation of role of post-translational oxidative modification of proteins in heart disease and stroke. Development of new methods for detection of methionine sulfoxide formation in the proteome. Identified novel covalent modifications of proteins by poison ivy toxins. Teaching responsibilities include biochemistry, molecular biology, forensic chemistry, and organic chemistry.
- 1988-1991: Postdoctoral fellowship with Dr. David Shortle at the Johns Hopkins University School of Medicine, Department of Biological Chemistry. Site-directed mutagenesis of the enzyme staphylococcal nuclease and biophysical studies of these mutants to investigate the mechanisms of protein folding and stability.
- 1983-1988: Graduate research on synthesis and characterization of medium ring templates for beta turns with Dr. Daniel S. Kemp at the Massachusetts Institute of Technology, Department of Chemistry.
- 1983: Synthesis of a new class of polymer cross-linking agents based on imide chemistry and the characterization of their cross-linking reaction. (Rohm and Haas, Philadelphia PA)
- 1981-1983: Undergraduate research on the synthesis of the Nocardicin family of beta lactam antibiotics with Dr. Craig A. Townsend at the Johns Hopkins University, Department of Chemistry.

HONORS AND AWARDS:

The 1991 Johns Hopkins University School of Medicine Award for Postdoctoral Basic Science Investigation
NIH Postdoctoral Fellowship, 1988-1991
Postdoctoral Fellow of the Institute for Biophysical Research on Macromolecular Assemblies
University of Arkansas Teaching Academy 1997 Outstanding Undergraduate Mentor Award
Visiting Associate Professor, Johns Hopkins University, Department of Biophysics, Fall 1998
Certificate of Appreciation, Program Manager for Non-stockpile Chemical Material, 2002
Award for Superior Service from Deputy Assistant Secretary of the Army, 2005
Standard of Excellence Award from Project Manager, Pine Bluff Chemical Demilitarization Facility, 2005
Commander's Award for Public Service from the Commander of the Pine Bluff Arsenal, 2011
Commander's Award for Civilian Service from the Deputy Undersecretary of the Army, 2013
Chancellor's Academic Fellow, 2018

ADMINISTRATIVE OR PROFESSIONAL SERVICE AND APPOINTMENTS:

General manager for the \$114M Institute for Integrative and Innovative Research Building Project, 2019-date
This ambitious project will build a new hub for five interdisciplinary research foci (Data Analytics, Integrative Neuroscience, Metabolism, Food Systems, and Nanomaterials) and begin to address critical shortages of research space. As the administrative lead, responsible for identifying approximately 45 key faculty through a novel analysis of collaborative networks, managing the collaborative process to gather their input along with that of another 20 administrators and staff, to work with architects, engineers, consultants, and general contractor to identify the correct mix of core facilities, labs and offices to maximize impact on the research enterprise and catalyze further interdisciplinary work, promote industrial engagement, and meet the expectations of the donor of the lead philanthropic gift. Phase I, completed in the Fall of 2020 saw selection of building site, developed the building program and scope along with estimation of costs for a detailed proposal for Board of Trustees approval in Fall 2020. Phase II since then has been the design will soon see construction start, with enabling bid packages already released. Construction should complete in the Spring 2024 and see the establishment of the Institute. The building has finished Schematic Design and is approximately halfway through Design Development. The volatile price environment is necessitating a very careful eye on budget and the ambitious construction schedule.

General manager for the \$10M Cleanroom Fit Out Project, 2020-date

As part of the first phase of the I³R building development, suggested that completion of shell space in the Nanoscale Material Science & Engineering Building adjacent to the I³R building site as a cleanroom, maximized the use of available resources to accomplish overall institutional goals. Currently managing the process to identify the proper mix of tools and environments for this new space, with a goal of Board of Trustees approval in September.

University *ad hoc* COVID-19 planning and steering committee and Research *ad hoc* COVID-19 planning and steering committee, 2020

As part of campus leadership, formulated phased guidelines for resumption of research activity and the return to campus in Fall 2020. Aided in PPE planning and procurement. Planning for response in the event of a large-scale campus outbreak. Revised research continuity plan for Spring 2021. Currently preparing for transition back to normal operations this summer.

