

**UALR Provost's Annual Report  
July 1, 2010 – June 30, 2011**

Completed reports are to be limited to 10 pages.

Academic Unit (College, School, Division): Engineering and Information Technology		Date 6/1/11
Department Construction Management	Prepared by: Michael Tramel	

### **Summary of Highlights**

*This text should be an overview of the entire year for your unit. This text will be used in the final Academic Affairs report; please use complete sentences.*

### **The Construction Management Department**

The Construction Management Department's student enrollment had another decline with a total of only 153 declared majors currently enrolled. The addition of the new Construction Engineering program to the Department added an additional 32 new majors bringing the total number of students to 185. The additional engineering student allowed the Department to continue to be ranked as one of the largest departments on campus. This year the Department's new student enrollment was the lowest in several years with only 47 new students entering with 26 in the Fall 2010 semester and 21 in the Spring 2011 semester. To add to the situation the annual graduation rate is up with 57 students graduating in the past year with 30 in the Fall 2010 semester and 27 in the Spring 2011 semester. The continued downturn in the national economy has caused the construction industry to experience higher unemployment than the national average. The lack of employment opportunities makes a difficult decision for a student wanting to begin a career with a professional degree in construction management, so they tend to seek other career fields.

The Construction Management Advisory Council is still one of the most active and supportive within EIT. The chair, Bill Hannah, CEO of Nabholz Construction, has decided to turn the leadership position over to Clay Gordon who is a graduate from the Construction Management program and a Vice-president with Nabholz Construction. Bill Hannah's leadership has been instrumental in shaping the standing of the Construction Management program and Clay Gordon will continue to help build the reputation of the program as well.

This year the Arkansas Contractors License Board donated \$40,000 for their scholarship, an additional \$21,000 for the new Howard Williams Endowed Scholarship, and \$5000 for the Department's gift account. The Construction Management Department currently has 24 scholarship funds with 21 funds endowed.

For the fourth year in row the Construction Management Department was the first academic unit on campus to have 100% donations to Campus Campaign

The Associated Builders and Contractors of Arkansas requested for the third year that the Construction Management Department faculty be the judges for the 2011 ABC

Excellence in Construction Awards. Faculty members reviewed over 30 company project portfolios and graded each one based on their division criteria.

### **Construction Management Program**

The Program submitted the one year report for re-accreditation and it was accepted as submitted. The report outlined how the one weakness dealing with collecting data from alumni and industry was being corrected. An initial survey was conducted to identify alumni's email address and to determine if the survey instrument provided the required data needed. The data collected provided enough information for a more comprehensive survey instrument and alumni population. Jim Carr is responsible for the survey and has established a web based survey instrument and is in the process of obtaining the necessary data required for accreditation.

The summer class enrollment is also down from last year with a total of only 76 students enrolled in 8 classes. This was the first summer that CNMG 2218 Building Information Modeling and CNMG 3302 Engineering Economy were offered and the first time that CNMG 4342 Construction Safety was cancelled due to lack of enrollment.

The University Plaza Construction Management Methods Laboratory is in the process of being cleaned up and organized now that construction activities have been completed. The laboratory areas are being finalized and the new methods courses are scheduled to be taught in the Plaza during the Fall 2011 semester. Mark Squires has done an excellent job in preparing the Plaza for the new methods labs.

The Construction Management Department had 20 students on three teams that competed in the annual TEXO/ASC Region V student construction competition. The Commercial Team Coached by Mike Tramel did not place for the first time in three years. The UALR heavy-civil team took 2<sup>nd</sup> place again and only missed first place because they were 15 seconds below the scheduled presentation time. Their project estimate difference was only \$197,000 from the actual project bid of \$98,939,030. The other team's bid differences ranged from \$4,000,000 to \$51,000,000 from actual bid. UALR has a long history of being the teams with the closest estimate to actual cost. The team was coached by Instructor Larry Blackmon and the team consisted of Captain Mark Gernhart (project management), Stephanie Shank (scheduling), Dustin Mize (contract questions), Chris Meyer, Josh Morris, and Ross Lovenstein (estimating

The competition problem was sponsored by the McCarthy Texas Civil Division and consisted of an expansion of a wharf for the Houston Port Authority which included concrete piers that had to be placed underwater and a concrete deck placed on top of the piers. The project had to be scheduled and completed in 600 days. The project required 17 cranes with most of them placed on barges to allow construction to be completed in the required timeframe. The team was locked in a hotel room from 6:00 AM to 10:00 PM Sunday and did not have any outside contact for the 16 hour period that they worked on the problem. McCarthy would send them information by phone on subcontracting prices and changes and then would inspect the team to check for compliance. Food was furnished by McCarthy and the six students spent the entire time in a small hotel room.

