

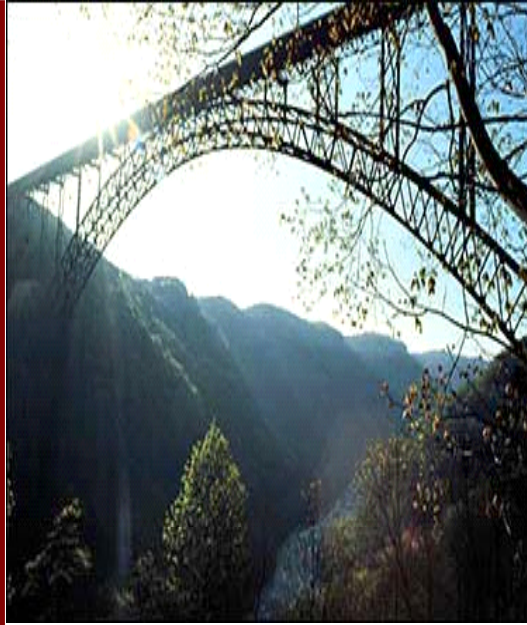
## In This Issue

- Pre Registration
- Architecture Studies
- Faculty News
- Fall 2005 Dean's List
- Spring 2006 Tentative Graduation List
- Locate and Name This Bridge!
- News from Student Engineering Groups

## Quote

"Engineering is the science of economy, of conserving the energy, kinetic and potential, provided and stored up by nature for the use of man. It is the business of engineering to utilize this energy to the best advantage, so that there may be the least possible waste."

(William Smith 1908)



# THE BRIDGE

*Newsletter for  
Students of  
Civil and Environmental  
Engineering  
UMASS - AMHERST  
April 2006*

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## Pre-Registration Advising April 6, 2006

Pre-registration advising for the entire department will be held on Thursday, April 6th from 4:00 pm to 7:00 pm in the Gunness Engineering Student Center. **Please print out your Degree Progress on SPIRE and bring with you to advising.** Students whose last names begin with A to L should come from 4 to 5 PM; those with last names from M to Z should come from 5 to 6 PM.

For students who cannot make the April 6<sup>th</sup> meeting, back up sessions will be held on Friday, April 7<sup>th</sup> from 1:30-3:30 pm and Tuesday, April 11<sup>th</sup> from 11:00 am to 1:00 pm with Dr. Ergas in Marston 233. Students who need special help can make an appointment to see Dr. Ergas or can stop by 18 Marston during her office hours which are Monday, Tuesday, Wednesday and Friday from 11:15 am to 12:15 pm. Students are encouraged to pick up pre-registration packets from Jodi in Marston 226 beginning March 30<sup>th</sup>.

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## Architecture Studies Master's and Minor of Architecture

In Fall 2005 the University of Massachusetts initiated a **Master of Architecture (M.Arch.)** degree program. The first group of students is enrolled and the program is currently going through accreditation. Dr. Civjan of the CEE Department, and Adjunct Professor with Architecture and Design, is currently teaching Tectonics III for the new program. Tectonics III is a 600 level final course in the structures related sequence where building layout, materials, analysis, preliminary design, detailing, and interaction between architectural and structural components are addressed.



A new **Minor in Architecture Studies** is also being developed which should be available Fall 2006. For Civil Engineering students with an interest in architecture, this minor could be a great way to obtain more knowledge in the field. The coursework requirements for the Minor in Architectural Studies are as follows:

- ❖ *Architectural Design Courses (6 credits min.);* Constructed space,

# Save the Date

- April 1<sup>st</sup> : Spring Open House
- April 6<sup>th</sup>: CEE Pre-Registration
- April 17<sup>th</sup>: Patriots Day
- May 1<sup>st</sup>: Seniors begin picking up commencement tickets
- May 17<sup>th</sup>; Last day of classes
- May 18<sup>th</sup> & 20<sup>th</sup>: Reading Days
- May 18<sup>th</sup>: CEE Awards Picnic
- May 19<sup>th</sup>, 22<sup>nd</sup> – 26<sup>th</sup>: Final Exams
- May 27<sup>th</sup>; Graduate Commencement at the Mullins Center
- May 27<sup>th</sup>; College of Engineering Commencement
- May 28<sup>th</sup>; Undergraduate Commencement at McGuirk Alumni Stadium

