

Website: <http://2yc3.org>

Chemistry Outlook

An Activity of
The Committee on Chemistry in the Two-Year Colleges
Division of Chemical Education
American Chemical Society



Candice McCloskey, Chair

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Notes From The Chair

Candice McCloskey
Georgia Perimeter College – Dunwoody
Dunwoody, GA

Greetings to you all. This is my last Notes from the Chair. It is now July, but you will be reading this sometime Fall Semester. The 185th conference in Rochester, MN will have taken place. We are now looking forward to the Hinds Community College Conference planned for November 13-14 in Raymond, MS. The theme is “Promoting Chemistry Education” and it promises to be, as usual, an edifying conference. I will be driving there with my family; we are making a family trip of it. There are many historic sites nearby. If you attended a recent 2YC₃ conference you may have picked up a brochure on Raymond’s historic buildings. The conference will be held at Eagle Ridge Conference Center on the college campus. The Center will have about 50 hotel rooms available as well. Of course, I hope to meet many new and not-so-new 2YC₃ members there.

There has been a great deal of attention lately on STEM Initiatives, which seem to come in all shapes and sizes. If you are involved with a STEM Initiative with a chemistry emphasis, and would like to share your experience with others, I invite you to write an article for the Outlook. I know that I would welcome hearing about others’ practices from the two-year college standpoint, and I’m sure that I’m not alone.

Recent conferences at Las Vegas and Salt Lake City dealt largely with undergraduate research in the two-year college. A research project has been shown over and over again to be instrumental in

continued on page 2



2009-2010

186th CONFERENCE (Southern)

November 13-14, 2009

Hinds Community CollegeRaymond, MS

Contact: Pam Clevenger

Email: pwclevenger@hindscc.edu**187th CONFERENCE (Western)**

March 19-20, 2010

City College of San FranciscoSan Francisco, CA

Contact: Bob Price

Email: rprice@ccsf.edu**188th CONFERENCE/21st BCCE**

Aug 1-5, 2010

University of North Texas,Denton, TX

Contact: Thom Jose

Blinn College, Bryan, TX

Email: tjose72@yahoo.com**189th CONFERENCE (Western)**

September 10-11, 2010

Portland Community CollegePortland, OR

Contact: Patty Maazouz

Email: patty.maazouz@pcc.edu**“Notes from the Chair” ...continued from page 1**

a student's decision to major in chemistry. But many of us cannot do research for lack of space, instrumentation, or other reasons, and don't have many chemistry majors. So, what about the less obvious means to that decision? Well, a great experience in organic lecture and/or laboratory can cause a student to decide to major in chemistry. I believe that it comes down to the student-teacher interaction, whether it's in class, teaching lab, or research lab. If the interaction is good, a few chemistry majors may come of it.

In addition to STEM majors, most two-year colleges have nursing and dental hygiene programs. In fact,

these students often make up the majority of our science students. I have had occasion, recently, to observe nurses at close hand. My husband had a major surgery and was hospitalized for two weeks followed by a month of recovery at home. I talked with many of the nurses and techs about their chemistry experience in college. It was gratifying, and maybe even a bit surprising, to hear many of them express their enjoyment of their chemistry class and lab. We all know that a basic understanding of chemistry is essential for nurses. If we as instructors can make the chemistry course fun as well as rigorous, we will be doing our GOB students, as well as their future patients, a great service.

By the way, I am trying some POGIL exercises with my organic students. Stereochemistry was an obvious choice to start with, and I could see the students learning a great deal by having to manipulate models as well as reflect those models on paper using various drawing methods. They surprised me, though. They professed to “not enjoy it” as much as lecture. I had heard that POGIL could be a hard sell. Any thoughts out there, I'd love to hear them.

Well, it's been a wonderful year as chair of 2YC₃. I want to thank everyone on the committee for their constant enthusiasm and their willingness to help and to work hard. It's been a valuable experience for me to work with you. I am looking forward to another three years working on the committee as Past Chair for Future Sites.

Thanks to all 2YC₃ members – see you in Raymond.

