

# Tulsa Society of Women Engineers

November  
2012



## Featured Content

Member Biography

WE12 Tips

Event Calendar

FIRST Lego League

Past Events

Game Night

Engineer Games

Petro Pros

Brownie Day

AG Equipment Tour

Job Postings

10 Signs of Job Dissatisfaction

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<https://sites.google.com/site/tulsaswe/>

<http://societyofwomenengineers.swe.org/>

# Featured Member Biography



Barbara is a charter member of the Tulsa SWE Section. In fact our Section is the first time she was a member of a section since her college days. Joining SWE as a student at University of Iowa she was a member-at-large (MAL) when she started her first job with Procter and Gamble in Kansas City. This did not stop her from being active in SWE. She served on national committees and eventually became national president in 1983-84. Her mission was encouraging young women to pursue engineering, the same goal she has today.

After working for P&G for five years, she worked for Warren Petroleum (Chevron) in Tulsa. When the offices were moved to Houston, she worked briefly for MAPCO, then took earlier retirement. Since then she had great fun starting the FIRST Robotics Team in 1996-97 at Jenks HS when her sons were students. Other hats she has worn during the past are: HS Marching Band Treasurer, Oklahoma Aquarium docent, the Oklahoma Malcolm Baldrige Award examiner, Mutual Fund class teacher for the Greater Tulsa Area Chapter of Better Investing, AARP tax preparer to name a few.

Currently she is Trustee and officer of Tulsa Engineering Foundation, a volunteer for the Tulsa Engineering Challenge, a volunteer at Linnaeus Teaching Garden as well as chair of the weekend watering team, member of Moneyrakers, an Investment Club which has given her the confidence to manage her and husband's retirement accounts, a volunteer with Celeste Baine to bring more STEM education to the Tulsa area, and a member of PEO. Within our SWE Section she is the SWE Certificate Merit Chair.

She and her husband, Richard, also an engineer, enjoy volunteer activities together, Tai Chi, and traveling, especially to see their two grandchildren, who are becoming very skilled at building with legos. They have two adult sons, both are engineers. One is supporting his wife as she earns her civil engineering degree. She returned to school at 30!

***Check out the next page for Barbara's tips for making the most of the SWE Annual Conference!***

**Tulsa SWE is social! Find the section on [Facebook](#) or [LinkedIn](#) for pictures, discussions, general announcements, and job postings!**



# Tips to Make the Most of WE12!

## **Attending SWE Annual Conference? Here are some tips from Barbara on how to make the most of it:**

I love continuous learning so the SWE Annual Conference is my Mecca. So many sessions, so many fascinating women. How do I get the most out of it?

Before it starts, I review each tract and write down those sessions, time and room numbers of what I think I want to attend. I then make a list by time period (I use a yellow tablet, you could easily use a word or excel doc.) Of course I have 2-3 sessions I want to attend each time period. I note my order of interest - 1st, 2nd, and 3rd by each.

At the conference, I go to my first choice and sit near the back. If it is not what I expected, I leave and go to my 2nd choice, and so forth. The “process” works for me. But then again my philosophy is each person I listen to provides at least one nugget that changes me.

Tracks I usually look at are:

- Innovation in Technology and Business
- Management & Strategy
- K – 12 Outreach
- Inclusion & Cultural Awareness
- Career Enhancement Series
- Others are Academic or Government & Military or Career & Life Transitions.

Remember to take some address labels to use at the Career Fair booths. Many have drawings and it is quicker to use an address label and add your phone number. The year I did this I won a big case of Kimberly Clark product and an iPod for BAE Systems. Sweet.

PS: There is an **Explore WE12 App**. I may switch to this versus my yellow tablet. Quote from website “Download the native app for iPhone, iPod Touch, iPad, or Android to personalize your schedule, take notes, share contacts, and more.”

**Enjoy!**

***There are always webinars and events sponsored by the national organization!  
Officially join SWE (please list the Tulsa Section!) to get access to the event registration and job seeker!***

**<http://societyofwomenengineers.swe.org/>**

# Event Calendar

Be sure to check your email for the following events (add [tulsaneoswe@swe.org](mailto:tulsaneoswe@swe.org) to your address book to prevent messages being marked as spam)

- Tulsa Engineering Alliance—11/9
- Grad School Part 1 – 11/15 – *see the paragraph below!*
- Work/Life Balance Workshop on 11/29 at TCC Lemley. Childcare will be available.
- Covanta Energy Tour—12/11

*They will be strict on the requirements for long sleeves, long ankle length pants and flat heel, closed shoes. Note: Ballet slippers, etc, will not be allowed. Anyone who does not meet the requirements will be prevented from attending the tour.*



Nov 15 from 5:30 -7:30 PM, the University of Tulsa will host our first SWE-Tulsa graduate education seminar at ACAC, helping SWE professionals and students pursue an advanced degree in STEM, law, business, energy management, to name a few. Come learn what it takes to successfully determine if graduate education is in your future. Do you have what it takes to earn a PhD? What's the difference between an MBA and an Engineering Management degree and which one will be better for a STEM professional? U Tulsa and U Arkansas have confirmed thus far. OU, OK State, ORU, U Phoenix, Wesleyan and others have also been invited. A second workshop will be held in February, with a panel of professional women that have successfully pursued their advanced education. An invitation will be out soon!



