

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



Jeff Cramer, Chair

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Notes From The Chair

Jeff Cramer
Stark State College
North Canton, OH

Whoa, this is the last Notes from the Chair for me. I want to start by thanking the COCTYC, the official name of the executive committee. Some of you I have known a long time while others I am just getting to know. You do great work in a schedule that is already busy. It has truly been a pleasure working with you. I realize it does not seem that way during our executive committee meetings, but you have done significant work for 2YC₃. I hope our members get to know you and say, "thanks" when they see you at a conference or send an email. I also want to thank the colleges who have hosted conferences. You have affected my professional growth- positively that is.

One thing that is not easy for me is to meet new people. So when I go to a conference my tendency is to sit with people I know. This is probably especially true at the 2YC₃ conference lunches and dinners. But since I became a 2YC₃ officer, I have made an effort to meet new people and learn about them and their schools. This has been a great benefit to me also. So I want to thank all of you whom I have met at 2YC₃ conferences. I think there must be an important saying about this which I cannot directly quote. But it goes something like: "It is not through the easy things by which we grow." Oh, now I remember, "No pain, no gain."

As I write this I am at the 20th BCCE 2008 at Indiana University in Bloomington, IN. Susan Shih, Amy Jo Sanders, and Tom Higgins have done a great job as 2YC₃ Program Chairs for this BCCE. I have counted 14 sessions that were presided over by faculty from two-year colleges. Since there are between 14 and 20 concurrent sessions, and since I can only attend one presentation at a time, I feel guilty for missing so many other sessions. I believe there are over 60 workshops also. The Indiana University campus is pretty with all the trees, flora, and sandstone buildings. Some of the sessions that are relevant to us are "Exploring the ACS Guidelines" and "Expectations for the First Two Years of Chemistry" and "Using ACS Guidelines for Chemistry Programs in Two-Year Colleges to Enhance Chemistry Programs and to Facilitate Student Transitions." John Clevenger, Doug Sawyer, and Tamar

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2008 - 2009

183rd CONFERENCE (Eastern)

November 21-22, 2008

Anne Arundel Comm. CollegeArnold, MD

Contact: Lynn Tracey

Email: ljtracey@aacc.edu

184th CONFERENCE (Western)

March 20-21, 2009

Salt Lake Community CollegeSalt Lake City, UT

Contact: Neil Bastian

Email: Neil.Bastian@slcc.edu

185th CONFERENCE (Midwestern)

September 25-26, 2009

Rochester Community & Technical CollegeRochester, MN

Contact: Jason Jadin

Email: jason.jadin@roch.edu

186th CONFERENCE (Southern)

November 13-14, 2009

Hinds Community CollegeRaymond, MS

Contact: Pam Clevenger

Email: pwclevenger@hindsc.edu

“Notes from the Chair” ...continued from page 1

(Uni) Susskind made presentations in each of these symposia. Margaret Richards (m_richards@acs.org) from ACS was taking notes during the discussion section. Margaret is the newly hired 2YC₃ liaison. The final version of the Guidelines is not yet complete. John Clevenger will be attending the Las Vegas Conference, and he and Margaret will be attending the Anne Arundel Conference to obtain your input. Dolores Aquino has been surveying faculty at the last couple of 2YC₃ Conferences for this ACS project. I encourage you to start planning to attend the 21st BCCE from August 1-5, 2010 at University of North Texas in Denton. Their website is www.bcce2010.org.

At the 2YC₃ Membership Meeting I presented Jay Bardole

with the first 2YC₃ Lifetime Service Award. Jay has been 2YC₃ Chair, Newsletter Editor, our first Webmaster, and his college, Vincennes University continues to publish our Chemistry Outlook newsletter. Vincennes University (a 2-year college) has hosted at least two 2YC₃ Conferences. During the 1990's we had a substantial revision of the By-Laws, and Jay was instrumental in that project. For some reason meeting Jay at our Stark State College 2YC₃ Conference in 1995 stands out in my memory. Perhaps I was surprised how far Jay and Curt Dhonau had driven. But I suspect the real reason I always look for Jay is his friendly way, and he has always sincerely encouraged me.

Since I don't have time to discuss a word or words, I am going to ask you what book you would recommend that I read this summer. I am just finishing my wife Andrea's recommendation, "How to Win Friends & Influence People" by Dale Carnegie. I have decided it is a great pedagogy book. A major point of Dale's is to encourage people in the things they do well.

And last, thank you Andrea for supporting me.

185th Conference (Midwestern)
Rochester Community and Technical College
Rochester, MN
September 25-26, 2009

Conference Theme:**Resuscitating Our Chemistry Courses****Call for Papers**

We currently are looking for colleagues who would like to contribute to our program by giving a presentation, poster, or leading a workshop in the areas listed below.