Upcoming Conferences**-Call for Abstracts-****188th CONFERENCE/21st BCCE**

University of North Texas

Denton, TX

August 1-5, 2010www.bcce2010.org**Conference Theme:****A New Decade of Opportunity**

See Call for Abstracts on page 8 of this Newsletter for preliminary program information.

2009 COCTYC AND SUPPORT STAFF
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American Chemical Society
2009 Roster of Committee Members

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2YC₃ Membership Form

Please consider supporting the 2YC₃ by becoming a member or renewing your membership. Annual dues are only \$25.

NOTICE - Annual Dues Rate Increase. Annual Dues are now \$25, and we are no longer offering a special rate on joint membership with DivCHED. If you are interested in joining DivCHED, please go to <http://www.divched.org/index> and take the *Membership* link on the left.

I wish to: _____ Become a member of 2YC₃
_____ Renew my 2YC₃ Membership

I am a: _____ Two-Year College Teacher _____ Four-Year College Teacher
_____ High School Teacher _____ Other

Your Name: _____

Institution: _____

Address: _____
Street City, State 9-Digit Zip Code

Phone: _____ **Email:** _____

Current Member of: _____ ACS _____ DivCHED

Names of current members are posted on the 2YC₃ website. The list includes names, institutional affiliation, and membership expiration date only. Email addresses and phone numbers are NOT listed. If you do NOT want your name listed, check here _____.

- **NEW! Membership dues can now be paid by credit card or PayPal on the 2YC₃ website by visiting <http://www.2yc3.org/membership/>**
- **If paying by check, please send your check**, payable to 2YC₃, for \$25 to:
Frank Ramdayal, Bergen Community College, 400 Paramus Road, Paramus, New Jersey, 07652.

- Updated -

**186th 2YC₃ Conference (Southern)
“Sharing Ideas to Promote Chemistry Education”**

**Hinds Community College
Raymond, MS**

November 13-14, 2009

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Co nference Information

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For registration, lodging information, travel directions, and the latest information on the conference program, please check the 2YC₃ website for an upcoming conference website link. Before that, please contact

Program Chair:	Pam Clevenger	<i>pwclevenger@hindsc.edu</i>	601-857-3869
Local Arrangements:	Jason Webb	<i>jawebb@hindsc.edu</i>	
Exhibits Coordinators:	Lester Harrison	<i>lwharrison@hindsc.edu</i>	
	Lou Anne Williams	<i>lawilliams@hindsc.edu</i>	

*All events will be at the Eagles Ridge Conference Center, 1500 Raymond Lake Rd, Raymond, MS 39154

Friday, November 13

- 8:00 – 9:00 **Registration, Refreshments, and Exhibits**
- 9:00 – 9:15 **Welcome and Opening Remarks**
Dr. Clyde Muse, President of Hinds Community College
- 9:15 – 10:15 **Keynote Address, “Pathways to Success in the Chemical Sciences: Affirming the Value of Two-Year College Graduates”**
Onofrio G. Gaglione, Councilor ACS Southern Nevada Section and past 2YC₃ chair
- 10:15 – 10:45 **Refreshment Break and Exhibits**
- 10:45 – 11:15 **Presentation Sessions**
- A. History of the Community College System in Mississippi**
Dr. Ben Fatheree, Hinds Community College, Raymond, MS
- B. Undergraduate Research in Community Colleges**
Dr. Jay Bardole, Vincennes University, Vincennes, IN
- 11:20 – 12:00 **Presentation Sessions**
- A. ChemEd Bridges**
Dr. David Brown, Southwestern College, Chula Vista, CA and Dr. Tom Higgins, Harold Washington College, Chicago, IL
- B. Proposals Invited**
- 12:00 – 1:00 **Lunch Break and Exhibits**

