Sean P. Hickey

Senior Lecturer, Wayne State University

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**BACKGROUND**

EDUCATION

* PhD, University of New Orleans, Chemical Education, Anticipated May 2019
* MS, University of Michigan at Ann Arbor, Organic Chemistry, December 1994
* BS, University of New Orleans, Chemistry, May 1992

DISSERTATION:

* The Round Table of Scientific Communication: From Classroom to Course Creation, Back to the Classroom and Beyond

UNIVERSITY ACADEMIC EXPERIENCE

* Senior Lecturer, Chemistry, Wayne State University, August 2019-Present
* Staff Instructor, Student Academic Success Office, Xavier University, August 2018-August 2019
* Lecturer, Department of Chemistry, Xavier University, August 2017-August 2018
* Instructor, University of New Orleans, 2014-2017
* Undergraduate Coordinator and Chair, Undergraduate Affairs Committee, Department of Chemistry, University of New Orleans, August 2011 – 2015
* Lecturer, Business Manager, Chemist and Manager, (till January 2012), Department of Chemistry, University of New Orleans, August 2001 – 2014
* Adjunct Assistant Professor, Department of Natural and Applied Sciences, Our Lady of Holy Cross College, August 2004 – May 2011
* Adjunct Assistant Professor, Nursing School, William Carey University, August 1996 – July 2010
* Assistant Professor, Department of Sciences, Delgado Community College, August 1996 – August 2001
* Professional Teacher, Holy Cross High School, New Orleans, LA, August 1995 – May 1996
* Lecturer, University of Michigan, Ann Arbor, MI, Spring Semester, 1995

PUBLISHING ACADEMIC EXPERIENCE

* Subject Matter Expert, Perci, LLC, Organic Chemistry, June 2018-Present
* National Subject Matter Expert, Organic Chemistry, Chemistry Education Consultant,

Partner in Publishing, September 2017 – present

* President of Sean Hickey, LLC, Chemistry Education Consulting Firm, May 2010-present
* National Subject Matter Expert, Organic Chemistry, Chemistry Education Consultant and Mentor

John Wiley and Sons, Inc., January 2006 – present

* Product Designer, Chemistry, Wiley Publishing, 2014-August 2017

**SCHOLARLY AND CREATIVE PRODUCTIVITY**

1. PUBLICATIONS

A. Books

As Author:

* *CHEM 1007 General Chemistry Lab 1*, Hickey *et al*., John Wiley & Sons, **2012**.
* *CHEM 1008 General Chemistry Lab 2*, Hickey *et al*., John Wiley & Sons, **2013**.
* *CHEM 2017 Organic Chemistry Lab I*, Hickey, *et al.*, John Wiley & Sons, **2012**.
* *CHEM 3018 Organic Chemistry Lab II*, Hickey, *et al.*, John Wiley & Sons, **2013**.
* *Notes to Accompany Organic Chemistry Lecture 1 and 2*, Hickey, John Wiley & Sons, 2013,
* *CHEM 1001: Lights, Camera, Action: The Chemistry of Movies and TV*, Top Hat Marketplace, 2017
* *CHEM 1002: Life, the Universe and Everything: The Chemistry of Our Daily Lives*, Top Hat Marketplace, 2018

As Product Designer:

* **Trefil**, Integrated Sciences, 8th edition
* **Hein**, Introductory Chemistry, 15th edition
* **Solomons**, Organic Chemistry, 12th edition
* **Pratt**, Biochemistry, 4th edition
* **Klein**, Organic Chemistry, 3rd edition

B. Refereed Publications

1. “Can you teach subatomic particles with WKRP in Cincinnati and Climate Change with John Oliver?” Book chapter for ACS Symposium Book, *Videos in Chemistry Education: Applications of Interactive Tools*, early 2019 publication, chapter in progress
2. “Using Game of Thrones, Nicolas Cage and Harry Potter to Teach Chemistry to Non-Science Majors” Book chapter for ACS Symposium Book, *Chemistry in Communication*, early 2019 publication, chapter in progress

C. Other Publications

c. Patents (none)

d. Online Publications and Ancillary Materials

WILEYPLUS (online portal), product designer for Trefil, Hein, Solomons, Pratt, and Klein online WileyPLUS courses

