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**C T****Louisiana State University (LSU)**

2013 – present Honors General Chemistry I & II (CHEM 1421 & 1422) – lectures  
2005 – present General Chemistry I & II (CHEM 1201 & 1202) – lectures  
2002 (Spring) General Chemistry I (CHEM 1201) – lectures  
Analytical Chemistry (CHEM 2001) – lectures

**Southern University at Baton Rouge (SUBR) –**

2002 – 2005 General Chemistry I & II (CHEM 132 & 133) – lectures

**University of Calgary, Canada**

2001 – 2001 Analytical Chemistry (CHEM 411)

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**Analogies:** I often find it useful to make real-life analogies for concepts that may otherwise be intangible.

**Basics:** In my experience, good foundations are essential for students to build upon. Basics need to be reinforced and their application to new material needs to be clearly demonstrated. Good practices, such as attention to units and significant figures, fundamentals of chemical nomenclature and basic math skills, help students move onto more difficult concepts.

**Conversation:** I constantly converse with my students during lectures. I pose questions and wait for answers, ask for questions from students, provide answers, or... answer with questions. By asking a question, students make the first step toward answering it. Questions inquiring 'How', 'What if', 'Why' or 'Why not' tend to be more important than those inquiring 'What'.

**Discipline:** It takes discipline to learn science. It is not just about accumulating information. It is about getting prepared to hear the material, paying attention to the lecture, actively participating and constantly forcing oneself to connect the dots. It also takes discipline to teach science; to stay on topic, to stimulate, to show cause-and-effect relationships.

**Evaluation:** How students perform in class reflects on how well I teach them and how I inspire them to learn. It evaluates me.

**Fairness:** Students need to believe I am fair. I am not unreasonable in my expectations and I do not offer consideration to any one particular student that I am not prepared to offer to all the others.

**Group work:** Students benefit from learning

**P**assion: Passion for teaching helps in persevering through difficulties of the profession, those being setbacks experienced by failing students or the ineffectiveness of some teaching methods. It helps in communicating ideas and in finding the “whatever works” for a given group of students. It explains why my weekends are spent tinkering with class notes and answering students’ emails. If I am not passionate about what I am teaching, I cannot

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- 2017 Member of the Undergraduate Honors Thesis Committee (LSU, Ogden Honors College; Ms. Camille Prejean: *Characterizing Two Bestrophin Mutants of Chlamydomonas reinhardtii*)  
Participant of the Student Response System (Clicker) Focus Group (LSU, ITS)
- 2015–present Member of the Executive Committee (LSU, Chemistry)  
Center for Academic Success Faculty Partner (LSU)
- 2016 Member of the ad-hoc committee on student evaluations of teaching (LSU, College of Science)
- 2015 Member of:  
– Recruitment and Retention Committee (LSU, College of Science)  
– Outstanding Tutor Award selection panel (LSU, Center for Academic Success)  
Presenter at the First-Year Experience: STRIPES program (LSU, Division of Student Life & Enrollment)
- 2014–present Member of the Assessment Committee (LSU, Chemistry)
- 2013 Faculty partner for the Bridges to the Baccalaureate program (between LSU and BRCC, Baton Rouge, LA)  
Member of:  
– Admissions, Standards and Honors (ASH) Committee (LSU)

# Teaching Dossier

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I have developed extensive PowerPoint lectures for General Chemistry I & II, which have been integrated – together with other supplemental material – into the Moodle® course management system. I have written my own semester examinations, numerous quiz problems and handouts, clicker questions and surveys, online self-tests with solutions as well as contributed to or coordinated the preparation of the departmental final examinations.

In addition to developing my own course materials and course delivery methods, I have shared some of my ideas of what is important and how to link concepts throughout the General Chemistry curriculum through the *Instructor's Resource Manual*.<sup>(5), (6), (11)</sup> It is designed to help starting lecturers navigate the textbook and the multimedia resources that accompany it. I am also involved with the new edition of supplements to the *Introductory Chemistry* textbook,<sup>(9), (10)</sup> and have contributed text to liberal arts chemistry textbook entitled *Chemistry for Changing Times*.

The innovative lecturing approach involves making lecture notes templates available to students prior to the start of the semester and synchronizing those templates to the PowerPoint lecture presentations<sup>(3)</sup>

I have brought the cross-proportions – a problem solving method – back to the classroom. I have prepared a student handout as well as published an article on the subject (see publications below).<sup>(2)</sup>



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- (13) **Cook, E.** “*How to Write an Abstract for the Undergrad Research Poster Session*” in *Chemistry* (the official ACS student member magazine.) 2017. *In press*
- (12) Brunauer, L. and **Cook, E.** “*Instructor’s Resource Manual*” to accompany *CHEMISTRY, The Central Science, 14e*; Pearson Education, Inc. 2017.
- (11) McGuire, S. Y. and **Cook, E.** “*Instructor Teaching Guide and Complete Solutions*” to accompany *Introductory Chemistry, 5e*; Pearson Education, Inc. 2015.
- (10) McGuire, S. Y. and **Cook, E.** “*Student Workbook and Selected Solutions*” to accompany *Introductory Chemistry, 5e*; Pearson Education, Inc. 2015.
- (9) Brunauer, L. and **Cook, E.**



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Participated in the “

I have participated in the Macmillan Learning Focus Group on Active Learning in Introductory Chemistry (2017, San Francisco, CA); ACS-facilitated workshop on the General Chemistry Performance Expectations (2016, Washington, DC); Pearson's Chemistry Webinars on *Active Learning in General Chemistry* and *Applying the Science of Learning to Your Classroom* (2016, online); Wiley EdTech Focus Group for General Chemistry & Physics (2015, Orlando, FL); McGraw-Hill Chemistry Digital Symposium (2014, Amelia Island, FL); the Communication Across the Curriculum (CxC) Faculty Summer Institute devoted to deepening students' learning of course content and advancing their communication skills (2013, LSU); the Faculty Colloquium on cognition – a campus-wide discussion on



2013 (Spring) (...) you've made me a better critical thinker and overall contributed to my dream of becoming a researcher.

I have truly enjoyed your Chem 1201 and 1202 class, and I've learned so much from you! In fact, these were the only few classes I actually enjoyed taking my freshman year at LSU. So thank you for that!

2006 (Spring) ...I thoroughly enjoyed your class this semester. You teach very well! (...) you exceeded my expectations as professors of chemistry. I graduated with a B.S. from Middle Tennessee State University and never had the caliber of teachers as I have here. I just wanted to give you credit you deserve! Thank you making the subject matter interesting!

2002 (Spring) I really appreciate your caring nature towards your students...

Thanks for teaching me, I really learned a lot in this course and feel prepared for CHEM 1202.

I am proud to say that I've learned a lot of things and not memorized a lot of things this semester and it really feels good to have actually learned. You are a wonderful instructor.

2005 (Spring) You are a challenging teacher but fair. You expected and almost demanded that we know the information and not memorize it. Thank you. Don't ever change, you are a great teacher.

2004 (Summer) ...

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2017

Received the Outstanding Instructor Award from the LSU Chapter of Phi Kappa Phi Honor Society

Received a Certificate of Appreciation and Recognition from the Louisiana Beta Chapter of Sigma Phi Epsilon Fraternity (LSU)



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Based on student evaluations of my teaching, I know I am being tough on students; this is generally fine with