

# CURRICULUM VITA

**Dr. Brian P. Koehler**  
**Associate Dean of Curriculum & Advisement**  
**Associate Professor of Chemistry**

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## **Education**

Ph.D. Inorganic Chemistry (August 1999)  
University of Georgia (Athens, GA)

B.S. Chemistry (May 1992)  
B.S. Mathematics (May 1992)  
Presbyterian College (Clinton, SC)

## **Honors and Awards**

### *Georgia Southern University*

2012 selected as COSM Associate Dean for Curriculum & Advisement  
2009 NACADA Outstanding Faculty Advisor (National Academic Advising Assoc.)  
2005 Promoted to rank of Associate Professor

### *University of Georgia*

1997 Martin Reynolds Smith Prize for Outstanding Graduate Research Paper  
1996 Regents Merit Supplement for Outstanding Performance in Research and Teaching  
1995 and 1994 Center for Metalloenzyme Studies Research Training Grant  
1994 Department of Chemistry Merit Supplement for Excellence in Teaching  
1992 to 1994 Abraham Baldwin Graduate Fellowship

### *Presbyterian College*

1992 Outstanding Senior in Chemistry  
1990 Neil G. Whitelaw Scholarship  
1990 James C. and Ida M. Oeland Scholarship  
1990 Sigma Kappa Alpha Honor Society  
1990 Omicron Delta Kappa Honor Society  
1988 to 1992 The Alumni Scholarship

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## Research Projects and Grant Proposals

- **Since Promotion to Associate Professor**

GSU Pilot Grant “Fundamental Studies on the Effects of Neat Fatty Acids in the Lubricity of Mineral (fossil) Oils” **Funded: \$9,950** (Oct. 2011)

NSF NOYCE Scholarship Program (DUE#0833265): “SMART: Science and Math Achievement through Research and Teaching” **Funded: \$750,000** (Oct. 2008).

GSU Student Technology Fee Proposal “Smart Classroom Upgrades to Chemistry Lecture (Rm1006)” **Funded: \$19,000** (Fall 2006).

GSU Student Technology Fee Proposal “Integration of A/V Technology in Chemistry Classrooms” **Funded: \$15,200** (3/31/2006).

GSU Student Technology Fee Proposal “Upgraded Computer Lab” **Funded: \$10,160** (11/15/2005).

Paulson Math & Science Student Research Award Proposal “Characterization of Accelerants from Burn Residues of Common Household Materials.” \$1094.00 **Funded: \$837.26** (11/20/2005) – 1 undergraduate student participating.

- **Since Arriving at Georgia Southern University**

Research Project: “UV-Vis and EPR spectroscopic analysis of the marine metabolite, Adenochrome” (collaboration with Dr Michele Davis, GSU) – 1 semester, 1 student

Research Project: “Analysis of Plant Sterol and Fatty Acid Content in Onion” (collaboration with Dr Norman Schmidt, GSU), 2 undergraduate students participating.

GSU Student Technology Fee Proposal “Computers for Physical Chemistry Lab” \$29,517 **Funded: \$9,717 plus 18 computers** from Newton Lab (3/27/2003).

Research Project: “Analysis of Plant Sterols and Fatty Acids in a new Peanut-Based Snack Chip” (collaboration with Yao-Wen Huang, Univ. of Georgia), 3 undergraduate students participating.

Research Project: “Analysis of B-Sitosterol and Other Sterols in Black-Eyed Peas and Other Georgia Crops,” 3 undergraduate students participating.

Research Project: “Spectroscopic Characterization of the Iron Centers in marine Adenochrome,” 1 undergraduate student participating.

GSU Student Technology Fee Proposal “Chemistry Comp. Lab Upgrade” **Funded: \$31,481** (5/9/2001).

NSF-CCLI (DUE 0088586): “Meeting the Needs of All General Chemistry Students: Computers and Interfaced Analytical Probes in the Laboratory.” **Funded: \$139,000** 1/1/2001-12/31/2003.

Research Project: “Designing of interactive Internet prelab exercises for the General Chemistry Laboratories,” 1 undergraduate student participating.

