

# Maureen A. Scharberg, Ph.D.

Cal State University, East Bay (CSUEB)

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## EDUCATION:

- 1991 Ph.D. Chemistry, University of California, Davis
- 1986 B.S. Chemistry, University of California, Irvine
- 1986 B.S. Biological Sciences, University of California, Irvine

## SUMMARY OF ACADEMIC POSITIONS:

- Professor, Chemistry & Biochemistry, CSUEB, 2016-
- Professor, Chemistry, SJSU, 2003-2016
- Associate Professor, SJSU, 1995-2003 (promoted early; tenured in 1997)
- Assistant Professor, SJSU, 1991-1995

## CURRENT TEACHING EXPERIENCE:

- Cal State University, East Bay: Chemistry 161, "Basic Chemistry for the Health Sciences"; Lower division General Education B1/B3 course; in-person, lecture, laboratory, laboratory administration, Spring 2024-
  - Curriculum Development:
    - Chemistry in Society: Lower-division General Education B1 course; fully online, hybrid, in-person options.
    - Chemistry of Spices: Upper-division General Education course with a sustainability overlay; online, hybrid, in-person options.
    - Green Chemistry: Upper-division General Education course with a sustainability overlay; online, hybrid, in-person options.

## ACADEMIC EXPERIENCE AT SJSU

- Primary Teaching Assignment: General Chemistry curriculum for non-science majors including lecture, laboratory, service learning and course & laboratory administration for 200-400 students per semester. Fall 1991-Spring 2006
- Other Teaching Assignments:
  - Teaching Secondary Science Methods (Hybrid)
  - Experimental four semester course blending general and organic chemistry for Science Majors
  - General Chemistry Laboratory for Science Majors
  - Molecular Modeling in Organic Chemistry
  - Biochemistry Laboratory for Nutrition Majors
  - Survey of Biological Applications in NMR Spectroscopy, Magnetic Resonance Spectroscopy, and Magnetic Resonance Imaging
  - Methods of Instruction in Chemistry
  - Graduate Course in Bioinorganic Chemistry

- Experimentation and Investigation Techniques in Science for Pre-service Science Teachers

### **PROFESSIONAL EDUCATION:**

- "Introduction to AI Tools For Teaching & Learning", CSU Online Course Services, Completed March 2024
- Academic Impressions Fundraising for Deans Conference, October 2019
- Executive Leadership Fellow, University of California, Berkeley, July 2019
- "Becoming A Provost Academy", American Association of State Colleges and Universities Class of 2015
- San Jose State University (SJSU) 2011 Salzburg Fellow
- Western Athletic Conference Summer Leadership Institute, SJSU, 2005
- Visiting Professor, Department of Chemistry, Stanford University Fall 2005-Winter 2006
- Fellow, Summer Institute on First-Year Assessment, Asheville, 2002
- Sabbatical Leave, American Chemical Society, Education and International Activities Division, 2000-2001
- Faculty Fellow, NASA-ASEE Summer Faculty Fellowship, 1993, 1995
- Visiting Faculty Scientist, Division of Computational Chemistry IBM Almaden Research Center, 1992

### **SUMMARY OF ADMINISTRATIVE POSITIONS:**

- Special Consultant to the CSU Chancellor Office for Doctoral Authority Programs, 2024-
- Dean, Academic Programs & Services, CSUEB, February 2016-August 2023
- WASC Accreditation Liaison Office, CSUEB, July 2017-present
- Associate Vice President, Student Academic Success Services (SASS), SJSU, July 2010-February 2016
- Associate Dean, College of Science, SJSU, June 2008-June 2010
- Associate Dean, Special Projects, College of Science, SJSU, January 2005-May 2008
- Director of Science Education Program, College of Science, SJSU Summer 2003-May 2008.