- Including green chemistry in the curriculum.
- Including biotechnology in the curriculum.
- New approaches in teaching allied health chemistry.
- Assessment of student learning.
- Use of technology to enhance lecture and labs.

We will also consider presentations on any other topic that will enhance our program.

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2YC₃ Membership Form

Please consider supporting the 2YC₃ by becoming a member or renewing your membership. Annual dues are only \$15.

Special Offer: Annual dues are \$15 for the 2YC₃ and \$20 for the American Chemical Society Division of Chemical Education (DivCHED). If you are not already a member of DivCHED, you may join both organizations today for a total of \$30, a savings of \$5.

I wish to:

- Become a member of 2YC₃
 - Renew my 2YC₃ Membership
 - Join DivCHED as a member (ACS members only) and 2YC₃
 - Join DivCHED as an affiliate* (non ACS members) and 2YC₃
- *affiliates have all membership privileges except voting and holding elective office.

I am a:

- Two-Year College Teacher
- High School Teacher
- Four-Year College 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 _____.

Please send your check, payable to 2YC₃, for \$15 (2YC₃ only) or \$30 (joint membership) to:

Frank Ramdayal, Bergen Community College, 400 Paramus Road, Paramus, New Jersey, 07652.

183rd 2YC₃ Conference (Eastern)

“Partnerships in Chemistry Education”

Anne Arundel Community College
101 College Parkway
Arnold, MD 21012

November 21-22, 2008

27 Co nference Information

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For **registration, lodging information, travel directions** and the **latest information on the conference program**, visit the conference website: <http://ola4.aacc.edu/ljtracey/2yc3/aacc2yc3home.htm>.

Program Chair:	Dr. Lynn Tracey	Email: ljtracey@aacc.edu	Tel: 410.777.2846
Local Arrangements:	Ms. Debbie Reeder	Email: dmreeder@aacc.edu	Tel: 410.777.2224
Exhibits Coordinator:	Dr. June Bronfenbrenner	Email: jbronfenbrenner@aacc.edu	Tel: 410.777.2269

Friday, November 21

8:00-4:30 **Exhibits**

8:00-9:00 **Registration and Breakfast**

9:00-9:15 **Welcome and Opening Remarks**

9:15-10:15 **Keynote Address: “Funding Opportunities for Community Colleges: The National Science Foundation (NSF) - Division of Undergraduate Education (DUE)”**; [Eun-Woo Chang, Program Director, Division of Undergraduate Education, National Science Foundation, Arlington, VA.](#)

Undergraduate education is central to NSF’s mission in human resource development. The Division of Undergraduate Education (DUE) serves as the focal point for agency-wide support for undergraduate education. The program activities of DUE aim to strengthen and continuously improve the vitality of undergraduate education for all students in science, technology, engineering and mathematics (STEM) courses in all US institutions of higher education. Within DUE programs, particular emphasis is placed on improving access to STEM education for all segments of U.S. society, including persons with disabilities, populations underrepresented in STEM fields or in technical or teaching careers.

This presentation includes a brief description of the DUE programs that are most likely to be of interest to chemists involved in undergraduate education and funding opportunities for community colleges within DUE in the areas of science, technology, engineering, and mathematics (STEM).

10:15-10:30 **Refreshments and Exhibits**

10:30-11:15 **Interactive Presentation: “The ACS Guidelines for Chemistry Programs in Two-Year Colleges: A Resource for Enhancing Chemistry Programs”;** John Clevenger, Emeritus Professor of Chemistry, Truckee Meadows Community College, Reno, NV.

The *ACS Guidelines for Chemistry Programs in Two-Year Colleges*, last updated in 1997, are undergoing a significant revision. One of the goals of this revision is providing a more useful resource for strengthening programs at two-year colleges. This interactive session will introduce the key messages of the draft revisions and discuss how faculty can use the guidelines to enhance program activities and leverage for resources. Input on the draft revisions will be solicited.

11:30-12:15 **Presentation: “POGIL – Hyuh, what is it good for? Absolutely something!”;** George Kraus, Professor, Department of Biological & Physical Science, College of Southern Maryland, LaPlata, MD.

Planting the seeds of student partnerships! We have been using the POGIL (Process Oriented Guided Inquiry Learning) workbook in General Chemistry I and II courses since Sept. 2004. CSM general chemistry classes have no more than 35 students and often less. Hear why we adopted POGIL, how we use it, what we use, who uses it, and why we will continue to use it. Unfortunately I have no juicy stories about obstructionist colleagues to share.

