GOAL 1: The Pott College of Science and Engineering will attract students with a higher academic preparedness.

Strategies

One- to two-year strategies

- Provide input to the Office of Admissions and USI Foundation on the selection of scholarship recipients.
  - By coordinating efforts between the Department of Mathematics and the Office of Admissions, the ability to leverage mathematics scholarships, such as the Labhart/Olsen renewable scholarship, with other scholarships has led to successful recruiting of excellent students.
  - Scott Gordon, dean of Pott College, has met with Eric Otto, director of Admission, to discuss recruitment and selection strategies for scholarship recipients.
  - A team of faculty in the college submitted a proposal to the NSF S-STEM scholarship program in August 2011. This NSF-STEM scholarship program provided renewable scholarships and was awarded to students majoring in the STEM disciplines.
- Develop an effective college recruiting program in the Tri-State region
  - Forge strong relationships with science and mathematics teachers at area schools.
    - The Master of Science—Mathematics Teaching program has provided an avenue to establish relationships with area mathematics teachers as well as an opportunity to renew contact with alumni. The Department of Mathematics anticipates positive results through the recommendation of their students to USI.
    - A variety of contests bring elementary, junior high, and high school students, as well as their teachers to USI, and helps to forge strong relationships with Pott College faculty and students and STEM teachers at regional schools. These contests include:
      - State Mathematics Contest
      - Chemistry Mole Day Quiz Bowl
      - Earth Day Chemistry Bowl
      - SeaPerch Underwater ROV Competition
      - Robotics Competition
      - Tri-State Science and Engineering Fair
      - Chemistry Olympiad
      - Numerous STEM workshops have been held at USI and various locations throughout the region for K-12 teachers through the Southwest Indiana STEM (SwiSTEM) Resource Center.
    - Various STEM activities are available through USI for K-12 teachers and their students. The activities include:
      - High Altitude Balloon launches through the Department of Engineering
- Project Lead the Way Student, Teacher, and Counselor Conferences
- Field Trips by K-12 classes to USI to explore the STEM areas
- Providing hands-on laboratory experiences for the Helfrich Park STEM Academy
- Providing instructional assistance with STEM curriculum in K-12 classrooms through the SwiSTEM Resource Center
- The Ohio Valley STEM Educators Conference was developed to allow teachers to showcase best practices in the classrooms, observe and learn from USI faculty and staff and other STEM teachers, and network.
- Through the SwiSTEM Resource Center, regional K-12 teachers are able to use the Equipment Lending Service. Laboratory grade equipment, materials, and curriculum are available and delivered to K-12 schools in a fourteen county region.
- By offering CAP courses, CAP high school teachers develop relationships with Pott College faculty.
  - Engage Pott College students and graduates to recruit within their communities
    - Anecdotally, some alumni recruit within their communities.
    - Pott College students and student groups are involved in numerous K-12 outreach events. These interactions highlight opportunities available at USI to prospective students. These events include:
      - Boy Scout Merit Badge Day aided by many Pott College students and student groups
      - Chemistry Connection, a Girl Scout Merit Badge sleep-over assisted by the ACS Student Chapter and other student volunteers
      - Tri-State Science and Engineering Fair with the help of numerous Pott College students during project set-up and as judges
      - Robotics Competition organized by the ASME student group
      - SeaPerch Competition assisted by the IEEE student group
      - Mole Day Chemistry Bowl with assistance from chemistry students
      - Earth Day Chemistry Bowl with assistance from chemistry students
      - Pre-Health Professions Conference organized by the Pre-Health Professions Club
      - West Terrace Family Math Night
      - Glenwood Leadership Academy
      - College Mentors for Kids
      - 21st Century Scholars (Games, Activities, Problem Solving)
    - The Pott College has developed the Student Advisory Board. The board members participate in the college recruitment activities such as the STEM Expo, a special Southern Hospitality Day for students interested in STEM.
    - Scott Gordon, dean of Pott College, has met with Eric Otto, director of Admissions, to discuss the role USI students can play in recruitment.
      - Obtain a list of highly qualified students in Tri-State high schools
    - Activities such as the Chemistry Olympiad, Pre-professional Health Conference, student competitions listed previously, and Tri-State Science and Engineering Fair developed lists of local students that have a strong interest in STEM fields.
      - The Pott College works with the Office of Admissions electively invited prospective students to the STEM Expo.
- Additional Strategies
  - Pott College has worked with the Office of Admission to develop a STEM Expo, a special Southern Hospitality Day for prospective students interested in STEM disciplines.
  - Faculty members in all departments met with prospective students at the request of the Office of Admission.
  - The Honor’s Program was used as a recruiting tool.
The university promoted opportunities available to prospective students in which students may earn college credit at USI through AP examinations and/or CAP courses.

