

# CATHERINE E. KLEHM

Curriculum Vitae  
2013

Oral Roberts University  
Department of Biology and Chemistry  
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Tulsa, OK 74171

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## EDUCATION

### **Ed.D., Chemistry/Educational Administration in Higher Education**

Oklahoma State University, Stillwater, OK, April 2001  
Doctoral Dissertation: *Studying the Effects of Multimedia-Enhanced Chemistry Lectures on Student Learning*  
Advisor: Dr. John Gelder

### **M.Ed., Chemistry/Secondary Teaching Methods in Science**

Northeastern State University, Tahlequah, OK, May 1992  
Master's Thesis: *Exciting Alternatives to Traditional Science Teaching*

### **B.S., Chemistry/Science Secondary Education**

Oral Roberts University, Tulsa, OK, May 1990

## INSTRUCTIONAL EXPERIENCES

### **Associate Professor of Chemistry, Oral Roberts University, Fall 2004-Present**

General Chemistry I Lecture and Lab  
General Chemistry II Lecture and Lab  
General Chemistry II Honors Lab (an original curriculum)  
Principles of Chemistry Lecture (regular and Honors) and Lab  
Chemistry Senior Seminar  
Secondary Teaching Methods: Science  
Secondary Student Teaching 7-9 and 10-12  
Honors Principles of Leadership

### **Assistant Professor of Chemistry, Oral Roberts University, Spring 2001-Spring 2004**

General Chemistry I Lecture and Lab  
General Chemistry II Lecture and Lab

General Chemistry II Honors Lab  
Principles of Chemistry Lab  
Secondary Teaching Methods: Science  
Secondary Student Teaching 7-9 and 10-12  
Honors Principles of Leadership

**Instructor, Oral Roberts University, Fall 1992-Spring 2001**

General Chemistry I Lecture (since Spring 1998) and Lab  
General Chemistry II Lab  
Principles of Chemistry Lab  
Secondary Teaching Methods: Natural Science  
Secondary Student Teaching 7-9 and 10-12

**Teacher, Victory Christian School, Tulsa, OK, Academic Years 1991-1993**

High School Physics

**Teacher, Victory Christian School, Tulsa, OK, Academic Year 1991-1992**

High School Chemistry

## **RESEARCH ACTIVITIES**

### **Grants Received**

**Service Learning (\$500 each), Fall 2002 - Fall 2006**

Students from two senior-level courses combined their course knowledge in visiting the lab classrooms of area high schools to analyze the classroom for safety. For each school, approximately \$250 of the grant was used to purchase supplies to help the lab better comply with safety standards.

**ORU Math/Science Summer Academy (\$153,035 total), Summer 1999 - Summer 2001**

Director of and instructor in “An Integrated Program to Enhance Mathematics and Science Skills Through Hands-On and Peer Teaching Experiences” funded by the Oklahoma Regents for Higher Education. Each summer the Academy hosted 56 junior and high school students for science and math enrichment experiences.

**Broken Arrow Rotary Club Summer Academy Grant (\$3,000 total), Summer 1999 - Summer 2000**

**ORU Intramural Grant (\$1,585), Fall 1998**

Used to purchase software for research conducted at ORU during the academic years of 1998-2000. Annual progress/research reports were submitted to Dr. Dave Connor.

## **Grants Submitted**

National Science Foundation Robert Noyce Scholarships for Teaching Program  
Submitted a \$1,368,684 grant proposal called MASST, Math and Science Scholarships for Teaching, serving as PI along with LeighAnne Locke as Co-PI, notification expected in September, 2013

## **PROFESSIONAL ACTIVITIES**

### **Professional Organizations**

American Chemical Society (ACS) Member, 1999-present; Tulsa Local Section—Elected Officer 2004-2006

National Science Teachers Association, 1994-present

Society of College Science Teachers, 1994-present

Alpha Lambda Delta (faculty advisor and honorary member), 2005-present

### **Professional Conferences**

Attended the American Chemical Society Pentasectional Meeting held at the University of Tulsa, March 9, 2013

Attended the “Igniting the Passion for Teaching Conference” on November 8-9, 2012, at the Annual Teacher’s Conference of the South Central Region of ACTS and ORUEF in Dallas, TX

Framework Review Conference for the Oklahoma Commission for Teacher Preparation (OCTP) serving on the Chemistry Content Advisory Committee for the Certification Examinations for Oklahoma Educators (CEOE), selection and attendance by invitation after applying for committee membership, Oklahoma City, OK, October, 2012

Attended the 2011 OACTE/OATE/OCTP Fall Conference in Edmond, OK and completed the Program Review Training session for Science Education, November 18, 2011

Successfully completed Board of Examiners Training for the Oklahoma Commission for Teacher Preparation (OCTP) and the National Council for Accreditation of Teacher Education (NCATE), February, 2011

Attended the 56th Annual Pentasectional American Chemical Society Meeting entitled, “Petrochemicals and Beyond: Chemical Technology for the 21st Century” in Bartlesville, OK, March 12, 2011

Attended the 2010 OACTE/OATE/OCTP Fall Conference in Norman, OK and completed the Program Review Training session for Science Education, November 12, 2010

54th Oklahoma Pentasectional Meeting of the American Chemical Society, Tulsa, OK, April 2009 (ORU was the host school so I helped set up the event and worked it that day as well as attended some sessions and interacted with professional chemists in attendance.)

National Science Teachers' Association National Meeting, San Diego, CA, March 2002;  
Attended the institute sessions, "Preparing for an NCATE Review of the Science Teacher Preparation Program"

47th Oklahoma Pentasectional Meeting of the American Chemical Society, Duncan, OK, March 2001

45th Oklahoma Pentasectional Meeting of the American Chemical Society, Bartlesville, OK, October 2000.

