# Proposal Cover Sheet

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Ohio Means Internships &amp; Co-ops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Location/s</td>
<td>University of Dayton, Sinclair Community College, and Industry Partners</td>
</tr>
<tr>
<td>Project Start Date</td>
<td>January 2, 2013</td>
</tr>
<tr>
<td>Interns/Co-ops Start Date</td>
<td>January 2013</td>
</tr>
<tr>
<td>Lead Applicant</td>
<td>Name and Address of Postsecondary Institution</td>
</tr>
<tr>
<td></td>
<td>University of Dayton</td>
</tr>
<tr>
<td></td>
<td>300 College Park Ave</td>
</tr>
<tr>
<td></td>
<td>Dayton, Oh 45469</td>
</tr>
<tr>
<td>Chief Contact</td>
<td>Name/Title of legal representative Address, Telephone, FAX, and E-Mail</td>
</tr>
<tr>
<td></td>
<td>Claudette M. Groeber</td>
</tr>
<tr>
<td></td>
<td>Director, Contracts and Grants/Authorized Representative</td>
</tr>
<tr>
<td></td>
<td>University of Dayton</td>
</tr>
<tr>
<td></td>
<td>300 College Park</td>
</tr>
<tr>
<td></td>
<td>Dayton, OH 45469-0104</td>
</tr>
<tr>
<td></td>
<td>937-229-2919; Fax: 937-229-2291</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:claudette.groeber@udri.udayton.edu">claudette.groeber@udri.udayton.edu</a></td>
</tr>
<tr>
<td>Project Director(s)- Key Personnel(s)</td>
<td>Name/Title, Address, Telephone, FAX, and E-Mail</td>
</tr>
<tr>
<td></td>
<td>John G. Weber, Associate Dean for Graduate Studies</td>
</tr>
<tr>
<td></td>
<td>Riad S. Alakkad, Associate Dean for Undergraduate Studies</td>
</tr>
<tr>
<td></td>
<td>Nancy Fortholder, Director Engineering Co-op Office</td>
</tr>
<tr>
<td></td>
<td>University of Dayton</td>
</tr>
<tr>
<td></td>
<td>300 College Park Park</td>
</tr>
<tr>
<td></td>
<td>Dayton, OH 45469-0228</td>
</tr>
<tr>
<td></td>
<td>(937) 229-2736; Fax: (937) 229-2756; Email: <a href="mailto:jweber1@udayton.edu">jweber1@udayton.edu</a></td>
</tr>
<tr>
<td></td>
<td>Matt Massie, Manager Career Services</td>
</tr>
<tr>
<td></td>
<td>Sinclair Community College</td>
</tr>
<tr>
<td></td>
<td>444 West Third Street</td>
</tr>
<tr>
<td></td>
<td>Dayton, OH 45402</td>
</tr>
<tr>
<td></td>
<td>(937) 512-2922; Fax: (937) 512-2226; Email: <a href="mailto:matt.massie@sinclair.edu">matt.massie@sinclair.edu</a></td>
</tr>
<tr>
<td>Amount of state money requested</td>
<td>$423,326</td>
</tr>
<tr>
<td>Match money committed</td>
<td>$426,174</td>
</tr>
<tr>
<td>Number of internships/co-ops proposed</td>
<td>20 co-ops</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>JobsOhio key industries impacted</td>
<td>Advance Manufacturing Polymers Information Technology Aerospace and Aviation Energy</td>
</tr>
<tr>
<td>Are any of the applicants represented by a member of the Advisory Committee?</td>
<td>Name/s: NONE</td>
</tr>
</tbody>
</table>

**Legal Applicant**

Name: University of Dayton

Address: 300 College Park

City: Dayton, OH Zip: 45469-0104

Phone: (937) 229-2919 Fax: (937) 229-2291 E-Mail: claudette.groeber@udri.udayton.edu

CEO Name: Daniel Curran, Ph.D., President

1) **Certification by Authorized Official:**
To the best of my knowledge and belief, data contained in this application are true and correct. The document has been duly authorized to comply with the required assurances.

Signature of Authorized Official: **Claudette M. Groeber**

Typed Name and Title: **Claudette M. Groeber, Authorized Representative**

Date: **12 Oct 2012**

2) **Administering Entity**
Agency Name: University of Dayton

Address: 300 College Park

City: Dayton Zip: 45469 Phone: (937) 229-2919

Fax: (937) 229-2291 Contact Person: Megan L. Rehberg

Title: Research Administrator E-Mail: megan.rehberg@udri.udayton.edu

3) **Business Partners (please submit separate information for each partner)**

Company Name: **(See next page for list of companies)**

Address: 

University of Dayton Ohio Means Co-ops Proposal
City: _______________________________ Zip: ________ Phone: ________
Fax: ______________________________ Contact Person: ____________
Title: ________________________________ E-Mail: ____________

5) Educational Partners (please submit separate information for each partner)

Name: Sinclair Community College
Address: 444 West Third Street
City: Dayton Zip: 45402 Phone: (937) 512-2922
Fax: ______________________________ E-Mail: matt.massie@sinclair.edu
President/CEO/Director Name: Matt Massie, Manager Career Services

Business Partners

Company Name: Innovative Scientific Solutions Inc.
Address: 2766 Indian Ripple Road City: Dayton Zip: 45440-3638 Phone: 937-429-4980 Ext. 106
Contact Person: Grant R. McMillan, Ph.D. Email: gmcmillan@innssi.com
Jobs Ohio Target Industry Codes: 3345, 5417

Company Name: Midmark Corporation
Address: 60 Vista Drive, P.O. Box 286 City: Versailles Zip: 45380-0286 Phone: 1-800-MIDMARK
Contact Person: Aaron R. Guggenbiller Email: aguggenbiller@midmark.com
Jobs Ohio Target Industry Codes: 3312, 5417

Company Name: PC Krause and Associates, Inc.
Address: 5409 Clayton Road City: Farmersville Zip: 45325 Phone: (937) 255-3211
Contact Person: Eric Walters Email: walters@pcka.com
Jobs Ohio Target Industry Codes: 5417

Company Name: PolyOne Corporation
Address: 33587 Walker Road City: Avon Lake Zip: 44012 Phone: 630-972-3194
Contact Person: Thomas W. Hughes Email: thomas.hughes@polyone.com
Jobs Ohio Target Industry Codes: 3314, 3252, 5417
Company Name: ATK Aerospace Structures – Military Systems  
Address: 1365 Technology Court  
City: Beavercreek  
Zip: 45430  
Title: HR Business Partner  
Phone: (937) 490-4160  
Contact Person: Kevin Comer  
Email: Kevin.comer@atk.com  
Jobs Ohio Target Industry Codes: 3314, 3252, 5417

Company Name: CACI, Inc. Federal  
Address: 2685 Hibiscus Way – Suite 200  
City: Beavercreek  
Zip: 45431  
Title: Division Manager  
Phone: (937) 499-8303  
Contact Person: Larry Sweeney  
Email: lsweeney@caci.com  
Jobs Ohio Target Industry Codes: 3345, 5417
ABSTRACT

The University of Dayton is a national leader in scientific and engineering research, serving government, industry and nonprofit customers. Our faculty, staff and students conduct research and provide support in a wide variety of technical areas, ensuring customer success by delivering affordable and innovative solutions, leading edge technologies and outstanding service. The university’s accomplishments are marked by integrity, respect for others and commitment to the individual growth of our employees and students.