- 1:00 – 1:55 **Presentation Sessions**
A. Introducing and Implementing the New ACS Guidelines for Chemistry in Two-Year College Programs
Dolores C. Aquino, San Jacinto College – Central Campus, TX
Dr. Armando Rivera, East Los Angeles College, Monterey Park, CA
Dr. Jorge Salinas, Miami-Dade College, Miami, FL
B. Proposals Invited
- 2:00 – 2:55 **Presentation Sessions**
A. Round Table Discussion on Community College Chemistry Curriculums in Mississippi
Jason Webb and Lou Anne Williams, Hinds Community College, Raymond, MS
B. CCLI Grant Writing Information Session
Presenters TBA
- 3:00 – 3:55 **Presentation Sessions – Proposals Invited**
- 3:00 – 5:00 **Tour of Historic Raymond, Mississippi**
- Shelton House, Chancery Building, St. Mark's Episcopal Church
- 6:00 – 8:30 **Dinner Banquet and Address, “Contributions in Anti-Fungal Pharmaceuticals: Elizabeth Lee Hazen, A Mississippi Chemist”**
Dr. Mark Michalovic, Bucks County Community College, PA

Saturday, September 26

- 8:00 – 9:00 **Exhibits, Registration and Refreshments**
- 9:00 – 10:00 **Opening Speaker**
TBA
- 10:00 – 10:15 **Refreshment Break and Exhibits**
- 10:15 – 11:00 **Presentation Sessions**
A. Outreach Diversity for STEM Through Green
Dr. Armando Rivera, East Los Angeles College, Monterey Park, CA
B. Proposals Invited
- 11:05 – 12:00 **Presentation Sessions**
A. Topic TBA
Dr. Deb Mlsna, Mississippi State University, Starkville, MS
B. Proposals Invited
- 12:00 – 1:00 **Lunch Break and Exhibits**
- 1:00 – 2:00 **Presentation Sessions**
A. Chemistry for High School Teachers
Dr. Tom Wiginton, University of Mississippi, Oxford, MS
B. Proposals Invited
- 2:00 – 2:55 **Presentation Sessions**
A. Topic TBA
Dr. Libby Hartfield, Director of Mississippi Museum of Natural Science, Jackson, MS
B. Topic TBA
Dr. Kerri Scott, University of Mississippi, Oxford, MS
- 3:30 – 4:00 **Closing Comments**

Continued next page...

LODGING

Reservations at the conference hotels must be made by **October 26, 2009** to secure the conference block of rooms. Ask for the 2YC₃ rate when making your reservation. Clinton, MS, where two of the hotels are located, is an approximately a 10 minute drive from Raymond.

Eagle Ridge Conference Center
1500 Raymond Lake Rd
Raymond, MS 39154
Room Rates: \$69 single, \$79 double (54 rooms at these rates)
1-601-857-7100

Clinton Hampton Inn
493 Springridge Road
Clinton, MS 39056
Room Rates: \$95 king, \$89 double
1-601-925-9393

Holiday Inn Express & Suites
495 Springridge Road
Clinton, MS 39056
Room Rates: \$89 double
1-601-708-0400

REGISTRATION

Registration for the conference is by mail-in form. A conference website is forthcoming and you will be able to find a link to it on the 2YC₃ website when it is available. To register before that, and for more information about the conference, please contact **Program Chair: Pam Clevenger, pwclevevenger@hindsc.edu or phone 601-857-3869**. Send in the form with your payment. Please note that your registration is not complete until your payment is received.

About Hinds Community College and Raymond, Mississippi

Raymond, Mississippi is rich with history and the home of Hinds Community College. The town is approximately 8 miles southwest of Jackson, MS where the Jackson – Evers International Airport (JAN) is located. The Mississippi Museum of Natural Science and the Mississippi Museum of Art in Jackson depict the state's natural beauty and diverse culture. Stay in Raymond at Eagle Ridge Conference Center or enjoy one of Raymond's historic Bed and Breakfasts. While you are in Raymond, enjoy the sites associated with its antebellum past. Located 45 miles to the west is Vicksburg situated on the bluffs on the Mississippi River with more southern charm. Located in the center of Raymond is Hinds Community College. The college is the largest community college in the state of Mississippi serving more than 10,700 credit students each fall semester. The Hinds Community College family welcomes you to our Raymond Campus.

Bubbling Over with Excitement?

An Invitation for Submissions to the 2YC₃ Chemistry Outlook

From the Editor: I would like to invite any and all members of 2YC₃ to consider submitting interesting and relevant articles, commentary, announcements, job postings or photographs for inclusion into the Chemistry Outlook. As our organization grows, the Outlook is hoping to grow as well, and it can serve as a convenient means of sharing information with your colleagues around the country. Do you have an interesting classroom activity you'd like to share? How about a demonstration or a teaching technique that you think works especially well? In the past we have published conference commentary, "It Works for Me", photographs of students excelling at presentations and workshop announcements. Submissions may be published on an editorial appropriateness and space-available basis, and should be typed in Times New Roman font, single-spaced, 12-pt.

