Dean’s Report

BU ECS Board of Advocates
Fri., 8-Oct-04
ECS LLC North Village Classroom
**Agenda**

**Board Meeting**
- BU Welcome
  - Dr. Frank Shushok
- Dean’s Report
- Engr Grad Program
  - Dr. Bob Marks
- CS/EGR Breakouts
- Lunch (Students)
- Board Utilization
- Board Session Reports...

**Dean’s Talk**
- New Board Members
- U.S. News Ranking
- SOWT overview
- North Village ECS LLC
- Personnel & organization
- Enrollment & plan
- Graduate & Research
- Expanding initiatives
- Culture and moving improvement forward
New Board of Advocates Members

- **Mike Ingram**
  - Sr Manager, New Product Development
  - Wilsonart International, Temple, TX

- **Larry Johnson**
  - Program Analyst, ASAMC
  - Performance Engineering Corp, Inc., San Antonio, TX

- **Rick Maul**
  - CEO
  - NetEffect, Inc, Austin, TX

- **Bill Ratfield**
  - Director of Global Manufacturing
  - National Instruments, Austin, TX
US News & World Report Ranking

1. Rose Hulman (4.4)
2. Harvey Mudd (4.2)
3. Cooper Union (4.1)
4-6 Service Academies (3.7-3.9)
6. Cal Poly-San Luis Obispo
8-10 Bucknell, Villanova, Lafayette, Swarthmore, Embry Riddle (3.3-3.4)

BU History
’02: 26th, (3.1)
’03: 20th, (3.1)
’04: 19th, (3.1)
’05: 14th, (3.2)

TX Grad focus
• UT 10th (4.2)
• A&M 16th (3.9)
• Rice 19th (3.8)
Strengths

- Baylor Christian ID
  - Strong BU infrastructure
- Faculty/Staff/Students
  - Complimentary blend
- Advocate Board
  - Answering the call
- Baylor branding

Weaknesses

- Facilities
  - For program growth
- Support Infrastructure
  - Grants, resources, info

Threats

- Baylor squabbling & PR
- Faculty full plate
- CS Enrollment
- BU Football
**Opportunities**

- **Student Life**
  - LLC, retention, growth, organizations, **passion**

- **Graduate & Research**
  - Equipment, undergrad influence, recognition, faculty careers

- **Career Services**
  - Consistent underachiever

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**Opportunities**

- **Honors College**
  - Develop ECS track

- **Global exposure**
  - Abroad projects

- **Business & soft skills**

- **Student recruitment**
  - LLC, quality, CS

- **ACM IBM ICPC**
  - Computing & San Antone
The North Village Residential Community of Baylor University: Home of the Engineering & Computer Science Living-Learning Center
ECS Living-Learning Center
In the North Village Residential Community

- Three houses
  - Community space
  - 600 beds; 87 ECS LLC
    - Apartment style
    - 10 different room layouts
    - LR & most with kitchens
    - 2:1 student/bath ratio
- Dr. Bradley’s apartmt.
- Community Ctr- Café
- Extended visitation
- Laundry facilities

- Academic Center
  - Project rooms
  - Conference room
  - Two faculty offices
  - LLC & NV staff offices
  - Classroom
  - Student organization storage space
  - Wireless
  - Card-swipe access
  - Study nights…
Personnel Actions

New Faces
• Dr. Greg Hamerly
  – Asst. Prof of CS
• Mr. Rishi Sriram
  – Student Success Spec.
• Mrs. Chava Baker
  – Admin Assistant III
  – Engineering Dept.

On-Going Searches
• Dept. Chair- CS
• Dept. Chair- ME
• Professor- CS

Current Statistics
• 15 CS Faculty
• 17 EGR Faculty
• 11 Staff
• 4 Visit/Admin/PT Fac
Fall Undergraduate Enrollments
CS- & EGR-related enrollment since 1998
Fall Undergraduate Freshmen
CS & EGR entering freshmen since 1998

<table>
<thead>
<tr>
<th>Year</th>
<th>CS Related</th>
<th>EGR Related</th>
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<tbody>
<tr>
<td>1998</td>
<td>90</td>
<td>70</td>
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<tr>
<td>1999</td>
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<td>2001</td>
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<td>2002</td>
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<td>2003</td>
<td>80</td>
<td>70</td>
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<tr>
<td>2004</td>
<td>60</td>
<td>50</td>
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SAT Average

BU & ECS fall entering averages since 1998

Baylor
ECS
Undergraduate Recruiting Plan

- Target of 250 new incoming students
- ECS plan feeds into BU recruitment/plan
- ECS activities target high end students and under-enrolled ECS programs
- Multifaceted & Intimate with the ECS LLC
- Involves the BU ECS Advocate Board
- Continued follow-up involves other groups and zeros in on active responders
Fall Graduate Enrollments
CS & EGR fall graduate enrollment since 1998
Graduate ECS Programs
All masters level

- **Computer Science**
  - Since 1984
  - Near record enrollment
  - Highest BU GREs

- **Engineering**
  - Approved Feb 2004
  - 11 entering students
  - Dual BS/MS

- **Joint Master of EGR-MBA**

<table>
<thead>
<tr>
<th>Dual BS? → MS?</th>
<th>Grad Major</th>
<th>MS BME</th>
<th>MS ECE</th>
<th>MS ME</th>
<th>MSE</th>
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<td>BS Major</td>
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<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
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<tr>
<td>ME</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
<td>EGR</td>
<td></td>
<td>X</td>
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## Research & External Funding