12:30-1:45 **Lunch and Exhibits**

1:00-1:45 **Tour of Chemistry Labs**

1:45-2:15 **2YC₃ General Membership Meeting**

2:20-3:05 **Presentation: “Chem Ed: Increase Conceptual Understanding in Chemistry and AP Chemistry —Activate Inquiry and Inspire Discovery!”;** Chris Wilhelm, Higher Education Consultant, PASCO Scientific.

Using PASCO probeware, students can visualize and explain abstract chemical concepts with words and math. Come experience how 21st Century Technology will become the heart of your laboratory—whether or not you have computers. This flexible tool will help you teach acid/base, gas laws, thermodynamics redox and more.

or

2:20-3:20 **Interactive Presentation: “The ACS Guidelines for Chemistry Programs in Two-Year Colleges: A Resource for Facilitating Student Transfer”;** John Clevenger, Emeritus Professor of Chemistry, Truckee Meadows Community College, Reno, NV.

The new *ACS Guidelines and Evaluation Procedures for Bachelor’s Degree Programs* were released in 2008. The *ACS Guidelines for Chemistry Programs in Two-Year Colleges*, last updated in 1997, are also being revised. One of the goals of this major revision is to facilitate student transfer. This interactive session will focus on the changes to the guidelines and on strategies for using them to establish relationships between transferring and receiving institutions and foster student success.

3:05-3:25 **Refreshments and Exhibits**

3:30-4:15 **Presentation: “ACS Chemical Technology Program Approval Service: Recognizing Excellence in Chemistry-Based Technology Education”;** Joan M. Sabourin, CTPAS chair, American Chemical Society, and Professor of Chemistry, Delta College, University Center, MI.

Chemistry-based technology programs fill a unique niche in two-year college chemistry education. They must prepare their students for careers in the chemical enterprise while maintaining sufficient academic rigor to enable transfer of credits or seek employment, according to their needs. Strong partnerships among academia, industry, and the community are essential to the success of such programs.

Since 1990, the American Chemical Society (ACS) has offered approval to qualified chemistry-based technology

Continued next page...

programs through the Chemical Technology Program Approval Service (CTPAS). This presentation will cover the benefits of ACS approval, the new approval process, and the role of partnerships in successful chemistry-based technology programs.

4:30-6:00 **Social Hour at AACC**

6:00-8:00 **Dinner Banquet at AACC**

Presentation: “Producing Chocolate, From the Trees to the Table”; James A. Saunders, Director, Molecular Biology, Biochemistry & Bioinformatics, and Professor, Departments of Biological Sciences and Chemistry, Towson University, Towson, MD.

A brief history of the development of chocolate will be presented from early Aztec cultures in Central and South America to its rise through European aristocracy to achieve current prominence as a world economic delight. We will explore the biology of growing cocoa beans and examine how characteristic flavors are developed through a combination of genetic, environmental and processing parameters. An overview of the role of modern research on cocoa will be presented to reveal how this crop continues to maintain a prominent role in social and political influences on a global basis. Best of all we will engage in popular taste testing of the final products of chocolate production. No previous knowledge of the chemistry of Chocolate is required!

Saturday, November 22

8:00-4:00 **Exhibits**

8:00-9:00 **Registration and Breakfast**

9:00-9:45 **Presentation: TBA**

or

9:00-10:00 **Workshop: “Journal of Chemical Education Online Resources”;** *presenter to be determined*

The Journal of Chemical Education (JCE) is the premiere chemical education publication in the world. It has provided invaluable print resources to chemical educators for over 80 years. In addition to the resources available in print, there is a vast quantity of resources available online. This workshop will explore the JCE online resources, showing participants how to search the JCE online and find the right resource for the job. We will also explore the Web-based software collection and suggest ways to incorporate this technology into your classroom.

10:05-10:50 **Presentation: “Critical Thinking for Organic Students: Using Anathons to Develop and Solve Structural Problems”;** Ray A. Gross Jr., Professor of Chemistry, Department of Physical Sciences & Engineering, Prince George’s Community College, Largo, MD.

Anathons are partial structures found in an analyte, the compound being analyzed. It will be shown how anathons can be used to construct and solve structure-determination problems. Solutions require only a basic knowledge of ozonolysis and permanganate-oxidation reactions, but many require students to apply the kind of logic and reasoning that instructors desire to foster in students. These compounds have from one to four pi bonds and zero to three rings. Molecular formulas of reaction products, and in some cases, the molecular formula of the reactant are the only data provided to students. Instructors can help students improve their reasoning skills by engaging them in these problems. It will also be shown how the concept of anathons can be applied to spectrometric analysis.