Design Investigations for an Approved Alternative

- ❖ *Architectural Technology Credits (6 credits min.):* Building Physics I, Building Physics II, Tectonics I or an Approved Alternative
- ❖ *Architectural History and Theory Courses (6 credits min.):* Introduction to Architectural History, The City, Great Spaces, 19<sup>th</sup> Century Architecture, 20<sup>th</sup> Century Architecture, Islamic Architecture or an Approved Alternative

For CEE students the major thrust of the minor will be completing the two Architectural Design studio classes *Design Investigations* and *Constructed Space*. Several of the Architectural History and Theory courses will be listed as general electives and can be counted towards a CEE degree. There may also be some overlap between CEE courses and the Architectural Technology courses. Courses taken now can be applied to the minor upon official approval, which will likely occur this summer. To be admitted into the Architectural Minor a student must have a GPA of 3.0 or better.

For more information about the programs or trying to fit any of these classes in your schedule please contact Dr. Civjan (Civjan@ecs.umass.edu) or the Architecture and Design Program directly (architecture@art.umass.edu). Additional information about all of the new programs can be found at <http://www.umass.edu/architecture>.

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## Faculty News

**Dr. Brena** was promoted to Associate Professor in February 2006. Dr. Brena came to UMass as an Assistant Professor in the CEE Department in September, 2000. He obtained his B.S. degree in Civil Engineering from the Universidad Iberoamericana in Mexico City in 1989 and his M.S. and Ph.D. degrees in Civil and Environmental Engineering from the University of Texas at Austin in 1990 and 2000, respectively. Both his Master's degree and his Ph.D. degree are with concentration in Structural Engineering. Dr. Brena teaches a combination of undergraduate and graduate courses, focusing on structural design and specifically design of concrete structures. Congratulations Dr. Brena!

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## Fall 2005 Dean's List

- Nicole M. Baldvins
- John S. Ballas
- Andrew L. Berthaume
- Scott W. Borecki
- Colleen M. Carrigan
- Timothy J. Chera
- Kuok K. Chiang
- Matthew W. Ciuffetti
- Jesse J. Conklin
- Alex P. Dobiecki
- Daniel E. Gnatek
- William R. Goulet
- Erica L Guidoboni
- Elsbeth N. Hearn
- Ever I. Hernandez
- Robert D. House
- Samuel G. Hummer
- Ryan Y. James
- Elena K. Janice
- Joseph M. Kenney
- Michael P. Kuchieski
- Yesher Larsen
- Jun Jie Li
- Stephanie J. Maker
- Patrick R. Malone
- Luke E. Matton
- David P. Maynard
- Michael J. Mitchell
- Kevin D. Moriarty
- Brian E. Pitta
- Adam N. Rochon
- Kimberly A. Rudy
- Jill A. Russell
- Christopher D. Sanford
- Christina L. Stauber
- Michael C. Tupper
- Steven M. Tupper
- Brien T. Waterman
- Jacob D. Wood
- David C. Zheng

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## Spring 2006 Tentative Graduation List

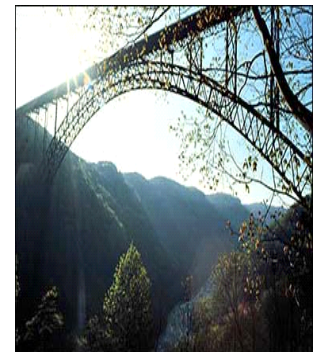
- Nicole Baldvins
- Bryan Balicki
- Roger Beaudoin
- Adam Bilancieri
- Lee Borthwick
- Ymane Bouramia
- Vladimir Caceres
- Colleen Carrigan
- Jillian Carty
- Zachariah Chornyak
- Ross Clay
- Alex Dobiecki
- Lauren Dutra
- Dennis Griecci
- Erica Guidoboni
- Brian Harris
- Matthew Johnson
- Tameron Josbeck
- James Karalekas
- Joseph Kenney
- Michael Maggiore
- Patrick Malone
- Lindsey Mantha
- Luke Matton
- David Maynard
- Michael Mitchell
- Kevin Moriarty
- Michael Nelson
- Ammie Rogers
- Jill Russell
- Ryan Siegel
- Jonathan Sieruta
- Dawid Szymczakiewicz
- Christopher Thorpe
- Charles Tripp
- Michael Tupper
- Raymond Vasquez
- Brien Waterman
- Michael Yau