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## Publications

- **Peer Reviewed - Since promotion to Associate Professor:**

1. Orvis, Jessica; Orvis, Jeff, Koehler, Brian. "The Nature of Color Subtraction—A Guided Inquiry Experience" *Journal of College Science Teaching* **2007**, 36, 68-69
2. LoBue, James M. and Brian P. Koehler. "Teaching Physical Chemistry-Let's Teach Kinetics First" In *Physical Chemistry Curriculum Reform: Where Are We Now and Where Are We Going?* Ellison, M. and Schoolcraft, T. Eds. ACS Symposium Series 973; American Chemical Society, Washington, DC **2007**, pp. 111-112.

- **Peer Reviewed – Since arriving at Georgia Southern University:**

3. Koehler, Brian P.; Orvis, Jessica. N. Internet-Based Prelaboratory Tutorials and Computer-Based Probes in General Chemistry. *Journal of Chemical Education* **2003**, 80, 606-608.
4. Dhawan, Ish K.; Roy, Roopali; Koehler, Brian P.; Mukund, Swarnalatha; Adams, Michael W.W.; Johnson, Michael K. Spectroscopic Studies of a Novel Tungsten-Containing Formaldehyde Oxidoreductase from the Hyperthermophilic Archaeon, *Thermococcus Litoralis*. *Journal of Biological Inorganic Chemistry* **2000**, 5, 313-327.
5. Dhawan, Ish K.; Roy, Roopali; Koehler, Brian P.; Adams, Michael W.W.; Johnson, Michael K. Spectroscopic Studies of Tungsten-Containing Formaldehyde Ferredoxin Oxidoreductase and Glyceraldehyde-3-phosphate Ferredoxin Oxidoreductase from Two Hyperthermophilic Archaea. *Journal of Inorganic Biochemistry* **1999**, 74, 112.
6. Kooter, Ingeborg M.; Koehler, Brian P.; Moguilevsky, Nicole; Bollen, Alex; Weaver, Ron; Johnson, Michael K. The Met243 Sulphonium Ion Linkage is Responsible for the Anomalous Magnetic Circular Dichroism and Optical Spectral Properties of Myeloperoxidase. *Journal of Biological Inorganic Chemistry* **1999**, 4, 684-691.

- **Peer Reviewed - Prior to Georgia Southern University:**

7. Koehler, Brian P.; Mukund, Swarnalatha; Conover, Richard C.; Dhawan, Ish K.; Roy, Roopali; Adams, Michael W. W.; Johnson, Michael K. Spectroscopic Characterization of the Tungsten and Iron Centers in Aldehyde Ferredoxin Oxidoreductases from Two Hyperthermophilic Archaea. *Journal of the American Chemical Society* **1996**, 118, 12391-12405.
  8. Park, I. Seon; Michel, Linda O.; Pearson, Matthew; Jabri, Evelyn; Karplus, P. Andrew; Wang, Shengke; Dong, Jun; Scott, Robert A.; Koehler, Brian P.; Johnson, Michael K.; Housinger, Robert P. Characterization of the Mononickel Metallocenter in H134A Mutant Urease. *The Journal of the Biological Chemical Society* **1996**, 271, 18632-18637.
  9. Koehler, Brian P.; Mukund, Swarnalatha; Conover, Richard C.; Crouse, Brian R.; Fu, W.; Adams, Michael W.W., and Johnson, Michael K. Spectroscopic Characterization of Tungsten-Containing Aldehyde Oxidoreductases. *Journal of Inorganic Biochemistry* **1995**, 59, 560.
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## Conference Presentations

- **Since promotion to Associate Professor:**

1. Poster Presentation: Cawthorn, M., Darley, J., Griffin, M., Koehler, B. & Lobue, J. “*Performance Assessment: Science and Math Achievement Through Research and Teaching Program at Georgia Southern Univ.*”. NOYCE Teacher Scholarship Program Conference (May 2012 Washington, DC).  
  
