Purdue School of Electrical & Computer Engineering Technology (ECET)
Industrial Advisory Board (IAB) Strategic Plan

STRATEGIC PLAN & OUTCOME:

Form an Industrial Advisory Board (IAB) consisting of industry experts and professionals, responsible to review, revise, edit, and modify the current student curriculum within the Purdue School of Electrical & Computer Engineering Technology program. Ideally the outcome would be to produce more job ready students upon graduation. Beginning in the Fall of 2019 the IAB will work with the University staff to begin the process of revising curriculum. New & modified courses are to begin implementation Fall 2021.

VISION, MISSION, PROGRAM OUTCOMES, & VALUE STATEMENT:

**Vision**
The IAB is in place to support the program to be recognized as a national leader in Engineering & Engineering Technology, produce more “job ready” graduates, and collaborate with firms in the industry.

**Mission**
The IAB assists, supports, and advocates for the Engineering & Engineering Technology Program at IUPUI.

**Value Statement**
The IAB reviews and advises the Department Chair on the curriculum and outcomes of the ECET program course work. The IAB members can provide their professional counsel to the faculty to achieve the educational outcomes. IAB members help the program provide graduates to the industry, with the skills needed to work in the industry, and serve clients. Upon graduation students will have been trained or certified in various professional fields through these updated curriculum requirements. The IAB members benefit through their access to students and graduates for employment. In addition, their companies benefit from the notoriety of membership with a nation leading Purdue University Engineering program.

**Program Outcomes**
The following outcomes describe the career and professional accomplishments that we expect our graduates to achieve early in their careers.

1. Develop and maintain a sustained program of continuing education and life-long learning.
2. Practice effective written and oral communication, and successfully participate within an interdisciplinary team environment.
3. Demonstrate an ability to apply problem solving skills and integrate technical knowledge with hands on experience in various engineering fields, based on their specialty and electives chosen.
4. Be engaged engineering professionals who comprehend the ethical, social, environmental, and economic impacts of engineering decisions and solutions.
5. Be engaged citizens who seek service and leadership roles in professional societies and organizations, as well as the community.

STRATEGIC INITIATIVES

The ECET Program Industrial Advisory Board Strategic Plan is based on:

1.0 ECET Undergraduate Program
2.0 ECET Research, Creative Activities, and Graduate Program
1.0 ECET Undergraduate Program

Initiative
1.1 Advise and assist the program in the delivery of instruction and the scholarship of teaching and learning.

Action
1. Assist and advise in the enhancement the quality of the undergraduate program as evidenced by external accreditation.
2. Assist and advise in enhancing the quality of the undergraduate program as evidenced by program reviews, and feedback from the IAB.
   a) Advise and assist to maintain continuous efforts of program, curricular, and course review.
   b) Enhance the ECET IAB course review process.
   c) Advise and assist in improving curricula on a continuous basis to keep all offerings relevant and responsive to the current and future needs of the industry.
   d) Advise and assist to increase the quality of the ECET IAB course review process and outcomes
   e) Advise and assist in conducting a rigorous review of all course titles, descriptions, prerequisites, course learning outcomes, and course content.
   f) Increased industry-based faculty internships.
3. Assist and guide in the improvement of instructional delivery by increasing the number of instructors employing best practices for engineering education.
   a) Advise and assist in increasing involvement by ECET faculty and adjuncts.
   b) Advise and assist course instructors in participating in communities of practice, teaching and learning with other academic programs within the department.
4. Advise and assist to enhance the culture of excellence in teaching and scholarship of teaching and learning.
   a) Advise and assist the recognition and reward for excellence in teaching.
   b) Advise and assist on the recognizing professional development.
   c) Advise and assist on increasing competitive proposal submissions in the areas of course, curriculum, and laboratory improvements, as well as innovative pedagogy, course delivery, and STEM education, innovation, and talent expansion.
   d) Advise and assist to increase the number of publications in peer-reviewed proceeding and journals and other dissemination outlets dedicated to teaching and scholarship of teaching, document the results, and present as public information.