**Progress: ~ last 18 months**

<table>
<thead>
<tr>
<th>ECS Funded Activities</th>
<th>Funded</th>
<th>Pending</th>
<th>Declined</th>
<th>Total</th>
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<tr>
<td>Baylor</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>8</td>
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<tr>
<td></td>
<td>$67k</td>
<td></td>
<td></td>
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<tr>
<td>Industry/ Foundations</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>9</td>
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<tr>
<td></td>
<td>$735k</td>
<td>$1,680k</td>
<td></td>
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<tr>
<td>Government</td>
<td>7</td>
<td>8</td>
<td>4</td>
<td>19</td>
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<tr>
<td></td>
<td>$456k</td>
<td>$1,641k</td>
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<tr>
<td>Total</td>
<td>18</td>
<td>12</td>
<td>6</td>
<td>36</td>
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<td>$1,376k</td>
<td>$3,321k</td>
<td>$1,760k</td>
<td>$6,357k</td>
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Expanded Initiatives
Summary of new/continuing initiatives

- ECS Honors
- Facilities needs
- Graduate & Research
- Career Services
- LLC development
- Faculty recruitment
- Undergrad recruitment and retention
- Assessment
- Staff infrastructure
- ECS student life
- Global exposure
- Board utilization
- External relations
- Business savvy
- ICPC World Finals
- Funding opportunities
- Software & Biomed Engr
Academic Culture & Improvement
Assuring ECS’s Success

Board of Advocates
Endowed Scholarship
(as of 17-Sep-04)

- Book Value:
  - $25,622.43
- Market Value:
  - $29,846.43

Scholarship will be awarded beginning Fall 2005!!

Requests
- Advice on trends
- Access to your organization
- Personal influence
- Time and advocacy
- Resource doors
- Sounding board

Book Value:
- $25,622.43

Market Value:
- $29,846.43
Our Engineering Degrees

1. MS in Mechanical Engineering
2. MS in Electrical Engineering
3. MS in Biomedical Engineering
4. Master’s in Engineering
Our Degrees: What’s New?

- Dual Engineering Degrees
  - Undergraduate students at Baylor can apply up to 6 hours of appropriate undergraduate coursework to their Master’s degree.

- Master’s of Engineering/MBA Degree
  - Two degrees in two years. Each degree’s electives is the other degree’s core.
## Engineering Graduate Students

<table>
<thead>
<tr>
<th>UG GPA</th>
<th>14 Students Applied</th>
<th>12 Accepted</th>
<th>2 Rejected</th>
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<tr>
<td>Mean</td>
<td>3.30</td>
<td>3.38</td>
<td>2.80</td>
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<tr>
<td>Median</td>
<td>3.19</td>
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<td>2.80</td>
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<tr>
<td>Max</td>
<td>4.00</td>
<td>4.00</td>
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<tr>
<td>Min</td>
<td>2.72</td>
<td>3.02</td>
<td>2.72</td>
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<td>Math GRE</td>
<td>14 Students Applied</td>
<td>12 Accepted</td>
<td>2 Rejected</td>
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<tr>
<td>----------</td>
<td>---------------------</td>
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<tr>
<td>Mean</td>
<td>748</td>
<td><strong>751</strong></td>
<td>730</td>
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<tr>
<td>Median</td>
<td>740</td>
<td><strong>740</strong></td>
<td>730</td>
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<tr>
<td>Max*</td>
<td>800</td>
<td><strong>800</strong></td>
<td>780</td>
</tr>
<tr>
<td>Min</td>
<td>680</td>
<td><strong>710</strong></td>
<td>680</td>
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</table>

* 4 students with perfect 800 scores
# Engineering Graduate Students

<table>
<thead>
<tr>
<th>Verbal GRE</th>
<th>14 Students Applied</th>
<th>12 Accepted</th>
<th>2 Rejected</th>
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<tr>
<td>Mean</td>
<td>550</td>
<td><strong>550</strong></td>
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<tr>
<td>Median</td>
<td>550</td>
<td><strong>550</strong></td>
<td>550</td>
</tr>
<tr>
<td>Max</td>
<td>730</td>
<td><strong>670</strong></td>
<td>730</td>
</tr>
<tr>
<td>Min</td>
<td>370</td>
<td><strong>400</strong></td>
<td>370</td>
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</table>
Engineering Faculty Grants

- **Curves** ($700k) – Walter Bradley, P.I.
- **NSF: Time Scales** ($300k) - Ian Gravagne, P.I.
- **Advanced Weapons Laboratory for Avionics Research**: Reconfigurable Computing ($65k) - Russ Duren, P.I.
- **Naval Postgraduate School**: Reconfigurable Computing – ($53k), Russ Duren, P.I.
- **JPL**: Swarm Intelligence ($50k) – subcontract to R.J. Marks II
- **NSF**: Neural Networks ($25k) - subcontract to R.J. Marks II
Recruitment

Emphasis
- Cutting edge research
- Appropriate Technology
- Variety
  - Business
  - MS
  - Masters of Engineering
- Christian World View
Recruitment

- Web presence & brochures
- Internal recruitment
- Outside student visitors
Immediate Goals

- 30 Grads
- Modern Web Presence
- Increased funding to support the Grads
- National and International Recruitment
- Cutting Edge Research / Transnational Reputation
- Glorify Our Lord