Senate, General Faculty endorse Honors Program

Dan Treadaway
Institute Communications and Public Affairs

A proposed undergraduate Honors Program picked up a key endorsement last week from the Academic Senate and the General Faculty Assembly. Following a presentation at their Sept. 13 joint meeting from Honors Program Committee Co-chairs Greg Nobles (History, Technology and Society) and Randall Engel (Psychology), the groups voted to endorse the Committee’s proposal.

In his presentation, Nobles characterized the Honors Program as an Institute-wide incubator for intellectual inquiry and engagement. “The committee envisions the Honors Program as an inquiry-based approach to education with an emphasis on intellectual self-direction,” said Nobles. “Other areas of emphasis would be interdisciplinary coursework, involvement in community service projects, and more intensive faculty-student interaction.”

One strategy Nobles mentioned for increasing faculty-student interaction is presenting a series of colloquia on common reading around a specific topic. “This would be a less structured environment that would create a different feel from what we have in place now,” he said.

Nobles said the Committee’s goal is to have the Honors Program begin next fall with about 100 students.

After their presentation, Nobles and Engel were asked about the Honors Program’s relationship to the President’s Scholarship Program (PSP) and whether the two might wind up competing for students. “We see the Honors Program as a cooperative, compatible program with the PSP, not as a competitor,” said Nobles, who went on to explain that the Honors Program will offer experiences and benefits that will be distinct from those offered by the PSP.

Export control regulations

Following the Honors Program discussion, Pamela Rary of the Office of Legal Affairs gave a presentation on the increasing impact of export control regulations on Tech’s academic and research programs. Rary said that in the aftermath of the 9/11 attacks, federal regulations have restricted the flow of information and materials that are vital to the academic and research enterprises of higher education in the United States.

“Since 9/11, export controls are increasingly used as anti-terrorism tools, are increasingly focused on universities and on enforcement, and are increasingly focused on life sciences and biological materials,” Rary said. “It’s also very important to remember that export licenses are required prior to providing foreign nationals with access to controlled technologies or materials.”

Rary explained that the U.S. government restricts the release of the following to foreign nationals in the United States and abroad through export regulations and embargoes critical technologies, technical data, equipment, chemical or biological materials, and other materials, information, and services.

The government is considering proposed changes in export control regulations that could have an even greater impact on universities. One such change includes expanding the scope of inquiry into the backgrounds of foreign nationals to take into account all the nationalities they have ever maintained and requiring employers to obtain export licenses based on country of origin regardless of an individual’s most recent

Core goals of the Honors Program

• Employ an inquiry-based approach to learning that engages issues of a broad societal reach.
• Challenge students to understand and apply a broad range of materials from different disciplines.
• Direct involvement with professional, governmental, and advocacy organizations from the local to national and international contexts.
• Facilitate formal and informal intellectual and social interaction with leading faculty members from all six colleges.

Senate continued, page 3

Rising sea temperatures correspond with rise in the most violent storms

David Terraso
Institute Communications and Public Affairs

The number of Category 4 and 5 hurricanes worldwide has nearly doubled over the past 55 years, even though the total number of hurricanes has dropped since the 1990s, according to a study by researchers at Georgia Tech and the National Center for Atmospheric Research (NCAR). The shift occurred as global sea surface temperatures have increased over the same period. The research will appear in the Sept. 16 issue of the Journal of Science.

Peter Webster, a professor in the School of Earth and Atmospheric Sciences, along with NCAR’s Greg Holland, Professor Judith Curry and Senior Research Scientist Hai-Ru Chang, studied the number, duration and intensity of hurricanes (also known as typhoons or tropical cyclones) that have occurred worldwide from 1970 to 2004.

What we found was rather astonishing,” said Webster. “In the 1970s, there was an average of about 10 Category 4 and 5 hurricanes per year globally. Since 1990, the number of Category 4 and 5 hurricanes has almost doubled, averaging 18 per year globally.”

Using the Saffir-Simpson Hurricane Scale, Category 4 storms have sustained winds from 131 to 155 miles per hour and predict significant structural failure, erosion and flooding. Category 5 systems, such as Hurricane Katrina at its peak over the Gulf of Mexico, feature winds of 156 mph or more and predict storm surges in excess of 19 feet.

“Category 4 and 5 storms are also making up a larger share of the total number of hurricanes,” said Curry, chair of the School of Earth and Atmospheric Sciences and co-author of the study. “Category 4 and 5 hurricanes made up about 20 percent of
New military concept vehicle developed at GTRI

A concept vehicle designed to illustrate potential technology options for improving survivability and mobility in future military combat vehicles was shown publicly for the first time at a military technology meeting held last week in Virginia.