### **SELECTED GRANTS:**

#### **Cal State University, East Bay**

- Predictive Analytics & Proactive Advising Grant; Stupski Foundation; \$4 million
- Predictive Analytics & Proactive Advising Planning Grant; Stupski Foundation; \$168,327
- CSU Consortium on Artificial Intelligence Chatbots for Student Success and Engagement; subaward from Irvine Foundation through CSUN; \$66,681
- Chancellor's Office Student Success Analytics Certificate Program; subaward from Stupski Foundation through CSU Chancellor's office; \$120,523

**Total for all CSUEB grants (pending and received): \$4,355,531**

#### **San Jose State University:**

- Title III Strengthen Institutions, "Project Succeed", U.S. Department of Education, \$2,249,421
- CSU Student Success Action Research Project, CSU Chancellor's Office, \$97,171
- Asian American Native American Pacific Islander Serving Institutions (AANAPISI), "Writing Skills of Asian American and High Needs Students at SJSU", U.S. Department of Education, \$1,978,434
- "SJSU Scholars in Science Project", S-STEM, National Science Foundation, \$600,000
- "STEP at SJSU: Improving Retention Through Learning Communities", Science, Technology, Engineering and Math Talent Expansion Program, National Science Foundation, \$2,000,000
- The Collaborative for Higher Education, Packard Foundation, \$150,000
- California Math and Science Partnership, Franklin-McKinley School District, San Jose, CA, \$197,191
- National Science Foundation, "NanoSense: The Basic Sense Behind Nanoscience"; Co-PI with SRI's Center for Learning with Technology, \$112,748
- National Science Foundation, Grant Opportunities for Academic and Industrial Liaison (GOALI) for SJSU and IBM-Almaden Research Center, \$750,000
- Genentech Foundation for Biomedical Sciences, written and submitted on behalf of the Santa Clara County Biotechnology Education Partnership, \$94,500
- National Science Foundation, Two year extension for Special Creativity to "San Jose State/IBM Almaden Research Center Integrated Research and Education Program, \$500,290
- "Establishing New Traditions: Revitalizing the Curriculum", NSF Course and Curriculum Development: Systemic Changes in the Chemistry Curriculum, Dept. of Chemistry, University of Wisconsin-Madison (PI), Department of Chemistry, SJSU as subcontractor, \$216,675
- Genentech Foundation for Biomedical Sciences, written and submitted on behalf on the Santa Clara County Biotechnology Education Partnership, \$25,000
- NMR Investigations of the Reactivity of Thiols and Disulfides with Ferryl [Fe(IV)] Myoglobin", Research Corporation, \$26,275

**Total for all SJSU grants: \$11,076,388**

## **PUBLICATIONS:**

- Bauer, C; Libby, R. DI; Scharberg, M; Reider, D. "Transformative Research-based Pedagogy Workshops for Chemistry Graduate Students and Post-docs", Journal of College Science Teaching, November 2013, Vol. 43 Issue 2, pages 36-43.
- M. Scharberg, "Improving STEM Student Success and Beyond: One STEP at a Time", chapter in Trajectories in Chemical Education Innovation, American Chemical Society Books, 2013.
- J. Contreras, M. Scharberg, "How to Build a Nanotech Kit", December 2009. Available at [www.nanosense.org](http://www.nanosense.org).
- M. Scharberg, "Constructive-Developmental Pedagogy in Chemistry", Chapter 20 in Handbook of College Science Teaching: A Publication of the National Science Teachers Association, 2007.

