



American Institute of Chemical Engineers Knoxville-Oak Ridge Section

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For additional information see our Web site at: <http://www.ornl.gov/sci/aiche/>
Or contact: Linda Puckett, puckettlf@ornl.gov, (865)574-6147 or
Christina Wilson, csoto@utk.edu, (865)974-2421

November 2011 Meeting

Date: Thursday, November 17, 2011
Cost: \$20
Location: Calhoun's at Turkey Creek, Knoxville TN
Menu: Buffet (Special menus available upon request)
5:30 pm Executive Committee Meeting (All members welcome)
6:00 pm Dinner – Buffet (Special menus available upon request)
7:00 pm Program – Richard Denney, Consultant – ***The Natural Gas Midstream Industry***

Abstract – The presentation will define the Natural Gas Midstream Industry in the United States as it relates to the overall domestic hydrocarbon supply and demand and provide an understanding of the common terms used in the Natural Gas Midstream Industry. The factors that are the basis for the economics and generation of income by the Natural Gas Midstream Industry including the historical relationships between crude oil, natural gas and natural gas liquids prices and typical natural gas commercial contract terms will be reviewed and quantified. Examples of the role of Chemical Engineers, particularly as consultants, in the Oil and Gas Midstream Industry including asset valuation and risk mitigation will be presented.

Bio – Richard (Dick) Denney began his chemical engineering career in 1956 at the Martinez, CA Shell Chemical petrochemical plant. He gained experience in specialty petrochemical process engineering, economic evaluation, operations management, plant trouble shooting and start-up. Subsequent positions resulted in experience in general management, new project development, project management, feasibility studies, contract negotiations, energy marketing, and process development as related to natural gas, natural gas liquids, crude oil refining, nuclear fuel reprocessing, synthetic natural gas, coal gasification, LNG, ethanol and petrochemicals. Upon joining Barnes and Click in 1988 and by continuing consulting with energy companies as a Senior Project Manager with SAIC Energy, Environment & Infrastructure LLC, Dick expanded his knowledge and expertise in the domestic and foreign energy industry and has become an internationally known consultant, recognized for outstanding proficiency both in hydrocarbon processing economics and energy project development strategy. Dick is a registered professional engineer in Texas.

Please make your reservations by November 17 by contacting

Linda Puckett, puckettlf@ornl.gov, (865)574-6147 or
Cristina Wilson, csoto@utk.edu, (865)974-2421

***The Section will subsidize up to 15 students,
including graduate students***



(Courtesy of DOE Digital Photo Archive, <http://www.doedigitalarchive.doe.gov/>)

"A person with a clear purpose will make progress on even the toughest road. A person with no purpose will make no progress on even the smoothest road."

Thomas Carlyle
Scottish satirical writer
1795-1881

Nominations for 2012 Local Section Officers and Directors

Nominations for Local Section Officers and Directors are being solicited for the December election.

The following offices are elected each year:

Chair-Elect,
Secretary,
Treasurer, and
Two Directors.

The Chair-Elect acts on behalf of the Chair during his/her absence and automatically becomes the Chair at the end of the current Chair's term.

Secretary and Treasurer serve for one year. The Secretary maintains a record of the proceedings of the Section. The Treasurer is charged with the collection and disbursement of funds as authorized by the Executive Committee. The Treasurer shall keep adequate records and present financial reports at the request of the Chair or the Executive Committee.

Directors serve for a two-year term and are members of the Executive Committee. The Directors duties are assigned

by the Chair and typically include planning and organizing meetings.

If you are willing to serve your local section, please give your name to one of the current section officers.

Elections are in December and the terms begin in January 2012.



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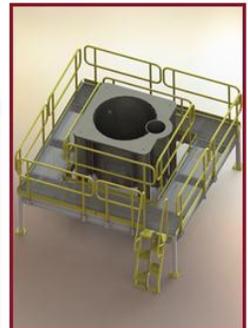
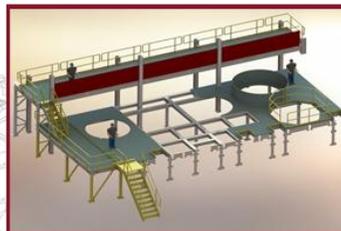


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75 Years for the Department of Chemical and Biomolecular Engineering

The Department of Chemical and Biomolecular Engineering (CBE) is celebrating its 75th anniversary this year. The department was established by the UT Board of Trustees in 1936, and its original home was Estabrook Hall.

