

Rachel 'Rae' Eaton

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Summary Ph.D. candidate in analytical chemistry with over eight years of experience in formal and informal science education. Experience developing educational materials for both K-undergraduate chemistry education and graduate student pedagogical education.

Experience

University of Washington – Seattle, WA

08/2014 – Present **Graduate Student Researcher**

- Designed and constructed new ion mobility-mass spectrometry instrumentation to study protein structure
- Presented work at three national and several local conferences; published results in three academic papers
- Research funded through competitive grants: National Science Foundation Graduate Research Fellowship (3 years); American Chemical Society Division of Analytical Chemistry Graduate Research Fellowship (9 months)
- Trained two junior graduate students in techniques relevant to research project

09/2014 – Present **Women in Chemical Sciences at UW (volunteer)**

- Elected positions: President (2017-2018), Outreach Coordinator (2015-2016)
- Led team of volunteers in design of interactive activity (~5 minutes, grades K-5) and workshop (45 minutes, grades 6-12) that demonstrate key principles of chemistry and the scientific method
- Organized lectures, workshops, and outreach events for membership and UW community

09/2015 – 09/2018 **TA Conference Workshop Facilitator (Annual Conference on Teaching and Learning)**

- Recommended for position by instructor from previous TA assignment
- Designed curricula for 75-minute workshops for new and returning teaching assistants on 4 topics: managing teaching laboratories, quiz sections, or office hours effectively, and active learning techniques

09/2014 – 03/2015 **Teaching Assistant (Introductory Chemistry Series)**

- Led lab and quiz sections (24 students / section) that emphasized student collaboration and problem solving
- Graded exams and lab reports; tutored students one-on-one and in small groups

Pacific Science Center – Seattle, WA

01/2017 – Present **Science Communication Fellow (volunteer)**

- Used principles of science communication and education to develop an interactive demo that teaches concepts from chemical separations to K-12 students and family (part of the Meet a Scientist program)
- Presented public lecture on prototyping and instrument development

Oberlin College – Oberlin, OH

08/2013 – 07/2014 **Researcher**

- Developed a biochemical marker to identify ovarian cancer protein marker HE4
- Presented work at a national conference and published an academic paper

09/2010 – 05/2013 **Teaching Assistant (Chemistry)**

- Developed and led weekly workshops that emphasized student collaboration and problem solving
- Answered questions concerning lab procedures and managed laboratory safety (20 students / section)
- Graded homework assignments, quizzes and lab reports; tutored students one-on-one and in small groups

Education

Summer 2019

Ph. D., Chemistry (GPA: 4.0/4.0)

University of Washington – Seattle, WA

Thesis Adviser: Matthew F. Bush

Honors: ARCS Foundation Fellow (2014-2017), Lloyd E. and Florence M. West Fellowship in Chemistry (2017-2018)

Spring 2019 **Certificate, Science, Technology, and Society Studies**
University of Washington – Seattle, WA

May 2013 **B.A., Chemistry and Biochemistry** (GPA: 3.6/4.0, High Honors in Biochemistry)
Oberlin College – Oberlin, OH
Thesis Adviser: Rebecca Whelan
Honors: Sigma Xi

Additional Volunteer Experience

2017 – 2018 Treasurer, Out in Science, Technology, Engineering, and Math at the University of Washington
2016 – 2018 Mentor, UW Chemistry Mentor Network