Sinclair’s academic excellence has been acknowledged on an ongoing basis by accolades from accrediting and higher education governing bodies. In 1989, Sinclair was selected for membership in the prestigious League for Innovation in the Community College, and, in 2001, became one of the League’s elite Vanguard Colleges. "Vanguard" is a term designated by the League to recognize the top twelve two-year institutions in North America that focus constantly on student and learner access and success.

The University of Dayton and Sinclair have a long history of working together. Students in the Engineering University Transfer Program at Sinclair are able to complete the first two years of their Bachelor’s program at Sinclair and then transfer to UD to complete either an engineering or an engineering technology program. Students with a 3.0 credit point average at Sinclair receive a 1/3 tuition scholarship when they transfer. For this program, Sinclair students who are interested in attending the University of Dayton and participating in the co-op program, will work with the UD Engineering Co-op office to obtain positions.

School of Engineering undergraduate enrollment for the 2012 fall term reached an all time high at 1,886, including 555 first-year students. Currently there are over 500 students enrolled in the School of Engineering Co-op Program. Through this proposal, UD aims to increase enrolled co-ops by 20 students by targeting key industries in Ohio. The three JobsOhio industrial areas being targeted are: Advanced Manufacturing (3-5 positions), Energy (6-8 positions), and Aerospace and Aviation (8-10 positions). Several positions target one of the above listed industries plus Polymer or Information Technology. Through this program students will be exposed to exciting job opportunities in Ohio during their co-op terms thus increasing the likelihood that they will remain in high-tech positions in Ohio after graduation.
Program Snapshot

<table>
<thead>
<tr>
<th>JobsOhio Key Industry or Industries</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of co-ops/internships created</td>
<td>20</td>
</tr>
<tr>
<td>Number that meet High Demand Occupations</td>
<td>20</td>
</tr>
<tr>
<td>Amount of state money requested</td>
<td>$423,325</td>
</tr>
<tr>
<td>Amount of match money obtained</td>
<td>$426,174</td>
</tr>
<tr>
<td>Total state money requested divided by number of co-ops &amp; internships created (in whole dollars)</td>
<td>$16,981</td>
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<tr>
<td>Total match money obtained divided by number of co-ops &amp; internships created (in whole dollars)</td>
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<tr>
<td>Total money (state plus match) divided by number of co-ops &amp; internships created (in whole dollars)</td>
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<tr>
<td>Number of business partners</td>
<td>6</td>
</tr>
<tr>
<td>Number of higher education partners</td>
<td>2</td>
</tr>
<tr>
<td>Number of other partners</td>
<td>0</td>
</tr>
</tbody>
</table>

PROGRAMMATICS (40)

1. Business attraction and retention

For the fall 2012 term, UD welcomed a record number of 555 new students to the School of Engineering. Total fall 2012 undergraduate enrollment for the School of Engineering reached a record high of 1,886 students. During academic school year 2011/2012, 377 students were placed in 501 co-op positions. UD proposes to add 20 new co-op positions in Ohio in an effort to retain more of the students in the state after graduation. The University of Dayton engineering research and development budget is approximately $100 million per year.

Three major research areas aligned with the JobsOhio key industries/fields of Aerospace and Aviation, Energy, and Advanced Manufacturing will be targeted. Several of the targeted positions target one of these three plus Polymer or Information Technology. These areas were chosen because of the strong outlook for future positions in Ohio in these specific industries. The Dayton Development Coalition predicts there will be 8,000 new jobs in key areas including Aerospace Research and Development and Advanced Materials and Manufacturing. The American Solar Energy Society predicts over 174,000 new Ohio jobs by 2030 in the energy area. Additive manufacturing consultant Wohler’s Associates expects Additive Manufacturing to continue strong double-digit growth for several years.

The University is a leader in Aerospace and Aviation research through a wide variety of technical areas throughout the school of engineering. The proximity to Wright Patterson Air Force Base, General Electric Aviation and NASA Glenn make UD an ideal incubator for...
aerospace and aviation research. Three of the University’s aerospace and aviation programs have been named State of Ohio Centers of Excellence in Education and Research in Emerging Technologies: High Performance Materials; Optoelectronics and Sensors; and von Ohain Fuels and Combustion Center. The General Electric Electrical Power Integrated Systems Research and Development Center (EPISCENTER) being built on the University of Dayton campus is a $51 million investment by the regions industry and government leaders in the future of aircraft power research at UD. The University has eight endowed chairs that support the aerospace and aviation research being conducted at UD: Hans von Ohain Distinguished Professor Fuels and Combustion; Wilke Distinguished Professor in Chemical and Materials Engineering; John F. and Leona D. Torley Chair in Composite Materials Engineering; Ohio Research Scholars Chair in Wide-Area Surveillance; Wright Brothers Institute Chair in Nano Materials; Wright Brothers Institute Chair in LADAR and Optical Communications; Ohio Research Scholars Endowed Chair in Multiscale Composites Processing; and the Wright Brothers Institute Endowed Chair in Nano Materials.

Energy research at the University is focused in the Center of Excellence for Strategic Energy and Environmental Informatics. The center builds upon extensive capabilities in industrial and building energy informatics, air and water environmental impact analyses, geospatial information systems, and environmental remediation technology to develop large scale analysis tools for strategic energy and environmental management. Energy focus areas include: Industrial assessment Center and Building Energy Center; sustainable environmental technologies; environmental engineering and renewable and clean energy.