UNIVERSITY OF  
ARKANSAS



# FIRST Lego League

***Young female engineers build robots and ideas to help senior citizens. Tulsa SWE is extending support for First Lego League annual event for middle school teams.***

Team Fetchinistas plan to go and fetch some engineering to solve a problem troubling seniors. Coach Dan Alpert formed the team with several home-schooled girls, including his own two daughters, as a way to satisfy science and project management curriculum requirements, show them how technology is fun, and that Lego is not just for boys.

As part of a Tulsa area event on Nov 17 they will compete by presenting their idea to a panel of judges in just one of three dimensions of the event. The second dimension is called the Robot Game where this all-girl team will design, build, program, and test an autonomous robot made exclusively from any parts controlled by the Lego Mindstorm NXT kit. The final dimension the girls will be evaluated on is their teamwork through a specially designed challenge event that will only be revealed when they walk in the room to participate.

The best part of this program is that the goals and objectives are clearly defined but how they get there is completely on their own. This creates an environment that fosters engineering creativity, social consciousness, project management, and public speaking. The whole process is full of encouragement and opportunity in a competitive environment where there are no wrong answers, only different approaches.

There is a stadium finish in the gymnasium that will keep you smiling for hours after you go home to tell your friends and family about how great of a day you just had. They just won't understand how awesome it was without being there. Many are just impressed by the opportunity that "they did not have that when I was kid" and wondering what better future engineers these kids are going to be and what a better world they will be able to create. I hope to see you there.

**Volunteer opportunities are available for you to be a team mentor or to be a judge at the Nov 17 event. Volunteering at this event is a truly uplifting experience involving more than 30 area teams, each with middle school age kids all trying to win points through engineering, innovation, inspiration, and presentation.**

**Contact [Dan Alpert](#) for more information!**



# Past Events

Eight lovely ladies got together at Marie Moran's house for games night. We played a couple games, enjoyed some yummy appetizers, and relaxed on a Sunday afternoon.



On Saturday October 27, SWE members met at Andy B's Bowling in South Tulsa. SWE paid for two lanes, and individuals brought snacks to share. While none of the SWE members will be making appearances in the WPBA any time soon, everyone in attendance had a good evening brushing up on their bowling skills (or lack thereof). All of the costumes were unique—including a deviled egg, Corpse Bride, and a Tea Party Supporter. Rumor has it that Where's Waldo showed up, but she was often hard to find in the crowd!

Area high school students participated in the Inaugural Engineer Games on October 30th. Each team of four students had an engineer mentor and competed in a succession of engineering challenges loosely based upon the popular *Hunger Games* series. Special thanks goes to Anthony Barber, Chriss Chavez, Suzanne Dodson, Jillian Coghill and Monica Rodriguez for recruiting and mentoring teams.

In *Hunger Games* tradition, there were sponsors who gave special help and tips to the teams as they competed. TAE sincerely appreciates the work of Tulsa Community College engineering students Kenney Garvey, Maggie Smith, Brandon Triffo, and Tyler Nitsche for their work as sponsors in the Engineer Games. The Tulsa Alliance for Engineering is extremely grateful for the support of OERB in funding the Engineer Games T-shirts for the participants.

The Engineer Games also enjoyed enthusiastic support from local high school teachers who put in extra work to make the contest possible. The Alliance wants to commend the following teachers: Brenda Irving, Tri-County Tech Center, Bartlesville; Bryan Yockers, Jenks High School; April Dalto, Rogers High School; Jalinda Hogan, Broken Arrow High School; Maemi Dildy, Edison High School; Marie Pfaff, Union High School; and Richelle Krumsiek, Bixby High School.



# Past Events



## Petro Pros Luncheon

Pictured are six SWE members who attended the Petro Pros Luncheon Tuesday, Oct. 9 at the Polo Grill. From left to right: "Ashley Jonshie, Abigail Wendt, Mary Jane Green, Barbara Wollmer-shauser, Mary Guinn, and Monica Rodriguez.

Petro Pros visit classrooms using materials provided by OERB to share their enthusiasm about oil and gas industries in Oklahoma.