Deadlines for submissions:

Vol I (due out mid-Feb): Dec. 15
Vol II (due out mid-May): March 15
Vol III (due out mid-Aug): June 15
Vol IV (due out mid-Sept): July 15

187th 2YC₃ Conference Preliminary Information and Call for Papers

Strategies for a New Decade: Increasing Student Success and Diversity

Friday, March 19 – Saturday, March 20, 2010
(Prior to the ACS 2010 Spring Meeting in San Francisco)



City College of San Francisco

Location Information

Join us in the City by the Bay prior to the Spring National ACS Meeting. Our campus is conveniently located near the BART regional train system for easy access to/from San Francisco International Airport and the ACS downtown conference site.

Call for Presenters

Please submit proposals for talks, panels and workshops related to the conference theme of increasing student success and diversity.

Preliminary Program

Planned presenters include representatives of MESA programs and similar initiatives, Chem Ed Bridges, POGIL, the Science Writing Heuristic, and faculty involved in undergraduate 2-year college research programs. Workshops will be held on NMR, Calibrated Peer Review and technology in chem ed.

Contact information

Program Chair: Bob Price, 415-239-3515, rprice@ccsf.edu

Local Arrangements Chair: Malinda Pauly, 415-452-5399, mpauly@ccsf.edu

Exhibits Chair: Larry Fong, 415-239-3516, lkfong@ccsf.edu



21st Biennial Conference on Chemical Education

A New Decade for Opportunity

www.bcce2010.org

August 1-5, 2010

University of North Texas, Denton, TX

The Biennial Conferences on Chemical Education (BCCEs) are the premier conferences on chemical education in the world. The ACS Division of Chemical Education (DivCHED) sponsors the BCCEs and the University of North Texas (UNT) in Denton will host the upcoming conference, in collaboration with Collin County Community College. The BCCE is coming of age. This will be the 21st BCCE and it is happening the same year as the Centennial Celebration of the founding of the Department of Chemistry at UNT. This BCCE also marks the 188th meeting of the 2YC₃.

If you've never attended a BCCE, now is the time! The BCCEs are the largest gatherings of chemical educators in the world, designed for all levels of chemistry: secondary school, 2-year college and university. This conference emphasizes the improvement of chemistry education and modern developments in chemistry and chemical education, and is highly respected in the chemical education community.

The commitment of UNT to chemistry education is exceptional, and we have an excellent working relationship with the City of Denton community and the surrounding venues in the Dallas-Ft. Worth Metroplex. The ²⁰Ca₁₀Ne Roundup Committee is working hard and would like to take this opportunity to extend our Texas hospitality to you!

Call for Abstracts

The 21st BCCE 2010 will focus on a wide range of critically important issues in chemical education that address the complex and subtle relationships of teaching, learning and research with particular focus on what will be happening in the next decade. You do not have to be a member of the ACS or DivCHED to attend or to present at the BCCE, but you do need to register. The time has come for you to share! Workshop submission will continue through December 11th of this year. Abstract submission will open November 23rd 2009 and close February 12th 2010. While this may seem like plenty of time, do not forget to submit! The Two-Year College Chemistry Program coordinators Thom José and Susan Shih are assembling a program that addresses the needs and issues of faculty in two-year institutions. If you would like to be included in the community college strand, please let the coordinators or program chairs know this. Submissions can be made at the 21st BCCE Website: <http://bcce2010.org> (look for the "Submissions" bottle in our virtual chemistry set). **We want this BCCE to have a strong program for the 2YC₃ membership, and we need your participation and attendance to accomplish this.** Any questions, program ideas, or general suggestions for the BCCE program chairs can be sent to the BCCE via email, program@bcce2010.org.

To receive the most current information and deadline notifications relating to the Conference, please join the 21st BCCE listserv by adding your name to our list: <http://chemed.tamu.edu/bcce2010>.