WILEYPLUS (online portal), edited, created and reviewed numerous other online questions, videos, multimedia, powerpoints, clicker questions and more for WileyPLUS

4. PARTICIPATION AT PROFESSIONAL MEETINGS (Invited Talks Only)

* **“Using WileyPLUS Concept Mastery assignments and ORION adaptive practice to give students ownership over their learning and ultimately their success in organic chemistry lecture”,**ACS-National Meeting, March 2019
* **“Using clicker questions and small group discussions to foster an active learning environment in the organic chemistry lecture”**, ACS-National Meeting, March 2019
* **“A Decade of Science Cafes (and Their Higher-Proof Cousin)”**, ACS-Presidential Symposium, ACS National Meeting, March 2018
* “**Using YouTube Videos and Infographics to Teach a Non-Majors Chemistry Course**”, ACS-National Meeting, March 2018
* “**Using Game of Thrones, Nicolas Cage and Harry Potter (amongst others) to Teach Biochemistry to Non-Science Majors”**, ACS-National Meeting, March 2018
* **“WileyPLUS an Online Chemistry Homework System Powered by Marvin JS a State of the Art Web Based Chemical Drawing Tool”**, ACS-National Meeting, March 2018
* “**Is There a Crisis in Organic Chemistry Education”,** ACS-Presidential Symposium, ACS National Meeting, San Diego, March 2016
* “**Using Adaptive Systems in Organic Chemistry**”, STEM Ed Tech Conference, New Orleans, 2017
* “**Using Online Systems in Organic Chemistry**”, Ed Tech Conference, Orlando, 2016
* “**Engaging Your Organic Chemistry Students through Technology**” Sean P. Hickey and Kristine Ruff, 200th 2YC3 Conference, New Orleans, LA April, 2012.
* “**Using Online Assessment in the Chemistry Classroom**” Sean P. Hickey and Kristine Ruff, 66th Southwest and 62nd Southeast Regional Meeting of the American Chemical Society, Joint Meting, December, 2010.
* “**Using Online Assessment in Chemistry Curriculum**,” Sean P. Hickey and Kristine Ruff, 21st Biennial Conference on Chemical Education, Denton, TX, August, 2010.

5. OTHER SCHOLARLY OR CREATIVE ACTIVITIES

A. Service as Officer in Professional Organization or as Session Organizer for Professional Meetings

**General Chair and Chair of the Executive Committee** for the 2020 Joint Southeast/Southwest

Regional Meeting of the American Chemical Society (ACS), New Orleans, LA

**General Chair and Chair of the Executive Committee** for the 2010 Joint Southeast/Southwest

Regional Meeting of the American Chemical Society (ACS), New Orleans, LA

**Secretary-Treasurer**, Southwest Region of the American Chemical Society, (2010-2020)

**Steering Committee Member**, Southwest Region of the American Chemical Society, (2004-present)

**Executive Board Member**, Southwest Region of the American Chemical Society, (2010-present)

**Chair-Elect, Chair, Past-Chair**, Southwest Region of the American Chemical Society, (2010-2012)

**Executive Board**, Southeast Region of the American Chemical Society, (2009-2011)

**Chair-Elect, Chair, and Past-Chair**, Louisiana Section of the American Chemical Society (2006-2008, 2011-2013)

**Secretary and Newsletter Editor**, Louisiana Section of the American Chemical Society (2004)

**Member**, Content Delivery Working Group, LSAC (Local Sections Activity Committee), American Chemical Society, (2008-2009),

**Member**, Chemistry Section, Wiley Faculty Network, John Wiley and Sons (2009-present)

B. Professional Society Memberships

American Chemical Society, Divisions of Organic Chemistry and Chemical Education

American Association of Chemistry Teachers

Tri-beta National Biological Honor Society and Golden Key International Honor Society

6. AWARDS, LECTURESHIPS, OR PRIZES

New Orleans CVB, Summer 2018 Featured Local Partner for work with the 2018 ACS National Convention and 2010 and 2020 SWRM/SERMACS Regional Meetings