We heard about the newest program for Kindergarten – 2nd grades, "Little Bits", where students learn about rock formations and the types of products made from petroleum. The 3rd – 6th grades, "Fossils to Fuel", learn about basic concepts

about how energy is transformed from the sun to carbon-based matter to petroleum and, ultimately, into our homes and schools. This kit includes a drill bit, rocks, petroleum products, an investment game, and an oil refining experiment. Other programs have been developed for 6th – high school.



## AG Equipment Tour

On September 27th SWE members toured AG Equipment. AG Equipment is a locally owned company in Broken Arrow that produces large industrial compressor packages.

Keith Kelly did a wonderful job on the AG Equipment tour! It was totally amazing. Great facilities. Effective work processes. Smart business model. Very intriguing software for design manuals. And more. Acres of it!

## Brownie Day

On September 29th, over 100 Girl Scouts rotated through hands-on science and engineering workshops during Brownie Day at the University of Tulsa. Tulsa SWE members Abigail Wendt and Christina Callas helped out with the event by running a Lego bridge building competition.

# Local Job Postings



**Title:** Mechanical Engineer II  
**Exempt Status:** Exempt

**Salary Grade:**  
**Job Code:**

**Summary:** Responsible for analyzing and developing mechanical engineering solutions for gas turbine inlet air cooling and heating technologies.

**Essential Functions:**

- Design and develop technical sales proposals for gas turbine filtration systems.
- Design and engineer fluid systems and hydraulics.
- Address shop related fabrications problems related to form, fit and functionality.
- Provide in-depth technical support including design to customers.
- Provide technical support to project execution, field management and quality control.
- Handle multiple projects of different design concepts and provide project coordination to the electrical designers.
- Continuously refine existing designs or update standards to products to meet new customer requirements.
- Adapt to changing customer profiles and work under pressure in a real-time environment.

**Technical Skills:**

- General computer skills, programming and technical writing, including CFD (Computational Finite Dynamics) analysis.
- Basic knowledge of MS applications, i.e. Word, Excel, Outlook, PowerPoint and Projects.
- Intermediate level working knowledge of AutoCAD/lite and Staad.
- Intermediate level working knowledge of Adobe Acrobat Read and Writer.
- Ability to read and understand shop drawings.
- Knowledge of local codes for different countries.
- Ability to review and understanding customer's specifications.

**Behavioral Skills:**

- Ability to maintain confidentiality and handle sensitive material.
- Strong written and verbal communication and presentation skills.

To apply, visit [www.globalpower.com](http://www.globalpower.com) and search for positions under Braden careers. Candidates can send their resume directly to [Jeff Faust](#)

*Please do not contact SWE regarding these postings!*



# Local Job Postings



**Title:** Lead Process & Controls Engineer  
**Exempt Status:** Exempt

**Salary Grade:**  
**Job Code:**

**Summary:** The successful candidate will be responsible for the electrical and process design of ammonia and control systems and equipment for Selective Catalytic Reduction (SCR) and related gas turbine power generation products. Candidate will provide similar support for other major Braden Manufactured systems: inlets, exhausts and filtration systems, along with related auxiliary subsystems.

This position requires thorough knowledge of the design of electrical controls and associated mechanical piping and chemical processes. The candidate should be versed in electrical chemical and mechanical process design and associated engineering techniques. Successful candidate will be required to work independently to develop process and electrical control systems for ammonia injection, air flow and other piping systems. Drawing modification, specifications preparation and review, technical calculations, chart and graph development; and monitoring of work for compliance to applicable codes, Client, and Braden standards according to accepted engineering practices, are other responsibilities of this position.

#### Essential Functions:

- Review customer specifications and technical to identify customer's requirements and specifications.
- Design systems and products to meet customer's specifications.
- Review and approve drawings and bill of materials for fabrications.
- Address shop related fabrications problems related to form, fit and functionality.
- Provide direction to resolve field problems related to operation and commissioning of equipment.
- Assist in manufacture/vendor supplied material conflict resolution.
- Refine existing designs of product to meet new customer's requirements or updated standards.
- Occasionally responsible for assigning activities to other employees.
- Provides electrical design direction on multi-discipline projects and supplies mentoring, supervision and training for junior electrical engineers.
- Adapt to changing customer profiles and work under pressure in a real-time environment.
- Interact at all organizational levels to resolve internal and external customer, shop and field issues.
- Provide startup and commissioning services for assigned projects.
- Assist in the preparation of engineering project proposals
- Check vendor drawings to insure design accuracy and compliance with specifications.
- Attend customer visits in technical support of proposals and project kick-off.