Co-PI for HHMI Driving Change proposal, 2020-date

Championed a proposal to the Howard Hughes Medical Institute (HHMI) Driving Change program, gathering key supporters across campus and convinced the Chancellor to make the \$2.5M matching commitment. This grant program aims to replicate the success of the UMBC Meyerhoff program at attracting under-represented minorities into STEM majors and research careers. The University's proposal has advanced to the finalist stage, but HHMI has placed the program on hold until the pandemic is further resolved. While waiting for HHMI, our team is gathering both campus and national data relevant to the proposal and identifying key barriers to the participation and success of these groups in STEM fields.

University Patent and Copyright Committee, 2017-date

Appointed by Chancellor to committee responsible for reviewing invention disclosures for patenting consideration; evaluating inventions for patentability, as well as scientific merit and practical application; determining patent or related property rights or equities held by the university in an invention; seeking initial resolution of campus disputes relating to rights in inventions; and reviewing works of authorship (including computer software) for copyright consideration.

Commissioner, Arkansas Pollution Control and Ecology Commission, 2015-2019

Appointed by Governor Hutchinson, April 2015. The 13 Commissioners pass Regulations that govern environmental policy for Arkansas. With guidance from the Governor, the Legislature, the EPA and others, the Commission determines the environmental policy and regulations for the state and the Arkansas Department of Environmental Quality implements those policies and regulations. The Commission has a judicial function; hearing appeals on violations of Regulations and issuance of Permits. It typically met ten times a year to take public comment, initiate or adopt rules, and judge appeals.

Consultant, Army Science Board, 2008-2009

2009 Study and Report: Army Installations 2025

Member, Army Science Board, 2009-2013.

2010 Study and Report: Soldier Resilience and Performance Enhancement

2011 Study and Report: Strengthening Sustainability and Resiliency of a Future Force

2012 Study and Report: Strategic Direction for Army Science and Technology

2013 Study and Report: Army Science and Technology (S&T) Essential Core Competencies

Vice-Chair charged with lead of Soldier Systems and Chemical and Biological Defense sub-panel

Commander's Award for Civilian Service from the Deputy Undersecretary of the Army, 2013.

Commander's Awards are the fourth highest non-military service recognition in DOD.

Commissioner, Pine Bluff Arsenal Citizen's Advisory Commission, Appointed by Governor to Federal Commission, U.S.

Army Program Manager for Chemical Demilitarization. 1997-2005.

Commander's Award for Public Service from the Commander of the Pine Bluff Arsenal, 2011.

Commander's Awards are the fourth highest non-military service recognition in DOD.

Award for Superior Service from Deputy Assistant Secretary of the Army, 2005

Standard of Excellence Award from Project Manager, Pine Bluff Chemical Demilitarization Facility, 2005.

Member of Dialogue on Assembled Chemical Weapons Assessment, U.S. Army Chemical and Biological Defense Command. 1997-2002.

Member of Technology Evaluation Panel for Non-stockpile Chemical Material Neutralent Post-treatment, U. S. Army Program Manager for Chemical Demilitarization. 2000.

Member of Technology Evaluation Panel II for Non-stockpile Chemical Material Neutralent Post-treatment, U. S. Army Program Manager for Chemical Demilitarization. 2002.
Certificate of Appreciation, Program Manager for Non-stockpile Chemical Material.

Chair of interdisciplinary committee that developed the program for a new Certificate of Brewing and an eventual degree program 2017-2019.

Chancellor's Academic Fellow 2017-2018

Two faculty each year are selected to carry out a project each proposes to address the needs of the University and to gain additional administrative experience at higher levels. Participate in the Chancellor's Executive Committee meeting each month. My project aimed at answering the acute need for additional research, teaching and administrative space in wake of rapid enrollment growth. Working with the Provost, I developed a proposed policy and process designed to better capture input from the faculty and wider University community to guide the University in making the best decisions possible regarding space assignments. Currently undergoing final review, formal adoption by Board of Trustees of new policy and procedure hopefully occur in early 2021 as pandemic resolves.