Additive Manufacturing is fast becoming a revolutionary breakthrough in component manufacturing. It is currently projected that additive manufacturing technology could result in a 50 percent cost reduction as compared to conventional polymeric manufacturing methods. This savings is principally derived from the fact that Additive Manufacturing processes or Direct Digital Manufacturing methods do not require tooling or molds to fabricate parts, thus a huge savings in upfront capital costs and timing. Consequently, Additive Manufacturing is rapidly transitioning from the “Rapid Prototyping” paradigm to a means of producing fully functional end-use parts. A 2011 industry market assessment, sponsored by the Ohio Polymer Strategic Council, calls out Additive Manufacturing as a key strategic technology to build Ohio’s polymer industry in the areas of advanced materials, product design, and manufacturing.

Sinclair Community College is a leader in advanced engineering and manufacturing solutions. With its 1,500 square-foot model factory, Sinclair’s Advanced Integrated Manufacturing (AIM) Center offers state-of-the-art, leading edge technology and equipment, along with on-site expertise, to assist companies with Lean and Six Sigma process improvement, rapid prototyping, and CNC programming and more. The AIM Center is equipped with many pieces of equipment used for hands-on training and process improvement. Of particular importance in this area are the 3D Printers/Rapid Prototyping Machines. The University of Dayton has contributed financially to the AIM Center since its establishment.

The University of Dayton has enhanced the viability of Additive Manufacturing by pioneering the development of nano-enhanced polymers and composites for aerospace applications. These developments provide new materials with significant improvements in strength. UD has been recognized by the Ohio Board of Regents as a Center of Excellence in Advanced Materials. In fact the State of Ohio, under the Third Frontier Program, has recently awarded UD a three-year contract to develop advanced nano polymers for Additive Manufacturing processes. GE Aviation and Honda are also key partners in this program.
The UD/Sinclair engineering co-op program is in a position to transition and leverage our team’s expertise in Additive Manufacturing in order to train engineers in capturing rapidly emerging additive manufacturing opportunities throughout an Ohio-based supplier value chain. The key co-op challenges are 1) educate engineering students regarding the advantages of using additive manufacturing processes for novel designs, 2) determine material property requirements, 3) formulate new nano-enhanced thermoplastics, and 4) optimize the process parameters for the Stratasys fused deposition modeling equipment.

2. Student attraction/retention/completion

The University of Dayton engineering faculty and staff develop the whole person. Their inspiring, caring and giving spirit has helped the school achieve the distinction of having one of the highest retention and graduation rates in engineering in the country. The fall 2012 engineering class of 555 new students and 1,886 total undergraduate students is the largest, most diverse and talented engineering class in UD history. The entering class has an average SAT of 1248, ACT of 29 and GPA of 3.78/4.00. Approximately 50 percent of the 2011 enrollment was from outside the state of Ohio resulting in the possibility of not only retaining current Ohio residents, but actually increasing Ohio residency by bringing in students from outside of the state. The 2011 exit survey of graduating students shows five out of five out-of-state students who co-oped in Ohio accepted full time positions in Ohio after graduation. The School of Engineering has a first year retention rate of 90 percent. Seventy-five percent of all students graduate within six years of entering UD. The School of Engineering four-year graduation rate is greater than 70 percent. The minority graduation rate is comparable to the overall graduation rate of 70 percent.

Endowed professors contribute expertise and academic leadership in areas of critical, national importance that includes energy, Ladar and optical communication, nano materials, sensors and bio engineering. Five of the programs have been named State of Ohio Centers of Excellence in Education and Research in Emerging Technologies.

The Sinclair students participating in this program will have the opportunity to complete one co-op term prior to their transition to the University of Dayton. We envision this program will enhance what is already a nearly seamless integration of the programs. UD annually receives 20 – 50 engineering/engineering transfer students from Sinclair. We are now planning to expand the offerings at Sinclair’s Course View Campus to include upper division courses from UD.

3. Student post-credential employment

Within six months of graduation, 95 percent of the 2011 graduates from UD and 98 percent of engineering graduates reported being employed, working on an advanced degree or entered in a service program. The University recruits globally with over 40 percent of the incoming 2011 class coming from outside of Ohio. While not all of the graduates stay in Ohio after graduation, it does present an opportunity to bring high-tech employees into the state.

Between 2007 and 2012, 62 percent of co-op students received offers from the employer they co-oped with; 71 percent of the students accepted offers from the co-op employer; and 19 percent of the co-op students who accepted offers were non-Ohio residents prior to arriving at the University of Dayton. One-hundred percent (five out of five) of the non-Ohio students who co-oped in Ohio and responded to the 2011 engineering exit survey took full-time positions in Ohio after graduation.
4. Plans & budgets for sustaining the program beyond state money
The dedicated School of Engineering co-op staff, as well as the Dean’s office and faculty will continue to collaborate with the industry partners to seek further funding opportunities to extend the new co-op positions beyond 2013. The School of Engineering and each of the departments, Chemical, Civil, Electrical and Computer, and Mechanical, maintains an Advisory Board representing all aspects of the engineering industry. The Dean of Science, Mathematics and Engineering at Sinclair has been a member of this board. Collaborations with members of the UD advisory boards and the Sinclair Career Services office will be used to identify continued funding for these co-op positions within the state.

5. Financial and performance metrics reporting system to Regents
At the completion of each co-op work term, the student is required to write a report about his/her experiences and feedback about the employer. The employer completes a performance evaluation, which is discussed with the student before the end of the work term.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Baseline (2011/2012)</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total co-ops</td>
<td>501 placements 377 students</td>
<td></td>
</tr>
<tr>
<td>Ohio employers</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Non Ohio employers</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Ohio resident student co-ops</td>
<td>274</td>
<td></td>
</tr>
<tr>
<td>Non Ohio resident student co-ops</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Women co-op students</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Minority co-op students</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Average co-op salary</td>
<td>$16.86/hr.</td>
<td></td>
</tr>
<tr>
<td>Co-ops placed in Aerospace and Aviation Industry</td>
<td>106*</td>
<td></td>
</tr>
<tr>
<td>Co-ops placed in Additive Manufacturing Industry</td>
<td>150*</td>
<td></td>
</tr>
<tr>
<td>Co-ops placed in Energy Industry</td>
<td>30*</td>
<td></td>
</tr>
<tr>
<td>Co-ops placed in Advanced Manufacturing Industry</td>
<td>136*</td>
<td></td>
</tr>
<tr>
<td>Co-ops placed in Polymers Industry</td>
<td>32*</td>
<td></td>
</tr>
<tr>
<td>Co-op graduates offered position from co-op employer</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Co-op graduates who accepted off from co-op employer</td>
<td>19</td>
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</tr>
<tr>
<td>Average starting salary of engineering graduate</td>
<td>$53,000</td>
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</tr>
<tr>
<td>Average starting salary of engineering co-op graduate</td>
<td>$60,725</td>
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</tbody>
</table>

*Some employers have multiple industrial interests and are counted in more than one focus area
On the form, the student has the opportunity to make comments. These documents are shared with the student, employer, UD Engineering Co-op office, and the student’s academic department chair. After the reports and data have been collected at the completion of each term, a report will be prepared summarizing the information using the metrics in the table below. The report will be sent to the Board of Regents by the first of March, July, November and February.