Initiative
1.2 Advise and assist in the increase recruitment, acceptance, retention, and graduation of well-qualified students.

Action
1. Assist and create increase scholarships through gifts that make an impact in perpetuity, including increasing need-based aid.
   a) Create an IAB internal endowed scholarships (number and amount).
   b) Assist and advise to increase student participation in internal and external financial aid through communication of information.
2. Advise and assist to increase the percentage of students who are members of the IUPUI Honors College or who pursue School-based Honors. a. Advise, assist, and document the number of ECET students in Honors College and facilitate presentations by Honors College to ECET students on the advantages of membership in the Honors College.
3. Advise and assist program to increase undergraduate enrollment.
   a) IAB to continue efforts working with the Indiana School Counselors Association.
   b) Advise and assist to increase efforts with ECET IAB to actively recruit students.
Action
1. Advise and assist the promotion of the program at all levels.
   a) Advise and assist to improve existing and to develop new, ECET marketing materials.
   b) Advise and assist to create a local ECET Alumni Chapters (expand to other regions).
   c) Advise and assist to increase percentage of alumni making donations to the IAB.
   d) Advise and assist to increase undergraduate enrollment and the quality of incoming students as a sustainable effort in conjunction with the ECET IAB.
   e) Increase presence on social media
   f) Increase attendance at the IUPUI Spring Career Fair from engineering companies.
   g) Increase ECET IAB membership (Goal - 200 members by 2023).
   h) Advise and assist program to maintain and update the ECET website to include Public Information, the ECET IAB, and notable accomplishments.
   i) Advise and assist to Incorporate a specialty Minors into the ECET curriculum (Fall 2020 with a new Plan of study effective Spring 2020).
   j) Advise and assist in creating an additional required internship (sophomore year).
   k) Advise and assist in the Development of on-line ECET courses to provide additional outreach to potential students working in the industry and added flexibility for current students.

Initiative
1.5 Advise and assist in the promotion effective advising, student support, and career development practices.

Action
1. Advise and assist to Improve student performance and satisfaction through effective advising, first-year experience courses, and career development.
   a) Assist in the creation of an advisor satisfaction survey administered every semester for New Student Advising within the ECET Program.

2. Advise and assist to increase the number of students who participate in RISE (research, international, service learning, and experiential learning). a. Advise and assist to increase the number of Rise Scholars in the ECET Program (experiential learning and international).

2.0 ECET Research, Creative Activities, and Graduate Program

Initiative
2.1 Monitor and support research foci that build upon faculty talent, established track records, and prior investments to achieve national recognition.

Action
1. Support Department Chair with the increase in the number of tenured and tenure track faculty.
   a) Increase number of tenure and tenure-track positions in line with enrollment figures and research output.

2. Ensure administrative and technical human resources space and equipment are proportional to productivity and potential, are allocated by the Director of the Department.

Initiative
2.2 Enhance infrastructure and collaboration.

Action
1. Support partnerships with organizations that can share resources, including space and equipment, to advance alliances with industry partners.
   a) Strengthen relationships with professional organizations and engineering firms to expand opportunities for sharing or acquiring resources.
   b) Increase number of ECET IAB external equipment proposals.
2. Support the increase in the percentage of ECET graduates applying for graduate school. a. Promote the advantages of graduate education in the program through mentoring sessions, meetings, and in class, as means to promote professional development.

Initiative
2.3 Offer innovative graduate programs.

Action
1. Support the expansion of graduate programs, certificates, and course offerings; which leverage faculty capabilities and interests, as well as demand from stakeholders. Promote the advantages of graduate education in the program through mentoring sessions, meetings, and in class, as means to promote professional development.

2. Assist and identify options for expanding, pathways, and programs of study for students seeking professional master’s degrees.
   a) Assist students in path towards Professional Engineer (PE) Certification

3. Ensure continuous improvement through the assessment and evaluation of all graduate programs.
   a) Once established, and after the first graduation class, ensure and assist with the Professional Engineer (PE) Certification.

Thanks,

David Bunch, BSEET
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