Academic Initiatives
Academic Initiatives

In consultation with the associate deans and the department heads, the College is developing a number of initiatives to invigorate its academic programs and research portfolio. These initiatives are funded from the College with no adverse impact of departmental finances. The list below constitutes the proposal currently under discussion. The selected initiatives will be launched at appropriate times over the next 2-3 months.

All initiatives below are in addition to, not instead of, the current and recent activities of the College in support of the departments.

Dean's Frontier Faculty Lines
Six fully-funded open rank faculty positions on frontier topics in engineering. Joint hires would expand the program when excellent candidates who are suitable for joint hires emerge. Advertisement should be broad, listing, but not restricted to, a number of frontier topics we are interested in. The process will be managed through a College-level search committee, in liaison with the department heads. These lines are funded from a permanent allocation made to the College as part of the Dean's recruitment package. They are therefore in addition to, not instead of, the usual number of faculty hires that the College has managed in previous years.

CoE Innovation Grants
Twenty five one-year research grants of $40,000 each on interdisciplinary topics that mesh with Penn State priority areas. RFPs for 5-page proposals will be issued twice a year, with the intention of funding about 12 in each round. A three-member review panel will review the proposals with a turn-round time of 3-5 weeks and make recommendations to the Deans.

CoE Distinguished Teaching Fellowships
Ten 25% fellowships for senior PhD students to teach a regularly schedule course entirely, under the supervision of the faculty teacher. The intention is for 5 fellowships per semester. Two pages proposals will be reviewed by the Associate Deans. A Teaching Fellows Program will be established for the recipients to interact with faculty recognized for their excellence in teaching.

CoE Graduate Excellence Fellowships
Eight full (50%, for 3 years) research assistantships for top new incoming graduate students (NSF fellowship-rank students), primarily aimed at fall semester admissions. The Associate Deans will review nominations from the departments. The fellowships may be allocated well ahead of NSF fellowship announcements to increase our chances of attracting the best candidates.

CoE Research Initiative for Undergraduates
Fifty 8-week REU opportunities of $6,000 each, giving $5,000 to the students and $1000 for the professor advising the student. The student and the intended faculty advisor will submit a one-page proposal for review. The REUs will be spread over academic year and summer. Students receiving support are expected to participate in one of the following: the University Undergraduate Exhibition, the College of Engineering Research Symposium, or a relevant professional conference to submit their research findings.

CoE Instructional and Research Equipment Grants
Fifteen grants of up to $100,000 each for equipment that advances the education and research objectives of the College, in harmony with the University priorities. Proposals of 10 pages will be requested, which will include an assessment of existing facilities if any, the required equipment and details of the impact on education and research as well as the courses and number of students benefiting from the grant.

Professional Masters
Ten grants of $50,000 each for complete non-thesis residential MS degree programs deliverable over 12 months. Proposals of ~5 pages will be requested and reviewed by the Associate Deans. The deliverable would be a complete submission to the University for a one-year non-thesis MS degree. Feasible expenditures may include substitute teaching to swap pre-requisites to courses that are given in the fall semester, and administrative cost of assembling well-researched proposals. Submission to the University will be subject to agreeing on a revenue-sharing formula that would bring substantial resources to the departments.

Global Engineering Leadership Program
The initiative will support international outreach for College of Engineering students and faculty and enhance the development of their global engineering leadership attributes. The College will provide funding of up to $25,000 per project to fully or partially cover expenses of faculty and their students to participate in this initiative. Four projects will be supported in the first year, starting fall 2014. The College may increase the planned funding limit of $25,000 for this solicitation if there are outstanding proposals that make a compelling case for a higher level of support.
Penn State Engineering Search for 6 Faculty Positions - Dean’s Frontier Faculty

As part of a plan for substantial expansion of the faculty in both core and emerging fields, the Penn State College of Engineering announces openings for six tenure-system Frontier Faculty positions in, but not restricted to, the areas of:

- **Optimal and Secure Cyberenvironments**: cybersecurity, cyberphysical engineering and healthcare systems, data analytics, informatics, multiscale-multiphysics modeling, cultural-technical system integration
- **Advanced Manufacturing for Medical and Mechanical Sciences**: bioprinting; biomedical sensing, devices and imaging; nanomanufacturing; additive manufacturing; new materials for sustainability and enhanced performance
- **Resilient Infrastructure Systems**: autonomous, optimized and adaptive systems; advanced land, air and sea vehicles; infrastructure technology, management and finance system integration
- **Sustainable Water-Energy-Food Nexus**: modeling, optimization and management of interacting water-energy-food systems; water resources sustainability; energy efficiency; natural gas cycle; food production, harvesting, storage, and transportation optimization; optimized and socially-responsible energy, water and food production and distribution

The College is particularly interested in senior- and mid-career faculty members who have demonstrated exceptional records of success of integrating teaching, research, innovation, leadership and service to their institutions, profession and communities. Exceptional early-career faculty members in emerging fields are also invited to apply. This search is being conducted at the College level and is led by the Dean’s office with the academic home of the successful candidates will be determined during the hiring process. Additional information about these positions and the College’s plan for growth may be found at [www.engr.psu.edu/growth](http://www.engr.psu.edu/growth).

Review of applicants will begin on November 1, 2014, and will continue until the positions are filled. Applicants should submit a statement of professional interests, a curriculum vitae, and contact information for four references. Please submit these items in one pdf file. Apply to job **53460** at [http://www.psu.jobs](http://www.psu.jobs).

Employment with the University will require successful completion of background check(s) in accordance with University policies.

**CAMPUS SECURITY CRIME STATISTICS:** For more about safety at Penn State, and to review the Annual Security Report which contains information about crime statistics and other safety and security matters, please go to [http://www.police.psu.edu/clery/](http://www.police.psu.edu/clery/), which will also provide you with detail on how to request a hard copy of the Annual Security Report.