If your name appears here and you are not planning to graduate after this semester or if you are planning to graduate after this semester and your name is not on this list please see Jodi Ozdarski in 226 Marston Hall as soon as possible. Each student must check with Dr. Lardner in 234A Marston Hall to be certified for graduation.

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## Locate and Name This Bridge!

For years, in order to cross this gorge, drivers were forced to take a 40-mile detour or carefully wind down narrow mountain roads. It wasn't until the completion of this bridge in 1977 that this problem was solved. This was an ideal location for a steel arch bridge. The solid rock on both sides of the gorge would resist the outward thrust of the arch, making tall towers and deep piers unnecessary. In June 1974, cables were strung between temporary towers located on each side of the gorge. The steel sections of the arch bridge were pieced together over the gorge by trolleys running on these cables. After three years of construction and \$37 million, the new bridge reduced a 40-minute drive to less than one minute.



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## News from Student Engineering Groups

### **AGC (Associated General Contractors)**

*Faculty Advisor: Dr. Lutenegger*

*President: Scott Lansing*

A group of students from UMass Amherst collaborated with Pioneer Valley Habitat for Humanity with construction on a home being built in Northampton. The student group, comprised mostly of CEE students, represents the AGC of Massachusetts on the Amherst campus. The AGC gets involved with many local community service projects every year, with the Habitat for Humanity projects routinely being a big draw for student support. "We try to get



involved with our surrounding communities as much as possible," Scott Lansing, AGC student chapter President, commented about the project. "We want to learn more about the things that are tough to put on a chalkboard, and lending a helping hand to a charitable local group has been a great way for us to be active." Through Habitat for Humanity, the students are able to gain valuable construction experience and skills, as well as an appreciation for the good that can be done for people who need help. If you are interested in joining AGC contact Scott Lansing at [AGCumass@hotmail.com](mailto:AGCumass@hotmail.com)



### **ASCE (American Society of Civil Engineers)**

*Faculty Advisors: Dr. Brena & Dr. Civjan*

*President: Matt Skelly*

**Concrete Canoe:** The concrete canoe has been poured and is now ready for sanding which is scheduled for this weekend. This year's canoe is extra large with a flat bottom for easier maneuvering. **HELP!** The Concrete Canoe team is looking for people, especially underclassmen, to help with the many hours of work remaining so the canoe ready for the Regional Concrete Canoe Competition on April 28<sup>th</sup> at UMass-Dartmouth. Please contact Team Captain Elsbeth Hearn at [ehearn@student.umass.edu](mailto:ehearn@student.umass.edu) if you are interested in participating with this project.

ASCE is also involved with building a wheelchair ramp at a home in Hadley. The project started at the beginning of the semester and is nearly complete. The contraction is scheduled for April 8<sup>th</sup> and 9<sup>th</sup>.

**The next meeting is Wednesday April 5th at 6:00 pm in Marston 132.** Contact ASCE President Matt Skelly for more information on how to get involved at [mwskelly@student.umass.edu](mailto:mwskelly@student.umass.edu).

