Call for TAC Members

ESTEC’s mission is to provide industry with competent technicians. We achieve this by teaching industry relevant curriculum that has been developed through our Technical Advisory Committees (TAC). ESTEC relies heavily on our industry partnerships to provide the support personnel for our TAC meetings. We sincerely appreciate those who are serving or who have served in the past. Idaho requires program specific meetings twice a year. We currently have openings and are asking for volunteers. If you or someone within your organization is willing to serve, please contact us at 208-282-3085 or ESTEC@isu.edu.

POWER Careers

ESTEC launched a special initiative to recruit and support women who want to become professional technicians. This initiative, Providing Opportunities for Women in Energy Related (POWER) Careers is funded with a grant from the National Science Foundation Advanced Technological Education (NSF ATE) program. This project has been nationally recognized and has been presented at a number of conferences where we have shared our methodology and success. POWER Careers is now in its third and final year. We are looking for industry support to help continue this amazing project. If your company would like to support the continued success of this program please contact Jodi Johnson at StuaJodi@isu.edu.

Lawrence H. Beaty joined Idaho State University in 2004 after an influential career in the U.S. Nuclear Navy and national and international power generation management in the private sector. He is a monumental individual who helped found ESTEC in 2007. He wrote the original curricula for the department that has helped prepare men and women alike to respond to the nation’s energy workforce needs. He started ESTEC on a solid foundation with his extensive knowledge in the energy sector and from that, over 400 students have obtained an Associates of Applied Science since 2009.

This year two very significant supporters of ISU, Bill and Rosemary Kobus, have graciously chosen to honor Lawrence H. Beaty by dedicating the main lobby in ESTEC to Lawrence. The Lawrence H. Beaty ESTEC Founders’ Lounge is a true testament and an honor to Lawrence and his lasting impact and contribution to the lives of former, current, and future students. Bill and Rosemary’s son and two grandsons have graduated from, or are currently enrolled in, an ESTEC program and are grateful for Lawrence’s impact on students.

Click here to read more
Academic 2017/2018 Spring Semester Student Snapshot

- 82 students enrolled for the Spring Semester
- 38 Spring 2018 graduates
- 98% placement rate
- 36 industry visits this academic year

Staying Connected
Help us - Help you

We are all aware of the challenges to find skilled industrial technicians. These challenges have been compounded as the economy has recovered, resulting in fewer people looking to increase their technical skills and abilities.

As a nation, we have seen a steady decline in college enrollment. This holds true for the ESTEC programs. Some of our programs are at all-time low enrollment levels.

Despite our increased recruiting efforts, we still have not seen a significant increase in enrollment...

Click here to continue reading
Mike Kobus is a fourth semester electrical engineering student. He already has had a wonderful journey through life before coming to ESTEC, but that has not stopped Mike from furthering his education. He has pushed passed barriers in order to achieve his goals and has helped others in achieving theirs. His goal is to obtain his electrical engineering degree and then his journeyman electrician license.

Bryan Palmer

Bryan is an ambitious third semester student in the instrumentation program. Not only did Bryan take 21 credits last semester, but he kept a 4.0GPA. Through his time at ESTEC he has thoroughly involved himself in activities like tutoring and after school projects. His strong work ethic as well as his enjoyment of the field has helped create an individual that can influence those he is around for the better.

Miranda Kriner is a fourth semester Nuclear Operations student. She has been a great asset to the ESTEC department through her work supporting the energy programs and industry contacts. Miranda was awarded the College of Technology's Distinguished Student award for spring 2018 and is the first ESTEC student who will have completed her AAS while taking Honors courses in all four semesters.

James Butikofer

James is a second semester mechanical student. He has been working on a project for Tech Expo where students are able to show off different projects they create. The excitement can be seen when he talks about the hands on work being put into building his electric trike. He has had previous experience with fixing minor things and some car repair which has further inspired him to reach for this program.
INDUSTRY & ALUMNI VISITS

Thank you for all your support!

Dykman, Inc.

Orbital ATK

Idaho National Laboratories
Materials and Fuel Complex

ESTEC Alumni

Nucor Steel

Automation Werx

Wunderlich-Malec

Idaho National Laboratories

Schweitzer Engineering

BOSS Separators

High Desert Milk

On Semiconductor
“Cultivate the people, educational resources and applied research capabilities necessary to improve the local, regional, and national availability of highly-skilled technicians and provide graduates with the technical knowledge and skills needed to support the design, construction, operation and maintenance of energy, industrial, mining and government agencies.”