Pilot lead for conversion of the University's Faculty Annual review process to Digital Measures Activity Insight software. 2018

Led Chemistry and Biochemistry participation as pilot department. Chosen by the company (Digital Measures Watermark) to serve as one of a dozen members of their national Faculty Insight Board for feedback and evaluation of new features and functions in the Digital Measures package.

Chancellor's Guiding Priorities Task Force on "Investing in Faculty" 2016-2017

As one of a six person committee along with the past-Provost, Dean of Business College, Chair of Campus Faculty, Faculty Senate Chair, and Vice-Provost for Planning, I worked on recommendations on how to best carry out the "Investing in Faculty" guiding priority; one of eight committees that resulted from the Chancellor's planning initiative.

Program manager of \$18.1 million Chemistry Building Renovation Project 2001-2007.

Wrote successful NIH Construction grant proposal that kick started project. Worked with team from University Facilities Management, architects, and engineers to develop final plans and managed project for the department. The project received honorable mention for Excellence in Preservation Rehabilitation from Historic Preservation Alliance of Arkansas and was awarded Best Education Building Project of 2007 in Alabama, Arkansas, Mississippi, or Tennessee by a regional jury.

Online Education Faculty Advisory Group, 2013-2016

University Financial Advisory Committee, 2012-date; Chair 2013-date

Committee works with Vice-Chancellor for Finance and Vice-Provost for Planning to examine various issues related to University budget and finance. Issues have included serious unbudgeted overspending in development office, faculty and administrative salary competitiveness with peer institutions, tuition, fees, and books.

Faculty Senate *ad hoc* committee on Faculty Salary Equity Policy 2018-2019

Appointed by Senate chair to committee charged with developing formal policy and procedures to address inequities in both tenure and non-tenure track faculty salaries.

Faculty Senate, 2010-2012

Campus Council 2011-2012

Chair, Fulbright College of Arts and Sciences Fiscal and Planning Committee, 2009-2010

Vice-chair, Fulbright College of Arts and Sciences Cabinet, 2009-2010.

PUBLICATIONS (ORCID 0000-0002-9334-3760; ResearcherID D-5348-2013):