6. Budget ROI and good use of public dollars

One hundred percent of the grant funding will go towards increasing co-op positions by 20 and aligning those positions with JobsOhio Key Industries. All co-ops participating in the program will be placed with employers in one of the three target industries of Energy, Aerospace and Aviation and Additive Manufacturing. These three target areas align with the curriculum and ongoing research at the University of Dayton. UD offers undergraduate concentrations in Aerospace Engineering and Energy Systems. The co-op experience is complemented on campus with capstone projects using the $4 million Innovation Center, where students tackle real-world problems. Students may also receive real-world experience through the ETHOS program, where students travel and follow the Catholic, Marianist tradition of service by preparing students for lives of leadership and service ready to make an impact.

7. Feedback loop between employers, educators and students

The UD Engineering Co-op Program has a feedback process whereby the employers and students share information on all co-op terms. Students are required to write a report at the end of the term that is reviewed by both the UD co-op office and the employer. Employers are encouraged to perform both midterm and end of term reviews with the students, as well as feedback to the UD co-op office at the end of the term. All first-work term students are contacted by the co-op office in the middle of the semester to see how the work term is going. The co-ops complete an exit interview with one of the UD co-op staff at the end of the first work term. For the Sinclair students, these reports will be sent to the Career Services Office.

8. Impact to key industry and local, regional or state economy

The three focus areas of Additive Manufacturing, Aerospace and Aviation, and Energy align with key JobsOhio industries. Additive manufacturing aligns with both Advanced Manufacturing and Polymers, two of the key JobsOhio industries. Aerospace and Aviation has been and will remain a key target industry for the University. Advantage is taken of the close proximity to Wright Patterson Air Force Base and General Electric Aviation as well as NASA Glenn. The investment of $51 million by General Electric and local partners in the EPISCENTER on the University of Dayton campus exemplifies the commitment of the Aerospace and Aviation industry to both the local region and the University of Dayton. UD ranks 1st in Ohio and 11th in the nation for federally funded engineering research (NSF 2010). Based on the exit survey of the 2011 engineering class, the average starting salary of a graduate is $53,000. If all 20 of the new co-op positions were to stay in Ohio after graduating, the impact to the Ohio economy would be over a $1 million per year. The 2011 exit survey also showed that 100 percent of the out-of-state co-op students who co-oped with Ohio industries took full-time positions in Ohio after graduation.

The Dayton Development Coalition predicts there will be 8,000 new jobs in key areas including Aerospace Research and Development and Advanced Materials and Manufacturing. The American Solar Energy Society predicts over 174,000 new Ohio jobs by 2030 in the energy
area. Additive manufacturing consultant Wohler’s Associates expects Additive Manufacturing to continue strong double digit growth for several years.

EMPLOYERS (25)

1. Capacity

According to the Dayton Development Coalition website, “The Dayton Region offers globally competitive industry strengths in the following sectors: Aerospace Research and Development; Human Sciences & Health Care; Information Technology; Advanced Materials & Advanced Manufacturing.

2011 was a significant year for Ohio’s economic development efforts. More than 40 recruitment, retention, and expansion projects stimulated economic development across the Dayton Region creating more than 2,600 jobs, $270.2 million in capital investment, and 1.2 million square feet in commercial real estate.

Due to the strong performance in 2011, the Region’s strategic industries are projected to account for nearly 8,000 jobs over the next five years.

The website also states, that in the Aerospace and Aviation industry throughout the region in research, development, and commercialization there is over $380 million per year invested in Fuels, Combustion, Chem/Bio and Remote Sensing; over $110 million per year invested in sensor fusion/data management, modeling and simulation and RFID; over $125 million per year invested in Alternative Energy, composites and nano-materials; and over $100 million per year invested in Human Performance and Human Factors. There is over $10 billion invested per year in Ohio in aerospace and aviation research and development at over 1,200 sites throughout the state.

The American Solar Energy Society predicts there will be over 174,000 new jobs in Ohio in the Energy sector by 2030. According to the JobsOhio website a recent economic impact study suggests that over the next four years, as many as 200,000 jobs could be created as a result of recent findings in the Utica shale fields.

Additive Manufacturing is a fast growing, emerging industry that UD and several Ohio industries, PolyOne, Thogus, ATK and Honda of America, have been collaborating on. According to a 2012 report on additive manufacturing trends published by additive manufacturing consulting firm Wohler’s Associates, “The compound annual growth rate (CAGR) of Additive Manufacturing was 29.4 percent in 2011. The CAGR for the industry’s 24-year history is 26.4 percent. The Additive Manufacturing industry is expected to continue strong, double-digit growth over the next several years. By 2015, Wohlers Associates believes that the sale of Additive Manufacturing products and services will reach $3.7 billion worldwide, and by 2019, surpass the $6.5 billion mark.” The University of Dayton and its collaborators have positioned themselves to make Ohio a leader in this quickly emerging industry.

A search of Monster.com for job openings in Ohio revealed: greater than 1,000 engineering openings; 94 Aerospace Engineer openings; 50 Aviation Engineer openings; 152 Energy Engineer openings; and 96 Advanced Manufacturing Engineering openings.

2. Work assignment quality

For the 2011-2012 academic year, UD’s School of Engineering placed 377 co-ops with employees earning an average salary of $16.86 per hour. At the conclusion of a co-op term, University of Dayton
Ohio Means Co-ops Proposal
students provide feedback to the University through a written report and a one-on-one meeting with the co-op staff. In addition, the employer provides feedback to the student and University through a performance evaluation form. This feedback loop assures that students have a successful and valuable co-op experience. The engineering co-op program maintains a data base of potential co-op employers that is updated regularly as new industry partners are sought and found. Two of the industries committed to adding new co-op positions, PolyOne and ATK, currently have eight openings listed on their websites for engineers in Ohio.

3. Position pay

All University of Dayton engineering co-op positions are paid. During the 2011-2012 academic year, the School of Engineering placed 377 co-ops with an average salary of $9,625 per term or $16.86 per hour. The salaries for this period ranged from $13.50 to $21 per hour. It is anticipated that all salaries under this proposal would fall within this range.

