REQUEST FOR ADDING, CHANGING, SUSPENDING OR DROPPING AN UNDERGRADUATE CURRICULUM

Department: School of Architecture
College: Art + Design
Name of Curriculum/Major: Architecture
Type of Degree: Bachelor
Date: 5/2015

Has this change been discussed with and approved by all departments/colleges affected? Yes (x) No ( ) N/A ( )

ATTACH JUSTIFICATION for all actions: Use separate sheet.
ATTACH RESPONSE from any departments affected [i.e. any department whose course(s) are to be added.]
ATTACH FORM D ADDENDUM for all new curricula or changes involving General Education courses.

ACTION (check appropriate box):

( ) ADDING: Show the entire new curriculum by year (freshman, sophomore, etc.) using catalog format. Use plain sheets and attach.

( x ) CHANGING: On a separate sheet of paper, include the current curriculum outline (all four years) which is to be changed in the left column and the proposed changes in the right column. In proposed column, use strikeout and bold to identify deletions and additions. Explain all changes adequately on attachment.

( ) SUSPENDING: Provide an adequate explanation for suspending the curriculum on plain sheets and attach.

( ) DROPPING: Provide an adequate explanation for dropping the curriculum on plain sheets and attach.

CURRICULUM

<table>
<thead>
<tr>
<th>PRESENT</th>
<th>PROPOSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total semester hours in current curriculum: 162</td>
<td>Total semester hours in proposed curriculum: 162</td>
</tr>
</tbody>
</table>

APPROVALS:

Department Faculty Approval Date: 10/1/12
Department Chair's Signature: [Signature] 10/8/13

College Faculty Approval Date: 10/12/12
College Dean's Signature: [Signature] 11/8/12

Chair, FS C & C Committee: [Name] 10/8/13
Academic Affairs Approval: [Signature] 10/7/13

College Contact: Thomas Sofranko
College Contact E-mail: tsofran@lsu.edu
## GENERAL EDUCATION REQUIREMENTS

When a department adds a new curriculum or makes changes in an existing one, a Form D Addendum must also be submitted. This form is simply a list of those courses in the curriculum that satisfy the General Education requirement. Include course rubric, number, and credit hours when curricula differ from the default values. Indicate the curriculum year for all General Education courses.

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<th>Course(s)</th>
<th>Credit Hours</th>
<th>Curriculum Year</th>
</tr>
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<tbody>
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<td>3</td>
<td>(X) 1&lt;sup&gt;st&lt;/sup&gt;</td>
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<td></td>
<td>ENGL 2000</td>
<td>3</td>
<td>(X) 2&lt;sup&gt;nd&lt;/sup&gt;</td>
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<tr>
<td>Analytical Reasoning (6 hrs.)</td>
<td>General Education analytical reasoning course (from mathematics department)</td>
<td>3</td>
<td>(X) 1&lt;sup&gt;st&lt;/sup&gt;</td>
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<tr>
<td>(At least 3 hours credit must be from a MATH course.)</td>
<td>General Education analytical reasoning course</td>
<td>3</td>
<td>(X) 2&lt;sup&gt;nd&lt;/sup&gt;</td>
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<tr>
<td>Arts (3 hrs.)</td>
<td>General Education arts course</td>
<td>3</td>
<td>(X) 1&lt;sup&gt;st&lt;/sup&gt;</td>
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<tr>
<td>Humanities (9 hrs.)</td>
<td>General Education humanities course</td>
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<td>ARCH 2007</td>
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<tr>
<td>Natural Sciences (9 hrs.)</td>
<td>General Education natural science course sequence</td>
<td>6</td>
<td>(X) 1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>(If 2 course sequence is taken in the physical sciences, the additional 3 hour course must be from the life sciences, and vice versa.)</td>
<td>General Education natural science course</td>
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<td>(X) 2&lt;sup&gt;nd&lt;/sup&gt;</td>
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<td>PHYS 2001</td>
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<td>Social Sciences (6 hrs.)</td>
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<tr>
<td>(At least three hours at or above the 2000-level.)</td>
<td>General Education social science course (2000-level or above)</td>
<td>3</td>
<td>(X) 2&lt;sup&gt;nd&lt;/sup&gt;</td>
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</table>
Form D – Changing Undergraduate Curriculum: Architecture

Justification:

The primary changes to the Bachelor of Architecture curriculum are a response to General Education changes. Additionally, some general housekeeping types of updates are also included.

ARCH 2401 – is being changed to allow architecture majors into the course. Also by requiring this course for architecture majors, the School of Architecture can deliver introductory material to the beginning students at the same time the students are fulfilling their Gen Ed Arts requirement.

ARCH 3005, 3006 – are being changed to 2000-level courses (2007 and 2008) as required by the General Education Committee. When approved as courses, ARCH 2007 and ARCH 2008 will be proposed as Gen Ed Humanities courses.

This proposal also decreases the number of professional elective hours from 19 down to 16 and increases the number of approved elective hours from 6 up to 15. This increase in the number of elective hours will more easily allow architecture students to pursue minors during their 5-year curriculum.
<table>
<thead>
<tr>
<th>EXISTING</th>
<th>PROPOSED</th>
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<tr>
<td><strong>FRESHMAN YEAR</strong></td>
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<td>ARCH 1001, 1002, 2401</td>
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<td>MATH 1022</td>
<td>MATH 1022</td>
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<td>General Education Analytical Reasoning Course</td>
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<td>ENGL 1001</td>
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<td>General Education Humanities Course</td>
<td>Gen Ed Humanities Course</td>
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<tr>
<td>General Education Social Science Course</td>
<td>Gen Ed Social Science Course</td>
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<tr>
<td></td>
<td>General Education Natural Science Courses</td>
</tr>
<tr>
<td></td>
<td>Phys 2001</td>
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<tr>
<td>ENGL 2000</td>
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<td>General Education Natural Sciences Course</td>
<td>General Education Natural Sciences Course</td>
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<tr>
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<tr>
<td>ARCH 3001, 3002, 3003, 3004, 3005, 3006</td>
<td>ARCH 3001, 3002, 3003, 3004, 3005, 3006</td>
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<tr>
<td>3007, 3008</td>
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<td>Professional Elective**</td>
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<td>General Education Arts Course</td>
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<td></td>
<td>General Education Humanities Course</td>
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<tr>
<td>ARCH 4001, 4002, 4007, 4031, 4062, 5006</td>
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<td>Approved Electives*</td>
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<td>ARCH 5001, 5002, 5005</td>
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* Note – Approved electives must be selected in consultation with a faculty advisor.
** Note – Professional electives must be selected in consultation with a faculty advisor.
REQUEST FOR ADDING, CHANGING, SUSPENDING OR DROPPING AN UNDERGRADUATE CURRICULUM

Department: Interior Design
College: Art & Design
Name of Curriculum/Major: Interior Design
Type of Degree: B.I.D.

Date: 11/12/12

Has this change been discussed with and approved by all departments/colleges affected? Yes ( ) No ( ) N/A ( )

ATTACH JUSTIFICATION for all actions: Use separate sheet.
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ATTACH FORM D ADDENDUM for all new curricula or changes involving General Education courses.

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APPROVALS:

Department Faculty Approval Date: 02/14/2013

[Signature]

Department Chair’s Signature: 02/14/2013

[Signature]

College Faculty Approval Date: 2/15/13

[Signature]

College Dean’s Signature: (Date)

[Signature]

Chair, FS C & C Committee Approval Date: 1/8/13

[Signature]

Academic Affairs Approval: (Date)

[Signature]

College Contact: ______________________________

(Please print name.)

College Contact E-mail: ______________________________
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## Present:

**CURRICULUM IN INTERIOR DESIGN**

**TOTAL SEM. HRS. • 135**

*Approved College Electives* • select nine sem. hrs. from courses in architecture, art, interior design, and landscape architecture. Six sem. hrs. must be in studio courses. **ART 1001** may not be used for degree credit.

*Specified General Education Courses* •

- A communication studies course is specified as three hours of the humanities requirement.
- An English course is specified as three hours of the humanities requirement.
- Economics 2000, 2010, 2030 or 2031 is specified as the social science requirement.
- Art History 1440 required in the interior design major also fulfills the general education arts requirement.

<table>
<thead>
<tr>
<th>FRESHMAN YEAR</th>
<th>SEM. HRS.</th>
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<td>ARTH 1440, 1441</td>
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<td>ID 1051, 1780</td>
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<td>MATH 1021 or 1029</td>
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<td>General education social sciences course</td>
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<td>ID 2774, 2775, 2785</td>
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<td>ID 3761, 3770</td>
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<td><strong>TOTAL</strong></td>
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## Proposed:

**CURRICULUM IN INTERIOR DESIGN**

**TOTAL SEM. HRS. • 135**

*Approved College Electives* • select nine sem. hrs. from courses in architecture, art, interior design, and landscape architecture. Six sem. hrs. must be in studio courses. **ART 1001** may not be used for degree credit.

*Specified General Education Courses* •

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- An English course is specified as three hours of the humanities requirement.
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- Art History 1440 required in the interior design major also fulfills the general education arts requirement.

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<tr>
<td>General education social sciences course</td>
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<td>General education natural science courses</td>
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<td><strong>TOTAL</strong></td>
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Interior Design / Changing Undergraduate Curriculum

Justification:

The undergraduate curriculum in Interior Design is being changed to reflect the latest actions by the School of Architecture in regards to Arch History I and Arch History II. ARCH 3005 and ARCH 3006 were recently dropped with ARCH 2007 and ARCH 2008 being added in their place.
Faculty Senate Courses and Curricula Committee

From: Lawrence Rouse, Chair, Courses and Curricula Committee

November 21, 2012

At their November 20th, 2012 meeting, the Faculty Senate Courses and Curriculum Committee took the following action regarding the ARCH proposals:

ARCH CURRICULUM

- The Committee conditionally approved the proposal to change the Architecture curriculum pending approval from the General Education Committee. The General Education Committee must approve ARCH 2007 and 2008 to be listed under the General Education Humanities category.

ARCH 3005

- The Committee conditionally approved the proposal to drop ARCH 3005 pending the submissions and approvals of the Interior Design curriculum and the Art History concentration.

ARCH 3006

- The Committee conditionally approved the proposal to drop ARCH 3006 pending the submissions and approvals of the Interior Design, Landscape Architecture, and International Studies curriculum, the Art History concentration, and the International Studies Minor. Note: Landscape Architecture must submit a proposal as soon as possible to address the missing General Education Arts component in their curriculum since all 3000-level courses have been dropped from the General Education Requirements.

ARCH 4007, 4051, 4052

- The Committee conditionally approved the proposals to change ARCH 4007, 4051, and 4052 pending the approval from the General Education Committee. The General Education Committee must approve ARCH 2007 and 2008 to be listed under the General Education Humanities category.

Please submit the requested documentation to Anna Castrillo in the Office of the University Registrar at 112 Thomas Boyd Hall or by email at acastril@lsu.edu.

If you have any questions regarding the request, please feel free to contact me at lrouse@lsu.edu.
Memo

To: Lawrence J. Rouse, Jr., Courses and Curricula Committee

From: Dr. George Z. Voyiadjis, Boyd Professor, Chair and Bingham C. Stewart Distinguished Professor of Engineering, Department of Civil and Environmental Engineering

CC: Anna Castrillo, Coordinator, Office of the University Registrar

Date: 9/24/2013

Re: CE 3700 (Engineering Materials Lab)

CE 3700, Engineering Materials Lab, is currently a 1 credit hour, 3-hour lab. It is currently being offered as a 1-hour lecture followed by a 2-hour lab. The CEE department has had to establish multiple sections recently to meet the need of increased enrollment. The enrollment in each section is restricted by the lab space. Since the lecture can be held in a larger classroom outside the lab, the department has decided to combine the students from all sections during the one hour lecture and offer the two hour lab at a different time. Therefore, the department is requesting to have one lecture which all students attend and then have separate labs accommodating each section. This would require changing the way the lab is set up so that we can schedule the lecture and labs separately. The course retains its current number and retains its 1 credit hour rating; all that changes is that students can now register for the common lecture (one contact hour) and one of the lab sections offered (two contact hours).

Sincerely,

Dr. George Z. Voyiadjis

[Signature]

[Approved by:][Signature]

[Approved by:][Signature]

Eff. 25/2014
3 October 2013

To: T. Gilmour Reeve
Vice Provost, Office of Academic Affairs

From: Lawrence J. Rouse
Chair, Faculty Senate Courses and Curricula Committee

Re; CE 3700

At the meeting of the Faculty Senate Courses and Curricula Committee meeting on 1 October 2013, the committee reviewed and approved a request by the Department of Civil Engineering to schedule CE 3700 (a 1 credit hour, 3 hour lab course) in two parts. The first part would gather all students registered for CE 3700 in one classroom for an hour and the second part would separate the students into smaller groups on multiple days and times for the conduct of the lab experiment. The memo uses the word “lecture” for the first part. The committee understands that the purpose of the large gathering is not a lecture in the normal definition, but an explanation of the purpose and methods for the conduct of the lab. I feel that this understanding should be included with the note from Dr. Voyaidjis.
Anna M Castrillo

From: Sherif S Ishak
Sent: Tuesday, September 24, 2013 12:00 PM
To: Anna M Castrillo; Robert K Doolos
Subject: RE: Thanks: We need a solution for CE 3700 Fall 2013.