Conference Registration/Lodging/Travel

Early registration should begin March 2010 through the 21st BCCE Website. Early registration fees are \$250. At the close of early registration a \$50 fee will be added. Housing will be available in several of our new residence halls and at several local hotels that have agreed to honor the Texas state employee rate. Dallas/Fort Worth International Airport and Love Field are less than one-hour trip from Denton. The Roadrunner shuttle service will be available for participants.

For specific information about the conference, visit and bookmark the 21st BCCE Website: <http://bcce2010.org>. This site will be continuously updated with information pertaining to the technical program, registration, housing, and social events as we approach August 1, 2010.

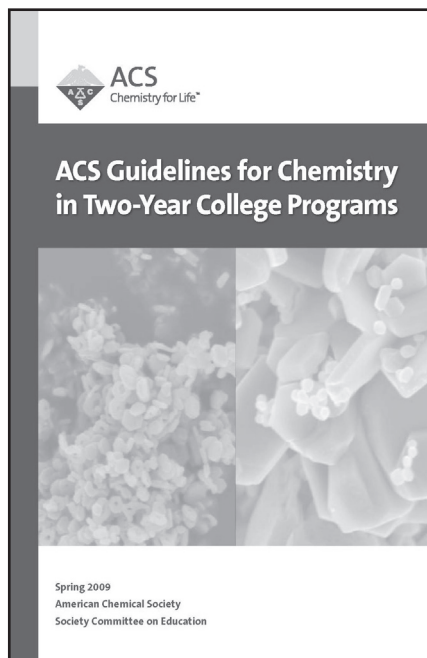
ABSTRACT SUBMISSIONS: NOVEMBER 23, 2009 – FEBRUARY 12, 2010
WORKSHOP PROPOSAL SUBMISSION: DEADLINE IS DECEMBER 11, 2009

COMING SPRING 2010 NEWSLETTER: 2YC₃ strand information (symposia, speakers, etc.) - STAY TUNED!!

Y'all come on down now, ya hear, and let's raise a little CaNe in Texas!

Announcing!!

The NEW ACS Guidelines for Chemistry in Two-Year College Programs



Released in the spring of 2009, this document is the result of input from the community and the hard work of a task force charged with coordinating the production and dissemination of the guidelines. An electronic version can be found at www.acs.org/2Yguidelines or receive a hardcopy by sending your name and address to CommCollChem@acs.org.

Several highlights of the guidelines are:

- The name of the document has been modified so that it applies to two-year programs at a variety of institutions,
- The vision of excellence for students, faculty, and programs has been made more explicit,
- The emphasis on faculty development has been increased,
- The organization mirrors that of the new ACS Guidelines and Evaluation Procedures for Bachelor's Degree Programs, in order to facilitate student transfer.

The new guidelines are designed to promote excellence and foster dialogue. Please take this opportunity to review the new guidelines and share them with a colleague or administrator.

Additional materials are being prepared to accompany the guidelines. These supplements will be developed to enhance and explain critical issues and best practices determined by the community. Your feedback regarding these topics and the content of the supplements is welcome and can be email to CommCollChem@acs.org. We also invite you to have an open dialogue about the guidelines and other topics relating to two-year college programs on the ACS Network Education forum by visiting <http://www.acs.org/Network>.



ACS
Chemistry for Life™

What's Happening in My Area?

News From the Regional Advisory Boards (RABs)

Western RAB
Dick Gaglione, Chair

Reflections on Undergraduate Research

By Mark Gianino, Southwestern College

Participating in undergraduate research, along with a group of peers, has been an experience unlike any other. The realization that there are no 'right' answers or expected results is liberating. The laboratory component of classes in which you are given a highly specific list of steps to follow and results to expect can be boring and unimaginative. However, I constantly look forward to and am excited by working in the lab as a research assistant, because it allows me to develop multiple skills, highlights the lack thereof, and serves as a validating experience for the need to gain a well rounded undergraduate education with depth.