10:50-11:10 **Refreshments and Exhibits**

11:00-12:00 **Workshop: “Molecular Modeling Experiment: High Tech to Very, Very Low Tech”;** Crystal Yau, Chemistry Coordinator and Associate Professor, School of Math & Science, The Community College of Baltimore County, Catonsville, MD.

Come and see how a high tech molecular modeling computer program can be used effectively in an introductory or general chemistry course. If your college cannot afford the software, not to worry! The workshop will also demonstrate how low tech and very, very low tech model kits could be possibly even more instructive in strengthening student understanding of VSEPR and Valence Bond Theory. Use of the models could become a springboard to an Internet search assignment on biochemical molecules of relevance to personal health.

or

11:15-12:00 **Presentation: TBA**

12:15-1:30 **Lunch and Exhibits**

12:45-1:30 **Tour of Chemistry Labs**

1:30-2:15 **Presentation: “Student Learning Outcomes Assessment (SLOA) Project In Chemistry At The Program And Course Levels”;** Nancy Thorpe, Associate Professor, Veronica Stein, Assistant Professor, and Cindy Dove, Assistant Professor, Science and Math Department, Hagerstown Community College, Hagerstown, MD.

If learning outcomes and assessment are still a challenge or puzzle, this project may help. The Chemistry program SLOA project has been a joint effort among full-time chemistry faculty, adjunct chemistry faculty, and other full-time science faculty. This chemistry project is used to illustrate program outcomes, integration of course and program outcomes, rubric grading of student work, external benchmarking, analysis of student success data, and lessons learned over a three year span of working with outcomes assessment, as well as demonstrate how multiple faculty can work together, incorporating their different teaching styles, to produce a unified outcomes assessment plan.

or

1:30-2:30 **Workshop: “Explore the Chemical Education Digital Library”;** *presenter to be determined*

Interested in using digital resources in your classroom? Explore the multitude of resources found at the Chemical Education Digital Library (ChemEd DL), a Pathway project of the National Science Digital Library. This hands-on guided-inquiry workshop will give you a head start on searching and using ChemEd DL content. Ultimately, the ChemEd DL will be the place on the Web to find or share digital content for chemical sciences education. Learn about how you can use, contribute, share, and organize chemistry education materials through ChemEd DL.

2:15-2:35 **Refreshments and Exhibits**

2:35-3:20 **Presentation: “Prep Chem as a Prerequisite to Gen Chem”;** Crystal Yau, Chemistry Coordinator and Associate Professor, School of Math & Science, The Community College of Baltimore County, Catonsville, MD.

Are you finding students ill-prepared to enter your General Chemistry? At the Community College of Baltimore County, we are requiring students who want to register for our General Chemistry, to have a passing score in our chemistry placement test or a grade of C or better in our Preparatory Chemistry course. Students who took chemistry in high school are not exempted. How well the prerequisite is working will be discussed, including problems we are facing and possible solutions that we are planning to implement.

3:35-4:20 **Presentation: TBA**

4:30-5:00 **Conference Closing**

Continued next page...

REGISTRATION

Registration for the conference is by mail-in form. The form is available at the conference website: <http://ola4.aacc.edu/ljtracey/2yc3/aacc2yc3home.htm>. Download and send in the form with your payment. Please note that your registration is not complete until your payment is received.

LODGING

Reservations must be made at all conference hotels by October 20 to secure the conference rate. Individual cancellations must be made 24 hours prior to arrival. All hotels provide free parking and breakfast. There are many hotel chains in the area and attendees can contact Debbie Reeder, Local Arrangements Chair, at 410-777-2224 or dmreeder@aacc.edu for additional choices.

Note: If you register through the hotel web site, you will be given the conference rate only if your check-in and check-out dates are within the range listed with each hotel below. If your check-in or check-out date is different, then call the hotel directly to make your reservations, and you will be given the conference rate.

Hampton Inn BWI Airport, 829 Elkridge Landing Road, Linthicum, MD 21090

Phone: 410-850-0600; Fax: 410-691-2119

www.hamptoninn.com

Conference-specific reservations:

<http://hamptoninn.hilton.com/en/hp/groups/personalized/BALATHX-AAC-20081120/index.jhtml>

Approximately 16 miles from campus

Room Rates: Single or double \$79/night + 13% tax

Ask for the Anne Arundel Community College Conference rate (group code AAC)

Check-in/check-out dates: November 20-22

Free shuttle to/from BWI airport and Amtrak station.