Darley, J., Cawthorn, M., Griffin, M., Koehler, B., Lobue, J., Gunn, R., & Hobbs, A. PPB Workshop. NOYCE Teacher Scholarship Program Conference (May 2012 Washington, DC).
3. Poster Presentation: Darley, J., Cawthorn, M., Griffin, M., Koehler, B., LoBue, J., Richardson, J., & Camps, S. “*Shifts in Pedagogy for NOYCE Scholars as a Result of Assisting Pre-service Elementary and Middle Grades Teachers in Mathematics Performance Assessments*”. NOYCE Foundation Southeastern Conference (Feb 2012 Greenville, SC).
4. Poster Presentation: “Pre-Professional Block as a NOYCE Scholar Preparation and Selection Tool” Koehler, Brian; Cawthorn, Michell; Darley, Joy; Griffon, Marlynn; Lobue, Jim. NOYCE Foundation Southeastern Conference (March 24-26, 2011 Greenville, SC)
5. Peer-Reviewed Presentation: “*Engaging Students Through Focused Advisement.*” Brian Koehler. 2011 NACADA Region 4 Conference (March 15, 2011 Birmingham, AL)
6. Poster Presentation: Darley, J., Cawthorn, M., Griffin, M., Koehler, B., LoBue, J. “*Using Performance Assessments to Connect Fractions and Rational Expressions: NOYCE Scholars as Mentors to Pre-service Elementary Teachers*”. NOYCE Teacher Scholarship Program Conference (July 7-9, 2011 Washington D.C.)
7. Poster Presentation: “*Partner- Scholar- Intern-Ship: a SMART Idea!*” Darley, Joy; Cawthorn, Michell; Griffon, Marlynn; Koehler, Brian; Lobue, Jim. NOYCE Teacher Scholarship Program Conference (July 7-9, 2011 Washington D.C.)
8. Presentation: “*Technology to Trump Text and Shake Boredom: It’s All in the Delivery.*” Smith, Amy; Lee, Laura; Koehler, Brian. Georgia NACADA Academic Advising Drive-In (May 10, 2010 Statesboro, GA)
9. Commission-Sponsored Presentation: “*Transitioning the New Student into a Science Major.*” Koehler, Brian; and Vance, Lisa. 2009 National Meeting of National Academic Advising Association (October 3, 2009 SanAntonio, TX)
10. Peer-Reviewed Presentation: “*Catalyzing Excitement in the Science Classroom with CBL Technology.*” LoBue, James; Koehler, B; Chassereau, K; Stanley, M; Durden, T. International Networking for Educational Transformation Conference (April 26, 2006 Augusta, GA)
11. Presentation: “*Bringing CBL Technology to the Biology and Environmental Science Classroom*” and “*Catalyzing Excitement for High School Chemistry and Physical Science.*” Karen Chassereau and colleagues. PRISM Regional Institute (September 23, 2005)

- **Since arriving at Georgia Southern University:**

1. Presentation: *Genchem Labs at the Next Level: New Tools for a New Era*. Koehler, B and Orvis, J. RISE RIG Georgia Southern University, College of Science and Technology (March 4, 2005 Statesboro, GA)
  2. Poster Presentation: *Phytosterols and Fatty Acids in Raw Peanuts, Defatted Pellets, and a New Peanut Snack Chip* Komisarow, Sasha N; Allgood, Anna L.; Huang, Yao-wen; Koehler, Brian P. 225th ACS National Meeting (March 26, 2003 New Orleans, LA)
  3. Peer-Reviewed Presentation: *Internet Based Prelab Tutorials in the General Chemistry Lab*. Koehler, Brian P. Biennial Conference on Chemical Education (July 31, 2002 Bellingham, Washington)
  4. Peer-Reviewed Presentation: *Salt Water Intrusion: A Chemistry Laboratory Exploration of Solution Conductivity* Koehler, Brian P.; Orvis, Jessica N. Georgia State Teachers Association Conference (February 15, 2002 Savannah, Georgia)
  5. Peer-Reviewed Presentation: *Web-Based Prelabs in the General Chemistry Curriculum*. Koehler, Brian P. Southeast Regional Meeting of the American Chemical Society (Sept. 25, 2001 Savannah, Georgia)
- **Prior to Georgia Southern University:**
    1. Poster Presentation: *Spectroscopic Studies of Tungsten-containing Aldehyde Ferredoxin Oxidoreductases from Two Hyperthermophilic Archaea*. Koehler, Brian P.; Dhawan, Ish D.; Roy, Roopali; Mukund, Swarnalatha; Adams, Michael W.W.; Johnson, Michael K. Summer Symposium on Molecular Biology (August 1997 University Park, Pennsylvania)
    2. Poster Presentation: *Spectroscopic Characterization of Tungsten Containing Aldehyde Oxidoreductases*. Koehler, Brian P.; Mukund, Swarnalatha; Conover, Richard C.; Crouse, Brian R.; Fu, W.; Adams, Michael W.W.; Johnson, Michael K. International Conference on Bioinorganic Chemistry (ICBIC) (September 1995 Lubek, Germany)
    3. Poster Presentation: *Ni(III)-Rubredoxin as a Model for the Nickel Center in NiFe-Hydrogenases*. Koehler, Brian P.; Verhagen, M.; Zhou, Z.H.; Adams, Michael W.W.; Johnson, Michael K. Inorganic Biochemistry Summer Workshop (August 1994 Athens, Georgia)
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## Work Experience