Anna,

Below is the memo from the CEE department.

CE 3700, Engineering Materials Lab, is currently a 1 credit hour, 3-hour lab. It is currently being offered as a 1-hour lecture followed by a 2-hour lab. The CEE department has had to establish multiple sections recently to meet the need of increased enrollment. The enrollment in each section is restricted by the lab space. Since the lecture can be held in a larger classroom outside the lab, the department has decided to combine the students from all sections during the one hour lecture and offer the two hour lab at a different time. Therefore, the department is requesting to have one lecture which all students attend and then have separate labs accommodating each section. This would require changing the way the lab is set up so that we can schedule the lecture and labs separately. The course retains its current number and retains its 1 credit hour rating; all that changes is that students now register for the common lecture and one of the lab sections offered.

Thank you,

Respectfully,
Sherif

Sherif Ishak, Ph.D., P.E.
Professor
Undergraduate Programs Coordinator
SM 98A Patrick F. Taylor Hall
Civil and Environmental Engineering
Louisiana State University
Baton Rouge, LA 70803
Phone: 225-578-4844

Personal Website
Experience: that most brutal of teachers. But you learn, my God do you learn.
C. S. Lewis

From: Anna M Castrillo
Sent: Tuesday, September 24, 2013 11:01 AM
To: Robert K Doolos
Cc: Sherif S Ishak
Subject: RE: Thanks: We need a solution for CE 3700 Fall 2013.

Robert,
i do not have any memo regarding CE 3700 addressed to the C&C Committee.

Anna Castrillo, M.A.
Coordinator
Office of the University Registrar
Louisiana State University
112 Thomas Boyd Hall
Phone: (225)578-4111
Fax: (225)578-5991

From: Robert K Doolos
Sent: Tuesday, September 24, 2013 10:19 AM
To: Anna M Castrillo
Cc: Brian C Antie
Subject: Thanks: We need a solution for CE 3700 Fall 2013.

Anna,

Did CE ever send the memo to C&C as Larry suggested last March. If so, what was the C&C Committee's response.

Robert

From: Sherif S Ishak
Sent: Tuesday, September 24, 2013 10:03 AM
To: Robert K Doolos; Lawrence J Rouse; Warren N. Waggenspack , Jr
Cc: Louay N Mohammad; mewagg@mx6a-00004801.pphosted.com; Richard Koubek; Anna M Castrillo; Tgilmour Reeve; Brian C Antie; Ruby M Brown
Subject: RE: Thanks: We need a solution for CE 3700 Fall 2013.

Robert,

We are in the process of scheduling the spring classes and once again we are facing the challenge of scheduling CE 3700 with one common hour for all lab sections and separate two hour sessions for each section. You had helped us in the spring schedule it this fall with approval from Larry. Can you pls. help us again do the same for the spring? Or, if possible, can this be programmed so that our department can schedule it this way from now on? Thank you for your help.

Regards,
Sherif

Sherif Ishak, Ph.D., P.E.
Professor
Undergraduate Programs Coordinator
3418A Patrick F. Taylor Hall
Civil and Environmental Engineering
Louisiana State University
Baton Rouge, LA 70803
Phone: 225-578-4846

Experience: that most brutal of teachers. But you learn, my God do you learn.
C. S. Lewis
From: Robert K Doolos  
Sent: Wednesday, March 20, 2013 5:48 PM  
To: Lawrence J Rouse; Warren N. Waggenspack, Jr  
Cc: Louay N Mohammad; Sherif S Ishak; mewagg@mx0a-00004801.pphosted.com; Richard Koubek; Anna M Castrillo; Tgilmour Reeve; Brian C Antie; Ruby M Brown  
Subject: RE: Thanks: We need a solution for CE 3700 Fall 2013.

Larry

Thanks for the guidance. We will schedule the sections as requested.

Robert

Robert K. Doolos  
University Registrar  
Room 112, Thomas Boyd Hall  
Louisiana State University  
Baton Rouge, LA 70803  
rdooolos@lsu.edu  
Phone: 225.578.1690  
Fax: 225.578.5991

From: Lawrence J Rouse  
Sent: Wednesday, March 20, 2013 5:32 PM  
To: Warren N. Waggenspack, Jr; Robert K Doolos  
Cc: Louay N Mohammad; Sherif S Ishak; mewagg@mx0a-00004801.pphosted.com; Richard Koubek; Anna M Castrillo; Tgilmour Reeve  
Subject: RE: Thanks: We need a solution for CE 3700 Fall 2013.

Warren, Robert,

Warren and I discussed this problem. It is not a lecture/lab course in the conventional sense and the term should not have been used. As in most science and engineering labs, the first part of the lab time is used to explain the procedure to be followed in the experiment followed by the conduct of the experiment or procedure by the students. It seems that CE wants to consolidate the explanation time for a number of sections to make better use of faculty/instructor time. What is wanted/needed is a lab that is split into two parts (two time slots). Although it is not a lecture/lab course, can the Registrar's office schedule the CE labs as requested?

To cover any problems, I suggest that CE (or the College of Engineering) submit a memo to the C&C committee explaining this two time slot lab concept for approval. I would not expect any problem and it would cover any questions that could arise.

Larry

From: Warren N. Waggenspack, Jr [mewagg@me.lsu.edu]  
Sent: Wednesday, March 20, 2013 3:31 PM  
To: Robert K Doolos  
Cc: Louay N Mohammad; Sherif S Ishak; mewagg@mx0a-00004801.pphosted.com; Richard Koubek; Anna M Castrillo; Lawrence J Rouse; Tgilmour Reeve  
Subject: Thanks: We need a solution for CE 3700 Fall 2013.

Thanks for the heads up.
The "Lecture/Lab" nomenclature is a misnomer to some extent but is what structure I know in the system that allows one to schedule multiple time blocks for a single lab section while allowing a concurrent time block for multiple sections.

The concurrent lab timeslot is to discuss the "how to conduct the lab" discussion, not necessarily a conventional lecture on new theory.

Warren

At 8:20 PM +0000 3/20/13, Robert K Doolos wrote:

Warren,

I am going to let Larry make a decision regarding the department's request.

What has happened is that the department has gotten caught in our "lockout" when we do not allow departments to touch their course offerings while we schedule classes into general purpose classrooms. The department asked us to schedule the course as a lecture/lab course and this is not what the C&C Committee or the University approved. Therefore, my staff correctly declined. I understand what is going on with PETE 3037, but if they really are offering that course as a lecture/lab course they should not be offering it that way without going through C&C.

Robert

Robert K. Doolos
University Registrar
Room 112, Thomas Boyd Hall
Louisiana State University
Baton Rouge, LA 70803
rdoolos@lsu.edu
Phone: 225.578.1690
Fax: 225.578.5991

From: Warren N. Waggenspack, Jr [mailto:mewagg@me.lsu.edu]
Sent: Wednesday, March 20, 2013 1:33 PM
To: Anna M Castrillo; Lawrence J Rouse; Robert K Doolos
Cc: Louay N Mohammad; Sherif S Ishak; mewagg@mx9a-00004801.pphosted.com; Richard Koubek
Subject: We need a solution for CE 3700 Fall 2013.

Larry, Anna, Robert
With course registration opening soon, we do not have the luxury of waiting for C&C paperwork to get processed. We have enrollment capacity issues in a laboratory facility and need to meet student demand. We can add more sections by doing the lab discussion in a single lecture outside the lab and schedule additional sections in the facility. This also better utilizes our faculty resources.

There is precedent for this exact request to meet large enrollment demands. PETE 3700 is in the catalog as a one credit, 3 contact hour laboratory course. We have 4 sections with a capacity of 28. It all used to take place 3 hours per section - in the lab. It now has a common one hour discussion in a single lecture hall, with separate two hour laboratory sessions. (see embedded below)

It is scheduled this way for fall 2013 and is the ONLY way we can accommodate the student load without additional resources being provided by the university -- that is not going to happen. We were hoping the enrollment burst was temporary but has, not only continued, but also gotten worse.

Function ==> VCST Term ==> 1S2014 Dept ==> PETE Crs ==> 3037 Sec ==> 1
Crs Title : PETE FIELD OPERATNS

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Function ==> VSEC Term ==> 1S/2013 Dept ==> PETE Crs ==> 3037 Sec ==> 001
Crs Title : PETE FIELD OPERATNS

Last Update: 08/31/2012 FTHURBE

Session : Call Number : 5061 Sec Status:
Sec Enrlment: 26  Location Code:  Add Date: 01/13/2012
Enrl Maximum: 28  Shared Instr: Y  Begin Date: 01/13/2012
Crs Cred Hrs: 1.0  Booklet Print: Y  Link Flg:
Waitlist Flg: W  Telephone Flg:  Spec Enrl:
Delivery Mtd:  Responsble Unit:
Sec Title:
Type  Hrs  Time  Days  Room  Building  S25 Code  830 1030  T
LAB  1.0  230  330  M  1109  PATRICK TAYLOR  HSM

Please work with us to solve the Fall 2013 issue before scheduling opens and
I will get CE to process the paperwork for the change. We were asked in
course registration meetings to work creatively to solve challenges, this is
exactly what we are proposing here.

Warren

At 3:44 PM +0000 3/20/13, Anna M Castrillo wrote:
I will forward this to Larry Rouse, the chair of the C&C Committee.

Anna Castrillo
Coordinator
Office of the University Registrar
Louisiana State University
112 Thomas Boyd Hall
Phone: (225)578-4111
Fax: (225)578-5991

_FROM: Ceramic S Ishak
Sent: Wednesday, March 20, 2013 10:44 AM
To: Anna M Castrillo; Warren N. Waggenspack, Jr
CC: Louay N Mohammad; Robert K Doolos
Subject: RE: Fwd: Ooops: CE 3700
In the last academic matters committee meeting, members from other departments indicated that they have labs in their program that are scheduled that way without being designated as lecture/lab! This is why we voted to table this change to CE 3700. All we need is to break the three hour lab into two sessions: a one-hour session and a two-hour session and both can be designated as labs. Can we do that?

Regards,
Sherif

Sherif Ishak, Ph.D.
Associate Professor
Undergraduate Programs Coordinator
3418A Patrick F. Taylor Hall
Civil and Environmental Engineering
Louisiana State University
Baton Rouge, LA 70803
Phone: 225-578-4846
Personal Website

Experience: that most brutal of teachers. But you learn, my God do you learn.
C. S. Lewis

From: Anna M Castrillo
Sent: Wednesday, March 20, 2013 9:44 AM
To: Sherif S Ishak; Warren N. Waggenspack, Jr
Cc: Louay N Mohammd; Robert K Doolos
Subject: RE: Fwd: Ooops: CE 3700

Dr. Ishak and Dr. Waggenspack,

Unfortunately, we cannot load this into the Mainframe until it has been approved by the Courses and Curricula Committee. I do not have the paperwork yet for CE 3700. Once the proposal is approved by C&C, we can then change the lab format into a lecture/lab format, but until then, nothing can be done.

Sincerely,

Anna Castrillo
Coordinator
Office of the University Registrar
Louisiana State University
112 Thomas Boyd Hall
Phone: (225)578-4111
Fax: (225)578-5991

From: Ruby M Brown
Sent: Wednesday, March 20, 2013 9:39 AM
To: Anna M Castrillo
Subject: FW: Fwd: Ooops: CE 3700

Here you go!!!!

Ruby

Ruby M. Brown
Administrative Program Specialist B
Louisiana State University
Office of the University Registrar
112 Thomas Boyd Hall
Baton Rouge, LA 70803
(225) 578-2096 Phone
(225) 578-5991 Fax
rubrown9@lsu.edu

From: Louay Mohammad [mailto:Louaym@lsu.edu]
Sent: Wednesday, March 20, 2013 9:24 AM
To: Ruby M Brown
Subject: Re: Fwd: Ooops: CE 3700

At 12:22 PM 3/14/2013, you wrote:
Sent from my iPhone
225-284-8865

Begin forwarded message:
From: "Warren N. Waggenspack, Jr" <mewagg@mc.lsu.edu>
Date: March 12, 2013, 7:46:04 AM CDT
To: <rbrown9@lsu.edu>
Cc: <rdoolos@lsu.edu>, <mewagg@m0x0-00004801.pphosted.com>, <sishak@lsu.edu>
Subject: Ooops: CE 3700

Sorry I had the wrong email address on first pass.... WNW
Ruby

In order to manage larger Fall 2013 enrollments with current facilities and existing faculty resources, Civil Engineering needs to restructure one of its labs. CE 3700 is currently in the catalog as a one credit, three contact hour lab that all takes place in a combined research/teaching laboratory setting.

Part of the course is presentation and discussion about the experiments followed by the actual conducting of the experiments. Based on needing to enroll more students in the course, CE needs more sections but has concerns with consuming additional time in the research facility. By moving the discussion portion out of the lab to a common lecture time, this frees up the lab to offer more sections without consuming more research time.

Can you work with Dr Sherif Ishak to schedule a concurrent 1 hour lecture period for the course for multiple sections and a two hour lab portion which will be scheduled in the facility.

The CE faculty are working on the Form C paperwork to change this formally.