Hampton Inn & Suites Annapolis, 124 Womack Drive, Annapolis, MD 21401

Phone: 410-571-0200; Fax: 410-571-0333

www.hamptoninn.com

Conference-specific reservations

<http://hamptoninn.hilton.com/en/hp/groups/personalized/ANDMDHX-ANN-20081120/index.jhtml>

Approximately 8 miles from campus

Room Rates: Single or double \$89/night + 13% tax

Ask for the Anne Arundel Community College Conference rate (group code ANN)

Check-in/check-out dates: November 20-24

Holiday Inn Express, 2451 Riva Road, Annapolis, MD 21401

Phone: 410-224-4317; Fax: 410-224-6010

www.holidayinnexpress.com/annapolismd

Approximately 7 miles from campus

Room Rates: Single or double \$119/night + 13% tax

Ask for the Anne Arundel Community College Conference rate

Check-in/check-out dates: November 21-23

About Anne Arundel Community College

Established in 1961, Anne Arundel Community College is built on a commitment to excellence, engagement in the learning process and mutual respect and courtesy. It is a fully accredited, public, two-year institution offering credit programs, lifelong learning opportunities and noncredit continuing education courses. Enrollment has grown from 270 students attending evening classes in a local high school to more than 53,000 students on the Arnold campus, a variety of off-campus locations and through distance learning.

For directions to the college, please visit: www.aacc.edu/locationsandmaps/

The Conference will take place in the CALT building (Center for Applied Learning and Technology).

Attendees should park in Lots G and H.

184th 2YC₃ Conference
“Building a Foundation in Chemistry: Assessment of Student Learning in Classroom and Undergraduate Research Situations”

Salt Lake Community College, Salt Lake City, UT
March 20-21, 2009

Preliminary Information

The 184th 2YC₃ Program will take place on March 20-21, 2009. Registration options will be updated and posted on the conference website (see below). The conference will take place in the student center at the Redwood Campus of the Salt Lake Community College approximately six miles from the downtown area.

Combining the amenities of a major metropolitan area with the friendliness of a small, western city, Salt Lake City is an ideal location for group travel. A beautiful, safe, and vibrant city, Salt Lake combines unparalleled access to natural recreation, a bustling economy, dynamic nightlife, remarkable history, warm hospitality, and Utah's Greatest Snow on Earth™. The airport is just 10 minutes from downtown. Taxis, limousines, buses, and shuttles provide airport service to anywhere in the valley and to local ski resorts. Many hotels provide complimentary airport shuttle service. Utah Transit Authority (UTA) provides over 100 bus routes throughout an 1,800 square-mile area. UTA also provides light-rail service, airport transportation, service to ski resorts in winter, and door-to-door transportation for disabled passengers. A free fare zone is available downtown. Go to <http://www.ci.slcc.ut.us/visitors/> or <http://www.visitsaltlake.com/visit/> for more information.

Make your plans now to attend the 184th 2YC₃ conference. Consult the website, <http://2yc3.org>, for informational updates, online registration, hotel accommodations, the program, area attractions and deadlines. Those wishing to present a paper, workshop or a poster at the 2YC₃ meeting should contact the 2YC₃ Program Chair: Neil Bastian at nbastian@slcc.edu.

Preliminary Program

- Donald Bouchard: Anasazi Instruments, Indianapolis, Indiana; Workshop: “NMR applications across the undergraduate chemistry curriculum”
- Diane M. Bunce (Keynote Speaker): Presentation: “Developing Assessments that Match Your Learning Goals”
- Jeffrey Cramer: Stark State College, Canton Ohio; Discussion and workshop regarding a grant received from the Great Lakes Fuel Cell Education partnership.
- Thomas J. Greenbowe and K.A. Burke: Iowa State University, Ames, Iowa; “Improving Understanding of Topics in General Chemistry By Implementing the Science Writing Heuristic in the Academic Laboratory”
- Thomas A. Holme: University of Iowa (Tentative)
- Jason Jadin, Teresa Brown, and Heather Sklenicka: Rochester Community & Technical College; Presentation: “Assessment of data gathered from competency quizzes given in a General/Organic/Biochemistry-I course.”
- Laurie LeBlanc and Kathryn Nette: Cuyamaca College, San Diego California; Presentation on use of student teams to solve “crimes” involving chemical and biological analyses. The student groups present their findings in the form of posters which they explain to their peers orally.
- Elizabeth A. Moore and Linda Fanis: University of Wisconsin-Madison.
- John W. Moore: University of Wisconsin-Madison; “The Chemical Education Digital Library: Web-based Resources for All”
- Mary Virginia Orna: College of New Rochelle, New Rochelle, NY; “Art Historical and Archaeological Chemistry Research For Undergraduates.”

