

ECE STRATEGIC PLAN

FINAL

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STRATEGIC PLAN



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Summary and Faculty Incentives

This ECE five year strategic plan (ECE-SP2005¹) is focused on two key aspects of program development.

- **Curriculum Development** - graduate and undergraduate, learning outcomes and outcomes assessment, course revisions, innovative practices, program depth and breadth in support of concentrations, student professional development and outreach.
- **National Recognition** - educational and research scholarship and innovation, supported by ECE and WPI campus wide collaboration, corporate collaboration and other forms of outreach.

The two specific goals of the strategic plan that encapsulated the two aspects of program development noted above are as follows.

Goal 1: Innovate in the undergraduate and graduate curricula.

Goal 2: Develop a broad base of educational and scholarly achievements that result in multiple levels of national recognition.

For this strategic plan to achieve the desired effect the faculty must *actively* contribute to the ongoing effort. As a result the following rewards and responsibilities will be enacted to link pursuit of the departments strategic plan to the efforts of the faculty and staff.

1. Faculty will annually address their contributions to both goals of ECE-SP2005. While individual faculty will likely emphasize one of the goals over the other, contributions toward both goals will be expected.
2. 10% of the total pay raise pool a year over the next 3-5 years will be reserved for a small number of faculty (4 maximum) who take on a leadership role and then make significant, noteworthy and highly visible contributions to the implementation of this strategic plan.
3. The department will financially support activities that lead to course, teaching laboratory, learning or other forms of educational innovation.
4. The department will provide conference travel funds to faculty who present department educational/curricular accomplishments and/or lead conference sessions as part of national, highly visible, curriculum innovation dissemination activities. This support will be provided regardless of individual faculty grant support.

On an annual basis the ECE department faculty and staff will consider progress toward strategic plan goals and, as necessary, modify plans or change focus as best serves the need of the WPI ECE department.

¹ ECE Department Strategic Plan 2005

ECE Strategic Plan

Strategic Goal #1

We believe that the best educational program that will help our students achieve success in a globally competitive world is that which will offer a range of well structured, state of the art *core* courses and to couple them with more focused, yet still relatively general higher level courses that provide *a solid foundation* for continued study in a selected area at the graduate level. These core and foundation courses must also be innovative and engaging to a diverse group of students, and support multiple career paths including those that are even currently unknown because of the rapidly changing nature of the ECE discipline.

Innovate in the undergraduate and graduate curricula.

Sample Goal Realizations

- an engaging **first year program** that introduces the profession and practice of ECE
- seminars and educational **presentations and workshops** that enhance the professional awareness and skills of ECE students
- an **integrated graduate/undergraduate curriculum** that includes core courses that provide a solid foundation and appropriate (undergraduate) distribution requirements that facilitate the engineer of 2020 working, communicating, and managing innovation across time and space in a global environment
- a non-traditional **honors program** that incorporates mentoring, commitment, self-study, scholarly activities, global awareness, leadership and exposure to professional-level events
- **writing and communication intensive courses** throughout the curriculum where students gain critical technical and persuasive writing skills
- inclusion of **ethics and societal value discussions** throughout the curriculum
- **learning outcomes and outcome assessment** methods that reflect core competencies in foundation courses as well as higher levels of learning in technical, societal, ethical and other areas of study
- continued recognition as a **national leader in project based education**

Strategic Goal #2

The national visibility and scholarly ranking of ECE (and WPI) is intimately tied to our scholarly publications, inventive research, department marketing publications and web presence, patents applied for, awards earned and other scholarly activities and accolades. Another often overlooked component is, of course, determining, highlighting and then celebrating the success stories of our alumni in a public forum.

Develop a broad base of educational and scholarly achievements that result in multiple levels of national recognition.

Sample Goal Realizations

- universal faculty **scholarship accountability**
- significant **advisory board involvement**
- **increased graduate student population**, particularly at the Ph.D. level
- continued efforts to establish and operate **funded centers of excellence**
- **leadership** to enhance collaborative research opportunities
- **faculty hires** to grow the department in support of department strategic goals
- **alumni surveys** to maintain contact and gather career data
- **awards and other mechanisms** to celebrate the successes of our alumni and faculty
- **improved marketing and communication** that reflects the department strengths and innovation, and reaches out to a individuals across a broad spectrum of ages, backgrounds, gender and interests.