I have copied Robert Doolos on this as well.
Warren

From: Sherif S Ishak <sishak@lsu.edu>
To: "Warren N. Waggenspack, Jr" <mewagg@me.lsu.edu>
Subject: CE 3700
Date: Fri, 8 Mar 2013 20:21:52 +0000

Warren,

Have you had the chance to check on how we can schedule CE 3700 as a lecture/lab course in the fall? Do you want me to contact someone at the registrar's office to get an answer on it? if so, pls. let me know who. I'd like to get this done before students begin to register and then it would be hard to change schedule.

Regards,
Sherif

Sherif Ishak, Ph.D.
Associate Professor
Undergraduate Programs Coordinator
3418A Patrick F. Taylor Hall
Civil and Environmental Engineering
Louisiana State University
Baton Rouge, LA 70803
Phone: 225-578-4846
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C. S. Lewis

Louay N. Mohammad, Ph.D.
Professor of Civil & Environmental Engineering
Holder of the Irma Louise Rush Stewart Distinguished Professorship
Transportation Faculty Group Coordinator
Department of Civil and Environmental Engineering
Director, Engineering Materials Characterization Research Facility
Louisiana Transportation Research Center
Louisiana State University
4101 Gourrier Ave., Baton Rouge, LA 70808
E-mail: louaym@lsu.edu
Ph. (225) 767-9126    Fax (225) 767-9179    Cell: (225) 252-7046
URL: http://www.cee.lsu.edu/people/Bios/Louay_Mohammad.aspx
**REQUEST FOR ADDITION OF NEW COURSE**

**Department:** Construction Management  
**College:** Engineering  
**Date:** 4/7/13

**PROPOSED COURSE**  
Short Title: MAINT & TURNAROUNDS  
Rubric & No.: CM 3355  
Title: Maintenance and Turnarounds

**COURSE CREDIT**  
Graduate Credit: [ ] YES [ ] NO  
Semester Hours of Credit: 3  
(For combination course types only: Lecture Hrs. Lab/Sem/Rec Hrs.)  
If course may be repeated for credit (i.e. special topics), course may be taken for a max. of [ ] credit hours.  
Credit will not be given for this course and:  

__(Indicate rubrics and course numbers)__

**GRADING**  
Final Exam: [ ] YES [ ] NO  
Grading System: [ ] Letter Grade [ ] Pass/Fail  
(Attach justification if the proposed course will not hold a final exam during examination week.)

**COURSE TYPE**  
(Indicate hours in the appropriate course type)  

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</table>

**Maximum enrollment per section:** 40  
(Use integer, e.g. 25 not 20-30)

**CATALOG TEXT**  
Concise catalog statement exactly as you wish it to appear in the LSU General Catalog

3355 Maintenance and Turnarounds (3) Prerequisites: CM 2103. Principles of industrial maintenance and turnarounds including facility types, process equipment, work order systems, safety, preventive maintenance programs, roles, planning, and facility shutdown concepts.

**BUDGET IMPACT**  
If this course is approved, will additional staff be needed? [ ] YES [ ] NO  
(If answer to either question above is "yes" attach explanation)  
Academic Affairs Approval:  
[ ] YES [ ] NO  
Date: [ ]

**ATTACHMENTS**  
ATTACH THE FOLLOWING TO YOUR PROPOSAL.

JUSTIFICATION: Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses? No

SYLLABUS: Including 14 week outline of the subject matter; titles of text, lab manual, and/or required readings; grading scale and criteria. (For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students.)

**APPROVALS**  
Department Faculty Approval  
[Signature]  
03/08/13  
07/12/13

College Dean's Signature  
[Signature]  
09/16/13  
09/27/13

College Contact: Lisa Launey  
College Contact E-mail: eglau@eng.lsu.edu

[Signature]  
Chair, FS C&C Committee  
09/17/13

[Signature]  
Academic Affairs Approval  
09/14/13
CM 3355 Maintenance and Turnarounds

TERM : Fall 2013

CLASS TIME & LOCATION

FACULTY : Dr. Emy Roider
Room 110 CM Building
croider@lsu.edu
225-578-0942

OFFICE HOURS
T Th 10:30 – 12:00
Wed: 9:00 – 11:00
By appointment

WEBSITE : Moodle will be utilized for this course.

CATALOG COURSE DESCRIPTION
Principles of industrial maintenance and turnarounds including facility types,
process equipment, work order systems, safety, preventive maintenance
programs, roles, planning, and facility shutdown concepts.

COURSE OBJECTIVE & OUTCOMES
This course is designed to provide the student with a working knowledge of
industrial facility types, process equipments types and functions, industrial
maintenance and the role of the contractor, work order processes, shutdowns,
turnarounds, work validation and planning, and project execution.

Following successful completion of this course, it is expected that students will:
1. Describe the major types of industrial facilities and the purpose of each
2. Identify the major types of process equipment and the functions of each
3. Apply project management concepts to the preplanning, planning, and
   execution of industrial maintenance and turnarounds

Quizzes will correspond to the weekly topical content. Written assignments
are components of the course objectives listed above.

GRADE POLICY

GRADE SCALE :

A ≥ 90 Distinguished mastery of the course material
B 80 – 89.9999 Good mastery
C 70 – 79.9999 Acceptable mastery
D 60 – 69.9999 Minimally acceptable achievement for credit
F ≤ 59.9999 Failing

Exam #1 30%
Exam #2 30%
Final Exam 30%
Quizzes / Assignments 10%
COURSE: REQUIRED: **Managing Maintenance Shutdowns and Outages by Joel Levitt**

**Out of Class Expectations:**
It is expected that the students have read the assigned chapters or pages prior to class for the background necessary to properly participate in the discussion and think critically about the concepts addressed. As a general policy, for each hour you are in class, you (the student) should plan to spend at least two hours preparing for the next class. Since this course is for three credit hours, you should expect to spend around six hours outside of class each week reading or writing assignments for the class.

**CM 3355: Tentative Course Outline**

<table>
<thead>
<tr>
<th>Week No.</th>
<th>Topic</th>
<th>Reading/Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview of the types of facilities (Refineries, Chemical Plants, LNG, Power Generation, Pulp and Paper, etc) including the purpose of each type and the different units inside each facility</td>
<td>Instructor Handout</td>
</tr>
<tr>
<td>2</td>
<td>Process Equipment – types and functions (Pumps, Blowers, Heat Exchangers, Cooling Towers)</td>
<td>Instructor Handout</td>
</tr>
<tr>
<td>3</td>
<td>Process Equipment – types and functions (Furnaces, Boilers, Towers/Columns, Pressure Vessels, Tanks)</td>
<td>Instructor Handout</td>
</tr>
<tr>
<td>4</td>
<td>Process Equipment – types and functions (Compressors, Turbines, Co-generation, Reformers, Reactors)</td>
<td>Instructor Handout</td>
</tr>
<tr>
<td>5</td>
<td>Process Equipment – Modular Construction, Grouting, Internals (packing, trays, distributor piping) – Exam #1</td>
<td>Instructor Handout/Exam #1</td>
</tr>
<tr>
<td>6</td>
<td>Overview of Maintenance and the role of the contractor (Routine maintenance, capital work, outages, permits).</td>
<td>Instructor Handout</td>
</tr>
<tr>
<td>7</td>
<td>Work order processes and systems, priorities, scheduling, ordering materials, execution, and safety (JSA, lock out-tag out, etc.)</td>
<td>Instructor Handout</td>
</tr>
<tr>
<td>8</td>
<td>Preventive maintenance programs; Typical maintenance work items (pump seals, flange leaks, piping replacement, boiler tube repair, other equipment repair)</td>
<td>Instructor Handout</td>
</tr>
<tr>
<td>9</td>
<td>Overview of Shutdowns, Turnarounds, and Outages; Communications; Shutdown phases; How to justify the shutdown</td>
<td>Chap 1-4*</td>
</tr>
<tr>
<td>10</td>
<td>Timelines and audits; Shutdown organization – Exam #2</td>
<td>Chap 5-6*, Exam #2</td>
</tr>
<tr>
<td>11</td>
<td>Work Validation and preparation for planning; Individual Job planning; Risk Management; Environment, Health, and Safety</td>
<td>Chap 9-12*</td>
</tr>
<tr>
<td>12</td>
<td>Key concepts for all Project Management Techniques; Critical Path Method(CPM); Resources including labor and equipment requirements</td>
<td>Chap 14-16*</td>
</tr>
<tr>
<td>13</td>
<td>Identification of Pre-Shutdown, Shutdown, and Post-Shutdown work items</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>How to integrate external organizations; Accounting, Costs, and budgets; Logistics- Organization for parts, scaffolding, materials, supplies, and construction equipment; Execution – How to manage in the face of reality</td>
<td>Chap 20-23*</td>
</tr>
<tr>
<td>15</td>
<td>Final Exam</td>
<td></td>
</tr>
</tbody>
</table>
Justification CM 3355

This course is needed to provide students with general knowledge of maintenance and turnarounds that will be used within industrial construction.
REQUEST FOR ADDITION OF NEW COURSE

Department: Construction Management Date: 4/10/13

College: Engineering

PROPOSED COURSE
Rubric & No.: CM 3236
Title: Residential Design Codes and Specifications

COURSE CREDIT
Graduate Credit: YES NO
Semester Hours of Credit: 3 (For combination course types only: Lecture Hrs. Lab/Sem/Rec Hrs. if course may be repeated for credit (i.e. special topics), course may be taken for a max. of credit hours. Credit will not be given for this course and: 

GRADING
Final Exam: YES NO Grading System: Letter Grade Pass/Fail
(Attach justification if the proposed course will not hold a final exam during examination week.)

COURSE TYPE
(Indicate hours in the appropriate course type)

Maximum enrollment per section: 50 (use integer, e.g. 25 not 20-30)

CATALOG TEXT
(Concise catalog statement exactly as you wish it to appear in the LSU General Catalog)

3236 Residential Design Codes and Specifications. Prerequisite: Majors Only. A study of residential design theory, techniques, and application as it relates to the International Residential Code for one and two family dwellings.

BUDGET IMPACT
If this course is approved, will additional staff be needed? YES NO
Will additional space, equipment, special library materials or other major expense be involved? YES NO
(If answer to either question above is "yes" attach explanation.) Academic Affairs Approval:

ATTACHMENTS
ATTACH THE FOLLOWING TO YOUR PROPOSAL.

JUSTIFICATION: Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses? No
SYLLABUS: Including 14 week outline of the subject matter, titles of text, lab manual, and/or required readings; grading scale and criteria (For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students).

APPROVALS
Department Faculty Approval 03/08/13 (date)
07/12/13 (department Chair's Signature)

College Faculty Approval 9/6/13 (date)
9/12/13 (Chair, FS C&C Committee)

Graduate Dean's Signature (for 4000 level and above) (date)

College Contact: (Please print name.)

College Contact E-mail:
CM 3236
Residential Design, Codes, and Specifications

TERM: TBA
CLASS TIME: TBA

FACULTY: Faculty Name
Office Location, Email, Office Phone

OFFICE HOURS: Faculty Office Hours

WEBSITE: Moodle or similar

CATALOG COURSE DESCRIPTION: Residential Design, Codes, and Specifications (3) 2 hrs. lecture; 2 hrs. lab.
A study of residential design theory, techniques, and application as it relates to the International Residential Code for one and two family dwellings.

COURSE OBJECTIVES & OUTCOMES: The goal of this course is to familiarize students with the residential design process from the production of plans and specifications that meet the client's needs, to the submission process of documents that meet the requirements for the issuance of applicable building permits. Following successful completion of this course, students will be able to:
1. Identify and interpret applicable IRC building codes and specifications to a residential structure.
2. Apply LEED and RESCheck standards to a residential design.
3. Create working drawings of a residential structure that meets permit requirements and clients' needs.

GRADING SCALE: Drawings and Projects 60%
Quizzes 20%
Exams 20%
A 90-100%
B 80-89.5%
C 70-79.5%
D 60-69.5%
F 0-59.5%

Exams (20%)
A midterm exam (10%) will be given during the class period indicated on the schedule. The final exam (10%) will be given at the time designated by the University and will be comprehensive. You will need to provide a small scantron (4.25x11) and a number 2 pencil to take each of these exams. There are no make-up exams.

Quizzes (20%)
Ten quizzes (2% each) will be given throughout the semester and will typically focus on lecture concepts, assigned readings, and/or homework assignments from the most recent class periods. All quizzes are unannounced. Quizzes are also measuring and assessing class attendance and participation, therefore there are no make ups for any missed quiz.

Drawings and Projects (60%)
There will be several drawings and projects focusing on typical residential structures. The number of drawings and projects turned in for a grade has not been preset and will be at the discretion of the instructor. It is intended that these projects will span several class periods and require outside lab work. Projects will be graded according to their accuracy and completeness. Projects will include creating floor plans, elevations, foundation plans, roof plans, wall sections, cabinet details, site plan, and applicable schedules. Drawing projects will also consist of 3D rendering as well as walk through animations of a residential project. All drawings turned in late will have one letter grade deducted for every day that they are late.

Lecture-lab course
It is expected that the students have read the chapters prior to class for the background necessary to properly learn the content and apply the concepts addressed. As a general policy, for each hour you are in class, you (the student) should plan to spend at least two hours on preparing for the next class and completing homework and laboratory assignments.