Before starting as a research assistant I had a "one-subject mind". When confronted with a Chemistry problem I would consciously only consider chemistry concepts and theories when trying to find a solution. Most chemistry problems I encountered were from a class, so I figured the only things needed was to find the solution I had learned in that class, and, for the majority of the time, this logic was bullet proof. This was true for other subjects as well. But once I started working on problems for which I knew no one had the answer, I began drawing on all my knowledge to assist me. For instance, with regard to the more apparently difficult problems in a General Chemistry book, the extent of abilities typically required include a bit of algebra along with understanding a chemical principal. However, when trying to answer questions while engaged in undergraduate research, I have been able to draw on my knowledge of calculus, physics and various topics in chemistry. I didn't realize how useful math and physics would be to my study of chemistry. As a result, my analytical and math skills have significantly improved.

Besides gaining enhanced problem-solving skills, I have been forced, through necessity, to improve my communication skills so that I can clearly voice my ideas about experimental design or questions I have concerning the project. Necessity has also required that I develop better time management skills so that I can successfully balance my course load for the academic semester while participating in research. The progress I have made in these areas has given me a greater sense of confidence when working in the lab and in other facets of my life.

In addition to getting hands-on research experience designing experiments and deciding what avenues to explore, I have experienced first hand the importance of a thorough understanding of general chemistry concepts. In our research we encounter electrochemistry and redox reactions daily. During General Chemistry I mastered redox sufficiently to do well on an exam, but, in all honesty, that understanding had no significant depth. I did not learn the subject as well as I should have, and I had to go back and re-read things when applying those principals to research questions. Our research group traveled to the ACS National Meeting in Salt Lake City this past March and individuals from preeminent scientists giving lectures on buckyballs to student affiliates sharing demonstration ideas for outreach activities mentioned redox reactions. Even professionals in industry that lecture at local ACS section meetings frequently mention redox reactions. This important chemical principal taught in General Chemistry, which I took for granted, is frequently mentioned by some of the world's leading scientists. These collective experiences have shown me that a thorough understanding of the basics is essential, and these basics are fundamental and recur at all levels.

Mark Gianino is a student and member of the research team of Dr. David R. Brown at Southwestern College in Chula Vista, CA. Mr. Gianino has also been selected for a 2009-2010 ACS Scholars Program Award.

Midwestern RAB
Amy Jo Sanders, Chair

Amy Jo wishes to remind everyone of the early fall 185th conference, September 25-26, 2009 at Rochester Community & Technical College, Rochester, MN. Contact: Jason Jadin, email: jason.jadin@roch.edu. Expect a report of the many interesting and exciting presentations and symposia in the next newsletter!

What's Happening in My Area?

News From the Regional Advisory Boards (RABs)

Eastern RAB Brahmadeo Dewprashad, Chair

Summer is often an opportunity for many faculty members to work on papers grants and even some research. For many, it is also an opportunity to share the excitement of chemistry with young minds. As part of the Day of Service celebrating Martin Luther King Day, groups of students from Elverson and Leeds Military Academies in Philadelphia toured Valley Forge Military College and were treated to demonstrations of chemistry. "Oohs" and "aahs" were elicited from the audience as chemical and physical changes took place.

Crushing a soda can using steam condensation was met with cries of "How did you do that?" which were followed by looks of incredulity when told that the pressure of the air in did it. Flaming foam from hydrogen peroxide decomposition was a hit as was popping hydrogen generated from the dissolution of magnesium in hydrochloric acid. The piece de resistance was boiling water in a paper cup.

The activity is part of the Valley Forge Military College "closer look" program initiated by Col. Nan Hood. It is a step in mentoring high school students that began with partnering activities in 2006 including the Elverson Military Academy.

These simple demonstrations were well received and generated interesting discussions about what the students had seen. This program will become a part of future Martin Luther King Day events at the College. We congratulate Valley Forge Military College for their outreach to high school students and wish them continued success in this endeavor. As we work on preparing teaching materials for our courses in fall, it is probably worthwhile to reflect on Valley Forge Military College's experience and make a special effort to adapt and use instructional materials and pedagogies such that our students also experience more of the excitement of chemistry.