4. Functional areas

Of the twenty positions being proposed, eight to ten positions will be placed in the Aerospace and Aviation sector consisting of electrical and mechanical engineers. Five to seven positions will be placed in the Advanced Manufacturing industry drawing students from chemical, industrial and mechanical engineering as well as engineering technology. The Energy industry will receive four to six new co-op positions from civil, mechanical and electrical engineering.

5. Demand for technology in the industry

A search of Monster.com for job openings in Ohio revealed: greater than 1,000 Engineer openings; 94 Aerospace Engineer openings; 50 Aviation Engineer openings; 152 Energy Engineer openings; and 96 Advanced Manufacturing Engineering openings.

The Dayton Development Coalition predicts there will be 8,000 new jobs in key areas including Aerospace Research and Development and Advanced Materials and Manufacturing. The American Solar Energy Society predicts over 174,000 new Ohio jobs by 2030 in the Energy area. Additive manufacturing consultant Wohler’s Associates expects Additive Manufacturing to continue strong, double-digit growth for several years.

The ODJFS annual job opening estimates for the period 2008 through 2018 include: 346 Mechanical Engineers; 229 Civil Engineers; 114 Electrical Engineers; and 1,182 Computer Software Engineers.

INSTITUTION OF HIGHER EDUCATION

1. Capacity

The University of Dayton School of Engineering fall 2012 enrollment set a record for the largest, most diverse and talented class in the history of the school with 1,886 full-time undergraduates including 555 first-year students. The average SAT and ACT for the entering students were 1248 and 29 respectively with an average GPA of 3.78/4.00.

The School of Engineering performs more sponsored engineering research than any Catholic school in the country and is second only to The Ohio State University for sponsored engineering research in Ohio. The faculty and staff develop the whole person. Their inspiring, caring and giving spirit has helped the school achieve the distinction of having one of the highest retention and graduation rates in engineering in the country. The university maintains a five-year
Endowed professors contribute expertise and academic leadership in areas of critical, national importance that include Energy, Ladar and Optical Communication Nano Materials, Sensors, and Bio Engineering. Five of the programs have been named State of Ohio Centers of Excellence in Education and Research in Emerging Technologies: High Performance Materials; Advance Energy; Center of Excellence in Advanced Transportation and Aerospace; High Performance Materials; and Optoelectronics and Sensors.

The School of Engineering has ABET accredited undergraduate programs in Chemical, Civil, Electrical, Computer and Mechanical Engineering. Within the School of Engineering, there is also an accredited undergraduate Engineering Technology program with major areas of study in Electronics and Computer, Global Manufacturing, Industrial, and Mechanical Engineering Technology. The School of Engineering also has Masters programs in Aerospace Engineering, Bioengineering, Chemical Engineering, Civil Engineering, Engineering Management, Management Sciences, Engineering, Electro Optics, Electrical Engineering, Materials Engineering, Mechanical Engineering and Renewable and Clean Energy. Doctorate programs in the School of Engineering include Aerospace Engineering, Electrical Engineering, Materials Engineering, Mechanical Engineering, and Electro Optics.

2. Positions transcripted/available for credit

Co-ops are required to register and pay a $65 fee for each co-op term. The student maintains full-time student status at the University while on a work term. The co-op term is documented on the student's transcript with either a satisfactory or unsatisfactory. In order to receive a satisfactory a student must complete the co-op term as well as a report and exit interview with the School of Engineering co-op office. The co-op office keeps a record of industry partners and successful co-op experiences for use in further collaborations.

3. Outreach to underrepresented in the area

During academic year 2011/2012, of the 377 students enrolled in co-op 103 were women and 25 minorities. The University of Dayton School of Engineering has several special programs for underrepresented engineering populations.

The STEM Bridge to Success program brings incoming minorities to campus for a week of preparation in core STEM courses prior to the beginning of the school year. During the 2012 summer, 34 incoming engineering students participated in the program. Support from the National Science Foundation, Ohio Science and Engineering Alliance, Messer Construction, the Virginia W. Kettering Foundation, the School of Engineering and the College of Arts & Sciences has made the program possible the past six years.

The Minority Engineering Program (MEP) at the University of Dayton offers minority engineering students an arena to collaborate and communicate where they can: engage in a summer residential program; participate in workshops for academic success; focus on professional development at bi-weekly workshops; collaborate with upper class MEP students at study tables; enroll with MEP peers in the same math, chemistry and physics courses; engage in peer-to-peer mentoring; and receive individual advising with the MEP director. Students who participate in MEP and meet academic standards receive a $3,000 scholarship per year.
The University of Dayton Women Engineering Program (WEP) recruits top female students into engineering majors and then ensures the highest level of retention possible through social and professional events as well as academic support systems. Special WEP events throughout the year include: welcome social; dinners with women engineers; professional speakers; speed mentoring with professionals; attend regional and national Society of Women Engineers Conference; women in science and engineering living learning community; Girl Scout Aerospace Badge Day; and Women in Engineering summer camp.

4. Improvements to existing or new academic programs

Improvements to three on-going academic/research programs are proposed.

Currently UD has a strong program in the emerging field of Additive Manufacturing. UD already has strong ties with the additive manufacturing industry throughout Ohio. This proposal will allow three to five new co-ops to be placed with these industry partners. The Additive Manufacturing program lies within the Ohio Board of Regents recognized Center of Excellence in Advanced Materials.

In the area of Aerospace and Aviation, UD has a strong tie with Wright-Patterson Air Force Base, General Electric Aviation and NASA Glenn Research Center. Endowed professors contribute expertise and academic leadership in two areas of critical, national importance: Ladar and Optical Communication Nano Materials and Sensors. Five State of Ohio Centers of Excellence in Education and Research in Emerging Technologies support the Aerospace and Aviation area: High Performance Materials; Advance Energy; Center of Excellence in Advanced Transportation and Aerospace; High Performance Materials; and Optoelectronics and Sensors. The University offers special curriculums with expertise in combustion and fuels through the von Ohain Fuels and Combustion Center. The investment of $51 million by General Electric and local partners in the EPISCENTER on the University of Dayton campus exemplifies the commitment of the Aerospace and Aviation industry in both the local area and the University of Dayton. UD ranks 1st in Ohio and 11th in the nation for federally funded engineering research (NSF 2010). This grant will allow UD to place an additional eight to ten students in new co-op positions throughout the state.

UD grants Ph.D. degrees in Mechanical and Chemical and Material Engineering with Energy Systems emphasis, as well as Masters’ degrees in Renewable and Clean Energy. The Masters program, which was jointly founded with Wright State University and in collaboration with the Air Force Institute of Technology, is one of only two such programs in the United States. The undergraduate program offers an Energy Systems concentration with more than 40 sponsored projects for Ohio industries oriented toward sustainable energy annually. Through this grant an additional six to eight co-op positions will be established throughout the state of Ohio.