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to minorities, women, veterans, disabled individuals, and other protected groups.
### CoE Dean’s Frontier Faculty Deliverables

<table>
<thead>
<tr>
<th><strong>Expansion</strong></th>
<th>6 new Frontier Faculty Positions this academic year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Funding</strong></td>
<td>$4 million investment</td>
</tr>
<tr>
<td><strong>Point of Contact</strong></td>
<td>Anthony Atchley</td>
</tr>
<tr>
<td><strong>Announcement</strong></td>
<td>September 12, 2014</td>
</tr>
<tr>
<td><strong>Start Date</strong></td>
<td>TBD</td>
</tr>
<tr>
<td><strong>Requirement</strong></td>
<td>Senior- and mid-career faculty members who have demonstrated exceptional records of success of integrating teaching, research, innovation, leadership and service to their institutions, profession and communities. Exceptional early-career faculty members in emerging fields are also invited to apply.</td>
</tr>
<tr>
<td><strong>Awardees</strong></td>
<td>TBD</td>
</tr>
</tbody>
</table>
CoE Innovation Grants: Request for Proposals

**Funding Description:** The College of Engineering (CoE) at Penn State announces an internal competition for short-duration high impact research projects that meet one or more of the following **Proposal Criteria:**

- Bring to maturity a new, high-risk or under-developed idea
- Take fundamental research to the next stage of development
- Establish faculty in new collaborations or in new areas of research
- Turn an existing idea into a product that meets pressing needs

The intent is to support integrative research that involves two or more CoE faculty members. Faculty members from other colleges may collaborate on the projects.

**Funding Amount and Duration:** We anticipate funding ten CoE Innovation Grants. Investigators may request up to $50,000 to support a one-year project. Funds may be used for student stipend and tuition and small equipment, materials and supplies. Depending upon progress, projects can be extended for up to six months at 25% of one-year budgets. If compelling reasons are provided, projects may also request up to $5,000 to support one REU student for up to eight weeks. Funding will be available July 1, 2014, and projects should start between this date and August 15, 2014.

**Funding Eligibility:** Tenure track and tenured faculty in the CoE working at University Park are eligible for these funds. Other Penn State faculty members may collaborate provided that their participation is funded by their departments or colleges.

**Submission Details:** For full consideration, proposals should be submitted by 5 p.m. EST May 16, 2014 (link to website). Funding decisions are anticipated by June 27, 2014.

**Proposal Guidelines:** Proposals should be submitted in a single PDF file. They should include the following:

1. **Project Description:** This should include project a) motivation and innovation, b) scope, c) approach, d) expected results and impact, and e) outcomes. Expected project outcomes may include: demonstration of feasibility of the innovation; publications; patents; prototype products; translational products; start-up companies; and other research products that fulfill an identifiable and pressing requirement. Outcomes must go beyond merely developing a larger proposal at the conclusion of the project – rather, they should indicate how the project results will be leveraged to bring the innovation to fruition. The project description, including figures, tables and references, should not exceed 5 pages in length, using a minimum 11-point font.

2. **Project Budget:** Investigators may request up to $50,000 to support a one-year project. Funds may be requested for student stipend and tuition and small equipment, materials and supplies. The portion of the budget to support the participation of faculty members outside the CoE must be provided by their home departments or colleges. An additional $5,000 may be requested for one REU student for eight weeks if compelling reasons are provided. Students supported with CoE funds must be enrolled in a degree program supported by a CoE department. One page is allowed for the budget plus budget justification, in addition to the five pages allowed for the project description.
CoE Innovation Grants: Request for Proposals (continued)

3. **Investigator(s) CV**: Include a maximum two-page CV for each investigator. The format should be similar to that for National Science Foundation proposals.

**Proposal Review Criteria**: Proposals will be reviewed by an ad-hoc committee of faculty members. The ad-hoc committee will provide funding recommendations to the Dean and Associate Deans, who will make final funding decisions. Depending upon the number of proposals received, the Dean and Associate Deans may conduct an initial screening. Review criteria for proposals are the following:

- Adherence to proposal guidelines and criteria
- Justification of the proposed budget
- Record of the PI(s)
- Innovative nature and quality of the proposal
- Impact of the proposed work on the discipline(s)
- Impact of the proposed work on society

**Interim and Final Reporting Requirements**: Project investigators are required to submit a one-page interim project report in the first week of the eighth month from the project start date, detailing progress toward project scope and outcomes. The report will be used to determine whether the support will be continued for the remainder of the project. Project investigators are also required to submit a final project report within three months of the end date. Final project reports are limited to three pages and should include the following information:

- Program accomplishments including significant research findings and impacts, students supported, publications, presentations at conferences and workshops, collaborations formed, invention disclosures and patents.
- Future activities that will result from the project including research, publications, workshops, etc.
- Plans for further development of the innovation

Publications resulting from projects should acknowledge support from the CoE Innovation Grant Program.

Questions regarding this proposal solicitation may be directed to Bobbi Schaffer (blr4@psu.edu, 5-2151).
# CoE Innovation Grants Deliverables

| Applications | Received: 46  
| Funded: 6 |
|------------|-------------|
| **Total Funding** | $305,000 |
| **Point of Contact** | Theresa Mayer |
| **Announcement** | August 12, 2014 |
| **Start Date** | August 15, 2014 |
| **Interim Requirement** | April 15, 2015 |

Project investigators are required to submit a one-page interim project report in the first week of the eighth month from the project start date, detailing progress toward project scope and outcomes. The report will be used to determine whether the support will be continued for the remainder of the project.

| **Final Report** | October 15, 2015 |

Project investigators are also required to submit a final project report within three months of the end date. Final project reports are limited to three pages and should include the following information:

- Program accomplishments including significant research findings and impacts, students supported, publications, presentations at conferences and workshops, collaborations formed, invention disclosures and patents.
- Future activities that will result from the project including research, publications, workshops, etc.
- Plans for further development of the innovation

<table>
<thead>
<tr>
<th><strong>Awardees</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Siyang Zheng, Zhiwen Liu, Nanyin Zhang - Opto-electro-delivery (OED) device to enable brain structure-function study at mesoscale.</td>
<td></td>
</tr>
<tr>
<td>Andrew Zydney, Manish Kumar - Characterization and treatment of flowback water from Marcellus shale gas processing using membrane systems.</td>
<td></td>
</tr>
<tr>
<td>James Brasseur, Sven Schmitz - Application of the Penn State High Performance Computing &quot;Cyber Wind Facility&quot; to design atmosphere-informed controls of wind turbines within wind plants to lower levelized cost of energy.</td>
<td></td>
</tr>
<tr>
<td>Adi van Duin, Suman Datta, Roman Engel-Herbert - Combined atomic-scale simulation and experimental studies on interface formation and growth of high-k dielectrics on Ge surfaces using atomic layer deposition.</td>
<td></td>
</tr>
<tr>
<td>Francesco Costanzo, Bruce Gluckman, Corina Drapaca, Patrick Drew, Scott Miller - Waste disposal in the brain: Fluid exchange mechanics in the glymphatic system.</td>
<td></td>
</tr>
<tr>
<td>Alexandra Radlinska, Tong Qiu - Synthesis and optimization of high energy absorbing materials.</td>
<td></td>
</tr>
</tbody>
</table>
Distinguished Teaching Fellowships for Fall 2014 and Spring 2015

The goal of the Distinguished Teaching Fellowship program is to provide experiences that will enhance the career success of the Fellows, especially those who choose to pursue faculty careers.