*July 2012 to present*

College of Science and Mathematics – Associate Dean for Curriculum & Advising

Duties: COSM Course & Curriculum Committee Chair, GSU Admissions Academic Colleges

Committee, GSU Technology Fee Committee, SOAR Advisory Council, GSU Electronic Advising

Documents Committee Chair

*January 2008 to present*

SMART Scholarship Committee – Internship Coordinator

Duties: Assist with direction and details required for operation of the SMART Scholarship program including interviewing applicants and make final decision on awards, maintaining the SMART

Scholarship Website as well as the GeorgiaVIEW course website (for current awarded scholars), meet

monthly with small group of scholars to discuss current text reading and journal topics. Additionally (as internship coordinator for the committee): to find appropriate internship opportunities with local schools, arrange the position with GSU HR, and collect weekly writing journals from the interns.

*January 2007 to July 2012*

College of Science and Technology Advising Center – Chemistry Representative

Duties: Advise all freshmen chemistry, pre-medical/dental, and pre-pharmacy majors on degree requirements, course sequences, expectations, and sources of support. Advised all sophomore chemistry, pre-medical/dental, and pre-pharmacy students on courses, self-evaluating performance and progress relative to degree objectives and career goals. Developed advising materials for the center and software used to evaluate students progress toward degree. Helped to plan, reviewed submissions, and attended the NACADA 2010 Georgia Drive-In Conference (May 10, Statesboro, GA).

*August 2001 to July 2012*

Associate Professor, Department of Chemistry, Georgia Southern University

Duties: Instruct undergraduate lecture and laboratory chemistry courses, serve as Departmental Web Master, maintain and install computer hardware/software/networking of departmental computer lab, integrate computers into chemistry lab program, develop research projects with undergraduate majors, served on Chemistry Strategic Planning Committee, COST Course & Curriculum Committee, Chemistry Curriculum Committee Chair, SOAR – Chemistry Faculty Advisor, GSU Scholar's Day interviewer, Dept. Post Tenure Review Committee, Dept. Honors Committee Chair, Dept. Space Committee, COST Tenure and Promotion Committee Chair, COST TEAC Committee Chair.

*August 1999 to 2001*

Visiting Assistant Professor, Department of Chemistry, Georgia Southern University

Duties: Instruct undergraduate lecture and laboratory chemistry courses, serve as departmental web master (design, update and maintain departmental web site as necessary), develop research projects with undergraduate majors, serve on Assessment Committee for General Chemistry Program.

*September 1992 - August 1999*

Research Assistant for Dr. Michael K. Johnson, Dept. of Chemistry, University of Georgia.

Duties: Guide and conduct experimental research on several topics of interest to the research group; install, maintain, and repair laboratory instrumentation and interfaced computer work stations; train new graduate students in the research group and assist in projects from collaborators outside the research group; order laboratory supplies and manage expense accounts for the research group.

*June 1991 – August 1991*

Undergraduate Research Assistant for Dr. Felix Escher, Department of Food Science, Swiss Federal Institute of Technology, Zurich, Switzerland

Duties: Develop analytical methods of quantifying both the free and bound food-grade emulsifiers in starch utilizing methods of extraction, enzyme starch degradation, derivatization and GLC analysis.

*June 1990 - August 1990*

Undergraduate Research Assistant for Dr. J.L. Adcock, Dept. of Chemistry, Univ. of Tennessee

Duties: Develop methods of synthesis for particular organic compounds for eventual perfluorination derivatization experiments.