5. Plan to connect employers and Students via web, communications and marketing

The proposed Engineering co-op positions will be filled through the Engineering Co-op Office, a team of dedicated, caring professionals committed to providing excellent career-related resources, programs, services and opportunities that build confidence and job search skills. The Engineering Co-op Office serves as a connecting point between students, faculty, alumni and employers in an increasingly diverse and globally influenced job market. The office is the co-op student’s leader in career planning and preparation, balancing the latest technology with personal guidance. The staff includes a full-time Program Manager, a full-time Senior Administrative Assistant, a part-time Co-op/Job Development Coordinator, and a part-time Co-op Coordinator who all focus on placing engineering students in co-op positions.
The Sinclair Career Services office will identify those students who are interested in the program and connect them with the UD Engineering Co-op office. Sinclair will track their students in the program and UD will share the student and employer reports. Students are encouraged to make an appointment with a career advisor who can assist with résumé preparation, interviewing tips, job strategy, and other aspects of the job search for those students who are seeking internships, part-time, or full-time employment.

6. Outreach to small, medium and large business enterprises

Twenty-two companies were contacted and asked to submit letters of commitment for the program. Those contacts resulted in eleven new commitments, six in Aerospace and Aviation and four in Advanced Manufacturing. Several companies expressed interest, but were unable to meet the short deadline. UD plans on filling the eleven positions committed to in the letters of commitment, plus an additional ten co-ops with new industry partners.

The 22 companies contacted included small businesses of less than a dozen employees and large Fortune 500 companies. The Letters of Commitment that have been received include three positions with small businesses and four positions with mid to large companies. Two areas to be further explored for additional positions include both small and large sized businesses in Aerospace and Aviation and Energy. On-going discussions with GE and Cornerstone Research are very promising. The University has many contacts throughout the state in Energy, but time restraints limited the outreach to this particular industry.

BUDGET NARRATIVE

The budget includes salary for 20 new co-op positions. The co-op salary was based on the average salary for a 2011/2012 UD co-op of $16.86, plus a three percent increase ($17.37) and was calculated for a full time position of 40 hours a week and 52 weeks a year. The salary for the co-op position will be shared between this grant and the employer.

The University of Dayton School of Engineering Co-op office will cost share a new position with the Ohio Board of Regents to coordinate between the industry partners, the students, and the faculty to assure the co-op experience is beneficial to the student. This position will also coordinate with the Sinclair Career Services office to support Sinclair students participating in the program.

The University also requests $10,000 to cover the cost of printing brochures for marketing purposes. This material will inform both UD and Sinclair students of the opportunities. In addition, material will be prepared to market this program and its continuation to Ohio companies

Travel costs are included to recruit industry partners from across Ohio and to attend Board of Regent Meetings in Columbus. The estimate of $2,350 is based on travel for two people as outlined:

- 1 trip to Cleveland for two nights and three days, $1,000;
- 2 single day trips to Cincinnati, $200;
- 3 single day trips to Columbus, $450;
- 1 trip to the Lima/Toledo area for one night and two days, $700.

In addition, the University of Dayton is contributing $72,185 to the program in indirect costs, which are not recoverable per the solicitation.
## BUDGET

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<th>Private Funds</th>
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(All non Regents funds must be supported by a signed commitment letter.)

Additional Contribution:

Indirect Costs Incurred: $103,543

Recovered Indirect Costs: $ 31,357

Indirect Costs Shared $ 72,185
APPENDICES

Sinclair Letter of Collaboration

Letters of Commitment

ISSI
ATK
CACI
Midmark
PolyOne
Paul C Kraus and Associates

Key Staff

Riad Alakkad, Associate Dean, School of Engineering
Nancy Forthofer, Program Manager, Co-Operative Education, School of Engineering
John Weber, Associate Dean, School of Engineering

School of Engineering Organizational Chart
Sinclair Letter of Collaboration
October 19, 2012

John G. Weber  
Associate Dean for Graduate Studies  
University of Dayton  
300 College Park, Dayton, OH 45469

Re: Letter of Collaboration for Ohio Means Internships and Co-ops

Dear John:

Sinclair Community College is pleased to collaborate with the University of Dayton on an Ohio Means Internships and Co-ops proposal to the Ohio Board of Regents. The University of Dayton and Sinclair are ideal partners for this collaboration, based on our long-standing successful engineering articulation agreement.

The collaborative project will benefit our dual enrollment and transfer students by providing them with co-op opportunities and meaningful relationships with potential employers before beginning their junior year. This new collaboration will enhance an already seamless integration of our programs.

In support of the collaboration, we commit to the following:

1. Identify students who are participating in the transfer program with UD
2. Provide marketing materials supplied by UD to notify students of the co-op opportunity
3. Refer interested students to UD’s School of Engineering co-op office
4. Support student/employer evaluation of the co-op experience

The point of contact for Sinclair will be Matt Massie, Manager of Sinclair’s Career Services Center. Mr. Massie has over twelve years of experience in higher education, working primarily in the area of Career Services. He has expertise in assisting college students to explore and identify careers and equipping them with the tools necessary to successfully gain employment, including experiential learning.

We look forward to this important collaboration with the University of Dayton.

Sincerely,

Steven L. Johnson, Ph.D.  
President and CEO

www.sinclair.edu
Letters of Commitment
University of Dayton  
School of Engineering  
300 College Park  
Dayton, OH 45469-0249

October 10, 2012

Dear Ms. Obringer

Innovative Scientific Solutions, Inc. is pleased to provide this letter of support for the University of Dayton’s proposal in response to the Ohio Means Internships and Co-ops program. ISSI is a Dayton-area small business, focused on aerospace research and development primarily in support of the Aerospace Systems and the Materials and Manufacturing Directorates of the Air Force Research Laboratory. In addition to our base-support business, ISSI has a highly successful commercial sales group focused on aerodynamic, hydrodynamic, and contact force instrumentation serving military, industrial and academic customers world-wide. As a result of the diversity of our business, ISSI can offer students with a variety of engineering research, information technology, and business experiences, tailored to their educational goals. ISSI routinely participates in student summer internship programs, both at our Headquarters and Wright-Patterson AFB locations.

ISSI is prepared to provide 100% matching funds for 2-5 co-op/internship positions during the duration of the program. We are prepared to evaluate each participating student’s performance in their co-op/internship position, both from the perspective of the student’s institution of higher education and ISSI. ISSI is forecasting continued growth of our workforce and views participation in this program as an important mechanism to attract and evaluate additional workforce talent.