NOTE: NEATNESS COUNTS ON EVERYTHING SUBMITTED FOR THIS CLASS!

University/Department/Course Policies:
1. No eating or drinking or use of tobacco products is allowed in CM classrooms.
2. Turn cell phones off, or place on the silent mode. Do not take calls or reply to messages in class.
3. Attendance and participation are required. In the event of an absence, it is the student's responsibility to obtain lecture notes and assignments, and otherwise compensate for whatever may have been missed. There are no make up quizzes. All assignments turned in late will have one letter grade deducted for every day that they are late.
4. Academic dishonesty will be dealt with according to university regulations and policy. It is each student's responsibility to understand these regulations. Students may help one another on assignments. However, copying a file from someone else, turning in someone else's work as your own, or allowing your work to be copied by someone else is considered cheating.
5. Copied or plagiarized work will not be accepted. Students are responsible for citing all work properly. Proper citation and attribution is expected for all non-original material submitted. Students are expected to be familiar with the plagiarism policy as set forth by the university in the Code of Student Conduct (Louisiana State University, 2009). For more information about plagiarism, the different types of plagiarism or how to cite sources properly refer to http://www.plagiarism.org/ .
6. Students are expected to assist in maintaining a classroom environment that is conducive to learning. To create an environment in which learning is the primary objective, students are asked to refrain from disruptive behaviors, tardiness, leaving early, sleeping, prolonged visiting with other students, and making inappropriate or offensive remarks. This is not a comprehensive list - in general, treat others with respect.
7. Campus-based and/or web-based library usage is required.

Class Contacts
Record the names, phone numbers, and email addresses of some of your classmates. These members of the class are valuable resources for notes, assignments, announcements, etc. that are needed in the case of an absence from class.

Student Name: _______________ Phone Number: _______________ E-Mail Address: _______________ @tigers.lsu.edu

Student Name: _______________ Phone Number: _______________ E-Mail Address: _______________ @tigers.lsu.edu
## Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Topic</th>
<th>Lab Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to course</td>
<td>Introduction to course projects</td>
</tr>
<tr>
<td>1</td>
<td>International Residential Code (IRC)</td>
<td>Determine design parameters</td>
</tr>
<tr>
<td>2</td>
<td>Scope and Administration</td>
<td>Determine applicable codes and zoning</td>
</tr>
<tr>
<td>2</td>
<td>Definitions</td>
<td>Determine customer needs</td>
</tr>
<tr>
<td>3</td>
<td>Building Planning</td>
<td>Preliminary design sketches</td>
</tr>
<tr>
<td>3</td>
<td>Foundations</td>
<td>Introduction to software application</td>
</tr>
<tr>
<td>4</td>
<td>Walls</td>
<td>Drawing process in software</td>
</tr>
<tr>
<td>4</td>
<td>Roof and Ceiling Construction</td>
<td>Floor plan creation</td>
</tr>
<tr>
<td>5</td>
<td>Energy Efficiency</td>
<td>Elevations creation</td>
</tr>
<tr>
<td>5</td>
<td>Mechanical System Requirements</td>
<td>Schedules creation</td>
</tr>
<tr>
<td>6</td>
<td>Plumbing</td>
<td>Plan creation</td>
</tr>
<tr>
<td>6</td>
<td>Electrical</td>
<td>Project printing</td>
</tr>
<tr>
<td>7</td>
<td>Chimneys</td>
<td>Preliminary drawing presentation</td>
</tr>
<tr>
<td>7</td>
<td>ADA Compliance</td>
<td>Sections and Detail drawings</td>
</tr>
<tr>
<td>8</td>
<td>Introduction</td>
<td>Elevation Drawings</td>
</tr>
<tr>
<td>8</td>
<td>Client Design Considerations</td>
<td>HVAC plan creation</td>
</tr>
<tr>
<td>9</td>
<td>Vernacular Designs</td>
<td>Plumbing plan creation</td>
</tr>
<tr>
<td>9</td>
<td>Local Code Requirements</td>
<td>Electrical plan creation</td>
</tr>
<tr>
<td>10</td>
<td>Building Standards</td>
<td>Cabinet elevation creation</td>
</tr>
<tr>
<td>10</td>
<td>Subdivision Restrictions</td>
<td>Plot plan creation</td>
</tr>
<tr>
<td>11</td>
<td>Preliminary Design Process</td>
<td>Specification creation</td>
</tr>
<tr>
<td>11</td>
<td>Preliminary Drawing Creation</td>
<td>Assembling working drawings</td>
</tr>
<tr>
<td>12</td>
<td>Elevations and Design Considerations</td>
<td>Assembling working drawings</td>
</tr>
<tr>
<td>12</td>
<td>Plumbing Design Criteria</td>
<td>Assembling working drawings</td>
</tr>
<tr>
<td>13</td>
<td>HVAC Design Criteria</td>
<td>Assembling working drawings</td>
</tr>
<tr>
<td>13</td>
<td>Electrical Design Criteria</td>
<td>Presentation drawing creation</td>
</tr>
<tr>
<td>14</td>
<td>Working Drawings</td>
<td>Presentation drawing creation</td>
</tr>
<tr>
<td>14</td>
<td>Plan Submission and Approval</td>
<td>Walkthrough animation creation</td>
</tr>
</tbody>
</table>
Justification CM 3236

The Department of Construction Management is requesting the creation of a new course titled Residential Design, Codes, and Specifications. This course is vital to the curriculum revisions taking place within the department. This course will serve as an elective course selection in the newly formed residential construction area of specialization within the curriculum and will provide students with the knowledge necessary to be successful within the program and their careers.

This course is designed to assist students in gaining the knowledge and skills necessary to interpret residential designs to ensure that all applicable codes and specifications are being adhered to. This course will familiarize students with codes and specifications commonly found in the construction industry and the steps required to ensure compliance. The ability to interpret and apply building codes is vital to the construction management profession as well as to CM students who will be utilizing these skills in other CM courses.

Industry representatives have asked that such a course be created and developed as this course does not exist on the LSU campus. Therefore, it does not duplicate other courses which CM students are eligible to take. No overlap between this course and those offered by other departments exists.

This course will be used as a Residential Industry Emphasis Area (IEA) course (see flow chart for IEA and minors). This course is currently being taught as a CM 4206 independent study.
Faculty Senate Courses and Curricula Committee

October 1, 2013

From: Lawrence Rouse, Chair, Courses and Curricula Committee
To: Charles Berryman, Department of Construction Management

At their October 1st, 2013 meeting, the Faculty Senate Courses and Curriculum Committee took the following actions regarding the Construction Management proposals.

Technical Sales Minor
- The Committee approved the Technical Sales minor change but requested a letter of support from the FIN department since the course is being added as an option.

CM 2141
- The Committee conditionally approved the proposal to drop CM 2141 pending the submission and approval of the proposals to change the Industrial Engineering curriculum, IE 4516, CM 4110, and the revisions to the degree requirements section in the College of Engineering.

CM 2105
- The Committee conditionally approved the proposal to add CM 2105 pending a revised syllabus with a corrected makeup exam policy statement.

CM 3145
- The Committee conditionally approved the proposal to add CM 3145 pending a revised syllabus with the correct title “Commercial Estimating” as well as a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3165
- The Committee conditionally approved the proposal to add CM 3165 pending a revised syllabus that explains what the +8% extra credit assignments is.

CM 3236
- The Committee conditionally approved the proposal to add CM 3236 pending a revised syllabus with a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3355
- The Committee conditionally approved the proposal to add CM 3355 pending a revised syllabus that adds the out of class expectations.
CM 3356
- The Committee conditionally approved the proposal to add CM 3356 pending a revised syllabus with a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3502
- The Committee conditionally approved the proposal to add CM 3502 pending a revised syllabus that adds a percentage to each of the grading criteria.

CM 3503
- The Committee conditionally approved the proposal to add CM 3503 pending a revised syllabus that adds a percentage to each of the grading criteria, the removal of “C or better” from the course description, and the addition of out of class expectations.

CM 3504
- The Committee conditionally approved the proposal to add CM 3502 pending a revised syllabus that adds a percentage to each of the grading criteria.

CM 4101
- The Committee conditionally approved the proposal to add CM 4101 pending a revised syllabus that adds the out of class expectations.

CM 4221
- The Committee conditionally approved the proposal to add CM 4221 pending a revised syllabus with a corrected makeup exam policy statement as well as the correct course rubric and number listed on the course schedule.

CM 4355
- The Committee conditionally approved the proposal to add CM 4355 pending a revised syllabus that explains whether the project is assigned by the instructor or student chosen.

Please submit the requested documentation to Anna Castrillo in the Office of the University Registrar at 112 Thomas Boyd Hall or by email at acastr1@lsu.edu.

If you have any questions regarding the request, please feel free to contact me at lrouse@lsu.edu.
REQUEST FOR ADDITION OF NEW COURSE

Department: Construction Management
Engineering

College: 

Date: 03/08/13

PROPOSED COURSE
Short Title: INDUST CONST EST
Rubric & No.: CM 3356
Title: Industrial Construction Estimating

COURSE CREDIT
Graduate Credit: YES X NO
Semester Hours of Credit: 3
(For combination course types only: 2 Lecture Hrs. 1 Lab/Sem/Rec Hrs.)
If course may be repeated for credit (i.e. special topics), course may be taken for a max. of ___ credit hours.
Credit will not be given for this course and:

GRADING
Final Exam: X YES ___ NO Grading System: X Letter Grade ___ Pass/Fail
(Attach justification if the proposed course will not hold a final exam during examination week.)

COURSE TYPE
(Indicate hours in the appropriate course type)

1 _LEC/REC 1 _LEC/SEM 2 _LEC 2 _LAB _LEC/LAB _SEM _ CLIN/PRACT _ RESIND
Maximum enrollment per section: 40 (use integer, e.g. 25 not 20-30)

CATALOG TEXT
(Concise catalog statement exactly as you wish it to appear in the LSU General Catalog)
3356 – Industrial Construction Estimating: (3) Prerequisites: CM 2103 and CM 3111.
2 hrs. lecture, 2 hours lab. Principles of estimating including quantity surveys, pricing analysis and bid package preparation for industrial construction.

If this course is approved, will additional staff be needed? YES X NO
Will additional space, equipment, special library materials or other major expense be involved? YES X NO
(If answer to either question above is 'yes' attach explanation.)
Academic Affairs Approval: 
Date:

ATTACHMENTS
ATTACH THE FOLLOWING TO YOUR PROPOSAL:
JUSTIFICATION: Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses? Yes, see justification
SYLLABUS: Including 14 week outline of the subject matter; titles of text, lab manual, and/or required readings; grading scale and criteria
(For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students.)

APPROVALS
Department Faculty Approval 03/08/13
College Faculty Approval 9/6/13

Department Chair's Signature 
(date)

Graduate Dean's Signature (for 4000 level and above) (date)

College Contact: Lisa Launey

College Contact E-mail: egloun@eng.lsu.edu

Lisa Launey 9/6/13
Chair, FS C&C Committee (date)

Academic Affairs Approval (date)
CM 3356 – Industrial Construction Estimating

TERM : Fall 2013

CLASS TIME & LOCATION : MW 2:30 – 4:20 pm
101 CM Building

 FACULTY : Dr. Carol Friedland, P.E.
3132A Patrick F. Taylor Hall
friedland@lsu.edu
578-1155 (office)
773-5701 (cell – please use with discretion)

OFFICE HOURS : MW 1:00 – 2:00 pm or by appointment

WEBSITE : Moodle will be utilized for this course.

CATALOG COURSE DESCRIPTION : CM 3356 – Industrial Construction Estimating; (3) Prereq CM 2103 and CM 3111.
2 hrs. lecture, 2 hours lab. Principles of estimating including quantity surveys; pricing analysis and bid package preparation for industrial construction.

COURSE OBJECTIVE & OUTCOMES : The course is intended to provide the student with a working knowledge of the mechanics necessary to prepare an Industrial Estimate with an overview of the various unique disciplines of work such as pipe fabrication, pipe erection, and heavy rigging.
Following successful completion of this course, it is expected that students will:
1. Understand the basics of interpreting industrial design drawings.
2. Understand basic quantity takeoff procedures for industrial applications.
3. Understand the application of manhour rates to quantities.
4. Understand the basic requirements for time management and communication in industrial estimating.
5. Understand the basic components of project cost.
6. Understand basic scheduling and manpower loading for bid preparation.
7. Understand basics of field overhead (staff, indirects, construction equipment) and the relationship with schedule and manpower.
8. Be motivated to ask questions consistent with the student’s level of experience.

GRADE POLICY : Homework/Quizzes/In Class Exercises 35%
Final Exam 20%
Student Project 45%

GRADE SCALE : A ≥ 90 Distinguished mastery of the course material
B 80 – 89.9999 Good mastery
C 70 – 79.9999 Acceptable mastery
D 60 – 69.9999 Minimally acceptable achievement for credit
F ≤ 59.9999 Failing
(Grade Descriptions from 2006-2007 LSU General Catalog, p. 74)

COURSE MATERIALS : Book “Basic Industrial Estimating” by Randal Rebowe is required for 2nd Class.