The Leadership and Mentoring in Engineering program impacted the regional Project Lead the Way students.

A Girls Only (GO) STEM residential camp brought young high school females interested in STEM to work with Pott College faculty and students and began to build relationships between all of these individuals.

Renewable STEM Scholarships were awarded annually to six students participating in the Tri-State Science and Engineering Fair.

Pott College and each department within the Pott College of Science and Engineering have up-to-date websites and brochures for their programs.

Pott College participates in USI day at Vincennes University and Ivy Tech Community College.

The Early Undergraduate Research Program gave first year students an opportunity to engage in undergraduate research early in their academic career and has been beneficial in recruiting prospective students to USI.

Pott College has developed a Facebook page as an additional mechanism to attract prospective students to USI. The page serves as a method to highlight achievements within the college.

Pott College sends out “The Periodic Review”, a biannual newsletter to all alumni, faculty, staff, and friends of the university. The newsletter highlights recent achievements of Pott College, its faculty, staff, students, and alumni.

Five-year strategies

- Distribute STEM scholarships annually from private gifts to the USI Foundation
  - Scott Gordon, dean of the Pott College, has met with the USI Foundation to discuss the development of STEM scholarships funded from private gifts. Unfortunately, the economic climate has prevented the college from moving forward on this strategy.

- Raise the visibility of the college as a viable choice for science and engineering
  - Pott College was selected as the lead institution for the ISTEM network. The SwISTEM Resource Center was developed as the outreach arm of Pott College.
  - Pott College and the SwISTEM Resource Center assisted with the planning and implementation of the Indiana Science Initiative (ISI). Pott College faculty assisted with kit selection for ISI.
  - Coordinated through the SwISTEM Resource Center, Pott College faculty and students have participated in STEM activities at Grandparents’ Night and Math/Science Nights at regional elementary schools to increase the visibility of Pott College to the community, especially for parents that have limited experiences with colleges and universities.

  - Pott College provides activities for Parents Weekend at USI.

  - The Pott College and the SwISTEM Resource Center has had a presence at state STEM teachers meetings such as the HASTI meeting, the Indiana Space Grant Consortium meeting, and the regional American Chemical Society meeting.

  - School field trips such as Washington Catholic, Perry Heights, Jasper Middle School, Mount Vernon Junior High, Helfrich Park STEM Academy and many others build interest in future studies for students at USI. These field trips are typically coordinated through the SwISTEM Resource Center.

  - Children are actively linked to STEM at USI through summer programs such as USI Summer Enrichment Day Camp and Super Summer Programs offered through the Office of Outreach and Engagement.

Metrics

- Incoming freshmen will have an average SAT score above 1100.
  - The average SAT score for Fall 2010 was 1067.
- An endowment will be established for scholarships to students majoring in STEM areas.
  - Dean Gordon has been meeting with USI Foundation personnel to discuss endowment possibilities.
GOAL 2: The Pott College of Science and Engineering will retain and graduate an increased number of highly prepared students each year, thereby favorably impacting the graduation rate within the college.