Larry P. Goss, Ph.D.  
President
September 26, 2012

To Whom it May Concern:

Growth in the materials and composite structures business has lead ATK Dayton to staff more technicians and manufacturing engineers over the last several years. We’ve experienced a quicker time to effective contribution from entry level engineers we’ve hired who have had an internship or co-op experience related to aerospace structures than those who have not.

ATK Dayton would use a co-op from the University of Dayton to learn our processes by doing hands-on operations, assisting engineers, program managers and lead technicians in the fabrication and testing of our products. By utilizing co-ops, it would enable ATK Dayton to complete much of our lower-level engineering work in a more cost-efficient way there by freeing up the time of our engineers to work on more complex tasks. All the while providing valuable experience to the co-op.

We would expect the student to be available full-time for a duration of 2-3 months. Based on our projections, this co-op position ideally will be staffed more than one co-op session by the same student with the ultimate goal of potentially hiring the student full-time post-graduation.

Typically, ATK Dayton has paid interns/co-ops in the range of $14-$16 per hour. With assistance from the State of Ohio, the burden would be greatly reduced and thereby affording us the opportunity to bring back a successful co-op for a subsequent term.

Regards,

Kevin Comer, SPHR
Human Resources Business Partner
ATK Aerospace Structures - Military Systems
(937) 490-4160
October 11, 2012

Dr. Tony Saliba, Dean of Engineering
University of Dayton
300 College Park
Dayton, OH 45469

Subject: Letter of Commitment for the University of Dayton - Ohio Means Internships & Co-ops Team

Dear Dr. Saliba:

CACI sustains an exceptional record of success by providing professional services and IT solutions needed to prevail in the areas of defense, intelligence, homeland security, and IT modernization and government transformation. We deliver enterprise IT and network services; data, information, and knowledge management services; business system solutions; logistics and material readiness; C4ISR solutions; cyber solutions; integrated security and intelligence solutions; and program management and SETA support services. CACI solutions help federal clients provide for national security, improve communications and collaboration, secure information systems and networks, enhance data collection and analysis, and increase efficiency and mission effectiveness. A member of the Fortune 1000 Largest Companies and the Russell 2000 index, CACI provides dynamic careers for approximately 14,700 employees working in over 120 offices in the U.S. and Europe.

In support of the University of Dayton (UD) Ohio Means Internships & Co-ops Team, CACI’s Business Enterprise and Custom solution Division is committing to create two additional co-op positions starting in FY13. A co-op position may be filled by more $29,400 per year which will be 50% funded by this program.

CACI currently supports the United States Air Force on the Purchase Request Process System (PRPS) program. Co-op students could fill a vital role in supporting development of our computer simulation based training modules and in our component integration testing as well mentoring with our software development team in the creation of this Java based software solution.

Our Business Enterprise and Custom Solutions Division has supported student hiring in the past under the State of Ohio’s Third Frontier Program. We have placed several students into jobs that provided a diverse background in Defense IT and Business Systems solutions and have successfully hired them into available positions where they qualified. These student interns have had a positive contribution on the many programs that they have supported. We look forward to supporting the University of Dayton in the future.

Sincerely,

[Irv D. Ramirez]
Vice President and Division Manager
Business Enterprise & Custom Solutions Division

Enclosure: CACI Business Enterprise & Custom Solutions Funding Commitment
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October 11, 2012

Nancy K. Zelina  
Coordinator, Cooperative Education  
School of Engineering  
University of Dayton  
300 College Park  
Dayton, OH 45469-0227

Dear Nancy Zelina:

Re.: 2013 Ohio Means Internships & Co-ops Program

On behalf of Midmark Corporation, I am pleased to share our intent to participate in the implementation of the proposed project led by the University of Dayton. Depending upon the alignment of purpose and our corporate strategy, we anticipate being able to support up to two additional students per year over our current level in the fields of advanced manufacturing and information technology. The estimated increased value of this support would be approximately $33,280 per year. However, Midmark Corporation reserves the right and responsibility to increase or decrease the number of students and related wages depending on market conditions and employment needs.

Midmark Corporation brings efficient patient care to millions of people each day in the human and animal healthcare industries around the world. The most trusted name in medical, dental and veterinary healthcare equipment solutions, Midmark is committed to providing innovative products and services for the healthcare professional, integrating value-added technology into everything it does. With over 1,400 teammates worldwide, Midmark is dedicated to making a positive difference in the practice of healthcare. Headquartered in Versailles, Ohio, Midmark Corporation maintains four subsidiaries in the United States. To support international healthcare markets, it holds subsidiaries in France, India and Italy.

Please contact me, if I can provide any additional information.

Sincerely,

Aaron R. Guggenbiller  
Senior Human Resources Generalist
October 11, 2012

Dr. Tony Saliba, Dean School of Engineering  
The University of Dayton Research Institute  
300 College Park  
Dayton, Ohio 45469-0160

Re: “JobReady Interns & Co-ops for Ohio Industry” Proposal

Dear Dr. Curran,

PolyOne Corporation is pleased to provide a Letter of Support for the proposal entitled “JobReady Interns & Co-ops for Ohio Industry” being submitted by The Ohio State University to the Ohio Board of Regents Ohio Means Internships & Co-ops Program. We have reviewed documents describing the intent of the Program as well as the basic objectives of the proposal.

Energy and Automotive and the associated supply-chains are among the technologies and markets that represent areas of major economic growth potentials for our company and the State in total. We constantly seek new talent and skills to fill the ever-changing demands for our business. This proposal seeks to provide students with more applied skills which will increase the rate at which they may become most productive in meeting the challenges of the dynamic business environment. We applaud the efforts to better align curriculum and training of students and making them more ‘job ready’ and we expect this will also reduce our normal training load of new hires. The added skills outlined in the proposal are necessary and differentiated skills which will advance the careers of the students as well as better meet the demands of our business. Higher quality learning experiences definitely supports the goal of retaining students in Ohio.

This proposed “JobReady Interns & Co-ops” proposal is of great interest to PolyOne Corporation because PolyOne’s Corporate Technology department has used interns in its Scientific Development, Process Engineering and Polymer Diagnostics groups for many years. We have enjoyed the Ohio Third Frontier Program support of these students for several years. We look forward to hiring interns and co-ops again as part of our Technology Leadership Development Program. We agree to identify the training modules which best suits the intern/coop skill needs of our company as well as recruit interns and coops students as we have openings. A projected number of intern positions we expect to create is 1 or 2 at a total cost of $42,000 to $80,000 per year per intern depending on whether the students are undergraduate or graduate students during the time period of the proposal. We look forward to participating in this innovative program by providing feedback to strengthen curriculum and training plans.