The concept vehicle, known as the ULTRA AP (Armored Patrol), was built to help the U.S. military evaluate multiple science and technology options — including ballistic and mine protection — that could benefit future vehicle design. The concept vehicle combines proven vehicle technologies with advanced materials and engineering concepts.

Research and development for the ULTRA AP has been conducted by the Georgia Tech Research Institute (GTRI), which led a unique team of research engineers from both GTRI and the automotive industry. The research has been sponsored by the Office of Naval Research (ONR).

"By bringing together experienced commercial vehicle designers with experts in advanced materials and cutting-edge engineering, we are providing a test bed for evaluating technologies that can help the military develop true 'leap-ahead' concepts," said David Parekh, GTRI’s deputy director. "By including persons with high-performance automotive engineering and NASCAR expertise as part of our team, we were able to root this advanced concepts project in real-world vehicle design."

The ULTRA AP emphasizes high-output diesel power combined with advanced armor and a fully modern chassis. The design matches the best of modern commercial automotive technology with racing experience, explained Gary Caille, a GTRI principal research engineer.

"The design team made improvements in key areas of survivability and safety."

The ULTRA AP will feature novel designs to provide ballistic, blast and enhanced rollover protection.

In addition, the use of on-board computers to integrate steering, suspension and brakes provides an unparalleled level of mobility and safety, Caille added.

The ULTRA AP project is linked directly to "e-safety," an emerging automotive concept that combines computers and advanced technologies to make driving safer, McLellan noted.

For more information...

Georgia Tech Research Institute
www.gtri.gatech.edu

Warm ocean water acts as a fuel source in the development of hurricanes. New research reinforces a link between ocean surface temperature and storm intensity.

"But we don’t know a lot about how evaporation from the oceans’ surface works when the winds get up to around 100 miles per hour, as they do in hurricanes," he said, adding that this physical understanding will be crucial to connecting trends in hurricane intensity to overall climate change.

"If we can understand why the world sees about 85 named storms a year and not, for example, 200 or 25, then we might be able to say that what we’re seeing is consistent with what we’d expect in a global warming scenario. Without this understanding, a forecast of the number and intensity of tropical storms in a future warmer world would be merely statistical extrapolation."

"We need a new generation of thinking at the planning, architectural and engineering levels of facility design. Currently, planning is based on the relatively simple square boxes we used to build. We set budgets by multiplying a building’s square footage by an average cost per square foot established by past projects."

—John Mullin, associate vice president and chief information officer for the Office of Information Technology, on incorporating emerging technologies (and their associated costs) into the design of new academic facilities. (College Planning and Management)

"The thing they do more than anything else, hurricanes do, is using the oceans’ tropical heat to higher temperatures which then work their way up, evaporation from the oceans’ surface, to create fuel for hurricanes. By bringing together experienced commercial vehicle designers with experts in advanced materials and cutting-edge engineering, we are providing a test bed for evaluating technologies that can help the military develop true ‘leap-ahead’ concepts," said David Parekh, GTRI’s deputy director. "By including persons with high-performance automotive engineering and NASCAR expertise as part of our team, we were able to root this advanced concepts project in real-world vehicle design."

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Tech takes annual charitable campaign online

Michael Taggart
Institute Communications and Public Affairs

B y moving its operations online, Georgia Tech has implemented a major change in how it manages donations to the annual statewide charitable campaign.

According to Carolyn Schneider, who serves as Tech’s campus coordinator for the campaign, the move will provide greater security and privacy for donors.

“The TechWorks program means fewer hands and eyes are involved,” she said. “We hope this will encourage more individuals to participate at all levels.”

The new system eliminates the need for departmental coordinators. Schneider was deeply appreciative for their past assistance, but said the administrative and cost savings of moving online were substantial.

“The cost of running the campaign is being cut 50 percent,” she said. “We’ll have a shorter campaign period, and we think this effort will streamline the process.”

Employees who used TechWorks to modify benefits information during last year’s open enrollment will be familiar with the format.

Beginning next month, pledges to the Charitable Campaign can be entered in the Employee Self-Service module.

Individuals who prefer to make a donation by cash or check may still do so. Through TechWorks, the employee may print a pledge card and deliver it personally.

Created in 1982 by the state General Assembly, the program enables government employees to make financial contributions that benefit charities operating within Georgia. Individuals can designate which charity benefits from their donation through a one-time donation or a pre-tax payroll deduction.

TechWorks also includes an option for the donor to designate a contribution in memory of another.

Because they do not link with TechWorks, three departments — the Athletic Association, Alumni Association and Georgia Tech Foundation — will participate in the campaign as in year’s past.