Strategies

One- to two-year strategies

• Develop a bridge program including “bridge advisors” within the college for under-prepared students.
• Provide assistance to ensure that more students are successful with the existing rigor of programs.
• Establish a student mentoring program.
• Educate potential majors about the opportunities and challenges of our programs.
• Create “high-powered” advising for students.

Five-year strategies

• Establish threshold requirements for a student to be accepted as a major in science and engineering programs. Create “pre-science” and “pre-engineering” designations for under-prepared students.
• Appropriately track and support nontraditional students.
• Ensure that qualified students are retained in the college.

Metrics

• The Pott College of Science and Engineering will increase the number of STEM majors to at least 1,200.
• The graduation rate within the college will increase.
• The Pott College of Science and Engineering will maintain the quality of its graduates as measured by scores on Major Field Tests and Fundamentals of Engineering exams.

One- to two year strategies

• Develop a bridge program including “bridge advisors” within the college for under-prepared students.
  o The Pathways Leading to Success in the Sciences (PLUSS) program has been developed and running for four years and has led to increased retention in the college.
  o The Department of Mathematics has redesigned offerings of lower-level mathematics courses to improve success rates. These offerings include bi-term courses, the Rapid Review course, and expanded offerings of MATH 100/101.
  o Pott College is piloting Course Redesign using the Emporium model for six sections of Math 100 during 2011-2012. After successfully piloting Course Redesign for two years, a total implementation began with the fall 2013 semester.
• Provide assistance to ensure that more students are successful with the existing rigor of programs.
  o Establish a student mentoring program. There is still discussion on the establishment of the student mentoring program but it may become a part of the Student Advisory Board strategic plan.
  o Educate potential majors about opportunities and challenges of our program
    ▪ Pott College started the STEM Expo, a special Southern Hospitality Day for students interested in STEM majors.
    ▪ Pott College participates in each Southern Hospitality Day throughout the year, offering sessions in science, pre-medicine, and engineering.
    ▪ Pott College participates each year in the Exploring Majors Fair held at USI. All college programs are represented at this fair.
    ▪ Pott College participates in USI Day at Vincennes University and at Ivy Tech Community College.
    ▪ Representatives from Pott College have participated in Celebrate Science Indiana in 2012 and 2013.
    ▪ Representatives from the Pott College have participated in SciCAN’s Career Exploration Day in 2012 and will Oct 2013.
  o Create “high-powered” advising for students
    ▪ The Pathways Leading to Success in the Sciences (PLUSS) program has been developed for under-prepared students.
Pott College has created an Advising Center staffed year-round to assist current and prospective students, especially those students in their first two years of college.

Pott College holds Advisor Development workshops annually to keep faculty members current with curriculum changes.

Pott College requires all students meet with an advisor each semester.

**Five-year strategies**

- Establish threshold requirements for a student to be accepted as a major in science and engineering programs. Create “pre-science” and pre-engineering” designations for under-prepared students.
- Appropriately track and support nontraditional students.
  - Each department offers courses in the evening, at USI Nearby locations, and online to accommodate the needs of nontraditional students.
- Ensure that qualified students are retained in the college.
  - Highly qualified third and fourth year students are encouraged to work in the Tutoring Center in Academic Skills or in the Supplemental Instruction program.
  - All departments have several “Major as Home” activities to bring students and faculty together.
  - Faculty assist students with searching and applying for co-op and internship opportunities.
  - The Early Undergraduate Research Program engages students early in their college experience. Students work on research projects with faculty mentors, visit regional STEM businesses and network with each other.
  - The departments are implementing alternative teaching methods and new course materials in the classroom. These include:
    - Applying new in-class assignments, activities, and laboratories;
    - Using on-line homework systems;
    - Using clickers in the classroom.
  - All departments have developed and are implementing an assessment plan to assess program and course contents to ensure high standards are maintained.
  - The Department of Mathematics has been redesigning the MATH 100 course and will pilot the redesigned course in fall 2011. (Full implementation of this program began with the fall 2013 semester.)