- The ESTEC Mission

After a decade of innovation, ESTEC is fast approaching the Department’s ten-year anniversary. The Department and staff have prepared over 400 outstanding graduates in careers in lifelong learning inside the energy sector. ESTEC’s overall job placement rate or continuing education is more than 90% for recent graduates. ESTEC has flourished thanks to all past and present colleagues, students, industry partners, vendors, and supporters. ESTEC continues to offer a unique approach to educating students by providing the specific knowledge and skills needed in energy production. Students in our Department learn through traditional classroom experience, as well as through extensive hands-on laboratory exercises.

The Department has received two separate grants from The National Science Foundation. One from the Scholarships in Science, Technology, Engineering and Math program (S-STEM) is funding ISU’S five-year Energy Systems Scholars Project. The second grant from The National Science Foundation Advanced Technological Education (ATE) program funds ISU’S five-year P.O.W.E.R. Careers Project.

SAVE the DATE - ESTEC will hold its Fall TAC meeting and a 10-year celebration open house on October 18, 2018. To RSVP to the meeting and/or the open house, email ESTEC@isu.edu.

https://www.youtube.com/watch?v=SW8D3hyQUBQ&feature=youtu.be
Bill and Rosemary Kobus both attended Idaho State University. Bill received a Bachelors of Business Administration degree from ISU in 1981. He also received an Associates of Arts degree in Business Administration from University of Alaska, Anchorage, in 1977, and a Masters of Public Administration degree from the University of Oklahoma in 1986. Rosemary studied botany, flora and paleontology at ISU. In 2000, Bill served as President of Idaho State University Alumni Association and in 2008 returned to serve four years as the Office of Alumni Relationships Director. In 2010 Bill and Rosemary Kobus received the President’s Medallion Award. Bill and Rosemary are significant supporters of the ISU Alumni Legacy Scholarship fund, the L.E. And Thelma E. Stephens Performing Arts Center, and Bengal Athletics. Bill and Rosemary have established two endowments in the College of Technology: the Kobus Family Memorial Endowment Fund for Rick Kobus in the Auto Technology and in Auto Collision Repair and Refinishing. Bill and Rosemary have chosen to honor Lawrence H. Beaty for his lasting contribution to the lives of former, current, and future ESTEC students.

**Annual Tech Expo 2018**

One of the main ways the Energy Systems Technology and Education Center recruits its students is through word of mouth. This year ESTEC and industry presented to over 3,000 students from 50 different schools. These students saw the fun projects that are being done within the ESTEC labs as well as how many companies want the technicians that come from ESTEC. One way that we can continue to be better is by making sure that we spread the word more. In order to help ESTEC recruit the technicians your company needs, consider attending events like the Tech Expo.

[Click here to see pictures and the full Tech Expo article!]
While ESTEC has had numerous excellent female graduates over the years, the percentage of women in ESTEC classrooms has remained stubbornly small. This lack of diversity has deprived women of a chance at a great career, and employers of the chance to hire qualified female technicians. Fortunately, in 2015 POWER Careers was developed to attract more women to ESTEC programs, and assist these women through graduation and into careers in their chosen field. In Fall 2017, over 20% of all new ESTEC students were women. We believe much of our success is because POWER Careers reaches out to all females who express an interest in ESTEC. Staff make meaningful personal connections with all incoming women. They help students overcome any barriers to enrollment. They also work hard with students to keep their enthusiasm high through their first day of class until graduation.

When we go out to recruit students, ESTEC is self-promoting. This is not as effective as when our partners promote our programs and are champions of ESTEC.

ESTEC is reaching out to strengthen our alumni and industry networks in an effort to increase participation and support of our recruitment efforts. This is a call to action for individuals and companies to consider capital contributions that would support scholarship programs and participation in recruiting events.

As key stakeholders, we are all in this together. Please do not wait for us to reach out to you - Contact us today at ESTEC@isu.edu.

Consider having your company participate in these recruiting events:

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<tr>
<th>Summer/Ongoing</th>
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<th>Spring</th>
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<tr>
<td>- Resume Workshops</td>
<td>- Part-Time Job Fair</td>
<td>- Spring Career Fair</td>
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<td>- Majors Fair</td>
<td>- Women in Work</td>
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ESTEC has continued its close collaboration and partnership with INL and industry. ESTEC participated in two research and development contracts with the INL: Phase II of Wireless Valve Position where wireless valve position sensors are being prototyped and tested; and Traditional Risk Assessment for Cyber Security Vulnerabilities where cyber-attacks were simulated on the wireless valve position network and industrial control system. ESTEC supplied faculty and students to support the research and design efforts. The risk assessment research was successfully completed on time. ISU faculty and students are still supporting the Phase II of the wireless valve project as INL engineers develop the prototypes.