News from the Regional Advisory Boards (RABs)

Western RAB David R. Brown, Ph.D.

Interested in Enhancing your Chemistry Curriculum?

It's no secret that advances in the chemical sciences are rapid and continuous, which can pose significant challenges to maintaining an up-to-date curriculum. Students are excited by and deserve to be exposed to aspects of the latest, greatest discoveries and progress made in a diverse set of fields.

The Center for Workshops in the Chemical Sciences (CWCS) is an initiative supported by a National Science Foundation Course, Curriculum, and Laboratory Improvement (CCLI) grant, with the objective of providing workshops designed to provide a background and modern perspective on key areas of the chemical sciences. The workshop materials are accompanied by methods to introduce these topics into the undergraduate curriculum. Participation (including registration and housing) is **FREE**.

CWCS is directed by Jerry Smith (Georgia State University) and co-directed by David Collard (Georgia Institute of Technology) and Lawrence Kaplan (Williams College). Having participated in four of the workshops, I can personally attest to their quality and the impact they have had on the curriculum at Southwestern College. Certainly you, your students, and your institution would also benefit by your participation in one or more of the excellent CWCS workshops. I highly recommend you look into it soon!

Tentative topics for workshops in summer 2009 include Forensic Science, Chemistry in Art, Computational Chemistry, Nuclear Magnetic Resonance, Functional Organic Materials, Environmental Chemistry, Genomics and Proteomics, and Green Chemistry. The finalized schedule will be distributed in fall 2008.

If you wish to receive advanced notification of the finalized 2009 schedule, with an opportunity to apply at the earliest possible moment, please send an email to cwcs@gatech.edu.

More information can be found on the CWCS website: <http://chemistry.gsu.edu/CWCS>.

Eastern RAB Brahmadeo Dewprashad

Brahmadeo Dewprashad is our new Chair of the Eastern Regional Board. He is an Associate Professor of Chemistry and Co-Director for the Teaching and Learning Center of the Borough of Manhattan Community College. He brings to the position a track record of facilitating faculty and student development and promoting the value of the work of two-year colleges. He has committed to working with members and leadership to support the work of the 2YC₃ and looks forward to your support.

I invite you to attend the 183rd conference of the 2YC₃ in November at Anne Arundel Community College (see p. 4 of this Newsletter). The meeting promises to be an exciting one. Mark it on your calendar and encourage your colleagues to do also.

Midwestern RAB Amy Jo Sanders, Chair

The Midwest was just brimming with chemical education this summer. We have just wrapped up the 20th Biennial Conference on Chemical Education (BCCE) held July 27-31 in Bloomington, Indiana. The years of planning definitely paid off, for the overall consensus was that the conference was a great success. In addition to planning the logistics of the conference, the goal of the 2YC₃ Program Co-Chairs was to bring a strong 2YC₃ presence to the conference. I believe we achieved this goal in a number of different ways. 2YC₃ organized several well-attended symposia and workshops that were particularly suited to two-year educators. These events also attracted interest from educators at four-year institutions which facilitated new contacts and collaborations. We met many new people who were interested in 2YC₃. We enjoyed discussing 2YC₃ with them at the JCE booth, the 2YC₃ membership meeting and at the ice-cream social. I would like to thank two of my RAB members, Bal Barot and Michele Turner, who gave informative presentations and were eager to lend a hand with all of the 2YC₃ events. Finally, I would just like to comment on my overall reaction to attending my first BCCE. It was an amazing conference with over 1200 attendees, 900 presentations, 50 workshops, tours and other events. At every interchange, organized or not, I learned something new that I could use in the classroom or in my career. I asked several attendees why they participated in the way they had, either by attending, presenting, or organizing, and their responses always boiled down to this: To take your career to this level of professional development results in a renewal or rejuvenation of your love for teaching chemistry

Southern RAB Mark Matthews, Chair

I, like many of you, have entered the wonderful world of online classes. I've been slowly easing into it during the past several years: supplemental web sites, Blackboard sites, and finally hybrid courses (online lecture, traditional lab), but this year I'm finally taking the plunge and teaching a fully online course using "Late Nite Labs" for the lab component.

While I've always been a big proponent of incorporating technology into the classroom, when the big push for online classes began a few years ago, even I was skeptical of the idea that *any* class could be done via the internet. I must say, however, that current technologies have finally made a convert out of me. Sure, one can argue that the "hands-on," experience can't be fully duplicated through kitchen chemistry and certainly not virtually, but there's no question that online learning is creating opportunities for student that weren't possible before.