- M. Scharberg, "Teaching High School Chemistry as a Second Career", *Journal of Chemical Education*, 2005, 82, 1281.
- M. Scharberg, *Faculty Resource On-Line Guide for Chemistry*, W.H. Freeman, March 2004.
- J. Bell, M. Scharberg, et al., *Chemistry*, W.H. Freeman, March 2004.
- S.E. Branz, M.A. Scharberg. "Blending General and Organic Chemistry: A Curricular Experiment", *Teal: A Journal of Scholarship on Teaching and Learning*, Volume 1, Number 1, Summer 2002.
- A. Strage, Y. Baba, S. Millner, M. Scharberg, E. Walker, R. Williamson, M. Yoder. "What Every College Professor Should Know: Student Activities and Beliefs Associated with Academic Success", *Journal of College Student Development*, March/April 2002, Vol. 43, No. 2.
- C.R. Landis, G.E. Peace, M.A. Scharberg, S.E. Branz, J.N. Spencer, R.W. Ricci, S.A. Zumdahl, D. Shaw, "The New Traditions Consortium: Shifting from a Faculty-Centered Paradigm to a Student-Centered Paradigm" *J. Chem. Ed.*, 1998, 75, 741.
- Scharberg, M.A., Pesek, J.J. "Nuts and Bolts of Administering An Academic/Industrial Partnership", *ACS Monograph on Academic/Industrial Partnerships*, 1998.
- Scharberg, M.A., Cox, O.E., Barelli, C.A. "Creating and Using a Consumer Chemical Molecular Graphics Database: The 'Molecule of the Day' - A Great Way to Begin Your Lecture". *J. Chem. Ed.*, July 1997.
- Scharberg, M.A., Chapter in "The Hidden Curriculum in Mathematics and Science: Faculty-Made Tests" by Sheila Tobias and Jacqueline Raphael, California State University Press, 1997.
- Bernstein, M. P., Sandford, S. A., Allamandola, L.J., Chang, S., Scharberg, M. A. "Organic Compounds Produced by Photolysis of Realistic Interstellar and Cometary Ice Analogs Containing Methanol", *Astrophysical Journal*, 1995, 454, 327-344.
- Scharberg, M.A., La Mar, G.N. "Sulfmyoglobin derived from Deuterohemin Reconstituted Protein. 1. Structure of the Initial Complex based on the Mechanism of Formation of Equilibrium Products." *J. Am. Chem. Soc.*, 1993, 115, 6513-6521.
- Scharberg, M.A., La Mar, G.N. "Sulfmyoglobin derived from Deuterohemin Reconstituted Protein. 2. "Molecular and Electronic Structure Determination of the Extracted Prosthetic Groups of Two Equilibration Products." *J. Am. Chem. Soc.*, 1993, 115, 6522-6528.

## **HONORS AND AWARDS:**

- Fulbright Specialist, US Department of State, 2023-2026
- EOP Distinguished Partner Award, CSUEB, 2019
- Educational Leadership Award, STEM Now, 2015
- Phi Beta Kappa Society, 2011
- Ottenberg Award, Santa Clara Valley Section, American Chemical Society, 2004
- Ellen Weaver Award for Mentoring Women in Science, Association of Women in Science, 2004
- Certificate of Merit, SJSU Award for Research on College Teaching and Learning, 2002
- Teacher-Scholar, College of Science, Institute for Teaching and Learning, San Jose State University, 1999-2000
- Outstanding Faculty Award, Golden Key Honor Society, SJSU Chapter, 1999
- Project Kaleidoscope Faculty for the 21<sup>st</sup> Century, 1998

- Disability Resource Center, Outstanding Faculty Award, SJSU 1996
- Junior Scholar Recognition by Office of Academic Vice President, SJSU, 1995
- Honorary Football Coach, SJSU Athletics Department, 1994
- Disable Student Services, Special Recognition for Outstanding Faculty, SJSU 1994
- Dean's Award, Outstanding Faculty Member for Teaching Contributions in Chemistry, College of Science, SJSU, 1993

### **CAL STATE EAST BAY SERVICE:**

- Faculty Member, Academic Senate, 2023-
- Member, Committee for Budget and Resource Allocation, 2023-
- Member, Writing Committee, 2018-
- Member, Strategic Enrollment Management Leadership Committee, 2016-2023
- Chair, Advising Council, 2018-2023
- Member, Committee for Academic Planning & Review, Academic Senate, 2017-2023
- Member, Committee for Instruction & Curriculum, Academic Senate, 2016-2017
- Chair, Education Effectiveness Council, 2016-2023
- Member, Semester Conversion Committees: Academic Advising Subcommittee (Co-chair), Steering Committee, Leadership Committee, Communication Subcommittee, 2016-2018
- Member, General Education Subcommittee, 2016-2017