Student Project Description:
The culmination of this class will be the development of an estimate proposal for an industrial construction project. Students will be required to review, interpret, analyze, and synthesize construction drawings, specifications, and contract documents to determine discipline-specific quantities (e.g., concrete, structural steel, piping, equipment erection); estimate labor requirements; apply crew mixes and labor rates to determine labor costs; determine crane requirements for process equipment erection; evaluate subcontractor and permanent materials quotations to select the best value; develop a construction sequence and duration schedule; determine project indirects; develop a full pricing proposal and a written letter proposal in response to an Owner RFP.
Out of Class Expectations:
It is expected that the students have read the chapters prior to class for the background necessary to properly learn the content and apply the concepts addressed. As a general policy, for each hour you are in class, you (the student) should plan to spend at least two hours preparing for the next class and completing homework and laboratory assignments. The student project will require extensive out-of-class student work with your project team.

Laboratory Format:
Laboratory topics will be coordinated with the corresponding lecture topic, as detailed in the Tentative Course Outline. Topics covered in the lecture portion of the course are required knowledge to complete the laboratory portion, and students textbooks are required for lab, as many critical elements required for lab completion are contained in the textbook. Generally, students will receive two lab assignments per course topic (e.g. two concrete estimating assignments for concrete topic) and will work together in small groups of 2 or 3 students. Students will use the lab time to prepare responses for the lab assignments, and will generally turn in a cover memo, request for information (RFI; for items not clearly detailed in the constructions drawings, specifications or contract documents), and completed estimating lab assignment. Student submissions will be graded as a group effort (i.e. each student in the group will receive the same grade on the assignment), and students will have an opportunity to provide feedback to the instructor. Results will be discussed in the next lab meeting, and student questions will be answered.

CM 3356 Tentative Course Outline
(This schedule is a guideline and subject to change with notification by instructor)

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Class Topic</th>
<th>Lab Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M 26-Aug</td>
<td>Syllabus Review</td>
<td>No Lab</td>
</tr>
<tr>
<td>2</td>
<td>W 28-Aug</td>
<td>Introduction</td>
<td>Overview of Procedures/Forms</td>
</tr>
<tr>
<td></td>
<td>M 2-Sep</td>
<td><em>No Class - Labor Day</em></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>W 4-Sep</td>
<td>Managing your Estimate/Bid Considerations</td>
<td>Concrete Takeoff</td>
</tr>
<tr>
<td>4</td>
<td>M 9-Sep</td>
<td>Total Estimate Summary</td>
<td>Concrete Takeoff</td>
</tr>
<tr>
<td>5</td>
<td>W 11-Sep</td>
<td>Subcontractor &amp; Fabricator Inquiries/Review of Bids</td>
<td>Concrete Takeoff</td>
</tr>
<tr>
<td>6</td>
<td>M 16-Sep</td>
<td>Lecture Quiz</td>
<td>Concrete Quiz</td>
</tr>
<tr>
<td>7</td>
<td>W 18-Sep</td>
<td>Structural Steel Takeoff</td>
<td>Structural Steel Takeoff</td>
</tr>
<tr>
<td>8</td>
<td>M 23-Sep</td>
<td>Structural Steel Takeoff</td>
<td>Structural Steel Takeoff</td>
</tr>
<tr>
<td>9</td>
<td>W 25-Sep</td>
<td>Structural Steel Takeoff</td>
<td>Structural Steel Takeoff</td>
</tr>
<tr>
<td>10</td>
<td>M 30-Sep</td>
<td>Heavy Rigging Introduction</td>
<td>Issue Bid Packages</td>
</tr>
<tr>
<td>11</td>
<td>W 2-Oct</td>
<td>Heavy Rigging</td>
<td>Equipment Setting</td>
</tr>
<tr>
<td>12</td>
<td>M 7-Oct</td>
<td>Heavy Rigging</td>
<td>Equipment Setting</td>
</tr>
<tr>
<td>13</td>
<td>W 9-Oct</td>
<td>Lecture Quiz</td>
<td>Steel/Equipment Quiz</td>
</tr>
<tr>
<td>14</td>
<td>M 14-Oct</td>
<td>Pipe Fabrication</td>
<td>Pipe Takeoff</td>
</tr>
<tr>
<td>15</td>
<td>W 16-Oct</td>
<td>Pipe Fabrication</td>
<td>Pipe Takeoff</td>
</tr>
<tr>
<td>16</td>
<td>M 21-Oct</td>
<td>Pipe Fabrication</td>
<td>Pipe Takeoff</td>
</tr>
<tr>
<td>17</td>
<td>W 23-Oct</td>
<td>Pipe Fabrication</td>
<td>Pipe Takeoff</td>
</tr>
<tr>
<td>18</td>
<td>M 28-Oct</td>
<td>Pipe Erection</td>
<td>Scheduling</td>
</tr>
<tr>
<td>19</td>
<td>W 30-Oct</td>
<td>Pipe Erection</td>
<td>Scheduling/Overheads</td>
</tr>
<tr>
<td>20</td>
<td>M 4-Nov</td>
<td>Pipe Erection</td>
<td>Labor Pricing/Overheads</td>
</tr>
<tr>
<td>21</td>
<td>W 6-Nov</td>
<td>Pipe Erection</td>
<td>Labor Pricing/Overheads</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>11-Nov</td>
<td>Lecture Quiz</td>
</tr>
<tr>
<td>---</td>
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<td>---------------------------</td>
</tr>
<tr>
<td>22</td>
<td>W</td>
<td>13-Nov</td>
<td>Estimate Summary</td>
</tr>
<tr>
<td>23</td>
<td>M</td>
<td>18-Nov</td>
<td>Estimate Summary</td>
</tr>
<tr>
<td>24</td>
<td>W</td>
<td>20-Nov</td>
<td>Estimate Summary</td>
</tr>
<tr>
<td>25</td>
<td>M</td>
<td>25-Nov</td>
<td>Lab Only - Project Work Day</td>
</tr>
<tr>
<td>26</td>
<td>W</td>
<td>27-Nov</td>
<td><strong>No Class - Thanksgiving Holiday</strong></td>
</tr>
<tr>
<td>27</td>
<td>M</td>
<td>2-Dec</td>
<td>Electrical/Instrumentation (if time allows)</td>
</tr>
<tr>
<td>28</td>
<td>W</td>
<td>4-Dec</td>
<td>Final Review</td>
</tr>
</tbody>
</table>

**Final Exam - Friday, December 13 5:30-7:30 pm**

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**Justification CM 3145**

CM 3356 replaces the existing course CM 3131. It will become an elective course in the new Construction Management Curriculum in the highway construction emphasis area. It was necessary to change the prerequisites to align with the new courses and numbering system using 3356. CM 3131 will be dropped using Form B in March 2014.
Faculty Senate Courses and Curricula Committee

From: Lawrence Rouse, Chair, Courses and Curricula Committee
To: Charles Berryman, Department of Construction Management

October 1, 2013

At their October 1st, 2013 meeting, the Faculty Senate Courses and Curriculum Committee took the following actions regarding the Construction Management proposals.

Technical Sales Minor
- The Committee approved the Technical Sales minor change but requested a letter of support from the FIN department since the course is being added as an option.

CM 2141
- The Committee conditionally approved the proposal to drop CM 2141 pending the submission and approval of the proposals to change the Industrial Engineering curriculum, IE 4516, CM 4110, and the revisions to the degree requirements section in the College of Engineering.

CM 2105
- The Committee conditionally approved the proposal to add CM 2105 pending a revised syllabus with a corrected makeup exam policy statement.

CM 3145
- The Committee conditionally approved the proposal to add CM 3145 pending a revised syllabus with the correct title "Commercial Estimating" as well as a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3165
- The Committee conditionally approved the proposal to add CM 3165 pending a revised syllabus that explains what the +8% extra credit assignments is.

CM 3236
- The Committee conditionally approved the proposal to add CM 3236 pending a revised syllabus with a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3355
- The Committee conditionally approved the proposal to add CM 3355 pending a revised syllabus that adds the out of class expectations.
CM 3356
- The Committee conditionally approved the proposal to add CM 3356 pending a revised syllabus with a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3502
- The Committee conditionally approved the proposal to add CM 3502 pending a revised syllabus that adds a percentage to each of the grading criteria.

CM 3503
- The Committee conditionally approved the proposal to add CM 3503 pending a revised syllabus that adds a percentage to each of the grading criteria, the removal of “C or better” from the course description, and the addition of out of class expectations.

CM 3504
- The Committee conditionally approved the proposal to add CM 3504 pending a revised syllabus that adds a percentage to each of the grading criteria.

CM 4101
- The Committee conditionally approved the proposal to add CM 4101 pending a revised syllabus that adds the out of class expectations.

CM 4221
- The Committee conditionally approved the proposal to add CM 4221 pending a revised syllabus with a corrected makeup exam policy statement as well as the correct course rubric and number listed on the course schedule.

CM 4355
- The Committee conditionally approved the proposal to add CM 4355 pending a revised syllabus that explains whether the project is assigned by the instructor or student chosen.

Please submit the requested documentation to Anna Castrillo in the Office of the University Registrar at 112 Thomas Boyd Hall or by email at acastr1@lsu.edu.

If you have any questions regarding the request, please feel free to contact me at lrourse@lsu.edu.
REQUEST FOR ADDITION OF NEW COURSE

Department: Construction Management

College: Engineering

Date: 4/10/13

PROPOSED COURSE

Rubric & No.: CM 3502

Title: Construction and Civil Materials

COURSE CREDIT

Graduate Credit: YES X NO

Semester Hours of Credit: 3

If course may be repeated for credit (i.e. special topics), course may be taken for a max. of ___ credit hours.

Credit will not be given for this course and:

GRADING

Final Exam: X YES ___ NO

Grading System: ___ Letter Grade ___ Pass/Fail

(Indicate rubrics and course numbers)

ATTACH JUSTIFICATION if the proposed course will not hold a final exam during examination week.)

COURSE TYPE

(Indicate hours in the appropriate course type)

LLEC/REC LLEC/SEM LLEC LAB LLEC/LAB SEM CLIN/PRACT RESIND

Maximum enrollment per section: 40

CATALOG TEXT

(Concise catalog statement exactly as you wish it to appear in the LSU General Catalog)

3502 Construction and Civil Materials (3): Prereq: CM 2501
Fundamentals involved in design, evaluation, testing and construction of asphalt, concrete, aggregates, steel and wood.

BUDGET IMPACT

If this course is approved, will additional staff be needed? YES X NO

(If answer to either question above is ‘yes’ attach explanation.)

Academic Affairs Approval: ___ Date: ___

ATTACHMENTS

ATTACH THE FOLLOWING TO YOUR PROPOSAL.

JUSTIFICATION: Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses?
No

SYLLABUS: Including 14 week outline of the subject matter; titles of text, lab manual, and/or required readings; grading scale and criteria
(For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students).

APPROVALS

Department Faculty Approval 03/08/13

College Faculty Approval 07/12/13

Graduate Dean’s Signature (for 4000 level and above) ___ (date)

College Contact: Lisa Launey

College Contact E-mail: eglaun@eng.lsu.edu

Chair, FS C&C Committee ___ (date)

Academic Affairs Approval ___ (date)

(please print name.)
CM 3502 Construction and Civil Materials

TERM : Fall semesters only

CLASS TIME & LOCATION

FACULTY : TBA

OFFICE HOURS

WEBSITE : Moodle will be used for announcements, posting of solutions, etc. Students are responsible for all announcements made in class or distributed to the class through Moodle or e-mail. Course information, announcements and grades will also typically be posted on Moodle. Students should check these locations periodically for important updates and information you may have missed.


COURSE OBJECTIVES & OUTCOMES : Following successful completion of this course, it is expected that student will be able to:

- explain the basic nature of materials and their engineering properties.
- predict the behavior of materials subjected to external loading.
- describe industry standard (e.g. ASTM) testing practices and interpret material test data for aggregates, concrete, asphalt, timber and steel.

