

ECS Strategic Planning

October 2, 2009

Steve Eisenbarth
Harold Rafuse
David Sturgill
Ken Van Treuren



Agenda

- Background
- Tentative Timeline
- ECS Mission and Vision
- Aspirations
 - Christian Mission
 - Undergraduate Experience
 - Serving the Community
 - Research and Graduate Education
 - Environment for Faculty and Staff



Background

- **Board of Advocates**
 - Strong interest in strategic planning
 - Recommendation to improve planning process
- **Baylor University Consultant**
 - Ashley Thornton, Director of Professional and Organizational Development
- **Strategic Planning Committee, Phase I**
 - Dick Campbell (ME), Pat Hynan (Staff), Leigh Ann Marshall (Staff), Charlie Baylis (ECE), Erich Baker (CS)
 - Phase I document with five aspirations
- **ECS Faculty Fall Retreat – Aug 20, 2009**
- **Strategic Planning Committee, Phase II – Sep 15, 2009**



Strategic Planning Committee Phase II

ECS representatives

- Adam Ecklund
- Steve Eisenbarth
- Don Gaitros
- Bill Jordan
- Ben Kelley
- Kwang Lee
- Leigh Ann Marshall
- David Sturgill
- Ken Van Treuren

External representatives

- Development- K. Ludlum;
- BU Business School- G. Leman
- BU Provost's Office- J. Bennighof
- BU Science/Math- S. Driese
- ECS Alum- D. Davis
- ECS Board of Advoc.- H. Rafuse
- ECS Student- J. Moczygemba
- External Academic- M. Gonzalez



Tentative Timeline

- Oct. 2 – Board of Advocates meeting
- Oct. 13 – 2nd meeting of committee
- Nov. 13 – *Departmental Plans*
- Nov. 24 – 3rd meeting of committee
- Dec. 9 – meeting after Christmas Potluck lunch
- Jan. 8 – final version



ECS Mission

The mission of Baylor's School of Engineering and Computer Science is to provide a superior education through instruction, scholarship and service that prepares graduates for professional practice and responsible leadership with a Christian world view.



ECS Vision

To prepare capable twenty-first century technology leaders who enjoy fruitful careers in positions where their technical knowledge, broad experience and deep sense of social responsibility can have the most positive influence on Texas, the United States and the world.



Aspiration 1

Live out our Christian mission

Our Christian commitment influences what we pursue professionally. Our mission demands excellence in our discipline, calls us to high ethical standards, compels us to care for others and God's creation, and frees us to elevate the whole person: mind and spirit. This worldview shapes the personality of the school, our decision-making, and our relationships.



Aspiration 1 Goals

- A. Create opportunities for faculty/staff/students to engage in meaningful discussions about issues of faith and vocation.
- B. Establish co-curricular opportunities for student organizations and other groups to participate in projects and activities that foster blending their education and faith.
- C. Provide instruction on professional ethical standards and expectations within the curriculum for each degree path.



Aspiration 2

Provide an excellent undergraduate experience that promotes high academic and learning achievement

Baylor's reputation is a magnet for the best and brightest students. This allows us to work with a highly qualified, diverse student body. ...



Aspiration 2 (continued)

... We help our students integrate technical expertise, hands-on experience, broad-based liberal education, and a deep sense of service into the foundation they need to build careers as innovative problem solvers and technology leaders. ECS co-curricular programs ensure an environment where social and spiritual activities dovetail with academic priorities resulting in a supportive, successful learning community.



Aspiration 2 Goals (A-E)

- A. Preserve high expectations for teaching quality and faculty-student interactions and mentoring.
- B. Increase the academic qualification of incoming students to match programs and opportunities offered within ECS.
- C. Grow the enrollment to optimize academic resources and leverage opportunities.
- D. Seek a percentage of minority first-year students approaching that of Baylor's undergraduate student population.
- E. Increase the percentage of female students.



Aspiration 2 Goals (F-J)

- F. Provide a fostering first year experience and resources that encourages students to persist toward attaining their academic potential.
- G. Fine-tune academic-assistance resources, effective instructional methods, and inviting co-curriculum environments to yield a competitive ECS graduation rate.
- H. Increase the endowment for ECS scholarships to the level that facilitates achieving enrollment targets.
- I. Shape curricular elements including as laboratory and research experiences to produce capable problem solvers and able to productively assimilate within industry and business environments or top graduate programs.
- J. Shape co-curricular and extra-curricular activities with an eye toward developing graduates with a deep sense of social responsibility.