2011 ChemLuminary National ACS Award, Committee on Meetings & Expositions, Outstanding Regional Meeting, 2010 Joint Southeastern/Southwest Regional Meeting

Employee of the Month, University of New Orleans, October 2009

Hospitality Award (nominated), LSAC, American Chemical Society, 2008

Special Recognition for Outstanding Service (won), LSAC, American Chemical Society, 2008

Gomberg Fellowship, University of Michigan (1993-1994)

Dean’s Scholarship, Loyola University New Orleans (1988-1989)

Presidential Scholarship, Loyola University New Orleans (1986-1988)

CRC, Freshman Chemistry Student Award, Loyola University New Orleans (1987)

7. GRANTS AND CONTRACTS

A. Grants and Contracts Received (Total = $75,000 approx)

* + - Principal Investigator, co-Principal Investigator, or Equivalent
    - Various mini-grants from ACS (2005-present), Science Café, Nanoinnovations.., $500 each, American Chemical Society
    - 6 Innovative Project Grants (2007, 2008, 2009, 2010, 2011, 2012), $3000-3500 each, (Beautifications, One Day Symposia on Chemical Manufacturing, One Day Symposia on LNG, Small Chemical Industries Symposia, BP/Horizon Oil Spill Symposia, Mardi Gras Symposia, Seminar on Lab Safety), American Chemical Society
    - STPIG Grant, “Pasco Equipment in the General Chemistry Lab”, $25,000, University of New Orleans, 2003-2004
    - Instrumentation/Technology Grants, “ComWEB classroom system and Probeware for Labs”, $30,000, Delgado Community College, 1998-2000

B. Grants and Contracts Pending

a. Principal Investigator, co-Principal Investigator, or Equivalent, NONE

8. MAJOR AREAS OF RESEARCH INTEREST

|  |  |
| --- | --- |
| Organic Chemistry | Synthesis and structural activity relationship of natural product Motuporin and derivatives |
| Chemistry Education | Improving science education at all levels (K-12, college, graduate); Undergraduate research programs |

9. OTHER PROFESSIONAL ACCOMPLISHMENTS

A. Course/Program Design And Development

Led Committee for the redesign of the Chemistry Curriculum, 2014

Created two new courses, CHEM 1001 (Lights, Camera, Action: Chemistry of Movies and TV) and 1002 (Life, the Universe and Everything: Chemistry of our Daily Lives), to encourage non-majors to take chemistry, 2013

Created and Implemented Chemistry Undergraduate TA program and the corresponding course, CHEM 3092

Led committee for redesign and creation of new lab manuals for Organic Chemistry labs, 2013

Led committee for the design and implementation of UNIV 1001 for Science Majors course (University Success course), 2011-2012

Led committee for the creation of Undergraduate TA program and course, 2012

Led committee for the of the Undergraduate Internship program and course, 2012

Initiated and implemented creation of iTunes U for University of New Orleans and created organic chemistry courses that have over 5000 enrolled students

Developed and ran the 1st SURF (Science Undergraduate Research Fair) in the College of Sciences, University of New Orleans, 2011

Led committee for redesign and creation of new lab manual for General Chemistry 2 lab, 2010

On committee for redesign and creation of new lab manual for General Chemistry 1 lab, 2009

On committee for redesign and revitalization of Chemistry BS curriculum, 2006-2011

Developed and initiated recitations in Organic Chemistry and General Chemistry, 2003-2004

B. Academic Service

a. On Campus

* **Library Liaison**, Department of Chemistry, Wayne State University (2019-Present)
* **Workload Working Group**, Department of Chemistry, Wayne State University (2019-Present)
* **Bylaws and Strategic Planning Working Group,** Department of Chemistry, Wayne State University (2019-Present)
* **Chair**, Undergraduate Affairs Committee, Department of Chemistry, University of New Orleans, (2011-2014)
* **Member**, College of Sciences Retention Committee, University of New Orleans, (2011-2014)
* **Chair**, College of Sciences Retention Committee, University of New Orleans, (2012-2014)
* **Chemistry Major Advisor**, Department of Chemistry, (2004-2014)
* **Pre-pharmacy advisor** (2012-2014)
* **Chemistry Club Advisor** (2004-2014)
* **Alpha Chi Sigma Advisor** (2013-2014)
* **Chemistry Olympiad Coordinator** (2004-present)
* **Member**, Safety Committee, Dept of Chemistry, University of New Orleans, (2001-2003)