**Metrics**

- The Pott College of Science and Engineering will increase the number of STEM majors to at least 1100.
  - The number of undergraduate STEM majors in fall 2010 was 1117 students.

![Undergraduate Science and Engineering Majors](chart.png)

- The graduation rate within the college will increase.
  - The number of undergraduate degrees awarded in 2009-2010 academic year was 103.
The Pott College of Science and Engineering will maintain the quality of its graduates as measured by scores on the Major Field Tests and the Fundamentals of Engineering exams.

This exam has a score range between 120-200. The average score of the Spring 2011 USI cohort is 159.1 while the national average is 152.1 with a standard deviation of 7.9 and a median score of 152. The national score report is based on testing at 459 institutions between August 2005 and June 2010.

This exam has a score range between 200-800. The average score of the Spring 2011 USI cohort is 535.1 while the national average is 500 with a standard deviation of 100. The national score report is based on testing at 150 individual between 2005 and 2011.

This exam has a score range between 120-200. The average score of the Spring 2011 USI cohort is 152.2 while the national average is 147.3 with a standard deviation of 9.7 and a median score of 147. The national score report is based on testing at 210 institutions between August 2006 and June 2010.

This exam has a score range between 120-200. The average score of the Spring 2011 USI cohort is 153.9 while the national average is also 153.9 with a standard deviation of 9.4 and a median score of 154. The national score report is based on testing at 300 institutions between February 2004 and June 2010.
One- to two year strategies

- Promote Evansville more effectively to recruited faculty.
  - Each faculty interviewed is given a packet containing information about the Evansville area.
- Assist new faculty partners in finding good employment in the region.
- Enumerate the favorable aspects of Evansville.
  - Each faculty interviewed is given a packet containing information about the Evansville area.
- Provide candidates with Evansville viewbooks and magazines.
  - Each faculty interviewed is given a packet containing information about the Evansville area.
- Offer a better compensation package to recruited faculty.
- Creatively reduce teaching loads.
  - Department chairs have 6 hours of flexible load hours that they can allocate to faculty members to reduce their teaching load.
  - Faculty have the option of flexible teaching loads, i.e. 9, 9, 6 hour or 12, 9, 3 hours.
  - Pott College has been investigating the possibility of changing the 0.75 load hour : 1 contact hour to 1 load hour : 1 contact hour for laboratory courses.
  - Faculty can “bank” research load hours generated during previous semesters in order to receive up to 3 hour load reduction during a future semester.
- Establish monetary awards for excellence in teaching, scholarship, service, and advising.
  - The college has established monetary awards for excellence in teaching, scholarship, service, and advising. The first awards were selected in the 2010-2011 academic year. The winners of these awards will then be nominated for comparable university-wide awards.
- Other strategies
  - Research space and funding is available for new faculty to set-up their research laboratories.
  - Faculty can receive assistance with applications for internal and external grants.
  - Pott College provides internal grant opportunities with the Science and Engineering Research Grant Award and the Pott Foundation Faculty Development Award.
  - Pott College and the departments provide funds for travel to professional meetings.
  - Summer stipends are provided for faculty mentoring students in the Early Undergraduate Research Program.
  - Pott College has developed a mentoring program for faculty in their first three years at USI.
**Five-year strategies**

- Streamline and expedite the University recruitment and appointment process.
- Increase the diversity of faculty and develop networks for diverse faculty in the regional community.
- Acclimate and integrate new faculty into the college family.
  - Pott College holds a faculty picnic each fall.
  - New faculty are introduced at the first college meeting each semester.
  - New faculty are assigned a faculty mentor within Pott College.
- Recognize faculty for their accomplishments.
  - Faculty are recognized for their excellence in teaching, scholarship, service, and advising with newly created monetary awards created by Pott College.
  - Faculty are highlighted each semester in a variety of venues. These include:
    - Announcements at college meetings;
    - Stories on Pott College web page, the Facebook page, and department Facebook pages;
    - Articles in “The Periodic Review”, the biannual college newsletter;
- Highly publicize faculty accomplishments in USI publications.
  - Faculty accomplishments are highlighted in USI Today, USI Magazine, and the USI web page.