- D. S. Kemp, W. E. Stites. A convenient preparation of derivatives of 3(S)-amino-10(R)-carboxy-1,6-diaza-cyclodeca-2,7-dione, the dilactam of L- α , γ -diaminobutyric acid and D-glutamic acid: A β -turn template. *Tetrahedron Lett* 1988, **29**, 5057-5060.
- D. Shortle, W. E. Stites, A. K. Meeker. Contributions of the large hydrophobic amino acids to the stability of staphylococcal nuclease. *Biochemistry* 1990, **29**, 8033-8041.
- W. E. Stites, A. G. Gittis, E. E. Lattman, D. Shortle. In a staphylococcal nuclease mutant the side chain of a lysine replacing valine 66 is fully buried in the hydrophobic core. *J Mol Biol* 1991, **221**, 7-14.
- E. James, P. G. Wu, W. Stites, L. Brand. Compact denatured state of a staphylococcal nuclease mutant by guanidinium as determined by fluorescence energy transfer. *Biochemistry* 1992, **31**, 10217-10225.
- K. Meeker, Y.-K. Li, W. E. Stites, D. Shortle. A simplified protocol for isolation and characterization of ssM13 DNA templates for use in dideoxy-sequencing. *Biotechniques* 1993, **15**, 370-372.
- G. Gittis, W. E. Stites, E. E. Lattman. The phase transition between a compact denatured state and a random coil state in staphylococcal nuclease is first-order. *J Mol Biol* 1993, **232**, 718-724.
- G. Gittis, W. E. Stites, E. E. Lattman. A first-order phase transition between a compact denatured state and a random coil state in staphylococcal nuclease. in *Statistical Mechanics, Protein Structure, and Protein Substrate Interactions* S. Doniach, ed., Plenum Press, New York, 1994, 39.
- W. E. Stites, A. K. Meeker, D. Shortle. Evidence for strained interactions between side chains and the polypeptide backbone. *J Mol Biol* 1994, **235**, 27-32.
- W. E. Stites, J. Pranata. Empirical evaluation of the influence of side chains on the conformational entropy of the polypeptide backbone. *Proteins* 1995, **22**, 132-140.
- W. E. Stites, M. P. Byrne, J. Aviv, M. Kaplan, P. M. Curtis. Instrumentation for automated determination of protein stability. *Anal Biochem* 1995, **227**, 112-122.
- M. P. Byrne, R. L. Manuel, L. G. Lowe, W. E. Stites. The energetic contribution of side chain hydrogen bonding to the stability of staphylococcal nuclease. *Biochemistry* 1995, **34**, 13949-13960.
- M. P. Byrne, W. E. Stites. Chemically crosslinked protein dimers: Stability and denaturation effects. *Protein Sci*, 1995, **4**, 2545-2548.
- M. P. Byrne, C. A. Broomfield, W. E. Stites. Mustard gas crosslinking of proteins through preferential alkylation of cysteines. *J Protein Chem* 1996, **15**, 131-136.
- D. S. Spencer, W. E. Stites. The M32L substitution of staphylococcal nuclease: Disagreement between theoretical prediction and experimental protein stability. *J Mol Biol* 1996, **257**, 497-479.
- García-Moreno E., J. J. Dwyer, A. G. Gittis, E. E. Lattman, D. S. Spencer, W. E. Stites. Experimental measurement of the effective dielectric in the hydrophobic core of a protein. *Biophys Chem* 1997, **64**, 211-214.
- W. E. Stites. Protein-protein interactions: Interface structure, binding thermodynamics, and mutational analysis. *Chem Rev* 1997, **97**, 1233-1250.
- J. M. Schwehm, E. S. Krystanne, C. C. Biggers, W. E. Stites. Stability effects of increasing the hydrophobicity of solvent exposed side chains in staphylococcal nuclease. *Biochemistry* 1998, **37**, 6939-6948.
- J. M. Schwehm, W. E. Stites. Application of automated methods for determination of protein conformational stability. *Meth Enzymol* 1998, **295**, 150-170.