The program will support up to 10 senior* Ph.D. students to teach an undergraduate engineering course under the supervision of an experienced faculty mentor. Fellowship support is a half-time, Grade 19 assistantship for one semester.

The program also provides special professional development opportunities. These opportunities include:

- Attending the College of Engineering New Faculty Workshop, held on August 19 and 20. Workshop topics include engaging your students, jump-starting your research career, and achieving work-life balance.
- Participating in monthly Roundtables of Teaching Fellows with faculty known for excellence in their teaching. Discussions will include using innovative teaching methods, conducting research on learning, and applying for faculty positions.
- Attending special teaching and learning workshops sponsored by the Leonhard Center throughout the academic year.
- Requesting support for attendance at a workshop or conference related to engineering education.

Applications for the Fellowships should be submitted by the Departments on behalf of the students. Each Department may submit applications for two students. The applications materials are limited to two pages and should include:

- Name and contact information of the
- Statement from the applicant on his/her reasons for applying for the Fellowship
- Description of any prior teaching experience of applicant including completion of ENGR 888†
- Course and semester that the Fellow will teach along with expected course enrollment (The course must be in the College of Engineering.)
- Name of the faculty mentor
- Brief description of the mentoring plan prepared by the faculty mentor

A letter of support from the student’s Ph.D. advisor should be included as an attachment to the application. The letter from the advisor should confirm the status of the applicant as a “senior” Ph.D. student.

The two page application and the letter of support should be submitted electronically to Ms. Lindsey Garner (lrr128@psu.edu) by July 22. Questions about the program should be directed to Tom Litzinger at tal2@psu.edu.

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* Senior means that the applicants must have completed their comprehensive exam and be in the final stages of completing their Ph.D., i.e., focusing on writing their thesis.
† Completion of ENGR 888 is a College requirement for any graduate student who has teaching responsibility; ENGR 888 is a 1-credit seminar that meets during the first half of the semester. If the Fellows have not completed ENGR 888, they must enroll and complete the course. ENGR 888 can be taken during the semester that the Fellow is teaching.
### CoE Distinguished Teaching Fellowship Deliverables

| Applications | Received: 16 applications from 8 departments  
Funded: 7 fellowships were awarded to 7 departments |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Funding</td>
<td>$125,000</td>
</tr>
<tr>
<td>Point of Contact</td>
<td>Catherine Harmonosky/Tom Litzinger</td>
</tr>
<tr>
<td>Announcement</td>
<td>August 2, 2014</td>
</tr>
<tr>
<td>Start Date</td>
<td>Fall 2014/Spring 2015</td>
</tr>
</tbody>
</table>
| Requirement  | • Attend College of Engineering New Faculty Workshop, held August 19-20, 2014  
• Participate in monthly Roundtables of Teaching Fellows with faculty known for excellence in their teaching.  
• Attend special teaching and learning workshops sponsored by the Leonhard Center throughout the academic year.  
• Request support for attendance at a workshop or conference related to engineering education.  
• One page (max) report (12 pt font, 1 inch margins) submitted but the student via the mentor within two weeks of the conclusion the semester the course is taught. The report should include:  
  o Name of student and mentor  
  o Course and enrollment  
  o Brief summary of the experience including how the program requirements were satisfied.  
  o Graduation timeline  
  o Plans after graduation |

### Awardees

<table>
<thead>
<tr>
<th>Principal</th>
<th>Department</th>
<th>Fall 2014</th>
<th>Spring 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ko Basu</td>
<td>Aerospace Engineering</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Vamshi Chillara</td>
<td>Engineering Science And Mechanics</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Emil Laftchiev</td>
<td>Electrical Engineering</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Amy Mensch</td>
<td>Mechanical And Nuclear Engineering</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Devin Pohly</td>
<td>Computer Science And Engineering</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Maria Sanchez Farran</td>
<td>Chemical Engineering</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Minchen Wei</td>
<td>Architectural Engineering</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
College of Engineering Graduate Excellence Fellowships

The Award:

The College of Engineering Graduate Excellence Fellowships are awarded to students intending to pursue a doctoral degree in one of the College’s programs. These prestigious three-year fellowships include a $30,000 annual stipend, tuition, and health insurance subsidy. Additionally the CoE Excellence Fellows will be awarded annually a $3,000 research award to support materials and equipment to conduct research or to travel to conferences. Additionally, the Fellows will benefit from social and academic events and programming that will provide them with a valuable networked community within the College.

Nominations:

All students offered admission to the College’s graduate programs are eligible for nomination. Each program may submit no more than three nominations to the Dean’s Office by February 19, 2014. The nomination package will include the following:

1) Nomination letter from the department which describes the attributes of the candidate that support their potential and promise to excel in doctoral studies; (Where possible, references to relevant activities such as prior research experience, accomplishments, published work and presentations, and leadership experience are encouraged.)
2) Copy of transcripts from previous degrees;
3) Candidate’s resume; and,
4) A summary of the graduate application information (included on the College’s Graduate Fellowship Form).