**Metrics**

- The Pott College of Science and Engineering will have an institutional endowment to provide support.
- The Pott College of Science and Engineering will recruit at least 50 percent of the college’s first-choice candidates for faculty positions.
- The average teaching load for tenure-line faculty will be 10 hours per semester.
GOAL 4: The Pott College of Science and Engineering will increase the array of programs offered within the college.

Strategies

One- to two-year strategies

- Ensure solid grounding of the proposed biochemistry, environmental science, and advanced manufacturing technology degrees.
  - A degree in Biochemistry degree has been established and approved.
  - A degree in Advanced Manufacturing has been established and approved.
  - A degree in Environmental Science has been established and approved for Fall 2013 in the Department of Geology and Physics.
- Complete the transfer of the applied computer science program (now offered by the College of Business) to a major in computer science (to be offered by the Pott College’s Department of Engineering).
  - A committee with faculty from the College of Business and Pott College was formed to evaluate the computer science major. The committee concluded that the transfer of computer science from the College of Business to Pott College is not feasible currently.
- Complete a survey of the STEM program needs in the Tri-State region.
  - The President’s Task Force has completed a survey of program needs in the region.

Additional Strategies

- Complete a survey of STEM program needs in the Tri-State region.
  - The President’s Task Force has completed a survey of program needs in the region.

Five-year strategies

- Build strong cases for new science and engineering programs
  - Complete a cost analysis for proposed new programs.
  - Gain support of the University Core Curriculum for new programs. Develop the curriculum for new programs, creating reassigned time for faculty who do so.
  - Explore creative options (i.e., tracks) for adding vital concentrations in academic programs.
  - A minor in Statistics housed in the Department of Mathematics has been approved.
  - The Actuarial track for the major in mathematics has been growing.
  - A minor in Biochemistry has been approved.
  - A minor in Elementary Science Teaching has been approved.
  - A minor is Elementary Mathematics Teaching has been approved.
  - A minor in Elementary/Middle-Level Mathematics has been approved.
  - A emphasis in Industrial Engineering is now available to students majoring in Engineering.
  - An emphasis in Mechatronics is now available to students majoring in Engineering.
  - Pott College participated with the ISTEM initiative by offering mathematics courses at the graduate level for persons teaching middle-level mathematics.
• Additional Strategies
  o All departments work to schedule all of the offerings required by other disciplines within Pott College on a timely basis with minimal course conflicts.
  o All departments assist in the development/modification of Science Teaching programs.
  o The Master of Science—Mathematics Teaching program has been approved.
  o Pott College works with the Department of Education and College of Health Professions in developing new courses.
  o The Department of Engineering is beginning to plan for “named” degree programs in engineering.

Metrics
• The Pott College of Science and Engineering will develop five new academic programs.
  o Three new undergraduate programs (advanced manufacturing, biochemistry, and environmental science) and one master of science program (mathematics teaching) have been developed.
  o New minors have been developed in biochemistry, elementary science teaching, elementary mathematics teaching, elementary/middle-level mathematics teaching, and statistics.
**GOAL 5: The Pott College of Science and Engineering will develop campus and community partnerships to enhance the learning opportunities for students within the college.**