GRADE POLICY : Quizzes/Homework 25% GRADE : A ≥ 90
Exam #1 35% B ≥ 80 and < 90
Final Exam 40% C ≥ 70 and < 80

GRADE SCALE : D ≥ 60 and < 70
F < 60

COURSE MATERIALS AND RESOURCES : Text Book:

ISBN: 0-13-611058-4

OUT OF CLASS EXPECTATION : It is expected that the students have read the chapters prior to class for the background necessary to properly learn the content and apply the concepts addressed. As a general policy, for each hour you are in class, you (the student) should plan to spend at least two hours on preparing for the next class and completing homework and laboratory assignments.
# CM 3502 Construction and Civil Materials

## Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Introduction / Material Properties</td>
</tr>
<tr>
<td>2</td>
<td>Material Properties</td>
</tr>
<tr>
<td>3</td>
<td>Aggregates - Properties and Uses</td>
</tr>
<tr>
<td>4</td>
<td>Aggregates - Testing / Asphalt - Refining and Types</td>
</tr>
<tr>
<td>5</td>
<td>Asphalt Production - Hot-Mix Asphalt / Asphalt Specification - SuperPave</td>
</tr>
<tr>
<td>6</td>
<td>Asphalt Specification - SuperPave / Asphalt Pavement Construction</td>
</tr>
<tr>
<td>7</td>
<td>Portland Cement Concrete - Chemistry</td>
</tr>
<tr>
<td>8</td>
<td>Physical Properties of Concrete / Concrete types Ingredients and Proportioning</td>
</tr>
<tr>
<td>9</td>
<td>Testing and Construction of Concrete</td>
</tr>
<tr>
<td>10</td>
<td>Iron and Steel - Production, Composition</td>
</tr>
<tr>
<td>11</td>
<td>Iron and Steel - Properties</td>
</tr>
<tr>
<td>12</td>
<td>Wood - Production and Properties</td>
</tr>
<tr>
<td>13</td>
<td>Wood - Types, use, and Deterioration</td>
</tr>
<tr>
<td>14</td>
<td>Masonry – Construction / Types and Properties</td>
</tr>
</tbody>
</table>

## Justification CM 3502

This course is needed to provide students with general knowledge of materials (and their properties) that will be used in road and bridge construction.
REQUEST FOR ADDITION OF NEW COURSE

Department: Construction Management  Date: 4/16/13
Engineering

PROPOSED COURSE
Rubric & No.: CM 3503  Title: Soils in Construction

COURSE CREDIT
Graduate Credit:  YES  X  NO

Semester Hours of Credit: 3  (For combination course types only:  Lecture Hrs  Lab/Sem/Rec Hrs.
If course may be repeated for credit (i.e. special topics), course may be taken for a max. of  credit hours.
Credit will not be given for this course and:

GRADING
Final Exam:  X  YES  NO  Grading System:  X  Letter Grade  Pass/Fail

(Attach justification if the proposed course will not hold a final exam during examination week.)

COURSE TYPE
(Indicate hours in the appropriate course type)

/  LEC/REC /  LEC/SEM  3  LEC  /  LAB /  LEC/LAB  SEM  /  CLIN/FRACT /  RES/IND

Maximum enrollment per section: 40  (use integer, e.g. 25 not 20-30)

CATALOG TEXT
(Concise catalog statement exactly as you wish it to appear in the LSU General Catalog)
3503 Soils in Construction (3). Prerequisites: CM 3502. In depth coverage of engineering behaviors of soil, soil testing and characterization, pore water pressure, stresses in soils, consolidation, excavation support, shear strength of soil, soil investigation and exploration; compaction, and retaining walls, construction of shallow and deep foundations.

BUDGET IMPACT
If this course is approved, will additional staff be needed?  YES  X  NO
Will additional space, equipment, special library materials or other major expense be involved?  YES  X  NO
(If answer to either question above is 'yes' attach explanation.)  Academic Affairs Approval:  
(Date)

ATTACHMENTS
ATTACH THE FOLLOWING TO YOUR PROPOSAL.

JUSTIFICATION: Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses?
SYLLABUS: Including 14 week outline of the subject matter; titles of text, lab manual, and/or required readings; grading scale and criteria
(For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students).

APPROVALS
Department Faculty Approval  03/08/13
(date)

Department Chair's Signature  07/12/13
(date)

College Faculty Approval  9/16/13
(date)

College Dean's Approval  9/27/13
(date)

Chair, FS C&C Committee  10/9/13
(date)

Graduate Dean's Signature (for 4000 level and above)  (date)

College Contact:  Lisa Launey

College Contact E-mail:  eglaun@eng.lsu.edu

Academic Affairs Approval  (date)
CM 3503 Soils in Construction

TERM : Spring semesters only
CLASS TIME & LOCATION :
FACULTY : TBA

OFFICE HOURS :

WEBSITE : Moodle will be used for announcements, posting of solutions, etc. Students are responsible for all announcements made in class or distributed to the class through Moodle or e-mail. Course information, announcements and grades will also typically be posted on Moodle. Students should check these locations periodically for important updates and information you may have missed.

CATALOG COURSE DESCRIPTION : CM 3503 - Soils in Construction (3): In depth coverage of engineering behaviors of soil, soil testing and characterization, pore water pressure, stresses in soils, consolidation, excavation support, shear strength of soil, soil investigation and exploration; compaction, and retaining walls, construction of shallow and deep foundations.

COURSE OBJECTIVES & OUTCOMES : Following successful completion of this course, it is expected that student will be able to:

- explain concepts related to soil physical properties, subsurface exploration, soil testing, earthwork and excavation methods, soil compaction techniques, and surface charge.
- evaluate stresses in soils and weight to volumetric relationships using phase diagrams.
- quantify immediate and consolidation settlement.

GRADE POLICY : Quizzes/Homework 25%  EXAM #1 35%  FINAL EXAM 40%
GRADE SCALE : A ≥ 90  B ≥ 80 and < 90  C ≥ 70 and < 80  D ≥ 60 and < 70  F < 60

OUT OF CLASS EXPECTATION : It is expected that the students have read the assigned chapters or pages prior to class for the background necessary to properly participate in the discussion and think critically about the concepts addressed. As a general policy, for each hour you are in class, you (the student) should plan to spend at least two hours preparing for the next class. Since this course is for three credit hours, you should expect to spend around six hours outside of class each week reading or writing assignments for the class.
CM 3503 – Soils in Construction

Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Origin of Soils</td>
</tr>
<tr>
<td>2</td>
<td>Subsurface Exploration &amp; Interpretation of Soils Reports</td>
</tr>
<tr>
<td>3</td>
<td>Soil Constituents</td>
</tr>
<tr>
<td>4</td>
<td>Soil Index Properties</td>
</tr>
<tr>
<td>5</td>
<td>Soil Classification</td>
</tr>
<tr>
<td>6</td>
<td>Weight-Volume Relationships (Phase Relationships) &amp; Relative Density</td>
</tr>
<tr>
<td>7</td>
<td>Compaction</td>
</tr>
<tr>
<td>8</td>
<td>Stress Analysis and Engineering Properties</td>
</tr>
<tr>
<td>9</td>
<td>Shear strength of soils</td>
</tr>
<tr>
<td>10</td>
<td>Consolidation and Settlement</td>
</tr>
<tr>
<td>11</td>
<td>Soil Stabilization</td>
</tr>
<tr>
<td>12</td>
<td>Excavations and Excavation Supports</td>
</tr>
<tr>
<td>13</td>
<td>Slab on Grade foundation</td>
</tr>
<tr>
<td>14</td>
<td>Foundation Construction</td>
</tr>
</tbody>
</table>
Justification CM 3503

This course is needed to provide students with general knowledge of soils that can affect the various industry types and designs.
REQUEST FOR ADDITION OF NEW COURSE

Department: Construction Management
Engineering

College: ________________________________

PROPOSED COURSE

Short Title: APPLIED STRUCT DESGN

Rubric & No: CM 3504
Title: Applied Structural Design

COURSE CREDIT

Graduate Credit: YES X NO

Semester Hours of Credit: 3
(Lecture Hrs. Lab/Sem/Rec Hrs.
If course may be repeated for credit (i.e. special topics), course may be taken for a max. of ___ credit hours.
Credit will not be given for this course and: _____________________________

GRADING

Final Exam: X YES NO
Grading System: X Letter Grade Pass/Fail

(Course will not hold a final exam during examination week)

COURSE TYPE

Indicate hours in the appropriate course type:

LEC/REC LEC/SEM LEC LAB LEC/LAB SEM CLIN/PRACT RES/IND

Maximum enrollment per section: 40

CATALOG TEXT

(Concise catalog statement exactly as you wish it to appear in the LSU General Catalog)

3504 - Applied Structural Design (3): Prerequisite: CM 2501. Structural design of ordinary timber, steel and reinforced concrete buildings and other structures in accordance with appropriate design code specifications; emphasizes contemporary design methodologies and provisions to achieve safe and serviceable resistance to vertical and lateral load effects.

BUDGET IMPACT

If this course is approved, will additional staff be needed? YES X NO
(If answer to either question above is "yes" attach explanation.)

ATTACHMENTS

ATTACH THE FOLLOWING TO YOUR PROPOSAL.

JUSTIFICATION: Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses? Yes
SYLLABUS: Including 14 week outline of the subject matter; titles of text, lab manual, and/or required readings; grading scale and criteria (For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students).

APPROVALS

Department Faculty Approval 03/08/13

College Faculty Approval 9/6/13

Department Chair's Signature 07/12/13

College Dean's Signature 9/27/13

Graduate Dean's Signature (for 4000 level and above) 10/9/13

College Contact: Lisa Launey

College Contact E-mail: eglaun@eng.lsu.edu

Academic Affairs Approval 10/1/13
CM 3504 Applied Structural Design

TERM:
CLASS TIME & LOCATION:
FACULTY:

OFFICE HOURS:

WEBSITE: Moodle will be used for announcements, posting of solutions, etc. Students are responsible for all announcements made in class or distributed to the class through Moodle or e-mail. Course information, announcements and grades will also typically be posted on Moodle. Students should check these locations periodically for important updates and information you may have missed.

CATALOG COURSE DESCRIPTION: CM 3504 – Applied Structural Design (3): Structural design of ordinary timber, steel and reinforced concrete buildings and other structures in accordance with appropriate design code specifications; emphasizes contemporary design methodologies and provisions to achieve safe and serviceable resistance to vertical and lateral load effects.

COURSE OBJECTIVES & OUTCOMES: Following successful completion of this course, it is expected that students will be able to:
- explain design methodologies; accounting for design factors of in Allowable Stress Design (ASD) and Load and Resistance Factored Design (LRFD), including vertical and lateral load considerations in design, including wind & earthquake loads; the use of design aids and the correlation of results from design aids and fundamental calculations for timber, steel and reinforced concrete.
- explain the relationship between the effects of applied loads (shear, moment, tension, compression) and the resistance of timber, steel and reinforced concrete.
- design timber, steel and reinforced concrete structural elements and structural systems used in permanent and temporary structures.

GRADE POLICY: Quizzes/Homework 25% GRADE SCALE:
Exam #1 35% A ≥ 90
Final Exam 40% B ≥ 80 and < 90

OUT OF CLASS EXPECTATION: It is expected that the students have read the assigned chapters or pages prior to class for the background necessary to properly participate in the discussion and think critically about the concepts addressed. As a general policy, for each hour you are in class, you (the student) should plan to spend at least two hours preparing for the next class. Since this course is for three credit hours, you should expect to spend around six hours outside of class each week reading or writing assignments for the class.
CM 3504  Applied Structural Design

Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Introduction, Units of Measure, Structural Elements, Beams and Columns</td>
</tr>
<tr>
<td>2</td>
<td>Methods of Design (ASD vs LRFD), Design Loads, Load Transfer</td>
</tr>
<tr>
<td>3</td>
<td>Lateral Loads - Wind &amp; Earthquake, Ethics Discussion</td>
</tr>
<tr>
<td>4</td>
<td>Timber Design - Beams</td>
</tr>
<tr>
<td>5</td>
<td>Timber Design - Span Tables, Columns, Connections</td>
</tr>
<tr>
<td>6</td>
<td>Timber Design – Applied Problems</td>
</tr>
<tr>
<td>7</td>
<td>Steel Design - Beams</td>
</tr>
<tr>
<td>8</td>
<td>Steel Design - Safe Load Tables, Columns, Connections</td>
</tr>
<tr>
<td>9</td>
<td>Steel Design - Applied Problems</td>
</tr>
<tr>
<td>10</td>
<td>Concrete Design - Beams</td>
</tr>
<tr>
<td>11</td>
<td>Concrete Design - Columns</td>
</tr>
<tr>
<td>12</td>
<td>Concrete Design - Foundations</td>
</tr>
<tr>
<td>13</td>
<td>Concrete Formwork</td>
</tr>
<tr>
<td>14</td>
<td>Concrete – Applied Problems</td>
</tr>
</tbody>
</table>
Justification CM 3504

The Department of Construction Management is requesting the creation of CM 3504 to replace CM 3506. Most of the topical content is remains the same but it was significant enough to warrant a new course. CM 3506 is to be dropped from the curriculum in March of 2015 as per our Transition Plan.
REQUEST FOR ADDITION OF NEW COURSE

Department: Construction Management
College: Engineering

Date: 04/10/2013

PROPOSED COURSE
Rubric & No.: CM 4221
Title: Construction Project Management

COURSE CREDIT
Graduate Credit: X YES ___ NO
Semester Hours of Credit: 3
(For combination course types only) Lecture Hrs. Lab/Sem/Rec Hrs.
If course may be repeated for credit (i.e. special topics), course may be taken for a max. of ___ credit hours.
Credit will not be given for this course and:

(Indicate rubrics and course numbers)

GRADING
Final Exam: X YES ___ NO Grading System: ___ Letter Grade ___ Pass/Fail
(Append justification if the proposed course will not hold a final exam during examination week.)

COURSE TYPE
(Indicate hours in the appropriate course type)

/ LEC/REC / LEC/SEM 3 LEC / LAB / LEC/LAB ___ SEM ___ CLIN/PRACT ___ RESIND

Maximum enrollment per section: 40 (use integer, e.g. 25 not 20-30)

CATALOG TEXT
(Concise catalog statement exactly as you wish it to appear in the LSU General Catalog)

4221 Construction Project Management (3). Prerequisite: CM 4101 and CM 4211. Field management of a project from inception to completion, including personnel needed, business aspects, estimating and bidding aspects, communication, record keeping, monitoring and control of project, risk and claims management, safety, and close out.