The other competition teams were from Oklahoma State University (First Place), University of Oklahoma (3<sup>rd</sup> Place), Texas A&M University, Texas Tech University,

University of North Texas, University of Louisiana Monroe, and Louisiana Tech University.

This was the first time that TEXO/ASC Region V had an international design build student competition with a team returning from the Dublin Institute of Technology and a team from UALR. The UALR team consisted of six Chinese students from the Xi'an University of Architecture and Technology and was coached by Haiyan Xie and Wei Shi. ASC Region V made a rule change to allow exchange students to compete in the division. The Dublin team had observed the competition last year and had a better understanding of what to expect. This was the first time that UALR had competed in the design build division much less the international design-build division. The UALR team's presentation used building information modeling and the judges commented on the lack of a standard card board model.

Dr. Jovanovic and two students attended the annual Student Steel Bridge Competition at Texas A&M University. The students acted as competition volunteers and Dr. Jovanovic went to observe the competition in preparation of competing once he gets new ASCE student organization approved.

Dr. Akhnoukh sponsored a team to the ASC Region II Student Competition For LEEDs to see if this was a competition that we would be interested in doing in the future once we establish a LEED course.

The Department governance and promotion and tenure documents were finalized by the faculty and submitted to the Dean in compliance with the approval process.

### **Construction Engineering Program**

This was the first semester for the new Construction Engineering program and it is off to an excellent start with 32 declared majors. Dr. Nicholas Jovanovic was appointed as the unpaid Program Coordinator and is the sole advisor for the majors at this time. He attended training with ABET in preparation for accrediting the new program once the first graduate has completed the program. ABET will not accredit until they can examine transcripts from the first graduates. Dr. Jovanovic was selected as an observer for an ABET accreditation visit to Cleveland State University, Department of Civil Engineering. This allowed him to experience the internal process of how a Civil Engineering visiting team evaluates a program. He is scheduled to attend the one week training seminar for Assessment during August 2011 and this along with the ABET training he has completed will help him in preparing the assessment and evaluation plan so that it can be implemented and improvements made to close the loop. It should also help him in writing the self-study. The self-study needs to be completed by June of 2013 to comply with the projected graduation of the first students.

Dr. Jovanovic researched the other construction engineering program's curriculum to ensure that UALR's curriculum will comply with ABET requirements. He also met with over ten engineering firms in Arkansas to ensure that the curriculum would prepare graduates for employment. The result of the meetings and research resulted in the preparation and approval of 47 curriculum changes that were approved by the Construction Management Department faculty. A large number of the changes had been scheduled until after the accreditation visit for construction management. The revisions not only updated the curriculum but also incorporated new courses identified by the

assessment plan. The overall result also reduced the number of credit hours for both programs.

Funds were requested for the new construction engineering program in next year's budget along with salary adjustments for the two full time engineering faculty members.

## **Student Achievements**

A list of important student achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

- The 2011 Excellence Awards for Academic Scholarship were given to:
  - Andrew Brown
  - David Dalporto
  - Mark Gernhart
  - Jacob Powell
  
- UALR took second place in the ASC/TEXO Region V Heavy Civil Division student competition.
  - Mark Gernhart
  - Dustin Mize
  - Ross Lovenstein
  - Stephanie Shank
  - Josh Morris
  - Josh Meyer
  
- UALR's First ASC/TEXO Region V International Design Build Division student competition.
  - Chris McKenney
  - Roshita Jordan
  - Duo Zhao
  - Fan Zhang
  - Mini Zeng
  - Yiqing Deng
  - Jeyang Xie
  - Yuan Hao
  
- Sigma Lambda Chi International Construction Honor Society inducted thirteen new candidates and one honorary faculty during the April 29, 2011 induction
  - Allison, Andrew
  - Anthony, Nathan
  - Bray, Steven D.
  - Csege, Roland
  - Fink, Kevin Allen
  - Jones, Paul Hastings
  - Muhammad, Eunice

- Stevens, Aaron Matthew
- Sullivan, Eric
- Voigt, Landon Ricky
- Wilkerson, Ron David
- Williams, Austin
- Wimpee, William Keith
- Jovanovic, Nickolas – Honorary

Sigma Lambda Chi International Construction Honor Society inducted thirteen new candidates during the November 12, 2011 induction.