- J. J. Dwyer, D. S. Spencer, A. G. Gittis, D. A. Karp, E. E. Lattman, W. E. Stites, B. García-Moreno E. High apparent dielectric constants inside proteins reflect water penetration. *Biophys Chem* 2000, **79**, 1610-1620.
- J. Chen, Z. Lu, J. Sakon, W. E. Stites. Increasing the thermostability of staphylococcal nuclease: Implications for the origin of protein thermostability. *J Mol Biol* 2000, **303**, 125-130.
- Y. H. Kim, A. H. Berry, D. S. Spencer, W. E. Stites. Comparing the effect on protein stability of methionine oxidation versus mutagenesis: Steps toward engineering oxidative resistance in proteins. *Protein Eng* 2001, **14**, 343-347.
- J. B. Holder, A. F. Bennett, J. Chen, D. S. Spencer, M. P. Byrne, W. E. Stites. The energetics of side chain packing in staphylococcal nuclease assessed by exchange of valines, isoleucines, and leucines. *Biochemistry* 2001, **40**, 13998-14003.
- J. Chen, W. E. Stites. The energetics of side chain packing in staphylococcal nuclease assessed by systematic double mutant cycles. *Biochemistry* 2001, **40**, 14004-14011.
- J. Chen, W. E. Stites. Higher order packing interactions in triple and quadruple mutants of staphylococcal nuclease. *Biochemistry* 2001, **40**, 14012-14019.
- J. Chen, W. E. Stites. Packing is a key selection factor in the evolution of protein hydrophobic cores. *Biochemistry* 2001, **40**, 15280-15289.
- A. Fitch, D. A. Karp, K. K. Lee, W. E. Stites, E. E. Lattman, B. García-Moreno E. Experimental pKa values of buried residues: Analysis with continuum methods and role of water penetration. *Biophys J* 2002, **82**, 3289-304.
- W. G. Sears, P. H. Benoit, S. W. S. McKeever, D. Banerjee, T. Kral, W. Stites, L. Roe, P. Jansma, G. Mattioli. Investigation of biological, chemical and physical processes on and in planetary surfaces by laboratory simulation. *Planet Space Sci* 2002, **50**, 821-28.
- J. M. Schwehm, C. A. Fitch, B. N. Dang, B. García-Moreno E., W. E. Stites. Changes in stability upon charge reversal and neutralization substitution in staphylococcal nuclease are dominated by favorable electrostatic effects. *Biochemistry* 2003, **42**, 1118-28.
- J. Chen, Z. Lu, J. Sakon, W. E. Stites. Proteins with simplified hydrophobic cores compared to other packing mutants. *Biophys Chem* 2004, **110**, 239-48.
- Y. H. Kim, W. E. Stites. Oxidation of buried cysteines is an insignificant factor in the structural destabilization of staphylococcal nuclease caused by H₂O₂ exposure. *Amino Acids* 2004, **27**, 175-81.
- J. Chen, W. E. Stites. Replacement of staphylococcal nuclease hydrophobic core residues with those from thermophilic homologues indicates packing is improved in some thermostable proteins. *J Mol Biol* 2004, **344**, 271-80.
- W. Qiu, Y. T. Kao, L. Zhang, Y. Yang, L. Wang, W. E. Stites, D. Zhong, A. H. Zewail. Protein surface hydration mapped by site-specific mutations: Time scales and role of protein fluctuations. *Proc Nat Acad Sci* 2006, **103**, 13979-84.
- M. P. Byrne, W. E. Stites. Thermal denaturations of staphylococcal nuclease wild-type and mutants monitored by fluorescence and circular dichroism are similar: Lack of evidence for other than a two state thermal denaturation. *Biophys Chem* 2007, **125**, 490-96.
- W. E. Stites, J. W. Froude II. Does the oxidation of methionine in thrombomodulin contribute to hypercoaguable state of smokers and diabetics? *Med Hypothes* 2007, **68**, 811-21.
- A. Karp, A. G. Gittis, M. A. Stahley, C. A. Fitch, W. E. Stites, B. García-Moreno E. High apparent dielectric constant inside a protein reflects structural reorganization coupled to the ionization of an internal Asp. *Biophys J* 2007, **92**, 2041-53.

- C. Ross, S. L. MacLeod, J. R. Plaxco, J. W. Froude, L. M. Fink, J. Wang, W. E. Stites, M. Hauer-Jensen. Inactivation of thrombomodulin by ionizing radiation in a cell-free system: possible implications for radiation responses in vascular endothelium. *Radiat Res* 2008, **169**, 408-16.
- Talla-Singh, W. E. Stites. Refinement of non-calorimetric determination of the change in heat capacity, ΔC_p , of protein unfolding and validation across a wide temperature range. *Proteins* 2008, **71**, 1607-16.
- Y. H. Kim, W. E. Stites. Effects of excluded volume upon protein stability in covalently cross-linked proteins with variable linker lengths. *Biochemistry* 2008, **47**, 8804-8814.
- R. Liyanage, N. Devarapalli, L. M. Puckett, N. H. Phan, J. Gidden, W. E. Stites, J. O. Lay, Jr. Comparison of two ESI MS based H/D exchange methods for extracting protein folding energies. *Int J Mass Spec* 2009, **287**, 96-104.
- P. Bell-Upp, A. C. Robinson, S. T. Whitten, E. L. Wheeler, J. Lin, W. E. Stites, B. García-Moreno E. Thermodynamic principles for the engineering of pH-driven conformational switches and acid insensitive proteins. *Biophys Chem* 2011, **156**, 217-26.
- C. Saunders, W. E. Stites. An electrophoretic mobility shift assay for methionine sulfoxide in proteins. *Anal Biochem* 2012, **421**, 767-9.
- R. Liyanage, N. Devarapalli, D. Pyland, L. M. Puckett, N. H. Phan, J. A. Starch, M. R. Okimoto, J. Gidden, W. E. Stites, J. O. Lay, Jr. Theory of the protein equilibrium population snapshot by H/D exchange electrospray ionization mass spectrometry (PEPS-HDX-ESI-MS) method to obtain protein folding energies/rates and selected supporting experimental evidence. *Int J Mass Spec* 2012, **330-332**, 63-70.
- Talla, W. E. Stites. The fluorescence detected guanidine hydrochloride equilibrium denaturation of wild-type staphylococcal nuclease does not fit a three-state unfolding model. *Biochimie* 2013, **95**, 1386-1393.
- D. Spencer, B. García-Moreno E., W. E. Stites. The pH dependence of staphylococcal nuclease stability is incompatible with a three-state equilibrium denaturation model. *Biophys Chem*, 2013, **180**, 86-94.