## **EWB (Engineers Without Borders)**

*Faculty Advisors: Dr. Ahlfeld, Dr. Long and Dr. Tobiason*

*President: Bree Carlson*

The UMass Amherst chapter of Engineers Without Borders traveled to Kenya in March 2006. Below is part of an article that was published on March 16, 2006 at <http://www.umass.edu/newsoffice/newsreleases/articles/32118.php>)

### **UMass Students Head to Kenya to Assess Village's Water Supply as Engineers Without Borders**

AMHERST, Mass. – A five-person team from the University of Massachusetts Amherst chapter of Engineers Without Borders is traveling to western Kenya today to kick off a project that will provide a reliable, healthy water supply for a village of 1,000 subsistence farmers.

The project will provide a source of potable water for the community of Namawanga in the western province of Kenya. This community currently relies on water located more than two miles from the village and villagers must fetch their water on foot from a stream that's often contaminated with animal and human waste and runs dry during part of the year.

"EWB-UMass believes that engineers are a big part of the solution to social inequalities," says Bree Carlson, the president of the campus chapter and a graduate student studying environmental engineering.

The project will create a reliable water source near Namawanga, reducing the villagers' chances of contracting waterborne diseases, and allowing residents more time to look for food, participate in income-generating activities and attend school.

The March assessment trip will determine a plan for giving Namawanga a self-sufficient water supply that is both uncontaminated and sustainable. Currently, the EWB-UMass team is looking into a variety of solutions, including drilling a well, rainwater catchments systems, and conventional water treatment. The assessment trip will also include extensive testing for major contaminants such as bacteria, arsenic, fluoride and nitrates.

The implementation follow-up trip will take place in early 2007, staffed by as many as 10 members of EWB-UMass. The goal of this trip will be to put into effect a well-designed engineering plan, created from the findings of the first trip.

"We have the ability to affect people on a scale that is much larger than ourselves," adds sophomore EWB-UMass member Julie Gagen. "It's humbling."

**EWB FUNDRAISER;** Tighe & Bond donated 100 t-shirts to us to help us with fundraising goals! We are thrilled with the t-shirts, and are grateful for the donation. T-shirts are \$15 for students and \$20 for non-students. Please send an email to [info@ewb-umass.org](mailto:info@ewb-umass.org) for information on how to purchase one.

## Spring 2006 Final Exam Schedule Civil and Environmental Engineering

Department	Course	Section	Date	Time	Place
CE-ENGIN	121	1	Tu 5/23	10:30	GSMN0064
CE-ENGIN	240	1	Th 5/25	8:00	MRST0211
CE-ENGIN	241	1	M 5/22	10:30	GSMN0064
CE-ENGIN	270	1	Th 5/25	10:30	MRST0132
CE-ENGIN	275	1	Tu 5/23	8:00	MRST0023
CE-ENGIN	290A	1	Tu 5/23	4:00	MRST0211
CE-ENGIN	310	1	W 5/24	4:00	MRST0132
CE-ENGIN	320	1	M 5/22	8:00	MRST0211
CE-ENGIN	331	1	F 5/19	10:30	MRST0220
CE-ENGIN	357	1	M 5/22	10:30	GSMN0051
CE-ENGIN	370	1	F 5/19	1:30	MRST0220
CE-ENGIN	371	1	F 5/19	8:00	MRST0132
CE-ENGIN	423	1	M 5/22	8:00	LGRCA203
CE-ENGIN	433	1	Th 5/25	8:00	MRST0132
CE-ENGIN	450	1	Tu 5/23	4:00	MRST0132
CE-ENGIN	476	1	W 5/24	8:00	MRST0220
CE-ENGIN	511	1	F 5/19	8:00	MRST0211
CE-ENGIN	516	1	Tu 5/23	4:00	MRST0132
CE-ENGIN	541	1	Tu 5/23	1:30	MRST0220
CE-ENGIN	542	1	F 5/19	8:00	MRST0220
CE-ENGIN	575	1	W 5/24	8:00	MRST0220
CE-ENGIN	577	1	Tu 5/23	8:00	MRST0220
CE-ENGIN	671	1	M 5/22	10:30	MRST0220
CE-ENGIN	690E	1	F 5/19	8:00	LGRCA205
CE-ENGIN	722	1	M 5/22	8:00	LGRCA201
CE-ENGIN	776	1	F 5/19	10:30	MRST0211