Selection:

The selection will be made by the associate deans using criteria that evaluate the strength of the nomination with regard to past achievements and the potential to excel in doctoral studies and independent research. It is expected that the cohort of fellows selected will include diversity of disciplines, demographics and perspectives.
## CoE Graduate Excellence Fellowship Deliverables

| Applications | Received: 35  
|              | Funded: 9   |
| Total Funding | $297,000   |
| Point of Contact | Catherine Harmonosky |
| Announcement | March 12, 2014 |
| Start Date | Three-year Fellowship |
| Requirement | A half page report on each student from the advisor in terms of courses taken, grades available, progress on research, and any conference or journal papers |
| Awardees | Moses Ajemigbitse - Environmental Engineering  
|          | Jaskanawal Chhabra - Civil and Environmental Engineering  
|          | Stephanie Cronk - Civil and Environmental Engineering  
|          | Timothy Garner - Environmental Engineering  
|          | Junyi Geng - Aerospace  
|          | Sepideh Kamrova - Computer Science and Engineering  
|          | Kristina Sorensen - Acoustics  
|          | Kai Wen Tien - Industrial Engineering  
|          | Mengxi Wu - Engineering Science and Mechanics |
CoE Research Initiative (CERI) for Undergraduates

The College of Engineering is launching a new research experience for undergraduates (CERI) intended to support Penn State undergraduate engineering students to conduct research with Penn State faculty. Students must not be intending to graduate prior to the completion of the REU experience. The program will provide $5000 to each student selected to conduct and complete their proposed engineering research project in conjunction with a PSU faculty member and that faculty member’s associated research group. The faculty member will receive $1000 to assist with costs associated with supervising the student’s project.

The application must include:

• Contact information on both the student and faculty supervisor
  o Interested faculty seeking undergraduate students can post their projects and contact information here: https://www.engr.psu.edu/reu/secured/faculty/default.aspx
  o Students seeking faculty projects can look at the following link as a starting place. New faculty will be added continually. https://www.engr.psu.edu/reu/secured/view-faculty-postings.aspx
  o Students are also encouraged to independently seek out other faculty in research areas of interest.
  o Once a faculty has selected a student, the application can be prepared.

• 1-2 page proposal written by the student which describes:
  o The goals of the project
  o The importance of the research
  o Research plan details including a time-line showing how the intended results can be achieved within the scope of the REU dates
  o Plan for engagement (types/frequency of interactions) with the faculty member and/or the research team throughout the project.

• 1 page letter of endorsement from the faculty supervisor indicating:
  o Agreement to supervise the proposed research
  o Endorsement of the student’s ability to conduct the proposed research
  o Confirmation of student access to the equipment and resources needed to complete the project
  o Approval of the student’s proposed engagement plan

Students receiving support are expected to present their research findings through participation in one of the following: the University Undergraduate Exhibition, the College of Engineering Research Symposium, or a relevant professional conference.

If you have questions contact Dr. Amy Freeman or Dr. Christine Masters at 814-863-1033.

Applications will be accepted at this web site with the following deadlines:

<table>
<thead>
<tr>
<th>Application Deadline</th>
<th>Research Experience Semester(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 21st, 2014</td>
<td>Summer 2014 full time (~40 hrs/wk for 8 weeks)</td>
</tr>
<tr>
<td>May 9th, 2014</td>
<td>Academic year FA14-SP15 (~10 hrs/wk for 32 weeks) Or Fall 2014 half time (~20hrs/week for 16 weeks) : Restricted to part-time students only (enrolled in 9 or fewer credits during the semester)</td>
</tr>
<tr>
<td>December 5th, 2014</td>
<td>Spring 2015 half time (~20hrs/week for 16 weeks) : Restricted to part-time students only (enrolled in 9 or fewer credits during the semester)</td>
</tr>
<tr>
<td><strong>CoE Research Initiative for Undergraduates Deliverables</strong></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| **Applications** | Received: 169  
Funded: 79 |
| **Total Funding** | $430,000 |
| **Point of Contact** | Catherine Harmonosky/Amy Freeman/Christine Masters |
| **Announcement** | April 21, 2014 |
| **Start Date** | April 21, 2014 – Summer 2014 full-time  
May 9, 2014 – Academic year FA14-SP15 or FA14 half-time; restricted to part-time students only  
December 5, 2014 – Spring 2015 half-time; restricted to part-time students only |
| **Requirement** | **Requirements:**  
- Students receiving support are expected to present their research findings through participation in one of the following: the University Undergraduate Exhibition, the College of Engineering Research Symposium, or a relevant professional conference  
- Conduct faculty supervised research  
- Attend professional development activities  
- Present preliminary or final research findings (the summer students did this at a single symposium held in July 2014, fall/spring students are expected to present at the PSU undergraduate research exhibition, a professional conference, or some other comparable venue)  
- Submit a culminating report that documents the original research objectives, describes the research methods used, and presents results. The format of the report is flexible and can be determined by the research faculty. |
Summer 2014 CERI Information:
There were a total of 144 Summer CERI applicants. There were 59 Summer CERI Awardees. All students are engineering students assigned to 39 faculty. Several had more than one student; this was more likely if students enhanced diversity of the group. All engineering departments were represented.

<table>
<thead>
<tr>
<th>Female</th>
<th>Male</th>
<th>First Year</th>
<th>2nd Yr</th>
<th>Jr</th>
<th>Sr</th>
<th>International</th>
<th>Under Rep</th>
<th>Total Summer 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>47</td>
<td>15</td>
<td>15</td>
<td>26</td>
<td>6</td>
<td>14</td>
<td>14</td>
<td>59</td>
</tr>
</tbody>
</table>

Summer 2014 Discovery Grant
There were 9 additional Discovery Grant students who received additional top up funds from the CERI program for their research. They participated in professional development events with other summer CERI students.

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Department</th>
<th>Supervising Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nick Frazette</td>
<td>B M E</td>
<td>Peter Butler</td>
</tr>
<tr>
<td>Virginia Gonzales</td>
<td>BIO E</td>
<td>Cheng Dong</td>
</tr>
<tr>
<td>Deborah Lee</td>
<td>BIO E</td>
<td>Cheng Dong</td>
</tr>
<tr>
<td>Brian McKeller</td>
<td>B M E</td>
<td>Siyang Zheng</td>
</tr>
<tr>
<td>Kevin Shebek</td>
<td>CH E</td>
<td>Manish Kumar</td>
</tr>
<tr>
<td>Matthew Swatski</td>
<td>B M E</td>
<td>Justin L. Brown</td>
</tr>
<tr>
<td>Colin Tkatch</td>
<td>B M E</td>
<td>Keefe Manning</td>
</tr>
<tr>
<td>Gage Walters</td>
<td>E SC</td>
<td>Tim Kane</td>
</tr>
<tr>
<td>Darian Nocera</td>
<td>BIO E</td>
<td>Sheereen Majd</td>
</tr>
</tbody>
</table>

Fall 2014 CERI Information:
There were a total of 51 Fall CERI applicants (31 Fall Applicants and 20 who applied to continue from the summer). There were 25 Fall CERI Awardees (20 selected for Fall academic year and 5 selected to continue research that started in Summer). All students are engineering students assigned to 23 faculty. Drs. Wong and Yang had two students (who enhanced diversity). Also, two of the faculty are from EMS in the interdisciplinary department of Material Science & Engineering in the EMS College.