- Bradford, Robert
  - Brown, Andrew
  - Cox, Hilda
  - Dalporto, David
  - Davis, Justin
  - DeFreitas, David
  - Freeman, Christie
  - Garrison, John
  - Graham, Anthony
  - McKenney, Chris
  - Powell, Jacob
  - Shnaekel, Tim
  - Stracener, Bruce
- Brandon Baxter undergraduate research in the development of high performance light weight concrete mixes (Dr. Amin Akhnoukh funded research)
  - Allen Harris undergraduate research in the effects of curing temperature on concrete (Dr. Amin Akhnoukh funded research)
  - Christie Freemon undergraduate research in the detection of reinforcement bars in concrete (Dr. Amin Akhnoukh funded research)
  - Roshita Jordan undergraduate research in the development of light weight concrete using environmental friendly materials (Dr. Amin Akhnoukh funded research)
  - Randy Murray undergraduate research in the development of green high strength concrete mix (Dr. Amin Akhnoukh funded research)

### **Faculty Achievements**

*A list of important faculty achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.*

#### **Akhnoukh, A.**

- Participated in the faculty/staff exchange program with the University of Graz/Austria. Dr. Akhnoukh presented his research to his counterpart in Austria. In a further step to encourage the collaboration with the University of Graz, Dr.

Akhnoukh received the Graz faculty visiting UALR and visited with them in his concrete lab.

**Carr, J.**

- Elected Director for the Associated Schools of Construction Region V.
- Taught a two month course at the Xi'an (China) University of Architecture and Technology. The students in the course were a group of 31 government officials. The course was to prepare the students for a semester long course at the Public Policy Institute at Duke University.

**Jovanovic, J.**

- Appointed Program Coordinator for the new Construction Engineering program which has 32 students in the first semester.

**Tramel, J.**

- 2011 Faculty Excellence Award for Public Service for the College of Engineering and Information Technology.
- Taught safety courses for undergraduate and graduate students at the Xi'an University of Architecture and Technology in Xi'an China.

**Xie, H.**

- Awarded the Northrop Young Research Award by the Graduate Institute of Technology, George W. Donaghey College of Engineering and Information Technology, University of Arkansas at Little Rock

**Curriculum**

*Detail program additions, deletions, and revisions; steps taken to strengthen the academic program; etc.*

**Program Changes**

1. New eight-semester plan for Construction Management degree
2. New eight-semester plan for Construction Engineering degree

**Course Suspensions**

1. CNMG 1301 The Construction Industry – replaced by CNMG 1201 and the EIT FYC course
2. CNMG 2310 Materials and Methods I – replaced by CNMG 2313/2113
3. CNMG 2312 Materials and Methods II – replaced by CNMG 2314/2114
4. CNMG 2195 Service Learning – replaced by CNMG 2113
5. CNMG 4195 Professional Service Development – replaced CNMG 2114
6. CNMG 4447 Soil Mechanics – replaced by CNMG 3347

**New Courses**

1. CNMG 1313 Construction Engineering Materials (CHEM 1402; MATH 1451)
2. CNMG 2113 Construction Methods I [CNMG 2313]

3. CNMG 2114 Construction Methods II [CNMG 2314]
4. CNMG 3321 Steel Construction (CNMG 3333)
5. CNMG 3374 Hydraulic Engineering (CNMG 3370) [CNMG 3378]
6. CNMG 4310 Construction Financial Management (ACCT 2310; CNMG 3339)
7. CNMG 4145 Professional Constructor Certification [CNMG 4245]
8. CNMG 4361 Green Construction (junior standing or above)
9. CNMG 2370 Engineering Statics
10. CNMG 2374 Thermal and Fluid Engineering
11. CNMG 3371 Engineering Dynamics
12. CNMG 3376 Engineering Structural Mechanics

### **Change Credit Hours**

1. CNMG 1205 Drawings and Specifications – change credit hours, and description
2. CNMG 4211 Estimating – change credit hours, and prerequisites
3. CNMG 4245 Construction Management - change credit hours, and prerequisites

### **Change Title (and other changes)**

1. CNMG 1101 Construction Engineering Colloquium – change title, type, and description
2. CNMG 4100/4200/4300 Independent Study in Construction – change title, description, and prerequisites
3. CNMG 4391 Cooperative Education in Construction – change title, description, and prerequisites

### **Change Description (and other changes)**

1. CNMG 1201 The Construction Industry – change type and description
2. CNMG 2314 Service Systems of Buildings – change description and prerequisites
3. CNMG 3347 Soils and Foundations – change description and prerequisites
4. CNMG 3195 Community Service Projects – change description and prerequisites
5. CNMG 4322 Building Structure Design – change description and prerequisites
6. CNMG 4389 Professional Engineering Licensure – change description and type
7. CNMG 4395 Professional Development – change description and prerequisites
8. CNMG 4199/4299/4399 Special Topics in Construction – change description
9. CNMG 4218 Advanced BIM (title changed to "Construction Modeling and Design, and CNMG 2314 added as a prerequisite)