The Department of Chemical and Biomolecular Engineering is one of the oldest engineering

programs in the South. It was included as an option in Chemistry as early as 1905 and became a separate department in 1936. The Masters program was begun in 1935 and the Ph.D. program in 1949. The University of Tennessee's Ph.D. program was the first doctoral program in engineering offered by any institution in Tennessee, public or

private. The undergraduate program in Chemical and Biomolecular Engineering has been continuously accredited since 1939, making it one of the four oldest accredited Chemical and Biomolecular Engineering programs in the South.

(Source: <http://www.engr.utk.edu/cbe/index.php>)

PE License – Is it for you?

The National Society of Professional Engineers (NSPE) considers Licensure to be the true mark of a professional. It's a standard recognized by employers and their clients, by governments and by the public as an assurance of dedication, skill, and quality.

There are numerous reasons – both professional and personal – for earning and maintaining a PE license. For instance, only a licensed engineer may prepare, sign, seal, and submit engineering plans and drawings to a public authority for approval, or to seal engineering work for public and private clients.

For consulting engineers and private practitioners, licensure is a virtual a necessity. And according to the NSPE, it is a legal requirement for all those who are in responsible charge of work.

More and more government agencies, educational institutions and private industries are requiring new hires to be licensed professional engineers and it is anticipated that this trend will continue.

No matter what career path a professional engineer chooses, a successful, ongoing career significantly benefits from having PE licensure.

Just as the CPA defines the accountant, and a law license defines the lawyer, the PE license tells the public that you have mastered the critical elements of your profession. It demonstrates your commitment to the highest standards of engineering practice. It's also proof of your ability to offer engineering services directly to the public - something only a licensed PE can do. The PE after your name is an advantage that will open doors for the rest of your life.

Five Reasons to Get Licensed

1. **Prestige:** PEs are respected by the public and are seen in the same light as licensed professionals in other fields. PEs are also held in high esteem by their peers within the engineering community and are viewed as part of an elite group.
2. **Career Development:** Employers are favorably impressed with engineers who have their PE license. Licensure not only serves to enhance your professional stature, it demonstrates commitment to the profession and increases your potential for leadership and management positions. In certain organizations,

Licensure can be a necessity for rising to increased levels of authority and responsibility.

3. **Authority:** Only PEs can sign and seal engineering drawings; and only PEs can be in responsible charge of a firm in private practice or serve as a fully qualified expert witness. In addition, many government agencies and educational institutions are emphasizing licensure for their engineers.
4. **Flexibility:** Having a PE license provides you with additional career options. You can become a specialist, or establish your own business. It can also protect you during industry downsizing or outsourcing. The PE license allows you to go as far as your initiative and talent will take you.
5. **Money:** Studies have shown that most PEs earn higher pay throughout their business careers. Having a PE allows expanded opportunities beyond a company structure, such as an independent consultant.

(Excerpts from the NSPE web site: <http://www.nspe.org/Licensure/WhyGetLicensed/index.html>)

Need for CAD Advisory - STEM Academy FIRST Robotics Team

The Knoxville Chamber is seeking mentors to help with the design and fabrication of a LEGO based robot to compete in the Smokey Mountains Regional FIRST Robotics Competition (<http://www.usfirst.org/roboticsprograms/rtc>). If you can help, please contact:

Ahnna A. Estes
Workforce Development Manager
Knoxville Chamber
17 Market Square, #201
Knoxville, TN 37902-1405
Phone: 865-246-2658
Fax: 865-523-2071

Volunteers will be expected to assist with the following:

Between now and the end of the calendar year:

- Serve as a mentor a few hours per week between now and the end of the year.
- The team will be planning and learning software, electronics, hydraulics, etc. for the upcoming season.
- The team will likely work on a "practice" robot of some sort.
- The STEM Academy team already has some computers,

that are thought to be loaded with AutoDesk™ software.