#### Technical Skills:

- Demonstrate experience in programming and trouble shooting on:
  - PLC's (Program Logic Controller)
  - SCADA systems (Supervisor Control & Data Acquisition)
  - SCR (Selective Catalytic Reduction) exhaust system startup and commissioning
  - SCR control system integration with customer's turbine (Distribution Control System) DCS.
- Understand Instrumentation, PID Controls, Motor Control, sensors and actuators.
- Demonstrate general computer skills including programming.
- Display basic knowledge of MS applications, i.e. Word, Excel, Outlook, PowerPoint and Projects.
- Intermediate level working knowledge of Adobe Acrobat Read and Writer.



**Tweet tweet! Check out what's trending for #STEM Follow @Society4Science to read about the physics of Angry Birds Space! What do you think about #Disney announcing they will make the next #StarWars film? Get your daily fix of #nerdHumor on Twitter!**

# Local Job Postings



**Title:** Electrical Engineer II  
**Exempt Status:** Exempt

**Salary Grade:**  
**Job Code:**

**Summary:** Responsible for the electrical design of systems and equipment for all related gas turbine power generation products, including the major systems for filtration, inlets and exhausts along with their related auxiliary subsystems.

**Essential Functions:**

- Review design specifications and technical drawings to identify customer's requirements and specifications.
- Design systems and products to meet customer's specifications.
- Review and approve drawings and bill of materials for fabrications.
- Address shop related fabrications problems related to form, fit and functionality.
- Provide directions to resolve field problems associated with operation and commissioning of equipment and systems.
- Handle multiple projects of different design concepts and provide project coordination to the electrical designers.
- Assist in manufacture/vendor supplied material conflict resolution.
- Refine existing designs of product to meet new customer's requirements or updated standards.
- Adapt to changing customer profiles and work under pressure in a real-time environment.

**Technical Skills:**

- General computer skills and programming.
- Basic knowledge of MS applications, i.e. Word, Excel, Outlook, PowerPoint and Projects.
- Working knowledge of Adobe Acrobat Read and Writer.
- Working knowledge of AutoCAD/ lite.
- Working knowledge of North American and European electrical standards and codes.
- Understanding of equipment testing, evaluation, calibration techniques, etc.
- Fundamental knowledge of design, operation and inspection of motors, batteries, relays, circuit breakers, switchgear, transformers and field instrumentation.
- General understanding of power plant operations, including the interrelationship of engineering with operation and maintenance functions.



# 10 Signs of Job Dissatisfaction!



**Are you completely happy with your current job? If not, now is a great time to analyze your job satisfaction. There are ten sure signs that you are experiencing job dissatisfaction. If you:**

- Dread Mondays or coming to work
- Can't wait for Friday
- Are often bored at work
- Feel tired or chronically fatigued
- Avoid your boss and dread meetings
- Have no enthusiasm or sense of self-worth
- Feel like you are getting nowhere in your job
- Take work stress home
- Question your choice of industry or occupation
- Can't think of a way out

Any of the above signs indicate a need for change. The biggest career mistake is to ignore those indicators. A head-in-the-sand mentality can lead to a downward career spiral that ends with disappointment and “what if” regrets.

**Here are three great ways to facilitate positive change.**

- Analyze your career choice.
- Is the problem your boss or employer—or is it that you have chosen the wrong occupation? Before you take any action, make sure you know what needs to change.
- Don't make the mistake of throwing away a good career (ex. accounting, sales, finance) when the problem is really the person you work for. On the flip side, if you're not cut out for sales, then changing employers isn't going to help the problem.
- A career coach can guide you to determine which of these problems is causing your unhappiness and give you ideas for your next career move.
- Update your resume
- Updating your resume can give you a great confidence boost. You'll feel better immediately if you know you are ready whenever opportunity knocks.
- Be careful, however, that your resume doesn't resemble a house with too many additions, each resembling a different style. If you have simply added to the same old resume job after job, it's time to “tear down that old shack” and rebuild your resume from the ground up.
- If your old resume format doesn't live up to your professional image, you may want to consult a resume coach. You'd never wrap a ruby ring in old newspaper, and you should never present your career with anything less than professional polish.
- Brush up your interview skills.
- If you have been on the job for a couple of years, your interview skills are probably rusty. Don't make the mistake of blowing off the first few interviews as practice. They might be the perfect jobs for you!

**You'll feel much more confident and comfortable if your interview skills are honed before you step into the first interview. To determine your current level of interview expertise, answer the following questions:**

- Do you know the toughest interview questions—and how to answer them?
- Can you answer the salary question without compromising the level of starting salary at offer time?
- Can you recognize the most common interview styles—and respond without showing stress?
- If you aren't sure, then it may be time to visit with a career coach who can help you prepare to WOW them in every interview.

Job dissatisfaction is an indication of needed change. Take the steps of change by investing in the appropriate job-search skills and tools, and you will be in a position to change your job—and your life—for the better.

[Deborah Walker](#), Certified [Career Management Coach](#)