Schneider said both she and Jennifer Collins would be available to make departmental presentations on the changes. In addition, anyone with questions can visit their booth during the annual benefits fair, on Oct. 19 in the Student Center Ballroom.

IN BRIEF:

Computing renames two divisions

The College of Computing has renamed both its Core Computing Division (CCD) and Interface Computing Division (ICD) to better reflect the focus of both. CCD has officially been changed to the Computing Science and Systems Division (CSS), and ICD is now the Interactive and Intelligent Computing Division (IID).

Professor Ellen Zegura will serve as CSS chair and will lead the division in defining and developing new computing paradigms grounded in computing theory and validated by system construction.

Professor Aaron Bobick, will occupy the IIC chair, developing a discipline focused on the interactions between computing and the external world.

Campus directory changes now through TechWorks

The online and printed campus directories provide contact information for members of the Georgia Tech community. Each year, the Office of Human Resources (OHR) has traditionally mailed letters to individuals listed in the printed directory, asking them to review their information and submit any changes to OHR by the publishing deadline for the next directory.

Beginning this year, the directory update process will be administered online via TechWorks.

Employee Self-Service has been updated to include three new functions which allow you to view and update more of your personal information. These new features will be available in the Personal Information section of Employee Self-Service to allow individuals to update information for the online directory at their discretion.

The 2006 Campus Directory will be printed based on information recorded as of Sept. 19. Changes made after this date will be included in the online directory, but are not guaranteed to be included in the printed directory.

For more information, visit www.techworks.gatech.edu.

TEAMbuzz Service Day

The 2005 TEAMbuzz Community Service Day will take place Saturday, October 8. Individual Registration will begin Sept. 19 through Oct. 2. Visit www.teambuzz.org for more information about important dates and times, service project and contact information.

A breakdown of students enrolling at Tech in the wake of Hurricane Katrina

Undergraduates:

- Delgado Community College 1
- Dillard University 2
- Loyola University New Orleans 2
- Holy Cross University 2
- Tulane University 10
- University of New Orleans 3

Graduate:

- Tulane University 10
- University of New Orleans 3

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**POSTWAR SCIENCE FICTION**

The Library and Information Center’s Tuesday Talk on Sept. 27 in room 132, TSRB. For more information, call 894-4488 or e-mail gvu-info@gvu.gatech.edu.

**THEMATIC LECTURES**

**Sept. 27**


**Sept. 27**

The Materials Council’s Institute Wide Seminar Series continues with Associate Professor Shuming Nie on “Bioconjugated Nanomaterials for Molecular Imaging, Profiling and Drug Targeting,” at 3 p.m. in room 299, Love Building.

**Sept. 30**

The School of Mechanical Engineering Woodruff Colloquia Series continues with Aline Cotet, professor in the Department of Civil and Environmental Engineering at the University of Michigan, on “Recent Developments in Stratified Turbulence,” at 11 a.m. in room 4211, MRDC. For more information, call 894-6038 or e-mail minami.yoda@me.gatech.edu.

**FACULTY/STAFF DEVELOPMENT**

**Sept. 22**

The Center for the Enhancement of Teaching and Learning (CETL) hosts a discussion of the book “What the Best College Teachers Do,” in the Library’s Homer Rice Center at 11 a.m. Registration is required, either at www.cetl.gatech.edu or through e-mail to clint.lyle@ctel.gatech.edu. Lunch will be provided.

**Miscellaneous**

**Sept. 21**

The Georgia Tech Faculty Women’s Club hosts an 11 a.m. open house. Lunch will be served. For more information, visit www.gtifwc.gatech.edu or call 404-627-7427.

**Oct. 5-6**

A TIAA-CREF consultant will be on campus conducting individual counseling sessions and answering questions about financial matters. To schedule an appointment, call Michael Odom at 800-842-2003 or visit www.tiaa-cref.org/moc.

**AUTOMOBILES**


1995 Mazda MPV van, 3 liter, $2,200 solid. Call 770-364-9718.

**FURNITURE**

Girl’s bedroom set: 2 twin beds with headboard and footboard, dresser with mirror, chest of drawers, desk with hutch. Off-white color with stenciling on headboards and desk. $600 for everything. See 305-8772.

Ultra-modern royal blue and gold ultrasuede sofa with silver metal legs, never used, $350. Nahagany planta- tion chair with footstool, $300. Call 404-229-1583 or e-mail naja@fashions@yahoo.com.

Girl’s bed: twin bed with headboard and footboard, dresser with mirror, chest of drawers, desk with hutch. Off-white color with stencilling on headboards and desk. $600 for everything. See 305-8772.

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