Technology Seminar by Jamie McKenzie entitled, "It's Not About Technology; It's About Teaching!" January, 2000

44th Oklahoma Pentasectional Meeting of the American Chemical Society, Tulsa, OK, October 1999

## **AWARDS**

Received a three-year grant for the Summer Math and Science Academy from the Oklahoma State Regents for Higher Education (serving as Co-director with PI, Dr. John Matsson), 2013-2015

Service Award from National Council of Alpha Lambda Delta Honor Society for Advisement of First Year Students, 2011

Outstanding Service Award Recipient for the School of Science and Engineering, 2010

Writing Across the Curriculum Award, 2007

ePortfolio Teacher of the Year, 2007

ORU Dean's Award for "Integrating Technology into the Curriculum," 2004

Dr. Fagin's "Caught Doing Good Awards"; "The Bill Nye Award" for excellence in making math and science exciting, 1999

State of Oklahoma Secondary Teaching Licensure (valid until June 2017)

Chemistry

Physics

Physical Science

Human Anatomy and Physiology

## **PUBLICATIONS**

Klehm, C. E. *Study General Chemistry II Lab to Show Yourself Approved...To Go Into Every Person's World*, a lab manual for the ORU CHE 112 course, 2008.

Klehm, C. E. *Studying the Effects of Multimedia-Enhanced Chemistry Lectures on Student Learning*, Doctoral Dissertation on file at Oklahoma State University, Stillwater, OK.

Klehm, C. E. *Exciting Alternatives to Traditional Science Teaching*, Master's Thesis on file at Northeastern State University Library, Tahlequah, OK.

## **PRESENTATIONS**

"Integrating Christian Worldview into Secondary Science Curriculum," given on November 9, 2012, at the Annual Teacher's Conference of the South Central Region of ACTS and ORUEF in Dallas, TX

Presented the ORU Chemistry Service Learning Project at the Conference entitled, "Service-Learning, Civil Engagement and Experiential Education: Building on the Research Related to Pedagogies of Engagement," March 29, 2006

Taught Intel's "Teach to the Future" curriculum for secondary teaching students in the fall semester, 2002 and several lectures of the course "Educational Technology" in the spring semester, 2003

Klehm, C. E. "Studying the Effects of Multimedia-Enhanced Chemistry Lectures of Student Learning," 2001 Pentasectional Meeting of the American Chemical Society, Duncan, OK, March, 2001

Klehm, C. E. Participant in the ORU Alumni Faculty Recognition Awards Competition, Fall 2001.

## **COMMUNITY/UNIVERSITY SERVICE**

Chair of the College of Science and Engineering Recruitment Committee, Spring 2013-present

Served on the Dean Selection Committee for the College of Science and Engineering, representing the Department of Biology and Chemistry, Fall 2012

President for the College of Science and Engineering Faculty Senate, 2011-2012

Standards and Evaluations Committee for the Faculty Senate, 2010-present

Professional Development Committee for the College of Education, serving as the secondary representative, 2011-present

Educational Liason for the Elsing Museum, 2010-present

Served on the Academic Efficiency Committee, 2009

General Education Committee, 2009-present

Served as the contact faculty member for the General Chemistry Lab remodel project, 2009-2010

Member of Vice President's Budget Committee, 2007

Subcommittee Chair for UFA Ad-Hoc committee on University Standards and Evaluations (reviewing Grade Inflation), and doing a departmental level analysis of grades issued over twenty semesters, 2005-2009

Subcommittee chair for Academic Integrity for the NCAA Site Visit and responsible for writing one-third of the self-study for reaccreditation for athletics, 2006

ePortfolio Lab instructor for the class, ePortfolio: Journey to a Transformed Life, 2004-present

Faculty Advisor for freshman Honor Society, Alpha Lambda Delta, 2005-present

Coordinator of the ORU Alumni Faculty Recognition Awards (Faculty Showcase), 2002-2005

Chair of Faculty Enrichment Committee for ORU University Faculty Assembly, 2002-2005

Elsing Museum Advisory Board member, 2000-present

Teacher for ORU Math and Science Summer Academy, most summers, 1994-present

ORU School of Education Faculty Senate Student Teaching Admissions and Placement Committee member, 1998-2008

Chemistry Department Student Worker Supervisor, 1995-2006

Local Science Fair judge and coordinator, 1993-2010

Advisor for the Science Secondary Education majors, 1992-present

Professional Collaboration with many area secondary schools, 1992-present

Chemistry Department Lab Coordinator, 1992-present

Regional Science and Engineering Fair judge in Physical Sciences, Tulsa, OK, 2003-2005

Intel's "Innovations in Education Institute" participant, summer 2003

Taught original curriculum of PowerPoint design and implementation to students in courses from other departments and majors, 2002-2003

Intel's "Teach to the Future" program trainee/trainer, Summer 2002-2003

Mentoring role in University Leadership Institute, 2002-2003

University Leadership Institute, May 2002

Served on NCAA interim report committee for "Academic Integrity," Summer 2002

Faculty Mentor, 2001-2002

ORUEF National Competition Science Fair judge, 2000-2001

Director of ORU Math/Science Summer Academy, 1999-2001

Master Trainer in Technology, 1999-2002

State Science and Engineering Fair judge in Physical Sciences in Ada, OK, 1999-2003

ORU University Faculty Assembly Committee member on Faculty Enrichment Committee, 1999-2000

Higher Education Representative and Consultant for TEEMS (Teams Enhancing Eisenhower Math and Science), 1999-2000

Teacher and Coordinator for ORU Math and Science Summer Academy, 1994-1998

Lead-Teacher in Technology, 1998