Southern RAB Ken Capps, Chair

Ken Capps is our new Southern RAB chair. Here is an introduction that Ken wrote for the Newsletter: I am an Associate Professor of Chemistry at Central Florida Community College (CFCC) in Ocala. I received my B.S. in chemistry from Wake Forest University, my Ph.D. in inorganic chemistry from the University of Miami, and postdoctoral experience at the University of California at Santa Barbara. I also recently earned my M.S.T. in college teaching from the University of New Hampshire. Prior to CFCC, I was an adjunct instructor at Montgomery College (Maryland) while on active duty as an officer in the U.S. Army. I am also a recent Fulbright Scholar, lecturing first-year chemistry students and assisting with curriculum development at the University of KwaZulu-Natal in Durban, South Africa. My current interests involve the use of collaborative activities and technology to assist student learning in introductory and general chemistry courses.

A reminder as well regarding the 186th conference in Hinds Community College in Raymond, MS. Anyone wishing to present should contact Program Chair Pam Clevenger (pwclevevenger@hindsgcc.edu) as soon as possible. For registration information, please visit [2YC₃.org/meetings](http://2YC3.org/meetings).

Submit News from Your Area!

Do you have interesting news to share with the rest of the 2YC₃ membership? Your RAB chairs welcome and encourage you to send interesting news from your area to them for compilation and submission to the Chemistry Outlook Newsletter. The RAB chair email addresses are:

Western RAB: Dick Gaglione, oggag@aol.com

Southern RAB: Ken Capps, cappsk@cf.edu

Eastern RAB: Brahmadeo Dewprashad, BDewprashad@bmcc.cuny.edu

Midwestern RAB: Amy Jo Sanders, ASanders@starkstate.edu

Case Studies: An Engaging Pedagogy

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From time immemorial, stories have been used to pass on values, beliefs and knowledge, and to stimulate imagination. We all remember how transfixed we were, listening to stories during our childhood and the lessons learned from each one. As such, the power of using stories to engage and educate is well accepted. Stories are still used to teach the very young but their use in formal education, particularly in chemistry, seems very limited. It cannot be because there are not stories associated with each of the major concepts in chemistry as the development of chemistry and its applications has many stories, even dramatic ones. It is more likely due to the fact that as chemistry evolved, it was taught to a select few and the pedagogy that evolved was tailored to the needs of this select group. This practice continued over the years with the pool broadening somewhat. However, such selectivity is still the norm in some countries, though not in the USA. Students selected out from a very large pool to undertake a specific discipline of study, do not need special efforts to engage them and motivate them to master seemingly abstract concepts. Their selection is usually based on demonstrated aptitude in the area of study. This, combined with recognition of their special status likely motivates them to work diligently and to succeed at mastering seemingly abstract concepts. The chemistry textbooks that we use and the pedagogical style that their use fosters had their origins in an education philosophy and practice geared to support instruction to such selected group of students. In fairness, chemistry textbooks and instruction are slowly moving away towards the use of more student-centered activities and connecting with a more diverse range of students. However, the changeover needs to be more radical, more so in two year colleges.

In the USA there is an attempt to educate not a select few but the general population, and two year colleges play a central role in this endeavor. As such, teaching directly from textbooks designed largely for instructor centered instruction and students in selective programs and colleges are probably not as effective in two year colleges. Many chemistry instructors at two year colleges are making special efforts to adapt and use various forms of student centered pedagogies. I feel that there a pedagogy that is underutilized but has great potential for engaging students and facilitating learning. It is the use of stories to teach chemical concepts.

In formal education, education stories are known as case studies. Chemistry textbooks do not usually have case studies but instructors desirous of learning more about chemistry case studies and how to use them have several resources available. The National Center for Case Study Teaching in Science has an excellent website with a collection of case studies that include several tested cases studies that can be used to teach organic chemistry, general chemistry, environmental chemistry and general organic and biological chemistry. The website has resources on using and evaluating case studies and on developing new cases. The website can be accessed at <http://ublib.buffalo.edu/libraries/projects/cases/case.html>. The center also hosts regular workshops where attendees can learn to use and/or develop their own case studies. The Journal of Chemical Education and The Chemical Educator also periodically publish tested case studies.

The collection of published case studies in chemistry is not exhaustive. As such, it is an opportunity for faculty members to develop case studies for tier use and to share with the larger community. The characteristics of a good case study should be considered when developing or selecting case studies. A good case study (a) tells a story, (b) focuses on an issue of interest and relevance to students, (c) is set in a time frame that students can relate to, (d) creates empathy with the characters, (d) is conflict provoking, (e) requires decision making, (f) promotes metacognition, (g) has generality and (f) must have pedagogic value.