**Courses Taught (**Wayne State Univeristy):

* CHM 1250 (Organic 1 Laboratory)
* CHM 2230 (Organic 2 Laboratory)

**Courses Taught (**University of New Orleans):

* CHEM 1001 (Chemistry of movies and TV:, nonmajors)
* CHEM 1002 (Chemistry of our daily lives, nonmajors)
* CHEM 1007 (general chemistry lab 1)
* CHEM 1008 (general chemistry lab 2)
* CHEM 1023 (general chemistry lab - non-chem majors)
* CHEM 1028 (general chemistry lab - chem majors)
* CHEM 2017 (organic chemistry lab 1)
* CHEM 2018 (organic chemistry lab 2)
* CHEM 2026 (organic chemistry lab 1 and 2)
* CHEM 2217 (organic chemistry 1 lecture)
* CHEM 3218 (organic chemistry 2 lecture)
* CHEM 3092 (undergraduate teaching apprenticeship)
* UNIV 1001 (university success - required for all incoming freshmen)
* UNIV 1001 (university success for Science majors)

**Courses Taught (**Xavier University of Louisiana):

* CHEM 2210 (Organic Chemistry 1)
* CHEM 2210D (Organic Chemistry 1 Drill)
* CHEM 2230L (Organic Chemistry 1 Lab)
* CHEM 2220 (Organic Chemistry 2)
* CHEM 2220D (Organic Chemistry 2 Drill)
* CHEM 2220L (Organic Chemistry 2 Lab)

b. Off Campus

* Participant, ACS (Louisiana Section) National Chemistry Week Activities (2003-present)
* Wiley Faculty Network, Faculty Mentor for Organic Chemistry Professors in the US and Canada (2006-present)

D. **Other-Invited Lectures**

“Using Online Homework in the Organic Lecture,” Sean P. Hickey presented at University of Alabama-Birmingham, 2018

“Using Online Homework in the Organic Lecture,” Sean P. Hickey presented at Clemson University, 2018

“Using Online Homework in the Organic Lecture,” Sean P. Hickey presented at University of Mississippi, 2018

“Using Online Homework in the Organic Lecture,” Sean P. Hickey presented at University of Central Florida, 2018

“Using Online Homework in the Organic Lecture,” Sean P. Hickey presented at Renesselaer Polytechnic Institute, 2017

“Using Online Homework in the Organic Lecture,” Sean P. Hickey presented at Loyola University-Chicago, 2017

“How to incorporate online homework in the Organic Lecture,” Sean P. Hickey presented at University of Central Florida, 2017

“Chemistry in Movies and TV”, Science Café, 2016

“Chemistry 1001: Lights, Camera, (Re)Action, the Chemistry of Movies and TV”, Sean P. Hickey, Xavier University Spring 2014 Seminar Series

“Online Assessment in Organic Chemistry Using Wiley Plus,” Sean P. Hickey presented virtually over 50 times in the past 6 years.

“Integrating Wiley Plus into the Organic Classroom,” Sean P. Hickey presented at Louisiana State University, March 2013

“Online Assessment in Organic Chemistry Using Wiley Plus in a Large Organic Chemistry Lecture” Sean P. Hickey presented at Texas A&M, May 2011

“Using Online Homework in the Organic Lecture,” Sean P. Hickey presented at University of South Florida, March 2010

10. References

Dr. Henry F. Hauck, Instructor, University of New Orleans, [hhauckjr@uno.edu](mailto:hhauckjr@uno.edu)

Dr. Mark Trudell, Professor and Chair, University of New Orleans, [mtrudell@uno.edu](mailto:mtrudell@uno.edu)

Dr. Matthew Tarr, VP of Research and Eurofins Professor of Analytical Chemistry, University of New Orleans, [mtarr@uno.edu](mailto:mtarr@uno.edu)

Dr. Richie Prevost, Coordinator, Chemistry Resource Center, Xavier University, rprevos1@xula.edu