<table>
<thead>
<tr>
<th>Women</th>
<th>Underrep.</th>
<th>International</th>
<th>Majority</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>6</td>
<td>2</td>
<td>15</td>
<td>25</td>
</tr>
</tbody>
</table>

(The 9 Discovery Grant students not included here)
College of Engineering Initiatives

2014-2015 CoE Instructional and Research Equipment Grants Request for Proposals
Submission Deadlines: July 15, 2014 and January 15, 2015

Funding Description: The College of Engineering at Penn State announces an internal competition for funds to support laboratory equipment that advances the education and research objectives of the College, in harmony with the University priorities. There will be two funding cycles during the 2014-15 fiscal year. The proposal submission deadline for the first cycle is July 15, 2014. The submission deadline for the second cycle is January 15.

Proposal Criteria: Proposals may request support for renewal or upgrade of existing laboratory equipment or the acquisition of new equipment that is critical to planned or future efforts and advances the education and research objectives of the College.

Funding Amount: Approximately $1.5M is available for the 2014-15 fiscal year to support this initiative. The number of proposals awarded depends on the funds requested per proposal, and the number of proposals that merit support. We anticipate making available up to ten awards in the first cycle and up to five awards in the second cycle.

Funding Eligibility: Tenure track and tenured faculty members in the College of Engineering at University Park are eligible to apply for these funds. Faculty members outside of CoE at Penn State can participate as senior investigators, but no funds will be distributed outside of the College.

Submission Details: All proposals should be submitted in a single PDF file. They are limited to eight pages using a minimum 11-point font and 1-inch margins. The eight page limit is inclusive of proposal title, names and affiliations of investigators, items 1 through 7 below and bibliography, but exclusive of CVs. Proposals must include the following:

1. Description of the activity the equipment will support
2. Description of the equipment to be purchased, renewed or upgraded
3. Specific opportunities that would be availed of by the investment in terms of:
   a. Educational enhancements (Undergraduate and Graduate), including courses and number of students
   b. Progress in research and technology transfer
   c. Leadership in university and national initiatives
4. Relevance to the mission of the CoE with regard to interdisciplinary education, research and engagement
5. Collaborative nature of the opportunity with faculty members in different areas and programs within the department and CoE, and with the University’s institutes and other colleges
6. Potential financial return on the investment
7. Consequences of not making the investment
8. Firm bids from suppliers and contractors (Proposers are required to underwrite increase in budget over the allocation made based on the submitted bids.)
9. Financial request including proposed matching from other sources (Encouraged minimum cash match from proposers of 15%. The leverage potential of cash match is a component of the review process.)

10. Investigator(s) CV: Include a maximum of two-page CV for each principal or senior investigator. The format should be similar to that for National Science Foundation proposals.

Proposal Review Criteria: Proposals will be reviewed by an ad-hoc committee of CoE faculty members. Domain-specific members from outside the College may also be asked to review. The ad-hoc committee will provide funding recommendations to the Dean and Associate Deans of Engineering, who will make final funding decisions. Depending upon the number of proposals received, the Dean and Associate Deans may conduct an initial screening. Review criteria for proposals are the following:

- Adherence to proposal guidelines and criteria (1 to 10 above)
- Record of the PI(s)
- Innovative nature and quality of the proposal
- Impact of the laboratory innovation on education, research, and/or leadership in university and national initiatives
- Impact of the laboratory innovation on the mission of the department with regard to interdisciplinary education, research and engagement
- Justification of the proposed budget

Questions regarding this proposal solicitation may be directed to Bobbi Schaffer (blr4@psu.edu). Proposals must be submitted by 5:00 p.m. on the day of the deadline via the following website: https://www.engr.psu.edu/grantrequest/?GrantID=COEEQUIP2014.
2014-2015 CoE Instructional and Research Equipment Grants
Request for Proposals
Round Two
Submission Deadline: January 15, 2015

Funding Description
The College of Engineering at Penn State announces the second round of internal competition for funds to support laboratory equipment that advances the education and research objectives of the College, in harmony with the University priorities. The submission deadline for the second cycle is January 15, 2015.

Proposal Criteria
Proposals may request support for renewal or upgrade of existing laboratory equipment or the acquisition of new equipment that is critical to planned or future efforts and advances the education and research objectives of the College.

Funding Amount
Approximately $500,000 is available for this round of proposals. While we anticipate making up to five awards, the number of proposals awarded depends on the funds requested per proposal, and the number of proposals that merit support.

Funding Eligibility
Tenure track and tenured faculty members in the College of Engineering at University Park are eligible to apply for these funds. Proposals for research instruments that will be placed in institute-managed core facilities are encouraged, and are expected to show a higher level of matching funds commensurate with the benefit to the broader university-wide research community.

Submission Deadline
For full consideration, proposals should be submitted by 5 p.m. EST January 15, 2015. Funding decisions are anticipated in early March, 2015.

Submission Details
The request for proposals, frequently asked questions and the submission procedure can be found on this website.

Proposal Guidelines
All proposals should be submitted in a single PDF file. They are limited to nine pages using a minimum 12-point font and 1-inch margins. The nine-page limit is inclusive of items 1 through 10 below and bibliography. Proposals must include the following:

1. Cover Page including proposal title, PI (primary point of contact) and affiliation, Co-PIs and affiliations, total cost, amount requested from COE and amount and sources of matching funds, primary purpose (i.e., instruction or research or both if contributions are equal)
2. Description of the activity the equipment will support
3. Description of the equipment to be purchased, renewed or upgraded
4. Proposed location and accessibility of the equipment (i.e., will the equipment be located in an individual faculty member's laboratory or will it be part of a user facility); suitability of proposed location for the equipment; and plan for long-term maintenance of the equipment.
5. Specific opportunities that would be availed of by the investment in terms of:
   a. Educational enhancements (Undergraduate and Graduate), including courses and number of students
College of Engineering Initiatives

b. Progress in research and technology transfer
c. Leadership in university and national initiatives
6. Relevance to the mission of the CoE with regard to interdisciplinary education, research and engagement
7. Collaborative nature of the opportunity with faculty members in different areas and programs within the department and CoE, and with the University's institutes and other colleges
8. Potential financial return on the investment
9. Consequences of not making the investment
10. Itemized budget including proposed matching from other sources. (Encouraged minimum cash match from proposers of 15%. The leverage potential of cash match is a component of the proposal review.)
11. Letters of commitment for the match. (Email is sufficient.)
12. Confirmation from Co-PIs and other investigators of their involvement and support of the proposal. (Email is sufficient.)
13. Firm bids from suppliers and contractors (Proposers are required to underwrite increase in budget over the allocation made based on the submitted bids.)
14. Investigator(s) CV: Include a maximum of two-page CV for each principal or senior investigator. The format should be similar to that for National Science Foundation proposals.