Thanks for the opportunity.

Sincerely,

Thomas W. Hughes  
Program Director, Open Innovation
October 8, 2012

Dr. Tony Saliba
Dean of Engineering
University of Dayton
300 College Park
Dayton, OH 45469

Subject: Letter of Commitment for the University of Dayton - Ohio Means Internships & Co-ops Team

Dear Dr. Saliba,

PC Krause and Associates, Inc. (PCKA) is a small business with offices in Indiana and Ohio focused on the design and analysis of integrated aerospace propulsion, power, and thermal systems. Over the past eight years, PCKA in collaboration with the Air Force Research Laboratory / Aerospace Systems Directorate (AFRL / RQ) has hired and trained 24 interns / co-ops that have worked at Wright-Patterson Air Force Base. In support of the University of Dayton (UD) Ohio Means Internships & Co-ops Team, PCKA is committing to hire one additional co-op student from UD starting in FY13. A PCKA co-op will earn up to $15,000 per year. It has been PCKA’s experience that most of these co-ops continue employment in the aerospace field upon completions, with several working for PCKA and AFRL. PCKA has found that this is an excellent tool for a small business to recruit talented student for future employment. PCKA looks forward to this opportunity to expand our co-op program.

Sincerely,

[Signature]

Eric Walters, Ph.D.
President

University of Dayton
Ohio Means Co-ops Proposal
Riad S. Alakkad, Associate Dean for Undergraduate Studies

1. **Name:** Riad S. Alakkad

2. **Academic Rank:** Lecturer (Full Time)

3. **Degrees with fields, institution and dates:**
   - B.C.E. Civil Engineering, University of Dayton, 1980
   - M.S. Civil Engineering, University of Dayton, 1981
   - Ph.D. Candidate Engineering, University of Dayton, 1985

4. **Faculty Service:**
   - 2011 – Present Associate Dean for Undergraduate Studies, University of Dayton
   - 2005 – 2011 Assistant Dean for Undergraduate Studies, University of Dayton
   - 1989 – 2005 Lecturer, Civil Engineering, University of Dayton
   - 1986 – 1989 Instructor, Civil Engineering, University of Dayton

5. **Consulting and patents:**
   - KIRBY Building system (Kuwait 1982) as Senior Structure Design Engineer.
   - Shaw Wise and Denaples 1990-1996 (Part time)

6. **Principal publications of last five years:**
   - Effective First-Year Engineering Program Improves Graduation Potential
     (Richard J. Kee and Riad Alakkad).

7. **Scientific and professional societies of which a member:**
   - American Society of Engineering Education (ASEE)
   - American Society of Civil Engineers (ASCE)
   - American Institute of Steel Construction (AISC)

8. **Honors and awards:**
   - Faculty Award for Excellence in Service SOE service Award 2001
   - Initiated to the Chi Epsilon (Civil Engineering Honors Society) 2003

9. **Institutional and professional service in the last five years:**
   - Faculty Board, Salary and Fringe Benefits Committees
   - School of Engineering First-Year Design Experience Committee
   - Advising ASCE (American Society of Civil Engineering) 1995 - present
   - Advising EDT fraternity (Epsilon Delta Tau) 1986 – present
Nancy Forthofer, Program Manager, Engineering Co-op Program

Nancy has worked at the University of Dayton for 38 years. She started out as an instructor in the School of Business and subsequently served as department Chair of the Associate Degree Secretarial Studies Program. In 1984, she moved to the Career Placement office. As an Assistant Director, she primarily worked in the Engineering Co-op area and Alumni Placement. Since the early 90’s, she has focused on the preparation and co-op job placement of Engineering students. From there, she became Associate Director of Cooperative Education overseeing all of the co-op students at UD. In 2006, the Engineering Co-op Program separated from the Career Services office and moved into the School of Engineering. Nancy currently serves as the Program Manager where she oversees and provides leadership for the Program and manages the daily operations, workflow, supervises staff, and develops strategic planning. She works closely with students, faculty, university administrators, and employers. She is a member of the Ohio Cooperative Education Association, the Cooperative Education and Internship Association, and a member of the UD Advisory Board for the Career Services office.
Dr. John G. Weber, Associate Dean for Graduate Studies

1. **Name:**
   John G. Weber

2. **Academic rank:**
   Visiting Professor, Electrical and Computer Engineering  
   Email: jweber1@udayton.edu

3. **Degrees with fields, institution, and date:**
   Ph.D.E.E. Electrical Engineering, University of Missouri(Columbia), 1971  
   M.S.E.E. Electrical Engineering, University of Missouri(Columbia), 1964  
   B.S.E.E. Electrical Engineering, St. Louis University, 1963

4. **Faculty Service**
   2011-Present  Associate Dean for Graduate Studies, University of Dayton, Dayton, OH  
   2005 – 2011 Assistant Dean of Engineering, University of Dayton, Dayton, OH  
   2001 – 2005 Visiting Professor of Electrical and Computer Engineering, University of Dayton, Dayton, OH

5. **Other related experience**
   1994 – 2001 Vice President and Chief Technology Officer, GreyStone Technology, Inc, San Diego, CA  
   1997 – 1999 Independent Consultant, San Diego, CA  
   1990 – 1992 Vice President and General Manager, Tactical Systems Group, Sverdrup Technology, Inc., Fort Walton Beach, FL  
   1982 – 1990 Chief Scientist, Ball System Engineering Division, San Diego, CA  
   1981 – 1982 Senior Engineer, TRW, Inc., San Diego, CA  
   1980 – 1981 Member of the Technical Staff, VERAC, Incorporated, San Diego, CA  
   1979 – 1980 Member of the Technical Staff, Simulation Technology, Inc., Dayton, OH  
   1963 – 1979 Officer, United States Air Force

6. **Consulting and Patents:**
   Advanced Electronics Design, Decision Sciences Corporation  
   Real-time Simulation for Installed Avionics Testing, Air Force Flight Test Center  
   Avionics Simulation for ATF (F-22) Avionics design, Lockheed  
   Development of the Integration Facility for Avionics System Testing, Air Force Flight Test Center

7. **Scientific and professional societies of which a member:**
   Member IEEE since 1963.  

8. **Institutional and professional service in the last five years:**
   University Accreditation Committee  
   Eta Kappa Nu Faculty Advisor  
   ABET coordinator for the School of Engineering

9. **Professional development activities in the last five years:**
   Leadership workshops
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