BUDGET IMPACT
If this course is approved, will additional staff be needed? ___ YES X ___ NO

Will additional space, equipment, special library materials or other major expense be involved? ___ YES X ___ NO

(If answer to either question above is "yes" attach explanation.)

Academic Affairs Approval: ___ Date: ___

ATTACHMENTS
ATTACH THE FOLLOWING TO YOUR PROPOSAL.

JUSTIFICATION: Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses? Yes, but replaces duplicate course. See justification.

SYLLABUS: Including 14 week outline of the subject matter, titles of text, lab manual, and/or required readings; grading scale and criteria. (For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students.)

APPROVALS
Department Faculty Approval 03/08/13 (date)
Department Chair's Signature 07/12/13 (date)
Graduate Dean's Signature (for 4000 level and above) 10-9-13 (date)
College Contact: ___ (Please print name.)
College Contact E-mail: ___

College Faculty Approval 9/16/13 (date)
Chair, FS C&C Committee 10/7/13 (date)
Academic Affairs Approval 9/17/13 (date)
LOUISIANA STATE UNIVERSITY

CM 4221 – Construction Project Management

TERM : Fall/Spring

CLASS TIME & LOCATION : TBD

FACULTY : Faculty Name
Office Location, Email, Office Phone

OFFICE HOURS : Faculty Office Hours

WEBSITE : Moodle or similar

CATALOG COURSE DESCRIPTION : CM 4221 - Construction Project Management (3); Prereq: CM 4111and CM 4211. This course tracks the management of a project from its inception to its completion, including the personnel needed, the business aspects, the estimating and bidding aspects, communication, record keeping, monitoring and controlling the project, risk and claims management, and close out of the project.

COURSE OBJECTIVES & OUTCOMES :
1. Evaluate Project Management foundational aspects dealing with organizational design, risk, human resource and financial issues. Students will investigate current events for the determination of demographic trends impacting construction for analyzing and evaluating critical decisions relating to effective productivity in a projects delivery.
2. Create a Construction Company/Project which will be evaluated from different management areas. Teams (3-4) will be formed for the development of a "Business/Project plan for an in-depth analysis for evaluating and understanding the concepts of project.
3. Construction ethics will be presented by offering cases posing current ethical concerns. Case analysis will offer critical discussion of topics while industry experts will provide a real world balance to the discussion.

COURSE MATERIALS AND RESOURCES :
Text Books: Construction Project Management Frederick Gould & Nancy Joyce
Reference Text
Construction Project Management. J.F. McCarthy
Engineering Ethics Concepts and Cases Charles E. Harris Jr., Michael S Pritchard, & Michael J. Rabins

GRADING POLICY :
- Ethical Cases (2) 10%
- Current Events (3) 10%
- Interview (1) 5%
- Mid Term Exam 25%
- Final Exam 25%
- Business Plan* 25%

GRADING SCALE :
- A 90-100%
- B 80-89.9%
- C 70-79.9%
- D 60-69.9%
- F 0-59.9%

OUT OF CLASS EXPECTATION: It is expected that the students have read the chapters prior to class for the background necessary to properly learn the content and apply the concepts addressed. As a general policy, for each hour you are in class, you (the student) should plan to spend at least two hours on preparing for the next class and completing homework and laboratory assignments.

Course Assessments

Ethics Cases (10%): Two ethics cases will be given throughout the semester that requires the student to participate in informal writing to learn course content. These cases will require the student to delve into construction ethics and present their handling of the situation. In addition, students will be asked to informally verbally present their findings in class. This will allow for oral presentation feedback in preparation for the final business plan presentation.
**Business “Project” Plan/Presentation (25%)**: 4 member groups (Groups assigned by Instructor at Mid Term) are expected to create a business plan for setting up their own construction company/project (Area of Interest “AOI” assigned by instructor). This plan must be a minimum of 10 pages and no longer than 15 pages. Students will deliver different parts of the plan throughout the semester and receive a review. At the end the groups will compile the complete plan using the revision suggestions and comments for their final business plan. One section of the plan will detail how you will ensure ethics are maintained within your company. Note sections will be presented in “Typical” project analysis.

**Business/“Project” Plan Components**: (5%) Each group should anticipate at least 2 random presentations of plan sections on due date. (Each group member should be present and prepared to discuss the appropriate section) Component parts marked with “O” are company related while “P” represents a typical project.

**Business/“Project” Plan Hard Copy**: (15%) Each “Project”/business plan will be presented to the class by their developer. Each presentation will be no longer than 25 minutes (15 minute minimum presentation followed by Question and Answer). The faculty member and classmates will evaluate the final presentation.

**Business/“Project” Plan Power Point**: (5%) Each “Project”/business plan will have a Power Point/Prezi slide show for presenting their plan.

**Small Business Administration Website**: [http://www.sba.gov/smallbusinessplanner/index.htm](http://www.sba.gov/smallbusinessplanner/index.htm)


SBA Forms (use with proposed “PROJECT” for group business plan): (Standardized Forms to be provided)

Forms to be used:
- Balance Sheet
- Income Statement
- Cash Flow Statement

**Current Events (10%)**: During the semester, the student will be required to provide 3 current event write-ups. The student must submit the article from public press publications (e.g., newspaper, trade magazine) along with a 1 page synopsis of the article and its relevancy to construction. (Note Business Plan should contain 3-5 cited events in the Business Plan appendix) **Usage of formatted cover sheet is required.**

**Professional Interview (5%)**: Each student must complete one professional interview. Each student must interview one of the following: (1) a key decision maker (e.g., vice president, superintendent) in the construction industry; (2) a support industry representative (e.g., construction lawyer, CPA, supplier; and/or, (3) a senior craftsman. Students will complete a two-page paper for each interview on what they learned and the walk away message of the interviewee. **Usage of formatted cover sheet is required.** **Construction Industry Advisory Council “Potential Interview List”** [http://www.ciac-lsu.org/Members.aspx](http://www.ciac-lsu.org/Members.aspx)

**Exams (50%)**: There will be a midterm and comprehensive final exam given during this course. The midterm exam (20%) will be given during the class period indicated on the schedule. The final exam (20%) will be given at the time designated by the University and will be comprehensive. You will need to provide a small scantron (4.25x11) and a number 2 pencil to take each of these exams.

**Assignments**: Assignments noted in the syllabus as scheduled (in/out class). Planned activities are sequential to the area of study. Scheduling of work (in/out class) will be based on both time and group involvement.

**Class Contacts**: Members of your class are valuable resources for notes, assignments, announcements, etc. that are needed in the case that you are absent from class. Record the names, phone numbers and email addresses of 2-3 students that are willing to assist you if you are absent.

**Student Contact**

<table>
<thead>
<tr>
<th>Phone Number</th>
<th>E-Mail Address</th>
</tr>
</thead>
</table>
Classroom Rules and Regulations

Department Policies:
1. Students are expected to attend all classes. If absence is necessary, Instructor is to be notified before the fact, if possible. Absences will only be excused when meeting the requirements of University Policy Statement 22.
2. In-class participation and questions are encouraged. They may positively influence grades in borderline cases.
3. Academic dishonesty will be dealt with according to university regulations and policy. It is each student’s responsibility to understand these regulations.
4. No food or drinks are allowed in classrooms. Any materials brought into the classroom by a student must be removed by that student — this includes newspapers and any other materials. It is everyone’s responsibility to keep our classrooms clean.
5. Turn cell phones off, or place in silent mode
6. “Campus-based and/or web-based library usage is required”

Course Policy Unexcused / Excused Absence or Tardiness:
A missed exam, quiz, homework assignment or in-class exercise resulting from an unexcused absence or tardiness will result in a grade of zero. An excused absence will be given only when the absence is documented in a timely fashion (prior to the absence when possible) and appears acceptable to the instructor. Make-up quizzes and exams will be different (in content and possibly in format) from the original. Excused absences for homework will only be given to allow a student to submit the assignment during the next class period without penalty, never to excuse a student from completing the assignment. The student is encouraged to make every effort to notify the instructor prior to the class period that will be missed by phone, email or message.

General Class Procedures, Office Hours, etc.:
Students are responsible for all announcements made in class or distributed to the class through Moodle or email. If you do miss a class, obtain class notes from Moodle and a classmate first. Assistance is available from the instructor during office hours posted.

You are encouraged to use the office hours posted: these hours are specifically devoted to meeting with students. If the posted office hours conflict with your schedule or you need additional help outside of these hours, call or email to make an appointment and alternate arrangements will be made to accommodate you. PLEASE DON’T WAIT UNTIL THE LAST MINUTE TO ASK FOR HELP!

Occasionally course announcements will be emailed to students using their PAWS account, although most announcements will be posted on Moodle. Students not using the PAWS account should have it set to forward all campus correspondence.

Students are expected to assist in maintaining a classroom environment that is conducive to learning. Please treat the instructor and other students with respect and by following these simple guidelines of behavior:
- Turn off cell phones/beepers or put them on silent before class begins
- Come to class on time and plan to leave at the end of the period (do not leave early)
- Participate in all class activities; if you need to do work for other classes, read the newspaper, talk to friends, work on your laptop, sleep, etc., please do so somewhere else.
- As a learning environment, there will be questions and differences of opinion. Please respect this learning process by avoiding inappropriate or offensive remarks.

University Policies and Services Accommodations:
Please contact me as soon as possible if (1) you have or think you may have a disability or medical condition which may affect your performance, attendance, or grades in this class and for which you wish to discuss accommodations of class related activities or schedules, (2) you may require medical attention during class, (3) you may need special emergency evacuation preparations or procedures, or (4) you need accommodations for any other reason (for example, religious observances). Disability accommodations must be documented through the Office of Disability Services, 112 Johnston Hall, (225) 578-5919.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading or Topics of Discussion</th>
<th>In Class Assignments</th>
<th>Assigned Work/Business Plan Component Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Introduction, The Construction Industry INTERVIEW</td>
<td>Chapter 1</td>
<td>Individual Profile &amp; Professional Interview Format presented</td>
<td></td>
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<tr>
<td>1</td>
<td></td>
<td>Construction Business Leadership and Leadership &amp; Ethics</td>
<td>Leadership Characteristics</td>
<td>CMAA Ethics Code Handout</td>
<td>Ethics Case #1</td>
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<tr>
<td>2</td>
<td></td>
<td>“Class Discussion of Ethics Case 1”</td>
<td>SBA Business Plan Template Ethics Characteristics</td>
<td>Discussion of Ethics Case # 1</td>
<td>Ethics Case #1 (Case study due)</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>SBA Business Plan Template/ Professional Interview Preparation</td>
<td>SBA Business Plan Template Ethics Characteristics</td>
<td>CE#1 General Business Environment “Regional Opportunities” Due</td>
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<tr>
<td>3</td>
<td></td>
<td>Company Organization</td>
<td>Chapter 2</td>
<td>SBA Business Plan Certificate Due</td>
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<tr>
<td>4</td>
<td></td>
<td>Strategic Information</td>
<td>Chapter 2</td>
<td>CE#2 Specific Industry Environment “External Factors” Due</td>
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<td>5</td>
<td></td>
<td>Risk Management</td>
<td>Chapter 3</td>
<td>CE#3 Specific Organization Environment “Internal Factors” due</td>
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<td>5</td>
<td></td>
<td>Controlling Project Cost, Time, Quality &amp; Financial Administration</td>
<td>Chapter 4</td>
<td>Professional interview Due</td>
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<tr>
<td>6</td>
<td></td>
<td>Controlling Project Cost, Time, Quality &amp; Financial Administration</td>
<td>Chapter 4</td>
<td>Group assignments announced (Instructor chosen)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Strategic Planning &amp; Management</td>
<td>Chapter 5 (through Pg 99)</td>
<td>Business /Project Plan: Topic Due, Brief description of Project topic</td>
<td></td>
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<tr>
<td>7</td>
<td></td>
<td>Midterm Exam</td>
<td>Material covered (Class 1-12)</td>
<td>Ethics Case #2</td>
<td></td>
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<tr>
<td>7</td>
<td></td>
<td>Strategic Planning &amp; Management</td>
<td>Chapter 5</td>
<td>A. Preliminary Executive Summary Due “O” * Submit Online by 12:00 pm 10/13*</td>
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<tr>
<td>8</td>
<td></td>
<td>Business Development</td>
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<td>9</td>
<td></td>
<td>Business Development</td>
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<td>C. Definition of the Market “SWOT” Analysis “O”</td>
</tr>
<tr>
<td></td>
<td>Ethics Lecture</td>
<td>Lecture w/ class Discussion of 2nd Ethics Paper</td>
<td>Ethics Case #2 (Case study due)</td>
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<td>10</td>
<td>Human Resource Management</td>
<td>D. Description of Typical Project “P”</td>
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<tr>
<td>11</td>
<td>Information Management Project Chronology/Delivery Methods</td>
<td>F. Marketing and Sales Strategy “O”</td>
<td>“Reworked Executive Summary” “O”</td>
<td></td>
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<tr>
<td>11</td>
<td>Documentation</td>
<td>“Project Chronology”</td>
<td>Project Management</td>
<td></td>
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<tr>
<td>12</td>
<td>Construction Law</td>
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<tr>
<td>13</td>
<td>Business/Project Plan Presentations</td>
<td>Presentations</td>
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<tr>
<td>13</td>
<td>Business/Project Plan Presentations</td>
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<td>14</td>
<td>Business/Project Plan Presentations</td>
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<tr>
<td>14</td>
<td>Business/Project Plan Presentations</td>
<td>Presentations</td>
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</table>

**Justification CM 4221**

This course is needed to provide students with an in-depth knowledge of construction project management. It replaces CM 4201 and contains addition topics. CM 4201 is to be dropped March 2015 as indicated on our drop schedule.
Faculty Senate Courses and Curricula Committee

From: Lawrence Rouse, Chair, Courses and Curricula Committee
To: Charles Berryman, Department of Construction Management

October 1, 2013

At their October 1st, 2013 meeting, the Faculty Senate Courses and Curriculum Committee took the following actions regarding the Construction Management proposals.