Chemistry faculty members should consider using / developing and using case studies in their classes. It is an effective way to engage students and provide practice in applying concepts to solve problems in their areas of interest. It is not advocated that case studies be used at all times instead of lectures as there are also several challenges to using case studies. The biggest challenge is finding cases to teach all of the core concepts in chemistry. In addition, using case studies requires special efforts in classroom management. This is because good case studies connect so well with students that their undertaking can very easily lead to broad-based discussions on case, and away from the chemical concepts covered by the case. In addition, careful time management is required. Assessment of individual student learning and efforts also requires some thought, particularly when the case is done in a group format. However, use of case studies do help instructors connect with students, students connect with each other and see the relevance of chemical concepts to their own lives. As such, their use in the classroom can be a worthwhile and practicable effort, particularly if they are use as substitutes for some lectures.

ACS Approval Granted to Laboratory Science Technology Program

The Laboratory Science Technology (LST) program at the National Technical Institute for the Deaf, Rochester Institute of Technology, has been awarded ACS approval. This is the first chemistry-based technology program designed for deaf and hard-of-hearing students to be approved by ACS.

Chemistry-based technology programs are educational programs that work closely with industry partners to ensure students learn the skills they need to enter the workplace upon graduation. Many chemistry-based technology programs also work with academic partners to give students more educational options.

Most chemistry-based technology programs serve local and regional communities. The LST program is unique in that both its students and industry partners come from across the country. Program coordinator Todd Pagano works hard to keep the program's partners involved.

Since 1990, ACS has granted approval to qualified chemistry-based technology programs through the Chemical Technology Program Approval Service (CTPAS). CTPAS evaluates associate-level programs on the strength of their industry partnerships, academic rigor, and hands-on experiences available to students. So far, a select group of 16 programs have received ACS approval.

To obtain ACS approval, chemistry-based technology programs indicate their interest in ACS approval by submitting a one-page request for consideration form. Upon receipt of the form, CTPAS begins to review the program. If the program appears to be a good candidate for approval, additional information is requested, and a site visit is arranged. The information supplied by the program, CTPAS's research, and the site visit is used to determine whether the program qualifies for ACS approval.

Because chemistry-based technology programs must accomplish much in a short period of time, the approval process can be rigorous. Programs must demonstrate that they are meeting the needs of their industry partners, their students, and their faculty. They must have clear, achievable goals and be committed to continuous program improvement. They must provide a solid foundation in chemistry theory, as well as practical skills and experiences. Often, the evaluation process itself results in program improvements.

For more information on ACS approval or to see a list of approved programs, visit "Chemical Technology Program Approval" at www.acs.org/education, call 202-872-6108, or email ChemTechLinks@acs.org.

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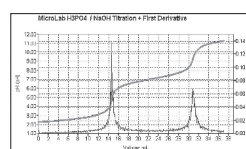
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Application for Chair-Elect for 2011 must include:

- A. Pertinent personal data such as name, college, job title, address, etc.
- B. Brief statement of pertinent qualification, signed by the nominee.
- C. A statement indicating a willingness to serve signed by the nominee.
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To be eligible to be nominated an individual must:

1. be a two-year college chemistry teacher
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3. be a member of DivCHED
4. have demonstrated leadership and organizational ability by serving as Chair or Co-Chair for a conference and in one or more of the following capacities:
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-Applications must be received by the Chair no later than OCTOBER 1, 2009.

- The COCTYC will serve as a nominating/screening committee to generate a slate of candidates.
- Each 2YC₃ member shall vote for one nominee per office and the candidate who receives the greater number of votes shall be declared elected.
- Ballots must be received by the Chair postmarked no later than 12/31/2009.

Call for applications for the office of Treasurer/College Sponsor Chair of 2YC₃ for a three year term beginning 2010

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- B. Brief statement of pertinent qualification, signed by the nominee.
- C. A statement indicating a willingness to serve signed by the nominee.
- D. A statement of support from an appropriate person in the applicant's school.

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