### **Change Prerequisites Only**

1. CNMG 2313 Construction Materials – change prerequisites
2. CNMG 2218 Building Information Systems – change prerequisites
3. CNMG 2323 Construction Administration – change prerequisites
4. CNMG 3327 Field Operations – change prerequisites
5. CNMG 3333 Statics and Strength of Materials – change prerequisites
6. CNMG 3339 Bid Process – change prerequisites
7. CNMG 4329 Construction Planning and Estimating – change prerequisites

8. CNMG 4334 Construction Contracts and Law – change prerequisites
9. CNMG 4342 Construction Safety – change prerequisites
10. CNMG 4376 Mechanics of Materials – change prerequisites
11. CNMG 4379 Heat Transfer – change prerequisites
12. CNMG 4385 Construction Engineering Design Experience – change prerequisites

### **Grant Applications/Awards**

*Please provide the numbers indicated. (The ORSP monthly report is a convenient source of information.)*

a. Number of proposals submitted	23
b. Total dollar amount requested in proposals	\$67,5650
c. Number of Awards (proposals funded)	15
d. Total dollars awarded	\$20,8650

- Arkansas Contractors Licensing Board Award funded \$5,000
- Carr, J., NAHB funded \$3,000
- Tramel, J., LEA Funds \$7 900
- Tramel, J., AGC funded \$2,000
- Tramel, J., ASC/TEXO Award funded \$750

### **Public Service**

*Please provide the numbers indicated. Public Service is defined as the application of a faculty member's discipline-based knowledge and skills to the problems of people and groups in society.*

a. Lectures and presentations, discipline-based, to non-discipline related audiences	1
b. Essays or articles in popular or semi-popular publications (in contrast to professional journals)	
c. Consultantships (paid)	10
d. Consultantships (non-paid)	
e. Other (please add other categories of public service as needed):	
Professional, University and Community Service	83
Professional Development	21
Professional Associations, Memberships, Certifications, and Registrations	100

## **Research/Creative Activities**

*Include only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).*

a. Books	1
b. Books (new editions)	
c. Research articles in professional journals	15
d. Research notes in professional journals	
e. Formal presentations at professional meeting	15
f. Discussants at professional meeting	
g. Art exhibits	
h. Theatre productions/musical productions	
i. Other	23

## **Information Technology**

*Detail efforts to integrate technology into the curriculum; significant acquisitions, etc.*

The Construction Management Department continues to update and utilize technology in nearly every course in the curriculum and was the first department within the College to offer on-line courses. A new on line course dealing with construction green delivery systems just received funding and a new course in building codes is being developed for the Fall 2011 semester. The new on line take off for estimating has been incorporated into CNMG 3339 Bid Process and has been instrumental in the student competitions.

Dr. Blacklock added new electronic testing equipment to the soils laboratory. Dr. Jovanovic ordered new computer generated equipment for the construction engineering design courses that will help students to see the reactions to their designs. Dr. Akhnoukh has also added new equipment to the high strength laboratory through his funded research that benefits students doing undergraduate research.

## **Recruitment and Retention**

*Summarize recruitment and retention efforts during the past year)*

Recruiting for the Construction Management program is going to have to be evaluated to see how to turn around the lack of new students. Scholarship funds may need to be used to attract more entering freshman. Mike Tramel met with several community college advisors to inform them about the program and transfer credits that can be used for the program. Mike Tramel and Dr. Jovanovic attended the UALR undeclared majors event, the UALR recruiting event, and the EIT recruiting events.

Dr. Jovanovic has started a campaign to inform professional engineers about the new Construction Engineering program. He has developed an advertisement poster that was sent out to the undeclared students and has posted it up in various locations. One of the problems that he faces is the lack of scholarship funds for the new program. All the existing scholarships are only for construction management students. He is planning to approach the engineering firms and ask for scholarship funds for the construction engineering students.

A new approach to recruiting is going to have to be developed since the current approach is not increasing enrollment.

### **Personnel Changes**

*Please list instructional and research personnel (non-classified), by name, and provide information as indicated. (Omit lecturers and adjunct faculty unless one of these titles is used for full-time employees).*

<b>Change Type</b>	<b>Name</b>	<b>Department</b>	<b>Most Recent Title / Rank</b>	<b>Highest Degree</b>
Promotion	James Tramel	Construction Management	Professor	M.S.

Other personnel changes. Use this section for personnel changes not covered above which you feel should be included in the annual report.

Larry Blackmon was added to the Department as a Laboratory Technician/Part Time Instructor who will teach one class a semester along with his staff duties.