VIDEOS

Although not conventional publications, with the support of the Camille and Henry Dreyfus Foundation, I produced, with our Global Campus video team, two videos illustrating chemical principles at work in chemical industry. Combining location shooting with computer animation, these videos have very high production values and show what can be done to bring chemistry to life for a generation not terribly interested in reading.

<https://www.youtube.com/watch?v=kOpC11j1u8w&t=2s>

<https://www.youtube.com/watch?v=8k1VPExr2CU>

TEACHING EXPERIENCE:

Graduate courses taught:

5101	Introduction to Research	Fall 2019, 2018, 2017, 2016, 2015
5753	Physical Methods in Organic Chemistry	Fall 1995
5603	Theoretical Organic Chemistry (Second Half)	Spring 1994
5813	Graduate Biochemistry I	Fall 1993, 1992
5843	Graduate Biochemistry II	Spring 2016, 2015, 2014, 2008
6823	Physical Biochemistry	Fall 2004, 2002, 1996, 1994
6863	Enzymes	Fall 1999
6873	Molecular Biochemistry	Spring 2007, 2001, 1999
6011-B	Biochemistry Seminar	Spring 2017, Fall 2006, Fall 2005, Spring 1999, Fall 1999, Spring 1995, Fall 1995

Undergraduate courses taught:

1053/1051	Chemistry in the Modern World	Spring 2000
1073	Fundamentals of Chemistry	Fall 2014
	Developed on-line content for initial offering	Summer 2013- Summer 2014
1213	Chemistry I for Majors	Fall 2008
1123	University Chemistry II	Fall 2009, 2010, 2011
2613	Physiological Organic Chemistry	Summer 2008, 2000, Spring 1998, 1995, 1994
2611	Physiological Organic Chemistry Laboratory	Summer 2008, 2000, Spring 1998, 1995, 1994
3203	Forensic Chemistry	Spring 2020, 2019, Fall 2013, 2007, 2003, 2001, and 2000
3451	Elements of Physical Chemistry Laboratory	Fall 2017, 2006
3601	Organic Chemistry I Lab	Fall 2000
3613	Organic Chemistry I	Summer 2008 and 2007
3613	Organic Chemistry II	Summer 2012, Spring 1997 and 1996
3611M	Majors Organic Chemistry Laboratory II	Spring 2000
3712L	Honors Organic Chemistry Laboratory II	Spring 2000
3813	Introductory Biochemistry	Fall 1997, Summer 2010
4813H	Honors Biochemistry I	Fall 1993, 1992
4843H	Honors Biochemistry II	Spring 2016, 2015, 2014, 2008
4853	Biochemical Laboratory Techniques (At this time a team-taught course, responsible for 3 week DNA sequencing/PCR module)	Spring 1998, 1997, 1996, 1995, 1994, 1993, 1991
	Complete course-shared with J. Sakon	2013, 2005, 2004, 2003, 2002
	Complete course alone	2018, 2017, 2012, 2011, 2009, 2006
4723/4720	Exp. Methods in Organic and Inorganic Chemistry	Fall 1995

Research advisor and thesis director for over fifty undergraduate honors students who have graduated *cum laude*, *magna cum laude* or *summa cum laude*. Research advisor for over forty additional undergraduates, primarily in summer programs.