

# DEREK R. DOCKTER

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## EDUCATION

PhD in Science Education (**in progress**), University of California, Davis, expected June 2019.

Continuing Education Units (22.5 quarter units). UC Davis Extension. Conducted teacher research and facilitated teacher research groups. UC Davis CRESS Center, 2004-2009.

Masters in Education, University of California, Davis, June 2004.

Single Subject Teaching Credential (Chemistry and Biological Sciences) with CLAD, University of California, Davis, June 2003.

Bachelor of Science, Biochemistry and Molecular Biology, University of California, Davis, June 2002.

Associate in Arts (Highest Honors) and Associate in Science (Highest Honors), Santa Rosa Junior College, May 1999.

## EXPERIENCE

**Teacher**, Pioneer High School, Woodland Joint Unified School District, Woodland, CA. Chemistry and forensic science. Designed and implemented curriculum in chemistry, honors chemistry, and forensic science that fulfilled California Science Content Standards and Next Generation Science Standards. Led classroom discussions; facilitated inquiry-based classroom activities; guided students during laboratory activities; created and administered exams. Created and sustained learning environments that were conducive to the education of all students. August 2004-June 2014 and August 2016-present.

**Cooperating Teacher**, Single Subject Science Credential program, UC Davis School of Education. Mentored and advised student teachers during the development and implementation of curriculum, lesson planning, and laboratory instruction according to the California Science Content Standards, Next Generation Science Standards, Common Core standards, and the California Teaching Performance Expectations. Advised student teachers on proper classroom management, behavior management, and duties of a high school science teacher. Provided regular support to student teachers and provided feedback to both the student teachers and their university supervisors. 2007-2014 and 2016-Present

**Teacher Fellow**, California State Summer School for Mathematics and Science (COSMOS), UC Davis. Assisted in the teaching of the biomedical sciences to high-performing high school students from throughout the state of California. Designed and implemented the writing and communications component of the program. COSMOS is a month-long, residential program that encourages high school students to pursue a future in the STEM field. July 2006-present.

**Teaching Assistant**, UC Davis School of Education. Assisted in the instruction of undergraduate education courses (EDU 100, EDU 110), within the Secondary Credential program (EDU 275A, EDU 275B), as well as within the Primary Credential program (EDU 307/292). Facilitated group activities; maintained an inclusive, constructive, and positive classroom environment; guided and mentored students in class and during office hours. August 2015-present.

**Graduate Student Researcher**, UC Davis Center for Educational Effectiveness. Piloted and evaluated a summer preparatory chemistry course at UC Davis (SP-Chem, now ALEKS Preparatory Chemistry) for incoming STEM students who plan to take general chemistry. Collaborated with various faculty and staff in undergraduate advising, the chemistry department, and the broader UC Davis community. Served as the Lead TA for all offerings of the online course. Presented our work both in oral and poster formats at the 2016 American Chemistry Society National Conference. January 2016-June 2016. [Research continues to present in non-paid capacity with CEE.]

**Member of the Chemistry Innovation Team**, UC Davis Center for Educational Effectiveness (formerly the iAMSTEM Hub UC Davis). Collaborated with group of graduate students, faculty, and a school administrator on implementing and investigating teaching, learning, and assessment strategies in general chemistry at UC Davis. Contributed to weekly meetings with chemistry TAs aimed at improving TA instruction and student learning in discussion and lab sections of general chemistry. October 2014-June 2016.

**Member of Secondary Science Teacher Supervision Study Group**, UC Davis School of Education. Met weekly with group of science education graduate students and a lecturer/supervisor to discuss issues related to science teacher education. Facilitated group discussions on literature relevant to science teacher education. Participated in teacher supervision visits and presented reflections to study group. Fall 2015.

**Associate Instructor/Student Teacher Supervisor**, UC Davis School of Education. Supervised student teachers in the Single Subject Science Credential program. Regularly visited school sites to conduct observations and provide feedback to four student teachers. Mentored student teachers on development and implementation of curriculum, lesson planning, and laboratory instruction according to Next Generation Science Standards, Common Core standards, and the California Teaching Performance Expectations. Advised student teachers on classroom management, behavior management, and duties related to their teaching assignments. Reviewed student teachers' digital journals and lesson plans on a weekly basis and provided feedback and support to nurture their growth and development teachers. Attended and contributed to weekly science cohort classes, including teaching one class meeting in place of the instructor. August 2014-June 2015.

**Portfolio Scorer**, Performance Assessment for California Teachers (PACT), UC Davis School of Education. Reviewed Single Subject Secondary Credential students' teaching portfolios required for obtaining a California teaching credential. Used extensive rubrics to evaluate students' planning, instruction, assessment, academic language use, and reflection indicating teacher preparedness. 2013-2015.

**Member of Advisory Council**, Teacher Education Advisory Council (TEAC), UC Davis School of Education. Collaborate with other cooperating teachers, university staff, and university faculty to inform and improve teacher education in the Credential/M.A. Program. October 2013-June 2014.

**Panel Member**, Peer Assistance Review Program (PAR), Woodland Joint Unified School District. Worked with a panel of teachers, school administrators, and district administrators to evaluate whether goals of peer assistance plans were being met by the teachers and consulting teachers. The PAR program provides peer assistance to teachers in order to improve instruction and increase student achievement. 2012-2013 academic year.

**Member of Partnership Teacher Advisory Board**, Mathematics and Science Teaching (MAST) Program, UC Davis. Advised the MAST program regarding the role of student interns in the high school classroom. Participated on the interview panel for MAST teacher-in-residence position. 2009-2013.