### **SAN JOSE STATE UNIVERSITY SERVICE:**

#### University-Wide Committees:

- Advising Council, Fall 2008-February 2016 (President Appointment); Chair Fall 2010-2016
- Joint Enrollment Planning, Spring 2011-February 2016
- University Council on Compliance and Accommodations, Fall 2013-February 2016
- Enrollment Retention Group (ERG), Fall 2010-February 2016
- Student Fairness Committee, ex-officio, Fall 2008-February 2016
- WASC Review Steering Committee, 2013-2015
- SJSU Retention and Graduation Committee, Fall 2009-October 2014 (Provost Appointment)
- Chair, Dean of College of Education Six-Year Review, Fall 2006 (Provost Appointment)
- Integrative Learning Panel, Vision 2010, 2006
- Academic Senate, Curriculum and Research Committee, 2005
- WASC Committee Chair for Student Development and Success, 2004-2005 academic year
- Coordinator, "First Class" MUSE Faculty Peer Review Group - Area D1, 2001-2002
- Chair, Academic Vice President for Undergraduate Studies Selection Committee, 2001-2002
- Member, Improvement of Instruction, Academic Senate, 1996-2001
- Chair, Improvement of Instruction Committee, SJSU Academic Senate, 1996-1997

#### College of Science Committees:

- Member, Council of Chairs, 2002-2010

- Chair and Member, College Curriculum Committee, 2003-2010
- Member, Science Education Committee, College of Science, 1992-2008
- Member, Biotechnology Education and Research Institute (BERI), College of Science, 1994-1997

#### Department Advising & Committees:

- B.A. Chemistry Advisor: Responsible for academic advising and curriculum planning for B.A. Chemistry majors (1997-2008)
- Chair, Chemistry Department Chair Review Committee, Fall 2007-Spring 2008
- Member, Curriculum Committee, Department of Chemistry, 1996-2008
- Member, Executive Committee, 2004-2008
- Member, Retention, Promotion, and Tenure Committee, 1999-2000; 2001-2008
- Web master for Department of Chemistry's Web Page, 1997-2000
- Member, Computer Committee, Department of Chemistry, 1995-2000

#### **NATIONAL SERVICE AND AFFILIATIONS:**

- American Chemical Society, National Award Selection Committee, 2025-2027 Award Cycle.
- Passer Award Committee, Division of Chemical Education, American Chemical Society, (2024-2026)
- American Chemical Society, 1986-present

#### **LOCAL SERVICE AND AFFILIATIONS:**

- Unit Commissioner/Camp Commissioner, Scouts BSA, Pioneer District, Silicon Valley Monterey Bay, Council 2017-2021
- Uniform Bank Coordinator, Scouts BSA, Pioneer District, 2015-
- College Connection Academy, a partnership between San Jose State University, Evergreen Valley College, Yerba Buena High School, Franklin-McKinley School District, 2011-2016.
- Co-Chair, Education Committee, Silicon Valley Leadership Group, 2008-2009
- Co-Director, Collaborative for Higher Education, A Partnership between UC Santa Cruz, SJSU, and Foothill College, 2005-2011
- Member, Education Committee, Silicon Valley Leadership Group, 2005-2010
- Chair 2003, American Chemical Society-Santa Clara Valley Section
- Chair-Elect 2002, American Chemical Society-Santa Clara Valley Section
- Councilor, American Chemical Society-Santa Clara Valley Section, 1993-2006
- Chair, High School Chemistry Competition, American Chemical Society-Santa Clara Valley Section, 1993-1999
- Founding Program Director, Steering Committee, Santa Clara County Biotechnology Education Partnership (SCCBEP), 1992-2001