Reporting and Other Requirements

• Interim report (one page maximum, 12-point font, 1-inch margins) submitted to the Office of Senior Associate Dean within four weeks of notice of award including:
  o Proposal Title
  o PI and affiliation
  o Status of purchase and timeline for equipment to be fully in use.
• Year-One Report (12-point font, 1-inch margins) submitted to the Office of Senior Associate Dean within 12 months of the award of the grant. The report should include:
  o Proposal Title
  o PI and affiliation
  o Location of equipment
  o Users of the equipment
  o Citations for publications, presentations, dissertations, theses, proposals supported by the equipment.
  o List of courses supported by the equipment with enrollments.
• Final Report (12-point font, 1-inch margins) submitted to the Office of Senior Associate Dean within 24 months of the award of the grant. The report should include:
  o Proposal Title
  o PI and affiliation
  o Location of equipment
  o Users of the equipment
  o Citations for publications, presentations, dissertations, theses, proposals supported by the equipment
  o List of courses supported by the equipment with enrollments.
• Acknowledgement of the College of Engineering Instrumentation Grant Program in publications and presentations reporting research results enabled with the equipment purchased through this program.
Proposal Review Criteria

Proposals will be reviewed by an ad-hoc committee. Domain-specific members from outside the College may also be asked to review. The ad-hoc committee will provide funding recommendations to the Dean and Associate Deans of Engineering, who will make final funding decisions. Depending upon the number of proposals received, the Dean and Associate Deans may conduct an initial screening. Review criteria for proposals are the following:

- Adherence to proposal criteria and guidelines
- Record of the PI(s)
- Innovative nature and quality of the proposal
- Impact of the laboratory innovation on education, research, and/or leadership in university and national initiatives
- Impact of the laboratory innovation on the mission of the department with regard to interdisciplinary education, research and engagement
- Justification of the proposed budget

For Additional Information

A frequently asked questions page is available on the submission website. Other questions regarding this solicitation may be directed to Bobbi Schaffer (blr4@psu.edu).
## CoE Instructional and Research Equipment Grant Deliverables

| Applications | Received: 18  
Funded: 12 |
<table>
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<tr>
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<tr>
<td>Point of Contact</td>
<td>Anthony Atchley</td>
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<td>Announcement</td>
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</tr>
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<td>Requirement</td>
<td></td>
</tr>
</tbody>
</table>
| • Interim report (one page maximum, 12-point font, 1-inch margins) submitted to the Office of Senior Associate Dean within four weeks of notice of award including:  
  o Proposal Title  
  o PI and affiliation  
  o Status of purchase and timeline for equipment to be fully in use.  
| • Year-One Report (12-point font, 1-inch margins) submitted to the Office of Senior Associate Dean within 12 months of the award of the grant. The report should include:  
  o Proposal Title  
  o PI and affiliation  
  o Location of equipment  
  o Users of the equipment  
  o Citations for publications, presentations, dissertations, theses, proposals supported by the equipment.  
  o List of courses supported by the equipment with enrollments.  
| • Final Report (12-point font, 1-inch margins) submitted to the Office of Senior Associate Dean within 24 months of the award of the grant. The report should include:  
  o Proposal Title  
  o PI and affiliation  
  o Location of equipment  
  o Users of the equipment  
  o Citations for publications, presentations, dissertations, theses, proposals supported by the equipment  
  o List of courses supported by the equipment with enrollments.  
| • Acknowledgement of the College of Engineering Instrumentation Grant Program in publications and presentations reporting research results enabled with the equipment purchased through this program.  

### CoE Instructional and Research Equipment Grant Deliverables (continued)

<table>
<thead>
<tr>
<th>Awardees</th>
<th>Description</th>
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<tbody>
<tr>
<td>Ali Memari, Aly Said, Paul Bowers, Paul Kremer</td>
<td>Repairs and Upgrades for 120,000 lb Tinius Olsen Super L Hydraulic Test Machine for Undergraduate and Graduate Education and Research</td>
</tr>
<tr>
<td>Jose Palacios, Dennis McLaughlin, Richard Auhl</td>
<td>Data Acquisition and Sensors for Instruction and Research</td>
</tr>
<tr>
<td>Jack Langelaan, Joseph Horn</td>
<td>Motion Capture System for Research on Micro Air Vehicles and Human Motion</td>
</tr>
<tr>
<td>Ming Xiao, Ali Memari, Gordon Warn, Qiu Tong, Robert Kunz, Philip Morris, Michael Kinzel</td>
<td>Acquisition of Laminar Shear Box for Seismic Shake Table</td>
</tr>
<tr>
<td>Rachel Brennan, William Burgos, Christopher Gorski, Bruce Logan, John Regan, Stephanie Velegol</td>
<td>Multi-detection microplate reader for collaborative environmental innovation: meeting current and future challenges in teaching, research, and outreach</td>
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<tr>
<td>Robert M. Rioux, Kyle Bishop, Manish Kumar, Howard Salis, Thomas Mallouk, Alexander Radosevich</td>
<td>Acquisition of a Novel Titration Calorimeter for Education and Research at the Interface of Engineering and Science</td>
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<td>Kultegin Aydin, Jeff Schiano, Mark Wharton</td>
<td>Studio Laboratory for Electrical Engineering</td>
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<tr>
<td>Sanjay Joshi, Tim Simpson</td>
<td>Acquisition of a Stratasys Fortus 350mc Additive Manufacturing</td>
</tr>
<tr>
<td>Jacqueline O’Connor, Stephen Lynch, Dom Santavicca, Rich Yette</td>
<td>High-Speed Laser-Induced Fluorescence for High-Fidelity Flow and Flame Measurements</td>
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<tr>
<td>Kostadin Ivanov, Asok Ray, Arthur Motta, Maria Avramova</td>
<td>Nuclear Engineering Computational Simulation Laboratory</td>
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<tr>
<td>Cheng Dong, Judith Todd, Keefe Manning</td>
<td>Enhancing Biomechanics Education and Research</td>
</tr>
<tr>
<td>Akhlesh Lakhtakia, Charles Bakis, Jeffrey Catchmark, Jian Yang, Nicole Brown, Paris von Lockette</td>
<td>Dynamic Mechanical Analyzer with Humidity Control</td>
</tr>
</tbody>
</table>
2014-2015 One-Year Master’s Degree Program Development Request for Proposals
Submission Deadlines: August 1, 2014

Funding Description: The College of Engineering at Penn State announces an internal competition for funds to develop one-year, residence-based master’s degree (M.S. and M.Eng.) programs to address the growing demand for advanced technical depth and professional preparation. The proposal submission deadline is August 1, 2014.