**Mentor Teacher**, Mathematics and Science Teaching (MAST) Program, UC Davis. Mentored UC Davis undergraduate interns who were considering future careers in secondary science education. Interns assisted student learning in my chemistry classes and were given opportunities to lead class instruction. 2008-2012.

**Junior Class Advisor**, Pioneer High School, Woodland Joint Unified School District. Mentored and worked with junior class officers and members of the junior class in planning and preparation of class events and fundraisers. Supervised junior class activities and events to ensure safety. 2010-2011 academic year.

**Teacher Fellow and Group Facilitator**, Collaborative Classroom-Based Inquiry Project (C.C.B.I.), UC Davis Division of Mathematical and Physical Sciences, UC Davis School of Education, and National Science Foundation. Facilitated a group of high school teachers, a UC Davis NPB undergraduate student, and a UC Davis chemistry graduate student in conducting classroom-based educational research. Researched the impact of inquiry-based learning on scientific-processing skills and the learning of science content in the high school science classroom. August 2005-June 2007.

**Teacher Research Group Facilitator for Pioneer High School**, CRESS Center, UC Davis School of Education. Facilitated a group of teachers at Pioneer High School in doing classroom-based educational research. Met weekly to discuss our action research studies and progress towards our final research reports. August 2004-June 2009.

**Teacher**, Woodland High School, Woodland Joint Unified School District, Woodland, CA. Chemistry. Designed and implemented a curriculum in chemistry that fulfilled California Science Content Standards. Led classroom discussions; facilitated classroom activities; guided students during laboratory activities; created and administered exams. Created and sustained learning environments that were conducive to the education of all students. August 2003-June 2004.

**Student Teacher**, Will C. Wood High School, Vacaville Unified School District, Vacaville, CA. Chemistry and Environmental Science. Planned and implemented lessons in chemistry and environmental science that fulfilled California Science Content Standards. Led classroom discussions; guided students during laboratory activities; created and administered exams. Created and sustained learning environments that were conducive to the education of all students. August 2002-June 2003.

**Volunteer**, Winters High School, Winters Joint Unified, Winters, CA. Chemistry, physics, and general science. Monitored and assisted students in the chemistry and physics laboratory. Assisted individuals and small groups of students with their chemistry, physics, and general science work. Winter 2002.

## **PRESENTER**

**Science Methods Course, UC Davis Single Subject Science Credential Program.** Conducted workshops on teaching strategies and inquiry-based learning. October 18, 2007; November 13, 2008; February 16, 2017; February 1, 2018.

**2016 American Chemical Society National Conference.** *Rethinking Remedial Chemistry: Preparing and Motivating Incoming Undergraduate Students for Success in Introductory Chemistry Using an Adaptive-responsive Online Chemistry Preparation Course.* Poster Presentation, March 14<sup>th</sup>; Oral Presentation, March 16<sup>th</sup>.

**2007 NSTA National Conference in St. Louis, 2007.** *Investigating Assessment Strategies Through Collaborative Teacher Research.* Collaborative Classroom Based Inquiry Project, UC Davis. Oral Presentation on March 31, 2007.

**Supper Seminar, UC Davis CRESS Center.** *Data Gathering and Analysis.* Panel facilitated on April 5, 2006

**Windows Conference, UC Davis CRESS Center.** *Meaningful Assessment in the High School Classroom.* Teacher research presented on March 12, 2005.

**Supper Seminar, UC Davis CRESS Center.** *Teacher Research Showcase.* Facilitated session on October 26, 2004.

## **PUBLICATIONS**

Dockter, D., Uvarov, C., Guzman-Alvarez, A., & Molinaro, M. (2017). Improving preparation and persistence in undergraduate STEM: Why an online summer preparatory chemistry course makes sense. In *Online Approaches to Chemical Education* (Vol. 1261, pp. 7-33): American Chemical Society.

Robins, L. I., Villagomez, G., Dockter, D., Christopher, E., Ortiz, C., Passmore, C., & Smith, M. H. (2009). Teacher research: Challenging our assumptions. *The Science Teacher*, 76(6), 35.

Dockter, D. (2007). Why don't you just ask them?: Using student surveys and questionnaires to gain insight into meaningful self-assessment. *Windows on Our Classrooms Volume 12*, Ed. Susan Christianson. CRESS Publications, The CRESS Center, School of Education, University of California, Davis, 65-86. Print.

Dockter, D. (2005). The Mighty "SRI" Quiz: Using meaningful assessment to increase self-regulated learning and student responsibility in the high school chemistry classroom. *Windows on Our Classrooms Volume 11*, Ed. Susan Christianson. CRESS Publications, The CRESS Center, School of Education, University of California, Davis, 83-101. Print.

## **SPECIAL SKILLS**

- Employing teaching strategies that engage all students in diverse classes at both the secondary and post-secondary levels.
- Nurturing positive mentoring relationships with students at all levels.
- Maintaining a challenging and productive learning environment for all students.
- Creating chemistry, honors chemistry, and forensic science curriculums that makes content accessible to high school students.
- Employing inquiry-based activities in the high school chemistry classroom.
- Facilitating teacher research groups and conducting classroom-based teacher research.
- Evaluating teaching and learning practices as they relate to performance, student motivation, and STEM identity.

## **PROFESSIONAL INTERESTS**

K-12 teacher education, K-16 science education, science curriculum development, teacher identity development, undergraduate chemistry preparation, student persistence, student motivation, STEM identity, scientific literacy, improving access to STEM education.