The ESTEC Department and all of its programs held Technical Advisory Committee (TAC) meetings. The meetings provide opportunity for collaboration, discussion on curriculum, and employment opportunity for graduates. INL has continued to support ESTEC by having their employees serve on ESTEC TACs.

ESTEC’s Cyber Physical Security (CPS) program saw great advancements over the past year through the collaborative efforts and guidance from INL subject matter experts and administration. INL and DHS employees worked closely with the department in support of the new program. In addition to the TAC, a laboratory design and development ad-hoc committee was formed to support the CPS laboratory. INL continues to have an integral part in the development of the new CPS program at ESTEC.

ESTEC participated in the INL sponsored event, “Growing Together.” The event provided STEM workshops for educators and culminated in a tour of the American Falls hydroelectric dam and Driscoll Farms fresh pack.

On February 22, 2017 ESTEC participated in the INL/CAES Engineering Your Future education event. The event was well attended by high school and college students.

INL’s internship program visited ESTEC in January 2017 to present the internship opportunities that are available to ESTEC students. They then returned to ESTEC in February to conduct interviews with perspective interns. ESTEC had nine students intern with INL/Fluor over the 2017 summer.

ESTEC taught workforce training classes covering root cause analysis, basic digital electronics, and motor operated valves. The Motor Operated Valve class was taught by Kevin DeWall (INL-retired) and Mark Holbrook (current INL engineer). The 7 students in attendance came from around the country and the globe, with 3 students coming from Spain to attend the course.

ESTEC’s partnerships with Idaho Power, Rocky Mountain Power, and Schweitzer Engineering Laboratories (SEL) provided the opportunity to collaborate and build a state-of-the-art protective relay lab. SEL had three application engineers work closely with faculty and staff to develop the laboratory and teach the first delivery of the curriculum.
The BEA grant supported the first year Energy Systems Nuclear Operations Technology (NUC) program instructor. This instructor allows the NUC program and the Energy Systems Mechanical Engineering Technology (MET) program to run on an annual basis. Both of these programs provided graduates to the INL for full time employment.

The BEA education support grant supported the development and delivery of the ESET0120: Introduction to Energy Systems Technology course with a cyber-physical security focus. An adjunct faculty was hired, Clinton Brooks P.E. M.E. The grant also supported the development and delivery of ESET0281, a wireless network course. These courses were taught for the Cyber Physical Security Program.

The BEA grant supported the development and construction of a 4-tank process control station that is designed with physical system security. The trainer is a prototype and will provide the basic design for industrial control systems. As funding becomes available, 7 more stations will be built. The 8 stations will be connected in a network that has various levels of cyber security. This will allow cyber security training on real industrial control systems.

The BEA grant supported ESTEC Nuclear Operations Technology students attending Radiation Contamination Worker (RadCon) training at EITC.

The BEA grant supported redesign and build out of a complex lock-out-tag-out trainer and conduct of operations trainer for the NUC program.

ESTEC completed the build out of the Schweitzer Engineering Laboratories (SEL) relay protection lab.

The Energy Systems Electrical Engineering Technology Program Coordinator built 7 new motor control stations that contain Human Machine Interface (HMI), Programmable Logic Controller (PLC), Variable Frequency Drive (VFD), and International Electrical Code (IEC) hardware.

ESTEC completed nearly 40 different projects over the summer with the support of Career Path Interns. One of the projects was an Electrical Conduit and Motor Control Center trainer that allows students to build a motor control center, bend conduit, and look up National Electrical Controls for electrical system installation.

Great advancements were made in the Cyber Physical Security (CPS) laboratory. Over 100 pieces of network equipment were obtained from the ISU IT support group. A new laboratory space was procured, allowing a designated area for the CPS program. The new program coordinator worked closely with the TAC and ad-hoc committees to conceptualize over 80 hands-on laboratories for the program. One of the projects completed this past year was the installation of an industrial grade network in the RFC B2 Basement laboratory. It has provided students with the experience of working on a Perdue modeled laboratory.

All programs had curriculum changes and submitted change forms to the University Curriculum Committee.
What have our Alumni been up to?

Samantha Phillips  
*Nuc Ops*  
Samantha was inspired by the different aspects of the energy industry. Her involvement with ESTEC along with her passion has pushed her along a successful career track with Flour Idaho.

Brent Aiken  
*EET*  
Not all students stay local when they finish their degree. Brent went out-of-state which landed him a chance to work with NASA. These experiences accentuated the skills he gained at ESTEC.

Rachel Pancheri  
*IET*  
Rachel recently commented that “ESTEC opened up a world that I previously was unaware of and I will continue to find it fascinating for years to come.” This has been apparent in her enthusiasm for her recent projects.