Proposal Criteria: Proposals may request support for developing new programs and courses in the three following categories:

• Type A- existing non-thesis programs that will be making no changes to course requirements and whose course offerings will be re-configured and sequenced for a student to complete the program in 12 months (anticipated earliest offering Summer/Fall 2015).
• Type B - existing programs that will be modified to be offered to include a non-thesis path and to be completed in a 12-month time frame (anticipated earliest offering Summer/Fall 2015).
• Type C - new programs that will address emerging fields or programs that exist at the interface of disciplines in the College (anticipated earliest offering Summer/Fall 2016).

Funding Amount: Approximately twelve proposals will be funded. A Department may request up to $50,000 per proposal. Funding will be available early in the fall 2014 semester, and the proposal duration is dependent upon the anticipated earliest offering of the program.

Examples of how funding may be used include (but are not limited to):

• Faculty release time to develop a new program or restructure an existing program.
• Faculty release time for individual course development or restructuring.
• Hire an instructor for one semester to allow for teaching the same course in two consecutive semesters to facilitate changing an existing course sequence for proper prerequisite timing.
• Hire an instructor for one summer to add a summer course offering.

Funding Eligibility: All Departments and Schools in the College of Engineering at University Park are eligible to apply for these funds.

Submission Details: For full consideration, proposals should be submitted by 5 p.m. EDT August 1, 2014 to https://www.engr.psu.edu/grantrequest/?GrantID=COE1YRMSDEV. Funding decisions are anticipated by August 31, 2014.

Proposal Guidelines: All proposals should be submitted in a single PDF file, up to five pages using a minimum 12-point font and 1-inch margins. Proposals must include the following:

1. Program description, which should include:
   a. Motivation for developing the new program.
   b. List of existing courses that may be utilized.
   c. List of anticipated new courses to be developed or existing courses that need to be modified.
2. Expected background of or type of student that would be attracted to this program
3. Faculty member(s) participating in program development with a description of their specific role.
4. Relevance to the mission of the CoE with regard to interdisciplinary education, research and engagement.
5. Itemized budget with full explanation and justification.
Proposal Review Criteria: Proposals will be reviewed by the Dean and Associate Deans of Engineering, who will make final funding decisions.

Review criteria for proposals are the following:

- Adherence to proposal guidelines
- Innovative nature and quality of the proposal
- Impact of the developed program on the mission of the department with regard to interdisciplinary education, research and engagement
- Relationship of the program to national or federal initiatives
- Justification of the proposed budget

Final Project Requirements: The outcome of the project is:

Type A:
An implementation plan submitted to the Dean by November 1, 2014. The plan should include the anticipated course offerings fall semester, spring semester, and summer as well as an explanation of how a student could complete all program requirements in one-year. Verification is also required that the program will be first offered summer or fall 2015.

Type B:
1. Submission of a Program Change Proposal for Graduate Council curricular review to the University Faculty Senate office by October 23, 2014, to be placed on the Graduate Council Curricular Review Committee agenda for the November 13, 2014 meeting.
2. Submission of graduate course proposals associated with the program change proposal to the Course Submission and Consultation System (CSCS) approved through level 6 by October 23, 2014.
3. Completion of the approval process to then first offer the program summer or fall 2015.

Type C:
1. Submission of a graduate program proposal for Graduate Council curricular review to the University Faculty Senate office by the specified deadline for agenda items for the September 2015 meeting of the Graduate Council Curricular Review Committee.
2. Submission of graduate course proposals associated with the program proposal to the Course Submission and Consultation System (CSCS) approved through level 6 by the specified deadline for agenda items for the September 2015 meeting of the Graduate Council Curricular Review Committee.
3. Completion of the approval process to then first offer the program summer or fall 2016.

Questions regarding this proposal solicitation may be directed to Lori Long (laj5@engr.psu.edu). Answers to Frequently Asked Questions (FAQs) for this RFP can be found under the Questions & Answers button on the RFP website and will be updated on a regular basis.

Proposals must be submitted by 5:00 p.m. on the day of the deadline via the following website:
https://www.engr.psu.edu/grantrequest/?GrantID=COE1YRMSDEV
CoE One-Year Master’s Degree Program Deliverables

| Applications          | Received: 18  
<table>
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<td>Catherine Harmonosky</td>
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<td>Announcement</td>
<td>September 2014</td>
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<td>Start Date</td>
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</table>

**Requirement**

**Type A:** An implementation plan submitted to the Dean by November 1, 2014. The plan should include the anticipated course offerings fall semester, spring semester, and summer as well as an explanation of how a student could complete all program requirements in one year. Verification is also required that the program will be first offered summer or fall 2015.

**Type B:**
1. Submission of a Program Change Proposal for Graduate Council curricular review to the University Faculty Senate office by October 23, 2014, to be placed on the Graduate Council Curricular Review Committee agenda for the November 13, 2014 meeting.
2. Submission of graduate course proposals associated with the program change proposal to the Course Submission and Consultation System (CSCS) approved through level 6 by October 23, 2014.
3. Completion of the approval process to then first offer the program summer or fall 2015.

**Type C:**
1. Submission of a graduate program proposal for Graduate Council curricular review to the University Faculty Senate office by the specified deadline for agenda items for the September 2015 meeting of the Graduate Council Curricular Review Committee.
2. Submission of graduate course proposals associated with the program proposal to the Course Submission and Consultation System (CSCS) approved through level 6 by the specified deadline for agenda items for the September 2015 meeting of the Graduate Council Curricular Review Committee.
3. Completion of the approval process to then first offer the program summer or fall 2016.