As we continue to debate the merits of substituting traditional labs with those online or in the kitchen, especially when it comes to courses for science majors, time will tell whether we're entering a new age of chemical education or all this talk of venturing away from traditional laboratories is simply a fad. Either way, it's definitely one worth discussing and should make our profession, and the students we serve, better for it in the end.

**Special NMR Workshops
at 184th 2YC₃ Conference, Salt Lake Community College**

Anasazi Instruments will be presenting a workshop titled, "NMR Applications at Community Colleges." Three talks will be given by recognized experts in the field addressing pedagogy, funding, and novel applications to non-majors. Dr. Charles Abrams, Truman College will present pedagogical tools to introduce students to the basics of NMR spectroscopy. Dr. Tom Higgins, Harold Washington College will present funding opportunities for NMR instruments at community colleges, and Donald Bouchard of Anasazi Instruments will present applications of NMR for the study of foods and consumer products to create interest for non-science majors.

Chemistry-Based Technology Programs Receive ACS Approval

Blake J. Aronson, ACS Senior Education Associate

In June, the chemistry-based technology programs at Mesa College (San Diego, CA) and Brazosport College (Lake Jackson, TX) were awarded ACS approval.

The Chemistry Technician program at Mesa College has a strong focus on the biotechnology industry. Program coordinator Robert Fremland works with representatives from K-force, the San Diego Water Department, and the Genomics Institute of the Novartis Research Foundation to keep his program up to date academically and industrially.

The Chemical Technology: Process Operations program at Brazosport College is the first process technology program to receive ACS approval. Program coordinator Gary Hicks uses the PTEC™ curriculum developed by the Gulf Coast Process Technology Alliance.

Since 1990, ACS has granted approval to qualified chemistry-based technology programs through 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 14 programs have received ACS approval.

Chemistry-based technology programs are educational programs that prepare students for careers as chemical technicians and related professions. To ensure the success of their graduates, such programs typically work closely with industry and the community, incorporating their needs into the curriculum.

CTPAS recently replaced its two-stage approval process with a more efficient single-stage process. In the new process, chemistry-based technology programs indicate their interest in ACS approval by submitting a one-page request for information 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.

For forms, information, and links to the approved programs, go to www.acs.org/education and look under Standards and Guidelines for Chemical Technology Program Approval.

**Travel Grant Opportunity for 2-Year College Faculty!!
Applications Are Being Accepted for
The Dorothy and Moses Passer Education Fund**

This Fund was established by a generous donation of Dorothy and Moses Passer. Moses (Mike) Passer was for many years the head of the ACS Education Division.

The Fund supports grants to provide support for teachers in programs at two- and four-year colleges or universities that do not have any advanced degree programs in the chemical sciences. The awards are to support continuing education activities that must be directly related to the applicant's teaching and must take them away from their campus. The applicant must be a full time faculty member at his or her institution. The applications are reviewed by a committee. There is no application form but the application must include a description of the proposed activity and how it relates to his/her teaching with dates, locations, titles and contacts; a brief description of the applicants institution and department; a short curriculum vita; an itemized estimate of expenses, amount of aid requested and sources of all supplemental funds. No support will be given for general attendance at national, regional or local ACS meetings nor for any sabbatical support.

Closing dates are three times each year: **January 1, April 1, and September 1.** All applications must be received electronically. For further information or inquiries contact **Richard Jones, richard.jones@sinclair.edu**; mailing address: **Sinclair Community College, Dayton, OH 45402**



American Chemical Society

ACS Position Statement on Computer Simulations in Academic Laboratories

Editor's note: With more and more colleges and universities pushing for online chemistry courses to be added to the curriculum, and the ever-increasing availability of computer-based laboratory simulations, a point of discussion and/or contention for many departments and instructors is the value and appropriateness of such simulations and their relevance to the curriculum (e.g. see Southern RAB Notes by Mark Matthews, p. 10 this issue). Jody Wesemann has provided me with the following ACS Position Statement as found on the ACS website (follow the path: <http://acs.org> then > Policy > Public Policies > Invest in People).

Summary

Computer simulations that mimic laboratory procedures have the potential to be a useful supplement to student hands-on activities, but not a substitute for them.

ACS Position

Hands-on activities enhance learning significantly at all levels of science education.^{1,2} These activities are usually the basis for a “laboratory” class or laboratory portion of a class. In a hands-on chemistry laboratory course, students directly experience chemicals and their properties, chemical reactions, chemical laboratory apparatus, and chemical laboratory instruments. These activities are essential for learning chemistry.