Aspiration 2 Goals (K-N)

- K. Offer all students exposures in global/international/intercultural and business/entrepreneurial/management in preparation for industry needs.
- L. Expand the on-campus residential and learning community to include an ECS "Academic Village."
- M. Initiate a faculty award that recognizes outstanding teaching and student mentoring.
- N. Maintain an assessment and continuous improvement process that seeks constituent input and satisfies professional and regional accreditation expectations.



Aspiration 3

With graduates and school activities as the catalysts, serve Baylor, Waco, the state of Texas, the United States and the world

Companies, universities and other well-respected organizations vie for Baylor graduates because they know they can expect well-rounded and capable technology professionals. ...



Aspiration 3 (continued)

... ECS graduates leave Baylor to become influential leaders: creators of technological innovations, professors at the world's most respected universities, highly-regarded community leaders, and industry trend-setters. Serving as a center for innovation, expertise, and collaboration, Baylor ECS provides technology solutions to societal challenges that have a positive impact on people's lives. ECS graduates earn positions and school faculty and staff engage in activities where their knowledge, experience and worldview have a positive influence on Texas, the United States, and the world.



Aspiration 3 Goals (A-D)

- A. Add undergraduate degree programs that match industry needs, student demand, and fit Baylor and ECS.
- B. Develop programs and experiences that lead through example and serve the Baylor community.
- C. Develop an effective system for engaging and keeping in touch with of alumni.
- D. Engage all students to participate in an industry or other real-world employment/vocation experience.



Aspiration 3 Goals (E-H)

- E. Make curriculum-to-career transition services a distinctive benefit of attending Baylor ECS.
- F. Build and occupy the Baylor Research Innovation Collaborative (BRIC) (General Tire) as the anchor tenant and in and collaboration with other academic units and government and industry sponsors.
- G. Initiate appropriate technology and other service projects that positively affect lives in disadvantaged regions.
- H. Create and endow the Competitive Learning Initiative that secures the ACM International Collegiate Programming Contest with headquarters at Baylor.



Aspiration 3 Goals (I-J)

- I. Develop relationship clusters and research programs with strong Texas industry presence and involvement in areas like gaming/simulated environments and wireless and microwave systems.
- J. Grow and sustain discipline-related work/project experiences and opportunities for the large majority of ECS students.



Aspiration 4

Engage in world-renowned research and graduate education

Baylor ECS research is respected worldwide for its significant contributions to the discipline and to industry. Excellent master's- and Ph.D.-level graduate programs attract well-qualified students who contribute to this research reputation and benefit from it. The ECS reputation benefits the whole campus by lifting the overall academic standing of university to higher and higher levels.



Aspiration 4 Goals (A-E)

- A. Meet the benchmarks established for the new ECE Ph.D. program.
- B. Increase the graduate student enrollment to meet the needs of the individual programs.
- C. Increase the academic qualification of incoming students to match programs and opportunities offered within ECS.
- D. Secure graduate student stipends/assistantships funding to help meet program enrollment targets.
- E. Increase the external funding secured by tenured/tenure track faculty to level sufficient for independently sustained research programs.



Aspiration 4 Goals (F-I)

- F. Identify 2-3 collaboratively-focused research areas per department and strategically hire new faculty and direct resources to support them.
- G. Launch new Ph.D. opportunities that support identified research objectives and provide faculty with improved research capabilities.
- H. Increase number of journal articles and conference proceedings publications in the top venues.
- I. Increase the number of collaborative research initiatives within departments, between members of different departments, and with external research organizations and industry.



Aspiration 5

Cultivate an excellent growing environment for faculty and staff

A world-class faculty and staff is the engine that drives our accomplishments. Judicious hiring and a commitment to professional development allow us to maintain a culture of accountability and high expectation. ...



Aspiration 5 (continued)

We intentionally commit time and resources to help each faculty and staff member succeed and grow. Collegiality is a hallmark of our life together. Faculty and staff enjoy each other's company and work well together on areas of mutual interest. This synergy allows us to accomplish more together than the total of what we could accomplish separately.



Aspiration 5 Goals (A-D)

- A. Intentionally focus on the development and support of new hire/tenure track faculty to give them the best possible chance for success.
- B. Identify and fund new staff positions in areas that offer the greatest opportunity for higher ECS excellence.
- C. Provide tenure expectations and annual reviews that are appropriately rigorous and attainable and that also call for mentoring and/or feedback.
- D. Occupy an inspiring on-campus ECS facility that fosters distinction in teaching and discovery and that promotes community, collegiality, and professional attainment.



Aspiration 5 Goals (E-F)

- E. Secure funding for endowed faculty positions and laboratories that enable attainment of research, educational, and programmatic goals.
- F. Engage in marketing and publicity activities that raise the awareness of ECS achievements and the profile of the school.