**Awardees**
- Mike Erdman - Proposal for Master of Engineering in Leadership and Entrepreneurship
- Jey Chandra - One-Year Master of Science Degree In Industrial Engineering With Non-Thesis Path
- Kultegin Aydin - One-Year Master’s Degree Program in Electrical Engineering
- Mike Janik - Proposal for a 12 Month Masters of Science Degree in Chemical Engineering
- Stephen Fonash - Proposed One-year, Resident, Non-Thesis, MS Degree: Engineering at the Nano-scale
- William Burgos - One-Year M.Eng. in Civil Engineering
- Raj Acharya - One-year resident non-thesis master’s degree program Department of Computer Science and Engineering
- Chinemelu Anumba - MS in Facilities Engineering and Management
- Victor Sparrow - Proposal for one-year residential M.S. degree (non-thesis) in Acoustics
- George Lesieutre - M.Eng. in Aerospace Systems and Technology
- Peter Butler - Masters of Science in Biomedical Engineering
- Al Segall, Judy Todd - M.Eng. in Engineering Mechanics
Global Engineering Leadership Program (GELP): Request for Proposals

Funding Description

The College of Engineering is pleased to announce a new Global Engineering Leadership Program. The initiative will support international outreach for College of Engineering students and faculty and enhance the development of their global engineering leadership attributes.

Proposal Criteria

The primary focus of the proposals are to provide College of Engineering graduate students and upper division undergraduate students with opportunities to experience engineering in a global context and to support faculty in developing, progressing or extending international collaboration in research and education. Examples of activities that would be considered for funding are:

- Faculty-led trips for students to participate in significant and relevant projects abroad, to gain knowledge and experience, and to report their observations in written and presentation forms. The deliverables would be student reports and college-wide seminars.
- Faculty travel abroad to meetings with groups from international universities in order to explore, discuss, and develop joint research that would lead to the development of research proposals. The deliverables would be the development and submission to funding agencies of high quality research proposals.
- Faculty members and their students attend or host specific workshops aimed at creating global research and/or education consortia. The deliverable would be workshop proceedings or research white paper describing a new research or education activity.

In general, activities and programs that would significantly enrich the global experience of College of Engineering students and faculty members and provide opportunities for them to develop global leadership skills will be considered for funding. The inclusion of both upper division undergraduate and graduate students is encouraged for student-based international activities. Joint proposals from more than one department and proposals that include matching funds are also encouraged.

Funding Amount

The College of Engineering will provide funding of up to $25,000 per project to fully or partially cover expenses of faculty and their students to participate in this initiative. Four projects will be supported in the first year, starting fall 2014. The College may increase the planned funding limit of $25,000 for this solicitation if there are outstanding proposals that make a compelling case for a higher level of support.

Funding Eligibility

College of Engineering faculty members and departments are eligible to apply. Applicants are encouraged to raise additional funds from other sources, such as industry, government, or other University offices (e.g., the University Office of Global Programs), in order to support and possibly expand the scope of their proposals.
Submission Details

All proposals should be submitted in a single PDF file and are limited to five pages (including the budget) using a minimum 11-point font and 1-inch margins. Proposals must include the following:

- Description of the proposed program/activity and how it relates to a unit’s global strategic plans. Indicate the goals/objectives and how their attainment will be evaluated or assessed. Include the expected deliverables.
- Justification for the specific location, project, or the global partner. Provide information on the quality and ranking of all global partners.
- Proposed itinerary for international trip for the participating students and faculty.
- Description of the added value for our students and/or research enterprise from the international trip, especially as it relates to the attributes of the world-class engineer.
- List of faculty member(s) and students from each department or school who will lead and/or participate in the international trip(s), follow-up studies, and/or will be participating in the workshop. Provide contact information and include a curriculum vita (up to two pages) in the appendix for each participating faculty member.
- Detailed budget and budget justification. Include information about matching or additional funds from all sources that will be used to support the proposed program.

Proposal Review Criteria

Proposals will be reviewed by the Dean and Associate Deans of Engineering, who will make final funding decisions. Proposals are due August 18, 2014. Successful proposals will be announced by September 8, 2014. Review criteria for proposals are the following:

- Adherence to proposal guidelines and criteria
- Innovative nature and quality of the proposal
- Impact of the proposal as it relates to the College’s international outreach leadership programs
- Justification of the proposed budget

Questions regarding this proposal solicitation may be directed to Lynn Tressler at lxt3@psu.edu.
# CoE Global Engineering Leadership Program Deliverables

| Applications | Received: 15  
Funded: 7 |
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<td>2014-2015</td>
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| **Requirement** | Two page (max) report (12 pt font, 1 inch margins) submitted within four weeks of the conclusion of the funded activity. The report should include:  
• Project Title  
• PI and affiliation  
• Faculty and students supported, including department affiliation and, for students their degree program and academic standing (e.g., first year, etc.)  
• Brief Description of the project, outcomes and future plans explaining how the project enhanced international outreach and the development of global engineering leadership attributes  
• Expenditure report including purpose (e.g., travel, materials, etc.), amount and funding source (e.g., College, Department, grant, etc.) |

## Awardees

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Project Title</th>
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<tbody>
<tr>
<td>Victor Sparrow</td>
<td>Acoustics</td>
<td>Strengthening an Existing College of Engineering Relationship with Ecole Centrale de Lyon and Universite de Lyon</td>
</tr>
<tr>
<td>Rachel Brennan</td>
<td>Civil Engineering</td>
<td>Sustainable engineering in coastal equatorial zones: a platform for innovative research, integrated education, and global engagement at the water-energy nexus</td>
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<tr>
<td>Harriet Nembhard</td>
<td>Industrial &amp; Manufacturing Engineering</td>
<td>GELP: Systems Engineering in Health Care Coordination</td>
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<tr>
<td>Soundar Tirupatikumara</td>
<td>Industrial &amp; Manufacturing Engineering</td>
<td>Data Analytics in Healthcare Systems Reengineering – Research and Education</td>
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<tr>
<td>Martin Trethewey</td>
<td>Mechanical Engineering</td>
<td>MNE &amp; IME Global Engagement Network</td>
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<tr>
<td>Keefe Manning</td>
<td>Bioengineering</td>
<td>Bridging and Enhancing Biomedical Engineering Research and Education Through a Penn State and Politecnico di Milano Consortium</td>
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