Computer simulations have been developed that can mimic laboratory procedures and have the potential to be a useful supplement to these hands-on activities in American classrooms. They are often used as a pre- or post-lab exercise to reinforce the procedural and safety issues of a laboratory experience. However, these simulations, by their very nature, do not involve contact with chemicals or lab equipment and thus should not be considered equivalent replacements for hands-on experiences critical to chemistry courses at any level.

With the increasing availability, sophistication and power of web-based tools and computer simulations, a growing number of academic programs are offering “virtual” chemistry laboratory courses. They often are intended to affordably increase student exposure to chemistry, to reduce costs, or to eliminate hazardous wastes and safety concerns.

Because computer simulations are not a substitute for hands-on laboratory experience, academic transcripts should clearly disclose whether a chemical laboratory course is hands-on or simulated. To meet the needs of potential employers and academic institutions evaluating potential transfer of credits, academic transcripts should reflect an applicant's laboratory experience. Thus, the Society believes that computer simulations are not a substitute for student hands-on laboratories from the kindergarten level through undergraduate education. Furthermore, ACS supports the development of a system of distinguishing labels for laboratory courses involving the substitution of simulations for more than 20 percent of the hands-on, laboratory activities.

1. “How People Learn: Brain, Mind, Experience, and School,” Bransford J., D., Brown A., L. and Cocking R., L. (Eds.), National Research Council, Washington DC: National Academies Press (2000).
2. “Scientific Teaching,” Handelsman, J., Ebert-May, D., Beichner, R., Bruns, P., Chang, A., DeHaan, R., et al. *Science*, 304 (5670), 521-522 (2004).

**Call for applications for the office of
Chair-Elect
of 2YC₃ for the year 2010**

Application for Chair-Elect for 2010 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.
- D. A statement of support from an appropriate person in the applicant's school.
- E. To be eligible to be nominated an individual must:
 1. be a two-year college chemistry teacher
 2. have been a dues paying member of 2YC₃ a minimum of three years prior to nomination
 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:
 - a. served three years on the Executive Committee
 - b. served as Local Arrangements Chair for a Conference
 - c. chaired a sub-committee
 - d. contributed within the past three years two or more ways such as:
 - acted as local industrial sponsor coordinator,
 - chaired a conference section,
 - presented a paper at a conference,
 - moderated a panel at a conference,
 - other ways an individual has contributed

-Applications must be received by the Chair no later than October 1, 2008.

-The COCTYC will serve as a nominating/screening committee to generate a slate of two candidates.

-Each 2YC₃ member shall vote for one nominee 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 12/31/2008.

**Call for applications for the office of
Industrial Sponsors Chair
of 2YC₃ for the years 2009-2011**

Application for Indust. Spon. Chair for 2009-2011 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.
 - D. A statement of support from an appropriate person in the applicant's school.
 - E. To be eligible to be nominated an individual must:
 1. be a two-year college chemistry teacher.
 2. have been a dues paying member of 2YC₃ a minimum of three years prior to nomination.
 3. be a member of DivCHED.
- Applications must be received by the Chair no later than October 1, 2008.
 - The COCTYC will serve as a nominating/screening committee to generate a slate of two candidates.
 - Each 2YC₃ member shall vote for one nominee 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 12/31/2008.

**Call for applications for the office of
Webmaster
of 2YC₃ for the years 2009-2011**

Application for Webmaster for 2009-2011 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.
 - D. A statement of support from an appropriate person in the applicant's school.
 - E. To be eligible to be nominated an individual must:
 1. be a two-year college chemistry teacher.
 2. have been a dues paying member of 2YC₃ a minimum of three years prior to nomination.
 3. be a member of DivCHED.
- Applications must be received by the Chair no later than October 1, 2008.
 - The COCTYC will serve as a nominating/screening committee to generate a slate of two candidates.
 - Each 2YC₃ member shall vote for one nominee 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 12/31/2008.

Thank You to 2YC₃ Industrial Sponsors August 2008

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Thank You to 2YC₃ College Sponsors July 2008

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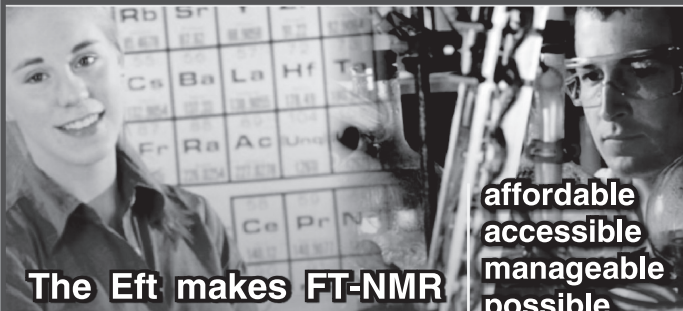
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