**Strategies**

**One-to two-year strategies**
- Improve relationship-building in the community.
  - Establish a College Advisory Board.
  - Advisory boards have been established for the Pott College, the Department of Engineering, and the Advanced Manufacturing Program.
  - Create external communications for community partners and alumni.
    - Departments survey alumni and employers as part of their assessment programs.
    - The Periodic Review is sent to regional STEM businesses and alumni.
    - The Pott College Facebook page, the SwlSTEM Resource Center webpage and the SwlSTEM Facebook page are used to communicate events, workshops, etc. to community partners and alumni.
    - The Department of Geology and Physics is working with Historic New Harmony and the Working Men’s Institute to highlight the historical significance of New Harmony to the discipline of geology.
  - Identify faculty/staff within the college to manage co-ops, internships, and community partnerships
    - Phil Parker, Director of Career Services, manages internships with approximately 45 companies (see attached list*).
    - A partnership has been developed with Naval Warfare Center-Crane and Josh Mischler has been hired as the USI/Crane Partnership Manager.
    - A partnership has been developed with Alcoa.
  - Additional Strategies
    - Pott College and SwlSTEM have partnered on grant proposals with Marian College, University of Notre Dame, Evansville-Vanderburgh School Corporation, Green County Schools, and Warrick County Schools.
    - Pott College and SwlSTEM partner with the Helfrich Park STEM Academy, Reitz Attendance District STEM Program, Marrs Elementary STEM Academy, Farmersville STEM Academy, and Central High School Biomedical Project Lead the Way program to provide educational opportunities for students and professional development opportunities for teachers.

**Five-year strategies**
- Identify faculty/staff to assume responsibility for logistics and planning when developing engagement activities, thereby enabling other faculty to focus solely on the consulting, research, or reason for engagement.
- Map out potential partnerships with other colleges and departments of the University, identifying faculty/staff within the college to seek and manage such partnerships.

**Metrics**
- The Pott College of Science and Engineering will have a minimum of 50 percent of its students engaged in campus and community partnerships.
- The Pott College of Science and Engineering will develop and maintain at least 20 annual STEM outreach projects.
- The Pott College of Science and Engineering will establish at least 100 relationships with industry and businesses in the region.
Five-year strategies

- Identify faculty/staff to assume responsibility for logistics and planning when developing engagement activities, thereby enabling other faculty to focus solely on the consulting, research, or reason for engagement.
  - The SwiSTEM Resource Center was created as the educational outreach arm of Pott College. Allison Grabert is the Interim Director of the SwiSTEM Resource Center. She provides curriculum assistance to K-12 teachers, provides professional development opportunities for K-12 teachers, and provides leadership in developing and coordinating many STEM outreach activities.
  - Dave Ellert is Coordinator, Engineering Outreach for the SwiSTEM Resource Center. He provides leadership in developing Project Lead the Way conferences, STEM presentations and assisting with the Tri-State Science and Engineering Fair.
  - Doris Mohr is Coordinator, Mathematics Outreach for the SwiSTEM Resource Center. She provides leaderships in developing mathematics curriculum for K-12 schools, leading professional development workshops, and assisting with the Tri-State Science and Engineering Fair.

- Map out potential partnerships with other colleges and departments of the University, identifying faculty/staff with the college to seek and manage such partnerships.
  - Departments work with the Center for Applied Research (CAR) in establishing consulting projects. The projects involve students when applicable. Companies working with Pott College through CAR include:
    - e-Biofuels;
    - Vigo Coal;
    - D&L Innovative Plastics;
    - Custom Resins;
    - Red Spot Paint.
    - Shamrock Technologies
    - Global Blade Technology

Metrics

- The Pott College of Science and Engineering will have a minimum of 50 percent of its students engaged in community and campus partnerships.
- The Pott College of Science and Engineering will develop and maintain at least 20 annual STEM outreach projects.

Regional Impact since 2008

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number</th>
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<tbody>
<tr>
<td>Teacher Workshops</td>
<td>105</td>
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<tr>
<td>Student Competitions</td>
<td>~18/yr</td>
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<tr>
<td>Teacher Impacts</td>
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<tr>
<td>Student Impacts</td>
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<tr>
<td>Equipment/Instrumentation Lending 09-10:</td>
<td>1229 items 38 schools (10-11 lending trending upwards)</td>
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</table>

- The Pott College of Science and Engineering will establish at least 100 relationships with industry and businesses in the region.