Technical Sales Minor
- The Committee approved the Technical Sales minor change but requested a letter of support from the FIN department since the course is being added as an option.

CM 2141
- The Committee conditionally approved the proposal to drop CM 2141 pending the submission and approval of the proposals to change the Industrial Engineering curriculum, IE 4516, CM 4110, and the revisions to the degree requirements section in the College of Engineering.

CM 2105
- The Committee conditionally approved the proposal to add CM 2105 pending a revised syllabus with a corrected makeup exam policy statement.

CM 3145
- The Committee conditionally approved the proposal to add CM 3145 pending a revised syllabus with the correct title "Commercial Estimating" as well as a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3165
- The Committee conditionally approved the proposal to add CM 3165 pending a revised syllabus that explains what the +8% extra credit assignments is.

CM 3236
- The Committee conditionally approved the proposal to add CM 3236 pending a revised syllabus with a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3355
- The Committee conditionally approved the proposal to add CM 3355 pending a revised syllabus that adds the out of class expectations.
CM 3356
- The Committee conditionally approved the proposal to add CM 3356 pending a revised syllabus with a detailed explanation of what the lab format of the course will consist of. The lab courses should be delineated from the lecture courses in the 14 week schedule.

CM 3502
- The Committee conditionally approved the proposal to add CM 3502 pending a revised syllabus that adds a percentage to each of the grading criteria.

CM 3503
- The Committee conditionally approved the proposal to add CM 3503 pending a revised syllabus that adds a percentage to each of the grading criteria, the removal of “C or better” from the course description, and the addition of out of class expectations.

CM 3504
- The Committee conditionally approved the proposal to add CM 3502 pending a revised syllabus that adds a percentage to each of the grading criteria.

CM 4101
- The Committee conditionally approved the proposal to add CM 4101 pending a revised syllabus that adds the out of class expectations.

CM 4221
- The Committee conditionally approved the proposal to add CM 4221 pending a revised syllabus with a corrected makeup exam policy statement as well as the correct course rubric and number listed on the course schedule.

CM 4355
- The Committee conditionally approved the proposal to add CM 4355 pending a revised syllabus that explains whether the project is assigned by the instructor or student chosen.

Please submit the requested documentation to Anna Castrillo in the Office of the University Registrar at 112 Thomas Boyd Hall or by email at acastr1@lsu.edu.

If you have any questions regarding the request, please feel free to contact me at brouse@lsu.edu.
REQUEST FOR ADDITION OF NEW COURSE

Department: Construction Management
Engineering

College: 

Date: 8/27/12

PROPOSED COURSE
Short Title: DRIVEN PILE CONSTRUCTION
Rubric & No.: CM 4355
Title: Driven Pile Construction

COURSE CREDIT
Graduate Credit: YES NO
(complete for 4000 level courses only)
Semester Hours of Credit: 3
(For 'Lecture/Lab' type courses only: Lecture Hrs. Lab Hrs.)
If course may be repeated for credit (i.e. special topics), course may be taken for a max. of ___ credit hours.
Credit will not be given for this course and:

(Indicate rubrics and course numbers)

GRADING
Final Exam: YES NO
Grading System: Letter Grade Pass/Fail
(Attach justification if the proposed course will not hold a final exam during examination week.)

COURSE TYPE
Check one type: LEC LAB LEC/LAB SEM CLIN/PRACT RES/IND
Maximum enrollment per section: 20
(use integer, e.g. 25 not 20-30)
Total weekly contact hours: 3
(If lecture/lab, contact hours of: Lecture Lab)

CATALOG TEXT
(Concise catalog statement exactly as you wish it to appear in the LSU General Catalog)
4355 Driven Pile Construction (3). Prerequisites: senior standing AND CM major; or consent of instructor; This specialized course will focus on the materials, construction techniques and testing procedures used in the driven pile construction industry. Topics will include: review of geotechnical parameters and testing methods, crane and hammer equipment selection, common construction practices, pile drivability, pile load testing, dynamic pile testing.

BUDGET IMPACT
If this course is approved, will additional staff be needed? YES NO
Will additional space, equipment, special library materials or other major expense be involved? YES NO
(If answer to either question above is 'yes' attach explanation.)

ATTACHMENTS
ATTACH THE FOLLOWING TO YOUR PROPOSAL.

JUSTIFICATION: Justification must explain why this course is needed. Will the course duplicate other courses?
SYLLABUS: Including 14 week outline of the subject matter; titles of text, lab manual, and/or required readings; grading scale and criteria.
(For 4000-level, specify graduate student grading criteria if requirements differ for graduate and undergraduate students).

APPROVALS
Department Faculty Approval 03/08/13
(07/12/13)
Department Chair's Signature

College Faculty Approval 9/6/13
(9/12/13)
College Dean's Signature

Graduate Dean's Signature (for 4000 level and above) 10-7-13

Chair, FS C&C Committee 10/8/13

Academic Affairs Approval 10/10/13
CM 4355 Driven Pile Construction

TERM : Fall 2014

CLASS TIME & LOCATION : TBD
101 Construction Management Building

FACULTY : Dr. Carol Friedland, P.E.
3132A Patrick F. Taylor Hall
friedland@lsu.edu
578-1155 (office)
773-5701 (cell)

OFFICE HOURS : Monday 9:30 am – 10:30 am or by appointment (email to schedule)

WEBSITE : Moodle will be utilized for this course.

COURSE DESCRIPTION : This specialized course will focus on the materials, construction techniques and testing procedures used in the driven pile construction industry. Topics will include: review of geotechnical parameters and testing methods, crane and hammer equipment selection, common construction practices, pile drivability, pile load testing, dynamic pile testing. Students enrolled in this course for graduate credit will be required to answer additional questions on exams and assignments and will complete a more in-depth final project than students not obtaining graduate credit.

COURSE OBJECTIVES & OUTCOMES : Upon completion of the course, it is expected that students will be able to:

- Interpret a geotechnical investigation (soils) report.
- Explain basic soil testing and the effects that test results have on pile design and construction.
- Select the most appropriate pile driving equipment based on given site conditions.
- Explain the effects of geotechnical parameters on pile drivability and setup.
- Interpret pile foundation drawings and specifications.

GRADE POLICY : Midterm Exam 15%
In Class Exercises 15%
Assignments 15%
Project 35%
Final Exam (Monday, December 3, 8 – 10 pm) 20%

GRADE SCALE : A $\geq$ 90 Distinguished mastery of the course material
B 80 – 89.9999 Good mastery
C 70 – 79.9999 Acceptable mastery
D 60 – 69.9999 Minimally acceptable achievement for credit
F $\leq$ 59.9999 Failing

(Grade Descriptions from 2008-2009 LSU General Catalog, p. 73)
COURSE MATERIALS: Course documents will be posted on Moodle and/or available online

AND RESOURCES: Other:

- Calculator
- 3-Ring Binder, 1” or larger (for Notebook)
- Index or Divider Pages (for Notebook)
- 3-Hole Punch (to punch papers for filing in your Notebook)
- Small Triangle or Straightedge (for drawing diagrams on HW and tests)
- Stapler (all papers you submit to me must be stapled – you may wish to get a small one to carry in your book bag)

Department Policies:

1. Students are expected to attend all classes. If absence is necessary, Instructor is to be notified before the fact, if possible. Absences will only be excused when meeting the requirements of University Policy Statement 22.

2. In-class participation and questions are encouraged. They may positively influence grading decisions in borderline cases.

3. Academic dishonesty will be dealt with according to university regulations and policy. It is each student’s responsibility to understand these regulations.

4. No eating, drinking, tobacco products, gum, magazines, or newspapers are allowed in CM classrooms.

5. Turn cell phones off, or place on the silent mode.

6. Campus-based and/or web-based library usage is required.

Course Policies:

Attendance/General Class Procedures
A wide variety of reference materials will be used for this course and it is imperative that students attend each class session. In-class activities and assignments must be submitted at the time indicated by the instructor. Students are responsible for all announcements made in class or distributed to the class through Moodle or e-mail. The instructor is not responsible to relay information that was given during the class period to any student. Assistance is available from the instructor by appointment. Please feel free to set up an appointment for any assistance or questions regarding the course.

Out of Class Expectations
It is expected that the students have read the chapters prior to class for the background necessary to properly learn the content and apply the concepts addressed. As a general policy, for each hour you are in class, you (the student) should plan to spend at least two hours on preparing for the next class and completing homework and laboratory assignments. Examinations Exams will include computational and written components and will consist of both computational and comprehension questions. The class will also include a project on driven pile construction, which will require a written report and oral presentation.

Homework
Several assignments of varying size and scope will be used to assess student performance throughout the semester. Assignments may be due during the class period in which they were assigned or at a later class period. Late assignments will be accepted no later than one class following the initial due date, for 70% credit, unless the assignment indicates otherwise.

Course Notebook
Students will be required to keep a course notebook. The notebook should be neat and organized. It should be tabbed and divided into sections that follow the course content. All class notes, handouts, assignments, exams, and other class materials should be filed in your notebook in the appropriate topic section. Notebooks may be collected anytime during the course with one week notice and if so, will count as a homework assignment.

Note to Graduate Students
According to Graduate School guidelines, there must be differentiation between the requirements for undergraduate and graduate students in a 4000-level class in order for students to receive graduate credit for the course. Accordingly, graduate students will be assigned additional reading, homework, in-class presentations, and/or exam problems.

University Policies and Services:
Office of Disability Services

If you have a disability that may have some impact on your work in this class and for which you may require accommodations, please see a staff member in the Office of Disability Services (112 Johnston Hall) so that such accommodations can be considered. Students that receive accommodation letters, please meet with me to discuss the provisions of those accommodations as soon as possible. Students that receive accommodation letters and require additional time on exams must make arrangements with me at least THREE (3) days prior to any exam where accommodation is requested.

The following course topics will be covered in this course. Homework will be assigned periodically throughout the semester and will consist of both written homework and oral presentations to be given in class. In general, undergraduate presentations will be on the order of 5-10 minutes, while graduate student presentations will be 30 minutes and will include a planned active learning exercise for the class. The final course project will consist of an oral presentation addressing current pile driving activities at an ongoing construction project. The subject of the project will be selected by the students, either from a list of topics provided by the instructor, or a topic of interest approved by the instructor. Undergraduate students will work in teams of two for the final project; graduate students will complete the project individually and will also submit a written paper (8 pages minimum) documenting the project in written form.

Course Topics

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Topic Introduction, Overview of Geotechnical Investigations and Engineering Principles - Friction, Cohesion, Bearing Capacity</td>
</tr>
<tr>
<td>2</td>
<td>Pile Types - Materials and Shapes</td>
</tr>
<tr>
<td>3</td>
<td>Pile Driving Equipment - Crane, Leads, Hammer, Helmet, Cushion, Gate, Template, Followers, Jetting, Drilling, Spudding</td>
</tr>
<tr>
<td>4</td>
<td>Additional Considerations - Time Effects, Scour, Densification, Plugging, Drivability</td>
</tr>
<tr>
<td>5</td>
<td>Reading a Geotechnical Report, Effects on Pile Driving Estimates and Job Planning</td>
</tr>
<tr>
<td>6</td>
<td>Pile Capacity, Static and Dynamic Load Testing, Sequence of Operations</td>
</tr>
<tr>
<td>7</td>
<td>Estimating - Quantity Takeoff (Drawings and Specifications)</td>
</tr>
<tr>
<td>8</td>
<td>Preparing an Estimate</td>
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<tr>
<td>9</td>
<td>Static Pile Capacity (Alpha Method)</td>
</tr>
<tr>
<td>10</td>
<td>Static Load Test Frame Design</td>
</tr>
<tr>
<td>11</td>
<td>Independent Study Student Presentations - Topic of Your Choosing Related to Pile Driving and Equipment</td>
</tr>
<tr>
<td>12</td>
<td>Hammer and Crane Selection</td>
</tr>
<tr>
<td>13</td>
<td>Estimating - Durations, Productivity</td>
</tr>
<tr>
<td>14</td>
<td>Independent Study Student Presentations - Topic of Your Choosing Related to Pile Driving and Equipment</td>
</tr>
</tbody>
</table>

Justification CM 4355

This course is needed to provide students with an in-depth knowledge conducive to driving piles with highway, commercial, and industrial construction.

This course will be used as a Highway Industry Emphasis Area (IEA) elective course (see flow chart for IEA and minors). This course was taught as a CM 4206 independent study. Past enrollment averages between 25 – 35 students.