- FIRST has some AutoDesk™ Inventor tutorials on its website, free to download (http://students.autodesk.com/?nd=content_box_layout_view&layout_id=197).
- We are trying to coordinate some training on SolidWorks™ for the Knoxville area teams. A local SolidWorks™ consultant is working on an outline to teach the students from several Knoxville area teams the basics. It is uncertain if the STEM Academy has SolidWorks™ yet.

From January 7 through approximately March 5:

- Between January 7 and the end of February, expect ~12 to 15 hours per week for mentoring the STEM Academy team.
- The FIRST Robotics Competition (FRC) teams will attend the "Kick-off" event here in Knoxville,

where they will learn what the game is for this year and also get their "Kit of Parts". The kit has everything needed to build a basic robot, including framing material, wheels, a CRIO controller, electric motors, wiring, etc. A list of last year's "Kit of Parts" contents is available on the FIRST website.

- The team will have six weeks to build a robot designed to compete in the game. The game changes every year. To give you an idea of what they are up against, here's a link to last year's game animation. <http://www.youtube.com/watch?v=cSc8FWfJQIU>
- At the end of six weeks, they will "seal up" their robot and not be allowed to work on it anymore until competition.
- The STEM Academy will compete in the Smoky Mountains Regional, to be held March 1-3 at the Knoxville Convention Center. It is free to attend.
- If the team does well, they could win a place at the Championship in St. Louis in April.



Activities Calendar

Date	Time	Topic	Speaker	Location
Nov 17	6:00 PM	The Natural Gas Midstream Industry	Richard Denney, Consultant	Calhoun's, Turkey Creek
Dec 8	6:00 PM	Planning for Retirement at various stages in your life/career	David Moon, Moon Capital Management	Calhoun's, Turkey Creek
Jan 19	6:00 PM	Consulting Liabilities and Ethics	Carter Boardman	Calhoun's, Turkey Creek
Feb	6:00 PM	Joint Meeting with ANS	TBD	TBD
Mar 15	6:00 PM	Process Safety Analysis, PHA, HAZOP	Bill Bradshaw	Calhoun's, Turkey Creek
Apr 1-5		2012 AIChE Spring Meeting		Houston, TX
Apr	6:00 PM	Student Awards	TBD	TBD
May 17	6:00 PM	TBD	TBD	Calhoun's, Turkey Creek

Sponsoring Opportunities

We continue to accept advertising in the newsletter in order to provide funds to support student participation in the meetings.

Rates per newsletter are:

\$80 full-page advertisement

\$45 half-page advertisement

\$25 quarter-page advertisement

The section will also continue to accept individual or corporate sponsors to provide student meals at Section meetings. The sponsor

will be recognized at the meeting and in the Newsletter.

The cost to sponsor one meeting is **\$200**. It's a great way to encourage students to attend the local meetings and become future members in the Institute!



(Michelangelo's [Pietà](http://en.wikipedia.org/wiki/Michelangelo) - Source: <http://en.wikipedia.org/wiki/Michelangelo>)

"The great danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it."

Michelangelo Buonarroti
Italian Renaissance painter, sculptor, architect, poet, and engineer
1475-1564

Officers

Chair:	Michael Aident	694-7333	Michael.Aident@shawgrp.com
Chair-Elect:	Jarrold Clark	276-1867	jarrod.clark@merrick.com
Secretary:	David DePaoli	574-6817	depaolidw@ornl.gov
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Directors:	Jacob Hutton	560-1706	jacob.hutton@power.alstom.com
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Term ends 2012	Sharon Robinson	574-1150	robinsonsm@ornl.gov
Term ends 2011	Stuart Daw	946-1341	dawcs@ornl.gov
Term ends 2011	Richard Denney	458-8875	rgdenney@charter.net
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We're on the Web!

See us at:

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Editor: B. Lewis

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(Source: <http://www.aiche.org/DivisionsForums/ViewAll/index.aspx>)

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