## Teaching Experience

*August 1999 – present*

Associate Professor, Department of Chemistry, Georgia Southern University

Courses Taught: Introduction to General Chemistry (Chem 1145), Introduction to General Chemistry II (Chem 1146), Comprehensive General Chemistry (Chem 1147), Allied Health Chemistry (Chem 1140), Research Methods (Chem 2031), Physical Chemistry Lab (Chem 3340L), Adv. Inorganic Chemistry (Chem 3140), Senior Seminar, Chem7090 Selected Topics (Science Teacher summer course), Conversations with Professors

*August 1992 – May 1999*

Graduate Teaching Assistant, Department of Chemistry, University of Georgia

Supervisors: Darwin Smith, John Ruff, Kenneth Whitten, Michael A. Duncan, Michael K. Johnson

Courses Taught: General Chemistry Lab (Chem122L), Experimental Inorganic Chemistry Lab (Chem 402L), General Chemistry Lab (Chemistry 121L), Advanced General Chemistry Lab (Chemistry 127L/137L), Qualitative Analysis Lab (Chem 123L), Senior Inorganic and Physical Chemistry Lab (Chem 3512L), Experimental Inorganic Chem. Lab (Chem 402L)

*1988 – 1992 (Fall and Spring Semesters)*

Undergraduate Teaching Assistant, Department of Chemistry, Presbyterian College

Supervisors: Dr. David Evans, Dr. Ed Gouge, Dr. Randolph Huff

Courses Taught: General Chemistry I & II Labs (Chem101L & 102L) and Organic Chemistry I & II Labs (Chem221L & 222L)

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## Relevant Skills

Biological research and methodology

- Enzyme chemistry
- Hyperthermophilic bacteria
- Aerobic and anaerobic sample handling

Operation, data interpretation, and maintenance of research instrumentation

- EPR/ESR
- CD and MCD
- UV/Vis/NIR absorption
- FTIR
- Resonance Raman
- GC and GC-MASS

Understanding of issues in curriculum and program development

- Longest standing member of College Course & Curriculum Committee
- Chaired Chemistry Course & Curriculum Committee
- Assisted with course and program forms in the development of the new Professional Science Master's Degree and the Survey of Chemistry sequence (Chem1151 and Chem1152) for health professional majors (to follow Board of Reagent guidelines).

Knowledge of advising center program and initiatives

- Developed pilot materials for advising chemistry students in COST Advising Center
- Authored software used to obtain student grades and schedule courses to graduate
- Have attended many of the GSU advising development seminars
- Assisted with math and science over-rides and enrollment management at SOAR

Experience working in team environment to accomplish common goals and objectives

- Served and/or chaired numerous departmental and college committees
- Worked with professional advising staff in development of college-level advising program
- Served on Planning Committee for the NACADA 2010 Georgia Drive-In Conference (reviewed and approved submissions for presentations)

Software integration and computer programming

- Implemented SharePoint restricted access of applicant materials for departmental position searches
- Use of Word and Excel – authored Excel integration to GSU student records database
- Versed in Windows, Macintosh, Linux, and Unix operating systems
- Programming in Fortran, Basic, PHP, and CGI
- Network server installation and administration

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## **Professional Service and Volunteer Work**

Organization and presentation of chemistry lab experience for GSU Eagle Science Camps Program (for Georgia middle school students, 2000-2010).

Scoutmaster, Troop 332 at Statesboro First United Methodist Church (2008-present)

Web Master for SE Region Summer Undergraduate Research Conferences (2002, 2004, 2008, 2010, 2011) and GSU Family Life Center Parents Advisory Committee (2000-2001).

PRISM Learning Community with the science teachers at Metter High School (2004-2006)

Family Science Night demonstrations at Langston Chapel Middle School (2004, 2005) and Career Day demonstrations and discussion at Mattie Lively Elementary (2007-current)

GSU Upward Bound Program Presentation of chemistry demonstrations and preparation of lab experience for students (Summer 2004)

Amateur Radio Service (KE4TYQ): Trained SkyWarn weather spotter for NOAA, emergency communications volunteer, and President (2003, 2005, 2006) and Treasurer (2007-2011) of Statesboro Amateur Radio Society.

Judge for various regional middle school science fairs (2001-2005).

Consultant for Ogeechee Technical College in development of laboratory facility to support a new general chemistry course (2003).

Presiding Host: *General Inorganic Session*. SE Regional Meeting of the American Chemical Society.  
Armstrong Atlantic State University, Savannah, GA. (Sept 26, 2001)

Manuscript reviewer: *Principles of Physical Chemistry (4th ed)*, by Ignacio Tinoco